NATURAL RESOURCES DEFENSE COUNCIL

September 13, 2012

Mr. Alfred M. Pollard
General Counsel
Federal Housing Finance Agency
Eighth Floor, 400 Seventh Street, S.W.
Washington, D.C. 20024
(Comments/RIN 2590-AA53)

Re: Comments of the Natural Resources Defense Council on the Federal Housing Finance Agency's Notice of Proposed Rulemaking re Property Assessed Clean Energy and Enterprise Underwriting Standards (RIN 2590-AA53)

Dear Mr. Pollard:

The Natural Resources Defense Council ("NRDC") submits these comments in response to the Notice of Proposed Rulemaking ("NPR") published by the Federal Housing Finance Agency ("FHFA"), "Enterprise Underwriting Standards" (RIN 2590-AA53), 77 Fed. Reg. 36086 (June 15, 2012), addressing whether and under what conditions the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac")(collectively, the "Enterprises") will purchase mortgages on properties subject to state or community level Property Assessed Clean Energy ("PACE") programs.

In the NPR, FHFA's proposal is premised on the claim that PACE programs materially increase financial risk to the Enterprises. This assertion is unsupported by any data or other evidence presented by FHFA and is further disproved by several studies, most notably an expert analysis of Sonoma County's PACE program. We urge FHFA to reverse its decision blocking the Enterprises from purchasing mortgages secured by PACE financed properties and issue a final rule based on data and facts, not unsupported assertions. This letter will detail why PACE programs do not add material risk to the Enterprises and actually decrease risk to the portfolios by lowering risk of default and increasing asset values. In addition, we will show that FHFA's standard of risk is inappropriate and does not fulfill the requirements of the Administrative Procedure Act ("APA") and is furthermore inconsistent with FHFA's own governing statute.

We propose that FHFA adopt a modified version of the NPR's Third Risk Mitigation Alternative ("Alternative 3"), whereby, so long as the PACE program complies with the rigorous underwriting standards and program guidelines set forth in Alternative 3:

1. the Enterprises shall *not* take actions to accelerate mortgages on homes with PACE obligations;
2. the Enterprises shall *be permitted* to purchase mortgages on such homes, and be directed to treat PACE assessments in a similar manner as any other local government tax or assessment; and
3. the Enterprises' consent to first priority PACE liens shall be deemed to have been given.

We additionally urge FHFA to leave open the option of using an insurance product or reserve fund if such a product becomes available in the future (Alternative 1). The modified version of Alternative 3 as stated above is well-supported by the evidence on the record, satisfies FHFA's obligations to protect the safety and soundness of the Enterprises while considering the environment and the public interest, and respects the well-established taxing and assessment rights of local governments.

Introduction

The Natural Resources Defense Council is an international nonprofit environmental organization with more than 1.3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Livingston, Montana, and Beijing. NRDC's top institutional priority is curbing global warming and creating a clean energy future. Energy efficiency and renewable energy are the quickest, cleanest, cheapest solutions to global warming. Because access to financing is a key obstacle to achieving needed investment in cost-effective energy

efficiency and renewable energy programs, NRDC has been a strong supporter of PACE initiatives, and has helped to develop and support PACE programs nationally.

I. Data from PACE programs show that participation in PACE programs does not increase the likelihood of default

In response to FHFA's claim that the comments received in support of PACE lacked adequate empirical data, the California Attorney General's office, with the support of NRDC and others, retained an expert economist to evaluate loans made under the Sonoma County's Energy Independence Program ("SCEIP"), one of the longest running and most robust PACE programs in the country. The report found that the default rate on the primary mortgage loan for properties that had participated in PACE financing programs (0.85%) was significantly lower than the mortgage default rate among Sonoma County as a whole (2.19%).[1] This study provides real data on the question of whether PACE improvements pose a risk to the Enterprises and disproves FHFA's unsubstantiated speculations that PACE will put the Enterprises at risk. Moreover, it provides strong evidence suggesting PACE programs can reduce risk for the Enterprises.

In addition to showing that PACE properties had lower mortgage default rates, the study also analyzes the underlying cause(s) of default. The study noted that the properties with PACE liens had statistically higher tax burdens than non-PACE properties due to the presence of the PACE assessment. If FHFA's theory that the presence of PACE assessments increases default rates by placing additional financial burden on the homeowner is correct, one would expect default rates to have risen in accordance with higher tax burdens. The data showed that this was not the case, and in fact, rate of mortgage default among PACE participating properties was less than half that of non-PACE properties, despite the higher tax burden.

The factors that were shown to increase mortgage default rates were not specific to PACE, but rather characteristics of general lending practices and the housing-market. These factors were: (1) initial loan-to-value (LTV) ratios (the higher the LTV, the higher the likelihood of default); (2) conventional loans rather than FHA or VA loans; and (3) sale during the peak of the housing market price bubble. Each of these three characteristics exhibited strong, statistically significant correlation to mortgage default in the study.

In the NPR, FHFA repeatedly contends that commenters in support of PACE were unable to produce empirical evidence of the default risk associated with PACE assessments, alleging that the evidence provided is incomplete, inconclusive, and collected from samples that are too small. FHFA can no longer make these claims. The Sonoma County economic study provides a robust and well-grounded assessment of the real world effect of PACE programs on mortgage default

[1] Empire Economics, Inc. (June 28, 2012). "*Economic Analysis of Mortgage Loan Default Rates, Sonoma County Energy Independence Program (SCEIP).*" Properties considered to be in "default" when (1) the borrower had missed one or more mortgage payments, and (2) the lender had filed a Notice of Default with the County Recorder.

rates from the largest existing PACE program. Further, neither FHFA nor any other entity has provided data or other empirical evidence showing that PACE programs do pose increased risk.

Any continued claims by FHFA that there is not enough data notwithstanding the Sonoma County economic study would be particularly arbitrary and capricious. FHFA and the Enterprises have access to additional default and delinquency data that could shed light on the benefits and risks involved in PACE programs but have refused to make such data available or conduct any analysis of it. For example, in its comments on the Advanced Notice of Proposed Ruling, the Department of Energy requested that FHFA make anonymized home mortgage data available so that DOE could analyze it to examine the effect of home energy performance on mortgage performance.[2] FHFA cannot continue to withhold this data while at the same time maintaining that the evidence presented insufficiently demonstrates that PACE programs do not pose a risk to the Enterprises.

II. Contrary to FHFA's assertions, the evidence shows that PACE programs do not materially increase risk to the Enterprises

In the NPR, FHFA makes unsupported assertions that PACE programs materially increase financial risk to the Enterprises. The three major types of risk presented are (1) in the event of foreclosure, the mortgage holder is required to pay any past-due PACE assessments due to the first-lien status; (2) in the event of foreclosure, the mortgage holder bears the risk of diminished home value due to outstanding PACE liens or the PACE improvements themselves, "which may or may not be attractive to potential purchasers" (77 Fed. Reg. 36088); and (3) the homeowner's obligation to pay PACE assessments may increase default rates whether due to homeowner behavior or inconsistent underwriting standards. For the reasons described below, FHFA's risk analysis is unsupported by the evidence, fails to properly analyze how PACE programs work, and, even if FHFA's analysis were otherwise correct, fails to analyze the potential magnitude of that risk.

A. *In the event of foreclosure on a property with a first-lien PACE assessment, the mortgage holder's obligation is to pay only past due assessments.*

One of the most important features of PACE financing is that the borrowed money is tied to the property rather than the individual. This not only encourages homeowners to undertake beneficial sustainability initiatives, but ensures that the financial obligation stays with the asset that is benefiting from the financed improvements. Because PACE obligations are not accelerated upon mortgage default, the risk to the Enterprises to repay overdue assessments is minimal.

[2] Department of Energy. (March 26, 2012). "Comments on the FHFA Advanced Notice of Proposed Rulemaking on Mortgage Assets Affected by Pace Programs."

To demonstrate the scale of the perceived risk, we use a representative example from existing PACE programs: a PACE loan of $15,000 repayable over a 20-year term, which results in a yearly assessment of roughly $1,400.[3] Assuming an adoption rate of 1% across an assumed 20 million homes with existing Enterprise owned mortgages, this adds up to $280 million in PACE obligations annually.[4] Because the Enterprises would only be liable to repay past due assessments on any foreclosed homes, not the full amount remaining on PACE liens, this is the *absolute maximum, worst-case* risk to the Enterprises (as this scenario assumes 100% foreclosure on all PACE properties), $280 million amounts to less than one-hundredth of one percent of the Enterprises' total combined assets ($5.46 trillion).[5,6] If we apply the foreclosure rate of 0.85% as found in the Sonoma County program to the total PACE obligated loans, the Enterprises would be responsible for roughly $2.4 million in outstanding assessments in a given year, or 0.00004% of the Enterprises' total assets. Even if we consider a theoretical default rate that is in-line with the Enterprises' 1Q 2012 foreclosure rate (4.1%)[7] – which is a default rate approximately *4.8 times higher* than was demonstrated in the Sonoma County PACE program – the outstanding PACE obligations due would be roughly $11.5 million, which is the equivalent of about 0.0002% of the Enterprises' total assets. Ultimately, the risk posed to the Enterprises in paying past due assessments on PACE obligated mortgages is so inconsequential given the scale of the Enterprises' operation that such risk is not material.

B. PACE improvements may have a net positive impact on home values

One of FHFA's key arguments concerning the risk associated with purchasing PACE-improved properties is that the value of the asset is jeopardized by the existence of the PACE obligation, an assertion that is unsubstantiated in the record by the Agency. In fact, many studies point to just the opposite result – homes that incorporate photovoltaic ("PV") solar installations or energy efficiency measures as measured by several "green label" systems fetch higher sales prices than comparable homes on the market.

A July 2012 study conducted by Nils Kok (Maastricht University, Netherlands and University of California, Berkeley) and Matthew E. Kahn (University of California, Los Angeles), analyzed home sales in California and showed that on average, green

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[3] See Sonoma County's annual payment calculator, available at (see CAG letter pg 4 footnote 7)

[4] Comptroller of the Currency, Administrator of National Banks (First Quarter 2012) "OCC Mortgage Metrics Report. Disclosure of National Bank and Federal Savings Association Mortgage Loan Data."

[5] United States Securities and Exchange Commission. "Federal National Mortgage Association Form 10-K (Annual Report) for fiscal year ended December 31, 2011."

[6] United States Securities and Exchange Commission. "Federal Home Loan Mortgage Company Form 10-K (Annual Report) for fiscal year ended December 31, 2011."

[7] Id. at 4

labeled homes (i.e., those rated by Energy Star, GreenPoint Rated, or LEED for Homes) sold on average for 9% (+/- 4%) more than comparable non-certified homes.[8] In this study, the sample size of green certified homes was 4,321 compared to a control group of 1.6 million homes and controlled for outside variables such as location, age, size, and desirable features such as pools, views, and other factors. This indicates that the presence of efficiency measures is likely to add real value to properties.

Additionally, numerous studies have been undertaken on the effect of PV installation on home resale prices. A 2011 study found that in San Diego, on average, homeowners spent $5.00/watt on solar PV installations and the average premium on home sales price was $5.50/watt, which translates to a net sales premium of over $17,000 on the installation of 3,100 watt system (which was the size of the average system installed).[9] A different study of the San Diego and Sacramento solar market indicated that a solar installation fetches a sales prices premium that is net 3.5% higher than a sale without a renewable energy system.[10] Furthermore, none of these studies take into account any of the economic impacts incurred over the time spent owning the home, such as utility savings.

C. *Homeowners' monthly cash flow increases with PACE improvements, decreasing the risk of mortgage default*

FHFA wrongfully assumes that participation in a PACE improvement project will increase the likelihood of individuals defaulting on existing mortgages by decreasing the homeowners' monthly cash flow. These fears are circumstantial and unsubstantiated by FHFA as set forth in the NPR.

Rebound Effect

FHFA asserts that homeowners may "choose to consume rather than monetize energy efficiency gains" (77 Fed. Reg.36101). This assertion fails on several grounds. First, the evidence shows that any rebound effect would be minor. Rebound theorists themselves acknowledge that there is a "paucity of data that support large rebound hypotheses."[11] Where there is any empirical data regarding rebound effects, studies

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[8] Kok, Nils and Matthew E. Kahn (July 2012). "The Value of Green Homes in the California Housing Market: An Economic Analysis of the Impact of Green Labeling on the Sales Price of a Home."

[9] Hoen, Brian, Ryan Wiser, Peter Cappers, and Mark Thayer. (April 2011). "An Analysis of the Effects of Photovoltaic Energy Systems on Home Sales Prices in California."

[10] Dastrup, Samuel, Joshua S Graff Zivin, Dora L. Costa, Matthew E. Kahn. (July 2011). "Understanding the Solar Home Price Premium: Electricity Generation and "Green" Social Status."

[11] Goldstein, David B., Sierra Martinez and Robin Roy, "Are there Rebound Effects from Energy Efficiency? – An Analysis of Empirical Data, Internal Consistency, and Solutions," *ElectricityPolicy.com* (May 8, 2011).

show that rebounds are small and diminish over time.[12] A study by the American Council for an Energy Efficient Economy ("ACEEE") found that direct rebound effects are generally ten percent or less in the residential context.[13] This means that 90 percent of the energy savings generated by energy efficiency measures are retained in the form of decreased energy use.[14] The study went on to show that the rebound effect is reduced with increased consumer education and depth of energy efficiency measures installed.[15] PACE programs that follow the underwriting standards set forth in Alternative 3 require an audit or feasibility study that discloses costs and energy savings, and this will increase customer awareness about energy usage and cost savings, thereby reducing rebound effects. In sum, FHFA's concerns about the rebound effect are overstated.[16]

More importantly, even if there were a significant potential rebound effect, there is no reason to expect that this would occur in households at risk of default. FHFA assumes without evidence that because a household can, in theory, spend energy efficiency savings on more energy, this increases the risk of mortgage default. But households under financial pressure and at risk of default are not likely to spend their utility bill savings on increased energy purchases. The only rational way to view the effect of a PACE improvement where savings exceed costs is that it increases the household's monthly discretionary budget by lowering the amount dedicated to paying utility bills. Under some circumstances, the homeowner may elect to spend the discretionary amount on additional energy consumption, however, it is not reasonable to assume that during times of financial stress homeowners will spend money on additional energy consumption rather than mortgage payments. As mortgage holders, the Enterprises are exposed to less risk whenever a household has more funds available to

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[12] *Id*. at 11.

[13] Steven Nadel, ACEEE. (August 2012). "*The Rebound Effect: Large or Small?" available at*: http://aceee.org/files/pdf/white-paper/rebound-large-and-small.pdf.

[14] Steven Nadel, ACEEE. (August 7, 2012). "*The Rebound Effect: Real, But Not Very Large*." *available at*: http://www.aceee.org/blog/2012/08/rebound-effect-real-not-very-large (stating that even if the rebound effect is as high as 20 percent, then "80% of the savings from energy efficiency programs and policies register in terms of reduced energy use, which benefits the environment and public health. And the 20% rebound contributes to increased consumer amenities (like more comfortable homes), as well as to a larger economy and more jobs. Therefore, these savings are not 'lost,' but put to other generally beneficial uses.") (citing Casey Bell, ACEEE, *How Does Energy Efficiency Create Jobs?* (Nov. 14, 2011), *available at*: http://aceee.org/blog/2011/11/how-does-energy-efficiency-create-job)).

[15] *Id*. at 13.

[16] In addition, FHFA's view that rebound is a wholly negative phenomenon is arbitrary. Some rebound can occur, for example, in a low-income household that was not able to afford adequate heating or cooling prior to weatherization or insulation. *See* Nadel, *supra* note 13. The fact that the household after the improvement consumes some of the savings as energy use in this circumstance should be viewed as a public good. FHFA is required to consider these types of co-benefits as an aspect of the public interest, and their presence weighs in favor of allowing PACE to proceed. *See* 12 U.S.C. § 4513(a)(1)(B)(v) (requiring FHFA to ensure that the Enterprises operate consistent with the public interest).

meet monthly expenses. FHFA's assertions to the contrary are not supported by the evidence on the record.

Energy Prices
FHFA states that the value of PACE improvements relies on assumptions about energy prices, which it claims are "variable and unpredictable, and therefore any forward-looking estimate of utility cost-savings is inherently speculative" (77 Fed. Reg 36100). First, FHFA provides no evidence that energy prices are expected to decline, which occurrence would lead to a smaller realized utility savings than projected. Even if energy prices were to fall, the overall utility expenditures by homeowners would decrease accordingly, thus offsetting the risk of mortgage default by lowering monthly expenses. Alternatively, if the cost of energy were to rise, the presence of efficiency measures or renewable generation financed through PACE assessments would serve as a hedge against the impact of rising utility costs on the household budget, leaving the homeowner in a better position than he or she would be without efficiency improvements.

Furthermore, the mortgage industry already accepts a large degree of uncertainty in traditional loans, from insurance expenses, to changing tax rates, variations in gasoline prices, and swings in consumer debt and spending. But unlike the risk held by the Enterprises on changes in other household expenses, the increased efficiency associated with PACE improvements serves to insulate borrowers from energy price volatility. In sum, the record does not support FHFA's assertion that uncertainty in energy prices means that PACE increases financial risk to the Enterprises.

It is also important to note that FHFA's efforts to dismiss PACE underwriting standards as faulty because of the Agency's view that any effort to predict future energy prices is "speculative" does not stand up. As the D.C. Circuit has explained, "[r]easoned decisionmaking can use an economic model to provide useful information about economic realities, provided there is a conscientious effort to take into account what is known as to past experience and what is reasonably predictable about the future." *Am. Pub. Gas Ass'n vs. Fed. Power Comm'n*, 567 F.2d 1016, 1036-37 (D.C. Cir. 1977). Thus, FHFA's perceived risk associated with the "uncertain" projections of utility cost savings from PACE improvements, which are based on reasonable economic models, is invalid.

III. FHFA is employing an inappropriate standard of risk in its consideration of alternatives

The APA requires FHFA to consider reasonable alternatives to a flat ban on purchasing mortgages that are participating in or subject to PACE programs. In the NPR, FHFA provides three possible alternatives to prohibition, however, FHFA then indicates that any viable alternative "must provide mortgage holders with equivalent protection from financial risk to that of the Proposed Rule [to ban PACE], and could be implemented as readily and enforcibly as" a flat ban (77 Fed. Reg. 36107). This standard of risk must not be used to prevent FHFA from undertaking a thorough and open-minded consideration of the alternatives.

First, FHFA appears to assume that banning PACE programs provides the greatest risk protection to the Enterprises. But when risk is considered in a broader context – across the whole of the Enterprises' portfolios – the greater risk may, in fact, be found in banning the purchase of mortgages secured by properties which have undergone PACE improvements.

As was shown previously, the default rate among homeowners participating in the PACE program in Sonoma County was significantly lower than the default rate amongst non-PACE homeowners. One of the most important pieces of evidence to note, in addition, is the correlation between the Loan-to-Value ratio (LTV) and the likelihood of default. A high LTV, on average, (whether first or second mortgage) is linked to a higher likelihood of default. Additionally, home sales that occurred at the peak of the housing market price bubble are also more likely to default. Considering the Enterprises portfolio, which include many loans based upon appraisals made during the housing bubble, one of the Enterprises' greatest risks is reduced property values. One of the surest ways to mitigate the risk of default among that huge cohort of homes that were overvalued at the time of loan origination is to increase the actual value of the property, thus reducing the LTV and the risk of default on the mortgage. As was shown previously in Section I.B., numerous studies have pointed to the increased value and sales price premium placed on homes that have renewable energy installations or are labeled as "green." PACE-funded improvements, therefore, are a viable, proven, and immediate method to **decrease** the deep financial risk that currently exists for the Enterprises. In addition, the improved monthly cash flow achieved by households that undertake PACE projects is likely to help homeowners avoid default.

Second, FHFA may not use the unreasonably strict standard of risk stated in the NPR to avoid the Administrative Procedure Act's requirement of careful analysis and consideration of alternatives. This means that even if FHFA believes some of the alternatives entail greater risk than a flat ban on PACE programs – an assumption the evidence does not support – that is not an excuse to avoid analyzing those alternatives to determine the magnitude of the potential risk as well as the potential public benefits that those alternatives would provide but a ban would prohibit.

IV. It is in the best interest of the public to allow the purchase of mortgages on properties participating in PACE programs

FHFA's governing statute compels the Agency to "ensure that… the activities of each regulated entity and the manner in which such regulated entity is operated are consistent with the public interest."[17] Banning PACE programs is inconsistent with the public interest. The best way for the Agency to ensure that the Enterprises benefit the public interest is to reverse its decision on PACE. As has been shown, the purchase of mortgages secured by properties subject to PACE assessments poses very little, if any, financial risk to the Enterprises, yet the energy improvement work financed by PACE assessments has the potential to substantially bolster the economy as a whole, save homeowners money, and also achieve public health and environmental improvements by reducing emissions of pollutants.

First, in its effort to protect the public interest, FHFA must consider the degree of acceptable risk and whether the potential benefits of PACE programs outweigh any perceived risks. For the reasons explained previously, purchasing PACE obligated mortgages poses little, if any, additional risk to the Enterprises. On the other hand, the potential economic benefits of PACE financing programs offer substantial public benefits. If the average PACE financing is $15,000, as was seen in the Sonoma County case, a 1% participation rate across an assumed Enterprise portfolio of 20 million homes, would result in $3 billion in economic activity,[18] most of which would occur in the struggling construction sector. By contrast, the example of a $15,000 average PACE assessment with 1% market adoption (i.e. 200,000 homes), and a very high 4.1% default rate (which is totally unsupported by Sonoma County's experience), imposes a risk to the Enterprises of only approximately $11.5 million. This $11.5 million risk is a fraction of the $3 billion in economic activity. And in fact, as we have shown, this $11.5 million is very likely a gross overstatement of the risk to the Enterprises.

Furthermore, a study conducted by ECONorthwest found that $4 million spent across four cities on PACE projects, would generate $10 million in gross economic output, $1 million in combined Federal, State, and Local tax revenue, and 60 new jobs.[19] Considering the same 1% participation rate throughout the Enterprises' mortgaged home portfolio, PACE programs have the potential to generate over $7.5 billion in gross economic output, roughly $750 million in taxes, and 45,000 new jobs. Thus, the FHFA cannot ignore the sizable potential benefit of PACE programs to the public interest due to minor and manageable perceived risk to the Enterprises.

Second, PACE programs advance the public interest by protecting both homeowners and the environment. Lower monthly utility bills due to renewable energy installations or energy efficiency upgrades free up cash flow for homeowners by reducing monthly utility expenditures.

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[17] Safety and Soundness Act, 12 U.S.C. § 4513.

[18] *Id. at 4.*

[19] Pozdena, Randall and Alec Josephson. (April 2011). "Economic Impact Analysis of Property Assessed Clean Energy." ECONorthwest.

That is money that is available to be spent in more job-creative sectors of the economy. PACE programs also have a positive environmental impact as they improve our existing stock of residential buildings. By helping to increase the energy efficiency of residential buildings, PACE programs can achieve substantial reductions in the emissions of carbon dioxide and other pollutants associated with electricity generation and consumption of natural gas. Likewise, installation of on-site renewable energy systems will also reduce pollution from fossil-fuel powered electricity generation. FHFA claims to doubt the effectiveness of PACE programs, asserting that the commenters have failed to demonstrate that PACE programs would "result in retrofits that would not have otherwise been undertaken" (77 Fed. Reg. 36106). FHFA may not disregard the views of the numerous experienced and expert local officials simply by claiming that PACE programs may not actually result in implementation of additional energy efficiency and renewable energy projects.

Third, the long-standing power of state and local governments to levy tax assessments that advance the public interest should not be impeded by a federal government agency. As of 2007, there were more than 37,000 special assessment districts in the United States.[20] For decades, municipalities have used these districts to create financing mechanisms for voluntary improvements to private properties that serve a public purpose. For example, under the "Community Septic Management Program" in Massachusetts, property owners can voluntarily take financing from the local government to perform upgrades to their septic systems. The assessments in the Massachusetts program are secured by a municipal priority-lien placed on the participating owners' land parcels.[21] To our knowledge, there is no precedent for FHFA prohibiting the Enterprises from participating in the mortgage market for properties in special assessment districts. We are urging FHFA to simply direct the Enterprises to treat first lien PACE assessments no differently than they would treat other special assessments, that is to say, not discriminate against beneficial and value-adding PACE improvements.

V. FHFA must comply with the National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires that "to the fullest extent possible" "all agencies of the Federal government" must prepare an environmental impact statement ("EIS") "in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). In an EIS, an agency is required to identify alternatives to the proposed action and thoroughly analyze the environmental impacts of the proposed action and the alternatives. 40 C.F.R. § 1502.14 (a); *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983). If an "agency is uncertain whether the impacts rise to the level of a major federal action requiring an EIS, the agency must prepare an environmental assessment," which is a shorter analysis of environmental

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[20] See U.S. Census Bureau, Local Governments and Public School Systems by State: 2007, *available at:* http://www.census.gov/govs/cog/GovOrgTab03ss.html.

[21] Massachusetts Department of Environmental Protection. (July 2005). "Community Septic Management Program."

effects and alternatives to the proposed action. *Nat'l Audubon Society v. Hoffman*, 132 F.3d 7, 12 (2d Cir. 1997); *see also* 40 C.F.R. 1501.4(b). Based on the environmental assessment, the agency determines whether to prepare a full EIS or issue a "finding of no significant impact." 40 C.F.R. 1501.4(b). In making these determinations, the agency must consider not only direct effects but also "foreseeable . . . indirect effects." 40 C.F.R. §§ 1502.16, 1508.8. Accordingly, FHFA must, prior to making a final determination, conduct and make public a thorough analysis of the environmental effects of its proposed action as well as the potential effects of a range of alternatives to the proposed action.

VI. Alternative 3, with modification, is a viable and reasonable alternative that will effectively protect the interests of homeowners and mortgage holders while advancing the public interest

FHFA has an obligation to consider alternatives to its proposed course of action and may not ignore reasonable alternatives.[22] In its July 6, 2010 Directive, FHFA itself stated that asserted risk could be reduced by the imposition of "robust underwriting standards to protect homeowners" and "energy retrofit standards to assist homeowners, appraisers, inspectors, and lenders determine the value of retrofit products."[23] The NPR presents three risk mitigation alternatives to the Proposed Rule and invites public comment suggesting modification to these alternatives. FHFA should adopt a modified version of its Third Risk Mitigation Alternative, as described below.

Although the underwriting criteria and other protections contained in Alternative 3 provide sufficient mitigation of the risks perceived by FHFA, Alternative 3 is unworkable as drafted in the NPR. As drafted, Alternative 3 requires Enterprise consent to assessments, even if the Alternative 3 requirements are fully satisfied. Under FHFA's proposed version of Alternative 3, if the applicable Enterprise does not consent to a local government PACE lien for a particular property, then notwithstanding the fact that the municipality has fully satisfied the Alternative 3 requirements, the Enterprise is still prohibited from purchasing a mortgage on that home and is still permitted to immediately accelerate the full amount of the underlying mortgage on such home. This formulation renders PACE programs unworkable from the perspective of local governments. Furthermore, given the complexity of the residential mortgage market and common arrangements between loan servicers and investors, it would frequently be infeasible for a mortgage customer to obtain lender consent.[24] For these reasons, Alternative 3 must be altered in order to allow residential PACE programs to proceed.

FHFA should therefore adopt a modified version of Alternative 3 whereby, so long as all PACE obligations are (or promptly upon their creation will be) recorded in the relevant jurisdiction's

[22] *See*, *e.g.*, *Motor Vehicle Mfrs. Ass'n of U.S. Inc. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 46, 48 (1983).
[23] Federal Housing Finance Agency. (July 6, 2010). "FHFA Statement on Certain Energy Retrofit Loan Programs."
[24] *See*, *e.g*. Gretchen Morgenson, "More Home Foreclosures Loom As Owners Face Mortgage Maze," *New York Times* (August 6, 2007). *Available at:* www.nytimes.com/2007/08/06/business/06home.html?pagewanted=all

public land-title records, and the applicable jurisdiction complies with the Alternative 3 requirements, then the Enterprises shall *not* take actions to accelerate the full amount of any obligation secured by a mortgage that becomes subject to a first-lien PACE obligation, and shall *be permitted* to purchase mortgages subject to first-lien PACE obligations. Under this modified Alternative 3, if the local government has complied with the Alternative 3 Underwriting and Program Requirements, the existence of a PACE lien shall not be a negative factor in the Enterprises' purchasing decisions (i.e. the Enterprises shall be directed to treat PACE liens the same way they treat liens for all other local government taxes and assessments) and consent to a first priority PACE lien shall be deemed to have been given. This variation on Alternative 3 provides a solution that clarifies the ambiguity with regard to Enterprise consent in the version of Alternative 3 as drafted, is amply supported by the record evidence, can be implemented by local governments immediately, and will allow PACE programs to move forward.

VII. FHFA should issue a final rule that allows for Alternative 1 to be considered as a future option for satisfaction of FHFA concerns

We also urge the FHFA, in its final rule adopting this modified version of Alternative 3, to leave open the future opportunity to address its concerns through the implementation of elements of its proposed Alternative 1 (Guarantee/Insurance). At this time, we know of no insurance product in the marketplace or an established reserve fund that protects against "100% of any net loss" as suggested by FHFA (77 Fed. Reg.36107). Requiring such a guarantee would be unprecedented, and we believe entirely unwarranted, given the lack of evidence to support FHFA's conclusion that PACE materially increases financial risk to the Enterprises. However, if at some point in the future an insurance product or reserve fund is developed to mitigate risk from PACE assessed properties, FHFA should allow the Alternative 1 criteria to sufficiently satisfy the need for protection from such risk.

FHFA cannot merely block PACE, as the Proposed Rule would do, without exploring reasonable risk mitigation alternatives. As noted above, no insurance product or reserve fund meeting FHFA's stringent risk tolerance criteria currently exists, but the Alternative 3 Underwriting and Program Requirements thoroughly address FHFA's perceived risks to the Enterprises and can be implemented immediately to allow local government PACE programs to move forward. Thus, we recommend that FHFA adopt the modified form of Alternative 3 described in Section V above. The final rule should also provide that if an insurance product or reserve fund that provides sufficient protection against the risk to the Enterprises perceived by FHFA becomes available in the future, local governments should be permitted to choose whether to utilize such products or comply with the Alternative 3 Underwriting and Program Requirements.

Conclusion

Based upon the comments included herein and the substantial evidence submitted to FHFA in response to the proposed ruling, we believe that there is sufficient reason to find that Alternative

3, as modified herein, is a reasonable and considered alternative to a flat ban of residential PACE programs. This alternative serves to not only enhance the financial position of the Enterprises' portfolios by decreasing default risks and adding net value to the collateral securing the portfolios' assets, but also serves to advance the public interest through job creation, economic stimulus, positive environmental impacts, and increased homeowner protections.

We appreciate the opportunity to comment on the NPR and trust that FHFA will take the enclosed comments and evidence supporting a modified Alternative 3 into serious consideration, and will make a reasonable decision to allow PACE programs to continue.

Sincerely,

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Natural Resources Defense Council
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CC: Heather Zichal, Deputy Assistant to the President for Energy and Climate Change
Nancy Sutley, Council on Environmental Quality
Rick Duke, Department of Energy

Enclosures: The following references are included via email for FHFA's review and inclusion in the administrative record:

A Empire Economics, Inc. (June 28, 2012). "*Economic Analysis of Mortgage Loan Default Rates, Sonoma County Energy Independence Program (SCEIP).*" As submitted by The Attorney General's Office of the State of California in "Comments of the California Attorney General on the Federal Housing Finance Agency's Notice of Proposed Rulemaking re Property Assessed Clean Energy (RIN 2590-AA53)." September 12, 2012.

B Department of Energy. (March 26, 2012). "Comments on the FHFA Advanced Notice of Proposed Rulemaking on Mortgage Assets Affected by Pace Programs."

C Comptroller of the Currency, Administrator of National Banks (First Quarter 2012) "OCC Mortgage Metrics Report. Disclosure of National Bank and Federal Savings Association Mortgage Loan Data."

D United States Securities and Exchange Commission. "Federal National Mortgage Association Form 10-K (Annual Report) for fiscal year ended December 31, 2011."

E United States Securities and Exchange Commission. "Federal Home Loan Mortgage Company Form 10-K (Annual Report) for fiscal year ended December 31, 2011."

F Kok, Nils and Matthew E. Kahn (July 2012). "The Value of Green Homes in the California Housing Market: An Economic Analysis of the Impact of Green Labeling on the Sales Price of a Home."

G Hoen, Brian, Ryan Wiser, Peter Cappers, and Mark Thayer. (April 2011). "An Analysis of the Effects of Photovoltaic Energy Systems on Home Sales Prices in California."

H Dastrup, Samuel, Joshua S Graff Zivin, Dora L. Costa, Matthew E. Kahn. (July 2011). "Understanding the Solar Home Price Premium: Electricity Generation and "Green" Social Status."

I Goldstein, David B., Sierra Martinez and Robin Roy. (May 8, 2011). "Are there Rebound Effects from Energy Efficiency? – An Analysis of Empirical Data, Internal Consistency, and Solutions." *ElectricityPolicy.com*

J Nadel, Steven, ACEEE. (August 2012). "*The Rebound Effect: Large or Small?*" *available at*: http://aceee.org/files/pdf/white-paper/rebound-large-and-small.pdf.

K Nadel, Steven, ACEEE. (August 7, 2012). "*The Rebound Effect: Real, But Not Very Large*." *Available at*: http://www.aceee.org/blog/2012/08/rebound-effect-real-not-very-large

L Bell, Casey, ACEEE. (November 14, 2011). "*How Does Energy Efficiency Create Jobs?*" *Available at*: http://aceee.org/blog/2011/11/how-does-energy-efficiency-create-job

M Pozdena, Randall and Alec Josephson. ECONorthwest. (April 2011). "Economic Impact Analysis of Property Assessed Clean Energy."

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O Federal Housing Finance Agency. (July 6, 2010). "FHFA Statement on Certain Energy Retrofit Loan Programs."

ECONOMIC ANALYSIS OF RESIDENTIAL MORTGAGE LOAN DEFAULT RATES

SONOMA COUNTY ENERGY INDEPENDENCE PROGRAM (SCEIP)

SONOMA COUNTY, CALIFORNIA

PREPARED BY:

EMPIRE ECONOMICS, INC.
JOSEPH T. JANCZYK, PH.D.

JUNE 28, 2012

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1. INTRODUCTION

The purpose of this report is to perform an economic analysis of the Mortgage Default Rates for the residential properties (owner occupied homes with mortgages) that are in the Sonoma County Energy Independence Program (SCEIP).

Specifically, this involves an analysis of the Mortgage Default Rates for residential properties with mortgages for both Sonoma County and SCEIP, and then a comparison of these Default Rates, to determine if the difference between them is statistically significant.

This analysis demonstrates that the residential properties in SCEIP have a substantially lower Mortgage Default Rate than for Sonoma County, and this difference is statistically significant at the 99%+ level, effectively ruling out that this difference occurs just by chance.

Definition of "Mortgage Default"

A "Mortgage Default" is defined herein as a borrower missing one or more mortgage payments, and then the lender taking action by filing a Notice of Default in the property records.

- If the default is not cured by the borrower, then the next step would be for the lender to take the property to Auction for bids in a public forum; if a bid is sufficient to cover the amount of the mortgage debt, then the sale may be consummated.
- However, if bids are not satisfactory to the lender, typically because they are below mortgage balance, then the property becomes Bank Owned – Real Estate Owned (REO).

For purposes of this Study, "Mortgage Default" includes any property which received a Notice of Default and has not cured the default, and so this includes properties that are "scheduled for auction" as well as properties that are "bank owned".

Note: The above discussion is meant to be a general description of the foreclosure process, and, as such, should not be regarded as being a precise technical legal description of the foreclosure process.

Description of "Statistically Significant"

The term "statistically significant" means that based upon a consideration of the average rates of Mortgage Defaults for properties in SCEIP and Sonoma County, and then taking into consideration their respective standard deviations which allows for variations from their averages, the differences in their average Default Rates are significantly different from each other. An informal way of characterizing statistically significant is that the difference in the Default Rates between SCEIP and Sonoma County is not due to chance.

2. ECONOMIC ANALYSIS OF RESIDENTIAL MORTGAGE LOAN DEFAULT RATES

2-A. METHODOLOGY UNDERLYING THE STATISTICAL ANALYSIS

The types of data that are required for the analysis, along with the relevant formulas for the analysis of these data, are as follows:

$$\text{Residential Mortgage Default Rate for Sonoma County} = \frac{\text{Number of Mortgage Defaults - Sonoma County}}{\text{Total Number Properties/Mortgages - Sonoma County}}$$

$$\text{Residential Mortgage Default Rate for SCEIP} = \frac{\text{Number of Mortgage Defaults - SCEIP}}{\text{Total Number of Properties with Mortgages - SCEIP}}$$

Statistical Significance of Difference in Default Rates: Sonoma County vs. SCEIP

The statistical significance of the difference in the Mortgage Default Rates for the residential properties in SCEIP and Sonoma County is determined by using a standardized t-test.

- The first step is to calculate the average Default Rates for properties in SCEIP and Sonoma County.
- The next step is to calculate the standard deviation for the properties in SCEIP and Sonoma County; this measures the degrees of variation around their respective averages.
- Third, the differences in the Default Rates for SCEIP and Sonoma County, after taking into account their standard deviations from their averages, are compared.

Finally, if the Default Rates for properties in SCEIP and Sonoma County, after allowing for the standard deviation variations from their averages do not overlap, then the difference between them is considered to be statistically significant.

Therefore, the use of the relevant empirical data, along with the statistical formula, will determine if Mortgage Default Rates for residential properties with mortgages for SCEIP are different than those for Sonoma County in a statistically significant manner.

2-B. NUMBER OF TOTAL AND RESIDENTIAL MORTGAGE DEFAULTS: SONOMA COUNTY AND SCEIP

The Mortgage Default Data were compiled on May 28, 2012 from Foreclosure Radar, a respectable and well-recognized firm that specializes in gathering Mortgage Default Information for properties that are located in California.

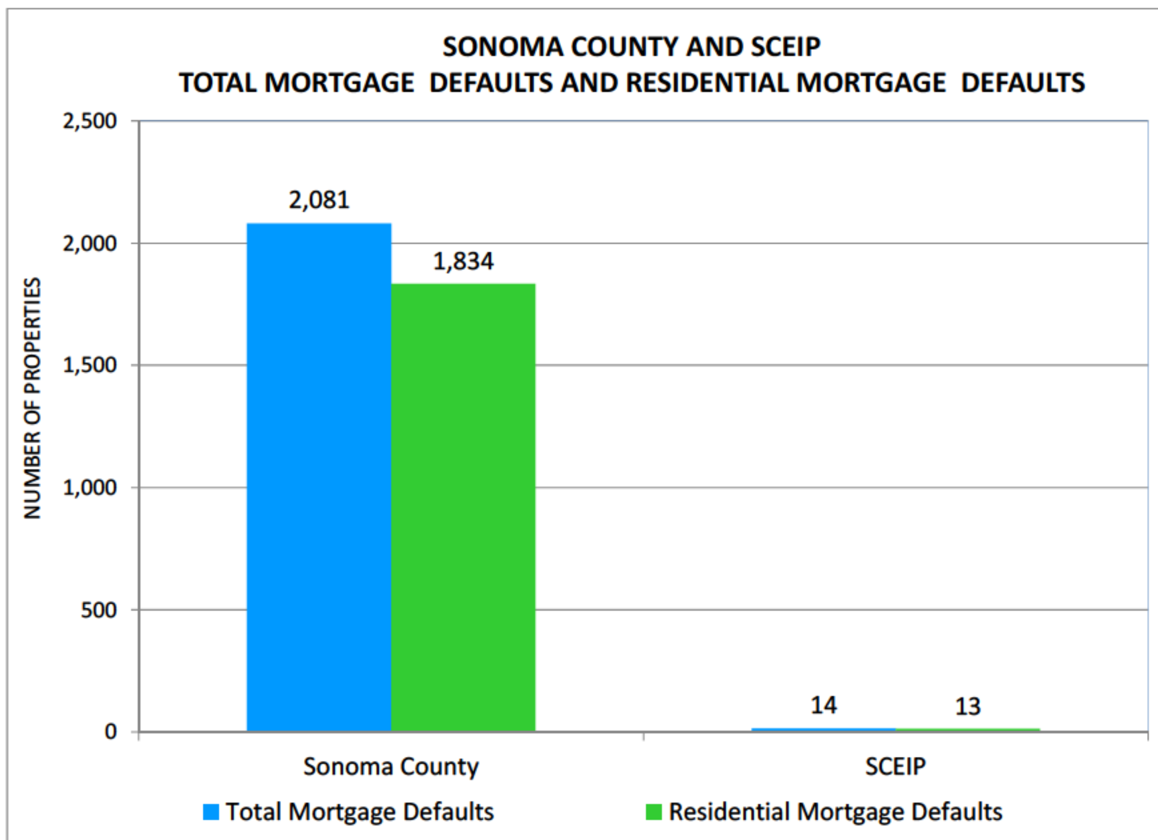
Accordingly, for Sonoma County and SCEIP, the total number of residential and non-residential properties that have Mortgage Defaults, along with only the residential properties that have Mortgage Defaults, are as follows:

Sonoma County:

Total Default Properties:	2,081 - Residential and Non-Residential*
Residential Default Properties:	1,834 - Residential Only

SCEIP:

Total Default Properties:	14 - Residential and Non-Residential
Residential Default Properties:	13 - Residential Only**



* Includes single-family, multi-family, commercial, agricultural, and all other land uses.
** Excludes the single SCEIP property in default that has a non-residential land-use (agricultural).

2-C. NUMBER OF RESIDENTIAL PROPERTIES WITH MORTGAGES: SONOMA COUNTY AND SCEIP

To determine the percentage shares of properties in Mortgage Default, it is critical to accurately identify the TOTAL number of residential properties with mortgages in Sonoma County and SCEIP; accordingly, these are as follows:

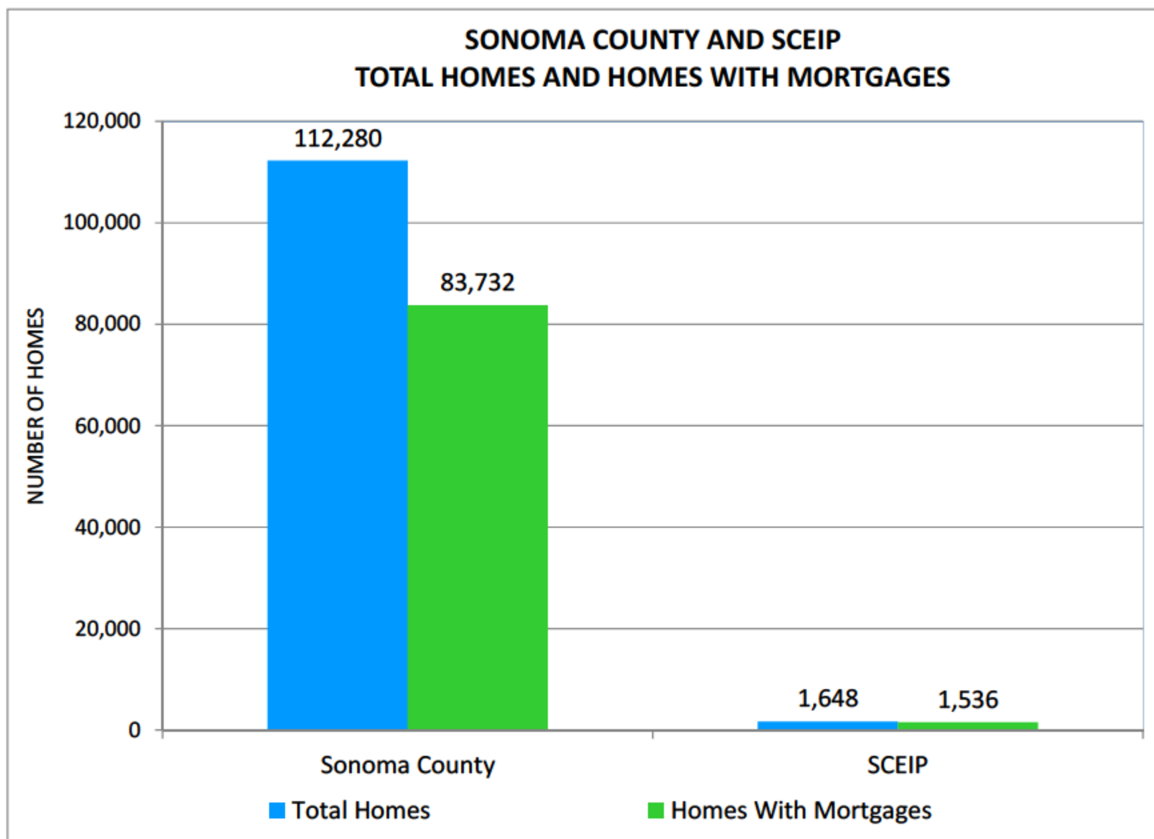
Sonoma County: Source of Data: 2010 Census

Number of Owner Occupied Homes:	112,280
Number of Homes with Mortgages:	83,732

SCEIP: Source of Data: Sonoma County, Auditor-Controller Treasurer-Tax Collector

Number of Homes:	1,648
Number of Homes with Mortgages:	1,536

(Based upon an analysis performed by Sonoma County in October 2011, 93.2% of the homes in SCEIP had mortgage loans.)



2-D. MORTGAGE LOAN DEFAULT RATES FOR RESIDENTIAL PROPERTIES WITH MORTGAGES: SONOMA COUNTY AND SCEIP

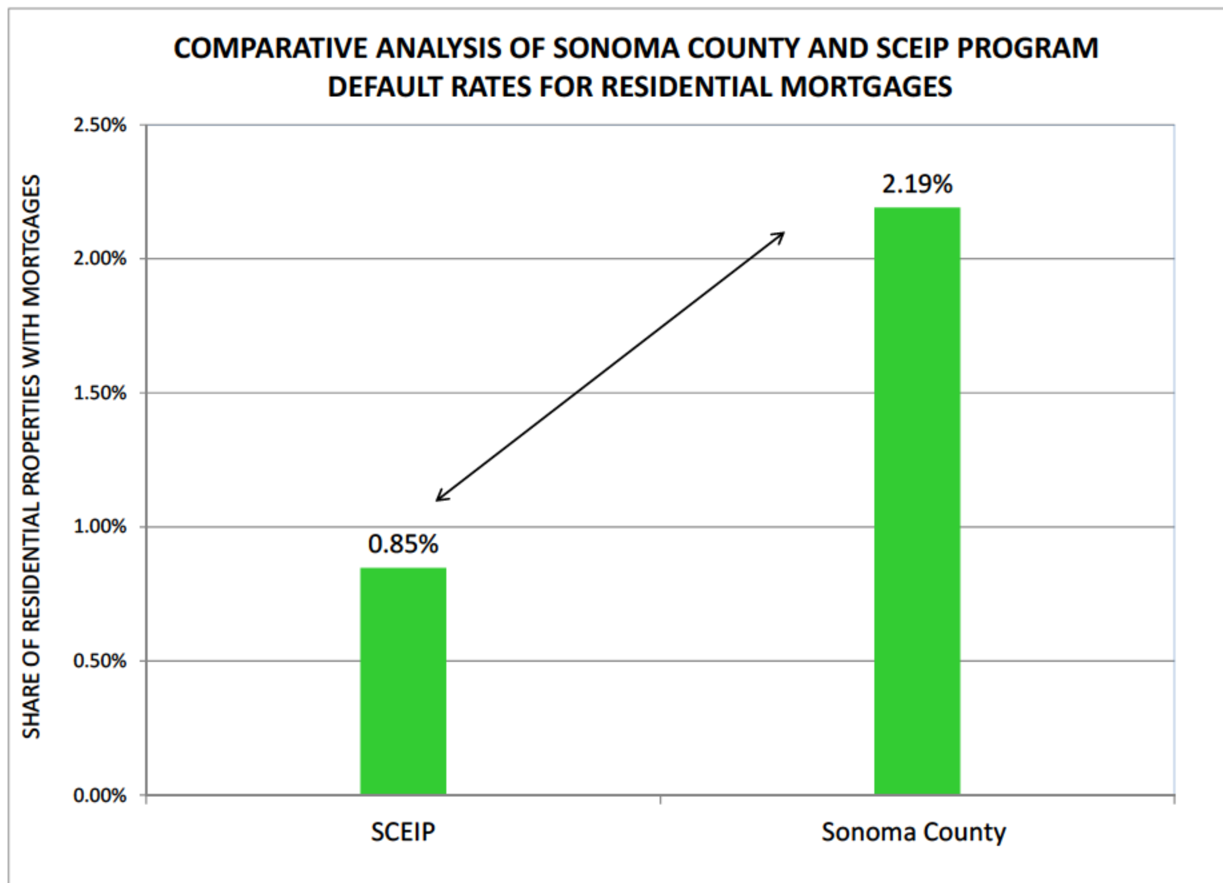
The shares of properties in Mortgage Default are now calculated, based upon the number of residential properties in Mortgage Default as compared to the total number of residential properties with mortgages, for both Sonoma County and SCEIP:

Sonoma County: Share of Residential Homes in Default: 2.19%

Number of Residential Mortgage Defaults:	1,834
Number of Homes with Mortgages:	83,732

SCEIP: Share of Residential Homes in Default: 0.85%

Number of Residential Mortgage Defaults:	13
Number of Homes with Mortgages:	1,536



2-E. STATISTICAL SIGNIFICANCE OF THE DIFFERENCES IN MORTGAGE LOAN DEFAULT RATES FOR RESIDENTIAL PROPERTY: SONOMA COUNTY AND SCEIP

The difference in the Mortgage Default Rates for Sonoma County and SCEIP appears to be substantial, 2.19% versus 0.85%, respectively, but it is necessary to perform a statistical test to identify the significance of this differential.

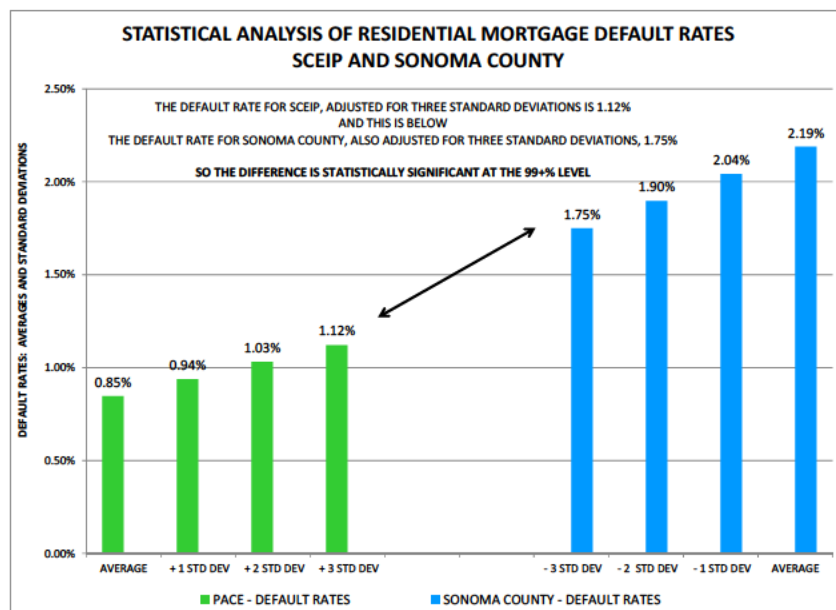
The statistical test that is relevant is called the "t-test" and this takes into account the "average" Mortgage Default Rates, as set-forth above, as well as their variability, which is measured by their standard deviations.

Accordingly, the relevant data for performing this t-test is as follows:

Sonoma County: Total Number of Residential Mortgage Properties: 83,732
Average Default Rate: 2.19%
Standard Deviation: 0.15%
Three Standard Deviations Below the Average: 1.75%

SCEIP: Total Number of Residential Mortgage Properties: 1,536
Average Default Rate: 0.85%
Standard Deviation: 0.09%
Three Standard Deviations Above the Average: 1.12%

So, based upon a standard t-test, which considers the Default Rate Averages as well as their Standard Deviations, the Default Rates for Sonoma County (1.75% lower bound) and SCEIP (1.12% upper bound) do not overlap, and so the difference is highly statistically significant, at the 99%+ level.



3. CONCLUSIONS ON RESIDENTIAL MORTGAGE DEFAULTS FOR SONOMA COUNTY AND SCEIP

The economic analysis of the Mortgage Default Rates for the residential properties that are in the Sonoma County Energy Independence Program (SCEIP) demonstrated the following:

- The Mortgage Default rates for the residential properties with mortgages is only 0.85% (less than 1%) for SCEIP and 2.19% (more than 2%) for Sonoma County.

- From a statistical perspective, this Mortgage Default differential of 1.34% between SCEIP and Sonoma County, taking into account their respective standard deviations, is highly significant, at the 99%+ level, effectively ruling out that this difference occurs just by chance.

Therefore, based upon the empirical data along with the statistical analysis, the properties in SCEIP have a substantially lower Mortgage Default Rate than for Sonoma County, and this difference is statistically significant at the 99% + level.

For additional information on the SCEIP Mortgage Default properties, refer to the Appendix.

4. NUMBER OF SCEIP RESIDENTIAL PROPERTIES IN MORTGAGE DEFAULT NOT SUFFICIENT FOR A CROSS-COMPARISON ANALYSIS OF MORTGAGE LOAN CHARACTERISTICS

Sonoma County California was chosen as a strategic area to conduct research, since it is regarded as having the largest number of properties in a PACE program, as compared to other public entities.

However, due to the minimal number of Mortgage Defaults for SCEIP, a level that is significantly statistically lower than for Sonoma County as a whole, there are NOT a sufficient number of SCEIP Properties in Mortgage Default to conduct various types of cross-comparison analysis of the mortgage loan characteristics for PACE vs. non-PACE properties.

Specifically, since there are only 13 Mortgage Default residential properties in SCEIP, there is NOT a sufficient number of such properties to perform a reliable statistical analysis of cross comparisons of their mortgage loan characteristics.

DISCLAIMER REGARDING USE OF STUDY

The State of California Department of Justice engaged Empire Economics to perform a study of the Sonoma County Energy Independence Program, a Property Assessed Clean Energy (PACE) program.

The stated purpose of the study is to inform the public rulemaking of the Federal Housing Finance Agency (FHFA) on PACE, which was instituted on January 26, 2012. Use of this Study, or parts thereof, for any other purpose is an unauthorized use of this Study.

Empire Economics hereby disclaims any and all responsibility or liability resulting from the FHFA's rulemaking, the FHFA's final PACE rule, or from any unauthorized uses.

APPENDIX

DETAILED INFORMATION ON THE
SCEIP MORTGAGE DEFAULT PROPERTIES

The following data on the 14 SCEIP Default Properties (residential and agricultural) was compiled from Core Logic Real Quest, which obtains its information from public records as well as other sources.

Personal information appearing on these records has been redacted.

This data is being provided for informational purposes only;
Empire Economics makes no warranty regarding its accuracy/reliability.

Records: 1 - 10 Displaying Page: 1 2 of 2 [>]

Property Detail Report

For Property Located At

CoreLogic®
RealQuest® Professional

Record #: **1**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	**HW / / JT**

Location Information:

Legal Description:	**MAP E5 74**		
County:	**SONOMA, CA**	APN:	
Census Tract / Block:	**1539.03 / 4**	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:		Map Reference:	**74-F5 / 322-H2**
Legal Lot:	**4**	Tract #:	
Legal Block:		School District:	**HEALDSBURG**
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	**10/03/2006 / 09/26/2006**	Deed Type:	**GRANT DEED**
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	**/**	1st Mtg Amount/Type:	**/**
Sale Price:		1st Mtg Int. Rate/Type:	**/**
Sale Type:		1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**/**
Deed Type:		2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	
New Construction:		Multi/Split Sale:	
Title Company:			
Lender:			
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	**/**	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:			

Property Characteristics:

Gross Area:		Parking Type:	**GARAGE**	Construction:	**WOOD FRAME/CB**
Living Area:	**1,770**	Garage Area:	**864**	Heat Type:	**FLOOR FURNACE**
Tot Adj Area:		Garage Capacity:	**3**	Exterior wall:	**WOOD**
Above Grade:		Parking Spaces:	**3**	Porch Type:	
Total Rooms:	**6**	Basement Area:		Patio Type:	
Bedrooms:	**2**	Finish Bsmnt Area:		Pool:	
Bath(F/H):	**1 /**	Basement Type:		Air Cond:	**YES**
Year Built / Eff:	**1934 /**	Roof Type:		Style:	**L-SHAPE**
Fireplace:	**Y / 1**	Foundation:	**RAISED**	Quality:	**AVERAGE**
# of Stories:	**1.00**	Roof Material:	**WOOD SHAKE**	Condition:	
Other Improvements:	**LAUNDRY ROOM**				

Site Information:

SINGLE FAM

Zoning:	CITYHE	Acres:	0.22	County Use:	DWELLING (0010)
Lot Area:	9,583	Lot Width/Depth:	72 x 137	State Use:	
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	PUBLIC
Site Influence:				Sewer Type:	PUBLIC SERVICE

Tax Information:

Total Value:	$177,039	Assessed Year:	2011	Property Tax:	$6,287.16
Land Value:	$53,364	Improved %:	70%	Tax Area:	002016
Improvement Value:	$123,675	Tax Year:	2011	Tax Exemption:	
Total Taxable Value:	$177,039				

Property Detail Report

For Property Located At

Record #: **2**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	HW / / JT

Location Information:

Legal Description:	MAP D3 00183		
County:	SONOMA, CA	APN:	
Census Tract / Block:	1509.01 / 5	Alternate APN:	
Township-Range-Sect:		Subdivision:	LIBERTY MDWS
Legal Book/Page:		Map Reference:	183-D3 / 465-C5
Legal Lot:	13	Tract #:	
Legal Block:		School District:	PETALUMA
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	/	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	12/31/2008 / 12/28/2008	1st Mtg Amount/Type:	$294,364 / FHA
Sale Price:	$298,500	1st Mtg Int. Rate/Type:	5.38 /
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	/
Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/
Transfer Document #:		Price Per SqFt:	$170.96
New Construction:		Multi/Split Sale:	
Title Company:	FIDELITY NATIONAL TITLE CO		
Lender:	PLAZA HM MTG INC		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	11/05/1999 / 11/03/1999	Prior Lender:	FTM MTG CO
Prior Sale Price:	$212,500	Prior 1st Mtg Amt/Type:	$148,750 / CONV
Prior Doc Number:		Prior 1st Mtg Rate/Type:	/ FIX
Prior Deed Type:	GRANT DEED		

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	1,746	Garage Area:	264	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	1	Porch Type:	

Total Rooms:	4	Basement Area:	480	Patio Type:	PATIO
Bedrooms:	2	Finish Bsmnt Area:		Pool:	
Bath(F/H):	3 /	Basement Type:	BASEMENT	Air Cond:	YES
Year Built / Eff:	1984 /	Roof Type:		Style:	L-SHAPE
Fireplace:	Y / 1	Foundation:		Quality:	GOOD
# of Stories:	3.00	Roof Material:		Condition:	
Other Improvements:	OPEN DECK				

Site Information:

Zoning:	CITYPE	Acres:	0.02	County Use:	PLANNED UNIT RESID (0015)
Lot Area:	873	Lot Width/Depth:	x	State Use:	
Land Use:	PUD	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$299,782	Assessed Year:	2011	Property Tax:	$4,294.76
Land Value:	$120,616	Improved %:	60%	Tax Area:	003000
Improvement Value:	$179,166	Tax Year:	2011	Tax Exemption:	
Total Taxable Value:	$299,782				

Property Detail Report

For Property Located At

Record #: 3

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	HW / / JT

Location Information:

Legal Description:	LOT 1		
County:	SONOMA, CA	APN:	
Census Tract / Block:	1530.01 / 2	Alternate APN:	
Township-Range-Sect:		Subdivision:	PAGE COUNTRY ESTATES PH 01
Legal Book/Page:		Map Reference:	129-A4 / 384-D4
Legal Lot:	1	Tract #:	
Legal Block:		School District:	SANTA ROSA CITY
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	/	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	04/15/2002 / 04/05/2002	1st Mtg Amount/Type:	$264,000 / CONV
Sale Price:	$335,000	1st Mtg Int. Rate/Type:	7.25 / ADJ
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	$66,000 / CONV
Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/ FIXED
Transfer Document #:		Price Per SqFt:	$197.99
New Construction:		Multi/Split Sale:	
Title Company:	FIRST AMERICAN TITLE		
Lender:	CHAPEL MTG		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	07/16/1996 /	Prior Lender:	

Prior Sale Price:	$10,000	Prior 1st Mtg Amt/Type:	/
Prior Doc Number:		Prior 1st Mtg Rate/Type:	/
Prior Deed Type:	QUIT CLAIM DEED		

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	1,692	Garage Area:	506	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	2	Porch Type:	
Total Rooms:	5	Basement Area:		Patio Type:	PATIO
Bedrooms:	3	Finish Bsmnt Area:		Pool:	
Bath(F/H):	2 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1981 /	Roof Type:		Style:	UNKNOWN
Fireplace:	Y / 1	Foundation:		Quality:	GOOD
# of Stories:	2.00	Roof Material:		Condition:	
Other Improvements:	OPEN DECK				

Site Information:

Zoning:	CITYSR	Acres:	0.15	County Use:	SINGLE FAM DWELLING (0010)
Lot Area:	6,534	Lot Width/Depth:	x	State Use:	
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$314,000	Assessed Year:	2011	Property Tax:	$5,422.62
Land Value:	$105,000	Improved %:	67%	Tax Area:	004002
Improvement Value:	$209,000	Tax Year:	2011	Tax Exemption:	HOMEOWNER
Total Taxable Value:	$307,000				

Property Detail Report

For Property Located At

Record #: **4**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	SW / /

Location Information:

Legal Description:	PARCEL MAPS 194 PG 5 UNIT 25 LOT 1,2		
County:	SONOMA, CA	APN:	
Census Tract / Block:	1515.02 / 1	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:		Map Reference:	130-A6 / 384-J7
Legal Lot:	1	Tract #:	
Legal Block:		School District:	SANTA ROSA CITY
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	/	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	04/10/2012 / 04/02/2012	1st Mtg Amount/Type:	$98,400 / CONV
Sale Price:	$123,000	1st Mtg Int. Rate/Type:	/
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	/

Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/
Transfer Document #:		Price Per SqFt:	$98.01
New Construction:		Multi/Split Sale:	
Title Company:	FIRST AMERICAN TITLE		
Lender:	LAND HM FIN'L SVCS		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	04/26/2005 / 04/20/2005	Prior Lender:	FINANCE AMERICA LLC
Prior Sale Price:	$300,000	Prior 1st Mtg Amt/Type:	$269,910 / CONV
Prior Doc Number:		Prior 1st Mtg Rate/Type:	6.49 / ADJ
Prior Deed Type:	GRANT DEED		

Property Characteristics:

Gross Area:		Parking Type:		Construction:	WOOD FRAME/CB
Living Area:	1,255	Garage Area:		Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:		Porch Type:	
Total Rooms:	3	Basement Area:		Patio Type:	PATIO
Bedrooms:	2	Finish Bsmnt Area:		Pool:	
Bath(F/H):	2 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1975 /	Roof Type:		Style:	U-SHAPE
Fireplace:	/	Foundation:		Quality:	GOOD
# of Stories:	1.00	Roof Material:		Condition:	
Other Improvements:	OPEN DECK				

Site Information:

Zoning:	CITYSR	Acres:	0.03	County Use:	CONDOMINIUM UNIT (0011)
Lot Area:	1,210	Lot Width/Depth:	x	State Use:	
Land Use:	CONDOMINIUM	Res/Comm Units:	24 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$146,000	Assessed Year:	2011	Property Tax:	$2,271.28
Land Value:	$58,000	Improved %:	60%	Tax Area:	004002
Improvement Value:	$88,000	Tax Year:	2011	Tax Exemption:	
Total Taxable Value:	$139,000				

Property Detail Report

For Property Located At

Record #: **5**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	MM / / SE

Location Information:

Legal Description:			
County:	SONOMA, CA	APN:	
Census Tract / Block:	1526.00 / 2	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:		Map Reference:	118-D5 / 365-C6
Legal Lot:		Tract #:	
Legal Block:		School District:	SANTA ROSA CITY
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	10/26/2004 / 10/26/2004	Deed Type:	GRANT DEED
Sale Price:		1st Mtg Document #:	
Document #:	[redacted]		

Last Market Sale Information:

Recording/Sale Date:	04/27/2001 /	1st Mtg Amount/Type:	/
Sale Price:		1st Mtg Int. Rate/Type:	/
Sale Type:	N	1st Mtg Document #:	
Document #:	[redacted]	2nd Mtg Amount/Type:	/
Deed Type:	INTERSPOUSAL DEED TRANSFER	2nd Mtg Int. Rate/Type:	/
Transfer Document #:		Price Per SqFt:	
New Construction:		Multi/Split Sale:	
Title Company:	FIDELITY NATIONAL TITLE INSURA		
Lender:			
Seller Name:	[redacted]		

Prior Sale Information:

Prior Rec/Sale Date:	/	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	/
Prior Doc Number:		Prior 1st Mtg Rate/Type:	/
Prior Deed Type:			

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	2,800	Garage Area:	692	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	2	Porch Type:	
Total Rooms:	8	Basement Area:		Patio Type:	PATIO
Bedrooms:	4	Finish Bsmnt Area:		Pool:	
Bath(F/H):	3 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1976 /	Roof Type:		Style:	L-SHAPE
Fireplace:	Y / 1	Foundation:		Quality:	GOOD
# of Stories:	2.00	Roof Material:		Condition:	
Other Improvements:	OPEN DECK				

Site Information:

Zoning:	RR5	Acres:	1.00	County Use:	RURAL RESID-1 RESID (0051)
Lot Area:	43,560	Lot Width/Depth:	x	State Use:	
Land Use:	RURAL HOMESITE	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$559,000	Assessed Year:	2011	Property Tax:	$7,941.16
Land Value:	$203,000	Improved %:	64%	Tax Area:	148002
Improvement Value:	$356,000	Tax Year:	2011	Tax Exemption:	
Total Taxable Value:	$559,000				

Property Detail Report

For Property Located At

Record #: **6**

Owner Information:

Owner Name:	[redacted]		
Mailing Address:	[redacted]		
Phone Number:		Vesting Codes:	HW / U /

Location Information:

Legal Description:	**LOT 28**		
County:	**SONOMA, CA**	APN:	[redacted]
Census Tract / Block:	**1528.01 / 4**	Alternate APN:	
Township-Range-Sect:		Subdivision:	**SAN MIGUEL**
Legal Book/Page:		Map Reference:	**128-F1 / 384-B1**
Legal Lot:	**28**	Tract #:	
Legal Block:		School District:	**SANTA ROSA CITY**
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	**/**	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	**06/30/1995 /**	1st Mtg Amount/Type:	**$139,800 / CONV**
Sale Price:	**$175,000**	1st Mtg Int. Rate/Type:	**/ FIXED**
Sale Type:	**FULL**	1st Mtg Document #:	
Document #:	[redacted]	2nd Mtg Amount/Type:	**/**
Deed Type:	**GRANT DEED**	2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	**$122.55**
New Construction:		Multi/Split Sale:	
Title Company:	**NORTHBAY TITLE CO.**		
Lender:	**CROSSLAND MTG CORP**		
Seller Name:	[redacted]		

Prior Sale Information:

Prior Rec/Sale Date:	**10/05/1983 /**	Prior Lender:	
Prior Sale Price:	**$95,000**	Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:	[redacted]	Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:	**DEED (REG)**		

Property Characteristics:

Gross Area:		Parking Type:	**GARAGE**	Construction:	**WOOD FRAME/CB**
Living Area:	**1,428**	Garage Area:	**460**	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	**1**	Porch Type:	
Total Rooms:	**5**	Basement Area:		Patio Type:	
Bedrooms:	**3**	Finish Bsmnt Area:		Pool:	
Bath(F/H):	**2 /**	Basement Type:		Air Cond:	**YES**
Year Built / Eff:	**1983 /**	Roof Type:		Style:	**L-SHAPE**
Fireplace:	**Y / 1**	Foundation:		Quality:	**AVERAGE**
# of Stories:	**1.00**	Roof Material:		Condition:	
Other Improvements:					

Site Information:

Zoning:	**CITYSR**	Acres:	**0.25**	County Use:	**SINGLE FAM DWELLING (0010)**
Lot Area:	**10,890**	Lot Width/Depth:	**x**	State Use:	
Land Use:	**SFR**	Res/Comm Units:	**1 /**	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	**$226,985**	Assessed Year:	**2011**	Property Tax:	**$5,743.52**
Land Value:	**$90,896**	Improved %:	**60%**	Tax Area:	**004027**
Improvement Value:	**$136,089**	Tax Year:	**2011**	Tax Exemption:	**HOMEOWNER**
Total Taxable Value:	**$219,985**				

Property Detail Report

For Property Located At

Record #: **7**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	**/ / TR**

Location Information:

Legal Description:	**OFFICIAL RECS 1118 PG471**		
County:	**SONOMA, CA**	APN:	
Census Tract / Block:	**1513.09 / 1**	Alternate APN:	
Township-Range-Sect:		Subdivision:	**COTATI RHO**
Legal Book/Page:		Map Reference:	**165-E1 / 425-D6**
Legal Lot:		Tract #:	
Legal Block:		School District:	**PETALUMA**
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	**07/10/2009 / 06/16/2009**	Deed Type:	**GRANT DEED**
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	**01/15/1992 /**	1st Mtg Amount/Type:	**$42,000 / PRIVATE PARTY**
Sale Price:	**$212,000**	1st Mtg Int. Rate/Type:	**/ FIXED**
Sale Type:	**FULL**	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**/**
Deed Type:	**GRANT DEED**	2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	**$47.22**
New Construction:		Multi/Split Sale:	
Title Company:	**NORTHBAY TITLE CO.**		
Lender:	**PRIVATE INDIVIDUAL**		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	**08/18/1976 /**	Prior Lender:	
Prior Sale Price:	**$25,000**	Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:	**GRANT DEED**		

Property Characteristics:

Year Built / Eff:	**1991 /**	Total Rooms/Offices:	**8**	Garage Area:	**1026**
Gross Area:		Total Restrooms:	**3.00**	Garage Capacity:	
Building Area:	**4,490**	Roof Type:		Parking Spaces:	
Tot Adj Area:		Roof Material:		Heat Type:	
Above Grade:		Construction:	**WOOD FRAME/CB**	Air Cond:	**YES**
# of Stories:	**1.00**	Foundation:		Pool:	
Other Improvements:	**OPEN DECK**	Exterior wall:		Quality:	**GOOD**
		Basement Area:		Condition:	

Site Information:

Zoning:	**DA20/3**	Acres:	**24.36**	County Use:	**PASTURE W/RESID (0541)**
Lot Area:	**1,061,122**	Lot Width/Depth:	**x**	State Use:	
Land Use:	**PASTURE**	Commercial Units:		Water Type:	
Site Influence:		Sewer Type:		Building Class:	**D075D**

Tax Information:

Total Value:	**$895,109**	Assessed Year:	**2011**	Property Tax:	**$23,123.80**
Land Value:	**$300,952**	Improved %:	**66%**	Tax Area:	**138012**
Improvement Value:	**$594,157**	Tax Year:	**2011**	Tax Exemption:	**HOMEOWNER**

Total Taxable Value: **$888,109**

Property Detail Report

For Property Located At

Record #: **8**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	**UW / /**

Location Information:

Legal Description:	**OFFICIAL RECS 420 PG 8 LOT 106**		
County:	**SONOMA, CA**	APN:	
Census Tract / Block:	**1513.11 / 3**	Alternate APN:	
Township-Range-Sect:		Subdivision:	**SPRECKELS PLACE 02**
Legal Book/Page:		Map Reference:	**165-A3 / 444-J1**
Legal Lot:	**106**	Tract #:	
Legal Block:		School District:	**COTATI ROHNERT PARK**
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	**01/31/2002 / 01/22/2002**	Deed Type:	**GRANT DEED**
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	**07/21/1989 / 00/1989**	1st Mtg Amount/Type:	**$138,000 / CONV**
Sale Price:	**$186,500**	1st Mtg Int. Rate/Type:	**/**
Sale Type:	**FULL**	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**/**
Deed Type:	**GRANT DEED**	2nd Mtg Int. Rate/Type:	**/**
Transfer Document #:		Price Per SqFt:	**$91.51**
New Construction:		Multi/Split Sale:	
Title Company:	**NORTH BAY TITLE**		
Lender:	**WESTERN BK**		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	**/**	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:			

Property Characteristics:

Gross Area:		Parking Type:	**GARAGE**	Construction:	**WOOD FRAME/CB**
Living Area:	**2,038**	Garage Area:	**442**	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	**1**	Porch Type:	
Total Rooms:	**8**	Basement Area:		Patio Type:	
Bedrooms:	**4**	Finish Bsmnt Area:		Pool:	
Bath(F/H):	**3 /**	Basement Type:		Air Cond:	**YES**
Year Built / Eff:	**1989 /**	Roof Type:		Style:	**U-SHAPE**
Fireplace:	**Y / 1**	Foundation:		Quality:	**AVERAGE**
# of Stories:	**2.00**	Roof Material:		Condition:	
Other Improvements:					

Site Information:

Zoning:	CITYRP	Acres:	0.10	County Use:	SINGLE FAM DWELLING (0010)
Lot Area:	4,356	Lot Width/Depth:	x	State Use:	
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$267,497	Assessed Year:	2011	Property Tax:	$4,328.62
Land Value:	$79,097	Improved %:	70%	Tax Area:	007003
Improvement Value:	$188,400	Tax Year:	2011	Tax Exemption:	HOMEOWNER
Total Taxable Value:	$260,497				

Property Detail Report

For Property Located At

Record #: 9

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	HW / / JT

Location Information:

Legal Description:			
County:	SONOMA, CA	APN:	
Census Tract / Block:	1527.02 / 2	Alternate APN:	
Township-Range-Sect:		Subdivision:	
Legal Book/Page:		Map Reference:	116-E3 / 364-B5
Legal Lot:	1	Tract #:	
Legal Block:	3	School District:	SANTA ROSA CITY
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	03/11/2005 / 03/07/2005	Deed Type:	GRANT DEED
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	11/19/2002 / 11/15/2002	1st Mtg Amount/Type:	$233,450 / CONV
Sale Price:	$333,500	1st Mtg Int. Rate/Type:	/ ADJ
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	$66,700 / CONV
Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/ FIXED
Transfer Document #:		Price Per SqFt:	$199.34
New Construction:		Multi/Split Sale:	
Title Company:	NEW CENTURY TITLE COMPANY		
Lender:	WORLD SVGS BK FSB		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	/	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	/
Prior Doc Number:		Prior 1st Mtg Rate/Type:	/
Prior Deed Type:			

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	1,673	Garage Area:	520	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	2	Porch Type:	

Total Rooms:	6	Basement Area:		Patio Type:	PATIO
Bedrooms:	3	Finish Bsmnt Area:		Pool:	
Bath(F/H):	2 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1962 /	Roof Type:		Style:	L-SHAPE
Fireplace:	Y / 1	Foundation:		Quality:	GOOD
# of Stories:	1.00	Roof Material:		Condition:	
Other Improvements:	OPEN DECK				

Site Information:

Zoning:	R15UA	Acres:	0.26	County Use:	SINGLE FAM DWELLING (0010)
Lot Area:	11,326	Lot Width/Depth:	x	State Use:	
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$372,000	Assessed Year:	2011	Property Tax:	$6,626.68
Land Value:	$122,000	Improved %:	67%	Tax Area:	120036
Improvement Value:	$250,000	Tax Year:	2011	Tax Exemption:	HOMEOWNER
Total Taxable Value:	$365,000				

Property Detail Report

For Property Located At

Record #: **10**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	HW / / JT

Location Information:

Legal Description:	MAP C6 104		
County:	SONOMA, CA	APN:	
Census Tract / Block:	1527.01 / 1	Alternate APN:	
Township-Range-Sect:		Subdivision:	564 01
Legal Book/Page:		Map Reference:	117-C2 / 364-F2
Legal Lot:	2	Tract #:	
Legal Block:		School District:	SANTA ROSA CITY
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	/	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	02/24/2012 / 02/22/2012	1st Mtg Amount/Type:	$292,000 / CONV
Sale Price:	$365,000	1st Mtg Int. Rate/Type:	/
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	/
Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/
Transfer Document #:		Price Per SqFt:	$177.79
New Construction:		Multi/Split Sale:	
Title Company:	FIDELITY NATIONAL TITLE		
Lender:	PEOPLES BK		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	03/29/2004 / 03/22/2004	Prior Lender:	CALIFORNIA FIN'L GRP

Prior Sale Price:	$739,000	Prior 1st Mtg Amt/Type:	$591,200 / CONV
Prior Doc Number:	[redacted]	Prior 1st Mtg Rate/Type:	4.50 / ADJ
Prior Deed Type:	GRANT DEED		

Property Characteristics:

Gross Area:		Parking Type:		Construction:	WOOD FRAME/CB
Living Area:	2,053	Garage Area:		Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:		Porch Type:	
Total Rooms:	8	Basement Area:		Patio Type:	
Bedrooms:	3	Finish Bsmnt Area:		Pool:	
Bath(F/H):	3 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1986 /	Roof Type:		Style:	UNKNOWN
Fireplace:	Y / 1	Foundation:		Quality:	AVERAGE
# of Stories:	2.00	Roof Material:		Condition:	
Other Improvements:					

Site Information:

Zoning:	RR5	Acres:	3.30	County Use:	RURAL RESID-1 RESID (0051)
Lot Area:	143,748	Lot Width/Depth:	x	State Use:	
Land Use:	RURAL HOMESITE	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$559,000	Assessed Year:	2011	Property Tax:	$8,473.22
Land Value:	$278,000	Improved %:	50%	Tax Area:	120007
Improvement Value:	$281,000	Tax Year:	2011	Tax Exemption:	
Total Taxable Value:	$552,000				

Records: 1 - 10 Displaying Page: 1 2 of 2 [>]

Property Detail Report

For Property Located At

Record #: **1**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	**MM / / SE**

Location Information:

Legal Description:	**MAP 50 PG 38 BLK E LOT 34**		
County:	**SONOMA, CA**	APN:	
Census Tract / Block:	**1537.03 / 3**	Alternate APN:	
Township-Range-Sect:		Subdivision:	**03 VACATION BEACH**
Legal Book/Page:		Map Reference:	**112-C5 / 361-A6**
Legal Lot:	**34**	Tract #:	
Legal Block:		School District:	**W SONOMA UN**
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	**09/29/2004 / 09/23/2004**	Deed Type:	**INTERSPOUSAL DEED TRANSFER**
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	**09/29/2004 / 09/17/2004**	1st Mtg Amount/Type:	**$208,000 / CONV**
Sale Price:	**$260,000**	1st Mtg Int. Rate/Type:	**2.38 / ADJ**
Sale Type:	**UNKNOWN**	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	**$26,000 / CONV**
Deed Type:	**GRANT DEED**	2nd Mtg Int. Rate/Type:	**/ ADJ**
Transfer Document #:		Price Per SqFt:	**$330.37**
New Construction:		Multi/Split Sale:	
Title Company:	**FINANCIAL TITLE**		
Lender:	**PAUL FIN'L LLC**		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	**01/07/2000 /**	Prior Lender:	
Prior Sale Price:		Prior 1st Mtg Amt/Type:	**/**
Prior Doc Number:		Prior 1st Mtg Rate/Type:	**/**
Prior Deed Type:	**GRANT DEED**		

Property Characteristics:

Gross Area:		Parking Type:		Construction:	**WOOD FRAME/CB**
Living Area:	**787**	Garage Area:		Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:		Porch Type:	
Total Rooms:	**3**	Basement Area:		Patio Type:	
Bedrooms:	**2**	Finish Bsmnt Area:		Pool:	
Bath(F/H):	**1 /**	Basement Type:		Air Cond:	
Year Built / Eff:	**1950 /**	Roof Type:		Style:	**SQUARE DESIGN**
Fireplace:	**/**	Foundation:		Quality:	**FAIR**
# of Stories:	**1.00**	Roof Material:		Condition:	
Other Improvements:					

Site Information:

Zoning:	**R14UA**	Acres:	**0.11**	County Use:	**SINGLE FAM DWELLING**

Lot Area:	4,792	Lot Width/Depth:	x	State Use:	(0010)
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$225,000	Assessed Year:	2011	Property Tax:	$6,348.60
Land Value:	$87,000	Improved %:	61%	Tax Area:	093049
Improvement Value:	$138,000	Tax Year:	2011	Tax Exemption:	
Total Taxable Value:	$225,000				

Property Detail Report

For Property Located At

Record #: 2

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	/ / JT

Location Information:

Legal Description:	LOT 10		
County:	SONOMA, CA	APN:	
Census Tract / Block:	1530.03 / 4	Alternate APN:	
Township-Range-Sect:		Subdivision:	MARTIN
Legal Book/Page:		Map Reference:	128-F6 / 384-C7
Legal Lot:	10	Tract #:	
Legal Block:		School District:	SANTA ROSA CITY
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	09/29/2000 / 09/25/2000	Deed Type:	GRANT DEED
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	12/31/1997 / 12/23/1997	1st Mtg Amount/Type:	$155,237 / FHA
Sale Price:	$160,000	1st Mtg Int. Rate/Type:	/ FIXED
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	/
Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/
Transfer Document #:		Price Per SqFt:	$131.58
New Construction:		Multi/Split Sale:	
Title Company:	NORTH AMERICAN TITLE		
Lender:	SCORE FCU		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	03/02/1995 /	Prior Lender:	CAL BAY MTG GRP
Prior Sale Price:	$147,000	Prior 1st Mtg Amt/Type:	$149,900 / VA
Prior Doc Number:		Prior 1st Mtg Rate/Type:	/ FIX
Prior Deed Type:	GRANT DEED		

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	1,216	Garage Area:	400	Heat Type:	WALL FURNACE
Tot Adj Area:		Garage Capacity:	2	Exterior wall:	WOOD SIDING
Above Grade:		Parking Spaces:	1	Porch Type:	
Total Rooms:	5	Basement Area:		Patio Type:	

Bedrooms:	3	Finish Bsmnt Area:		Pool:	
Bath(F/H):	2 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1981 /	Roof Type:		Style:	U-SHAPE
Fireplace:	Y / 1	Foundation:		Quality:	AVERAGE
# of Stories:	1.00	Roof Material:	COMPOSITION SHINGLE	Condition:	GOOD
Other Improvements:	FENCE				

Site Information:

Zoning:	CITYSR	Acres:	0.13	County Use:	SINGLE FAM DWELLING (0010)
Lot Area:	5,663	Lot Width/Depth:	70 x 86	State Use:	
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	PUBLIC
Site Influence:				Sewer Type:	PUBLIC SERVICE

Tax Information:

Total Value:	$199,405	Assessed Year:	2011	Property Tax:	$4,012.84
Land Value:	$74,775	Improved %:	63%	Tax Area:	004004
Improvement Value:	$124,630	Tax Year:	2011	Tax Exemption:	HOMEOWNER
Total Taxable Value:	$192,405				

Property Detail Report

For Property Located At

Record #: 3

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	/ A /

Location Information:

Legal Description:			
County:	SONOMA, CA	APN:	
Census Tract / Block:	1538.09 / 1	Alternate APN:	
Township-Range-Sect:		Subdivision:	OAK CRK 507
Legal Book/Page:		Map Reference:	103-C5 / 343-H7
Legal Lot:	21	Tract #:	
Legal Block:		School District:	WINDSOR
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	01/20/2005 / 01/11/2005	Deed Type:	GRANT DEED
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	09/17/2002 / 09/05/2002	1st Mtg Amount/Type:	$320,000 / CONV
Sale Price:	$400,000	1st Mtg Int. Rate/Type:	5.62 / ADJ
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	$40,000 / CONV
Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/ FIXED
Transfer Document #:		Price Per SqFt:	$230.95
New Construction:		Multi/Split Sale:	
Title Company:	FIRST AMERICAN TITLE		
Lender:	GREENPOINT MTG FNDG		
Seller Name:			

Prior Sale Information:

Prior Rec/Sale Date:	06/20/1984 /	Prior Lender:	

Prior Sale Price:	$130,000	Prior 1st Mtg Amt/Type:	/
Prior Doc Number:		Prior 1st Mtg Rate/Type:	/
Prior Deed Type:	DEED (REG)		

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	1,732	Garage Area:	746	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:	2	Porch Type:	
Total Rooms:	6	Basement Area:		Patio Type:	
Bedrooms:	3	Finish Bsmnt Area:		Pool:	
Bath(F/H):	2 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1979 /	Roof Type:		Style:	U-SHAPE
Fireplace:	Y / 1	Foundation:		Quality:	GOOD
# of Stories:	1.00	Roof Material:		Condition:	
Other Improvements:					

Site Information:

Zoning:	CITYWI	Acres:	0.32	County Use:	SINGLE FAM DWELLING (0010)
Lot Area:	13,939	Lot Width/Depth:	x	State Use:	
Land Use:	SFR	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$452,197	Assessed Year:	2011	Property Tax:	$7,711.68
Land Value:	$180,878	Improved %:	60%	Tax Area:	009014
Improvement Value:	$271,319	Tax Year:	2011	Tax Exemption:	HOMEOWNER
Total Taxable Value:	$445,197				

Property Detail Report

For Property Located At

CoreLogic
RealQuest Professional

Record #: **4**

Owner Information:

Owner Name:			
Mailing Address:			
Phone Number:		Vesting Codes:	UW / /

Location Information:

Legal Description:	COURTYARDS EAST LOT 000047 MAP 000338 00045		
County:	SONOMA, CA	APN:	
Census Tract / Block:	1538.08 / 2	Alternate APN:	
Township-Range-Sect:		Subdivision:	COURTYARD EAST
Legal Book/Page:		Map Reference:	102-F3 / 343-E5
Legal Lot:	47	Tract #:	
Legal Block:		School District:	WINDSOR
Market Area:		Munic/Township:	
Neighbor Code:			

Owner Transfer Information:

Recording/Sale Date:	/	Deed Type:	
Sale Price:		1st Mtg Document #:	
Document #:			

Last Market Sale Information:

Recording/Sale Date:	07/17/2009 / 05/28/2009	1st Mtg Amount/Type:	$142,373 / FHA
Sale Price:	$145,000	1st Mtg Int. Rate/Type:	5.00 /
Sale Type:	FULL	1st Mtg Document #:	
Document #:		2nd Mtg Amount/Type:	/

Deed Type:	GRANT DEED	2nd Mtg Int. Rate/Type:	/
Transfer Document #:		Price Per SqFt:	$157.61
New Construction:		Multi/Split Sale:	
Title Company:	FIRST AMERICAN TITLE		
Lender:	BANK OF AMERICA		
Seller Name:	[redacted]		

Prior Sale Information:

Prior Rec/Sale Date:	02/28/2005 / 02/25/2005	Prior Lender:	OWNIT MTG SOLUTIONS INC
Prior Sale Price:	$320,000	Prior 1st Mtg Amt/Type:	$248,000 / CONV
Prior Doc Number:	[redacted]	Prior 1st Mtg Rate/Type:	5.88 / ADJ
Prior Deed Type:	GRANT DEED		

Property Characteristics:

Gross Area:		Parking Type:	GARAGE	Construction:	WOOD FRAME/CB
Living Area:	920	Garage Area:	200	Heat Type:	
Tot Adj Area:		Garage Capacity:		Exterior wall:	
Above Grade:		Parking Spaces:		Porch Type:	
Total Rooms:	3	Basement Area:		Patio Type:	
Bedrooms:	2	Finish Bsmnt Area:		Pool:	
Bath(F/H):	2 /	Basement Type:		Air Cond:	YES
Year Built / Eff:	1983 /	Roof Type:		Style:	U-SHAPE
Fireplace:	Y / 1	Foundation:		Quality:	AVERAGE
# of Stories:	2.00	Roof Material:		Condition:	
Other Improvements:					

Site Information:

Zoning:	CITYWI	Acres:	0.02	County Use:	PLANNED UNIT RESID (0015)
Lot Area:	871	Lot Width/Depth:	x	State Use:	
Land Use:	PUD	Res/Comm Units:	1 /	Water Type:	
Site Influence:				Sewer Type:	

Tax Information:

Total Value:	$116,000	Assessed Year:	2011	Property Tax:	$2,335.64
Land Value:	$48,000	Improved %:	59%	Tax Area:	009004
Improvement Value:	$68,000	Tax Year:	2011	Tax Exemption:	HOMEOWNER
Total Taxable Value:	$109,000				

Department of Energy
Washington, DC 20585

March 26, 2012

Alfred M. Pollard
General Counsel
Federal Housing Finance Agency
400 Seventh St, SW
Washington, DC 20024

Mr. Pollard,

The U.S. Department of Energy has prepared the enclosed comments for your attention regarding the Advanced Notice of Proposed Rulemaking on Mortgage Assets Affected by PACE (RIN 2590-AA53).

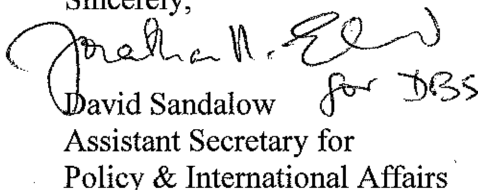
Improving residential energy efficiency is an important strategic energy policy objective for the nation. Inefficient housing stock imposes a major financial burden on homeowners and, since residential buildings consume more than 20% of US energy, they impose a significant burden on the environment. Overall, a 10% improvement in energy performance in the residential sector would save more than $20 billion each year, and would result in economic, environmental, and energy security benefits.

In its January 26, 2012 Advanced Notice of Proposed Rulemaking, FHFA raises many questions about the potential risk of PACE to national residential mortgage markets. Because there is insufficient data and analysis available to provide conclusive answers, DOE seeks FHFA cooperation to facilitate work with government-sponsored entities in the housing sector that would inform answers with appropriate data analysis.

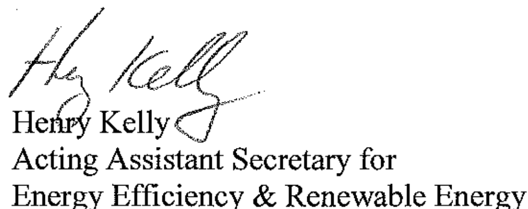
DOE has an interest in working with FHFA on developing solutions for investments in residential energy efficiency that are compatible with a stable and strong housing market in America. DOE strongly urges FHFA to partner with relevant stakeholders, including DOE, to ensure that pilot PACE programs are implemented with appropriate safeguards as outlined in the DOE *Guidelines for Pilot PACE Financing Programs.*

DOE appreciates the opportunity to engage FHFA on the important matter of improving the energy performance of housing in America, and we hope that FHFA will take these views into consideration in preparation of the rule.

Sincerely,



David Sandalow
Assistant Secretary for
Policy & International Affairs



Henry Kelly
Acting Assistant Secretary for
Energy Efficiency & Renewable Energy

Printed with soy ink on recycled paper

Comments on the FHFA Advanced Notice of Proposed Rulemaking on Mortgage Assets Affected by PACE Programs

Prepared by U.S. Department of Energy
March 26, 2012

Overview:

Improving residential energy efficiency is an important strategic energy policy objective for the nation. Inefficient housing stock imposes a major financial burdon on homeowners and, since residential buildings consume more than 20% of US energy, they impose a significant burden on the environment. Overall, a 10% improvement in energy performance in the residential sector would save more than $20 billion each year[1], and would result in economic, environmental, and energy security benefits.

In its January 26, 2012 Advanced Notice of Proposed Rulemaking, FHFA raises many questions about the potential risk of PACE to national residential mortgage markets. The concerns FHFA expresses generally fall into three categories:

1. The potential impact of PACE on residential property values.
2. The potential impact of PACE on residential mortgage default rates.
3. The potential impact of PACE defaults on mortgage holder value.

Because there is insufficient data and analysis available to provide conclusive answers, DOE seeks FHFA cooperation to facilitate work with government-sponsored entities in the housing sector that would inform answers with appropriate data analysis.

DOE has an interest in working with FHFA on developing solutions for investments in residential energy efficiency that are compatible with a stable and strong housing market in America. DOE strongly urges FHFA to partner with relevant stakeholders, including DOE, to ensure that pilot PACE programs are implemented with appropriate safeguards as outlined in the DOE *Guidelines for Pilot PACE Financing Programs.*

DOE is offering points of information based on extensive engagement in the development of residential energy efficiency programs.

- DOE works with thousands of Local Community Agencies on residential energy efficiency upgrades for low-income homeowners through the Weatherization Assistance Program.
- Through the Better Buildings Neighborhood Initiative, DOE is working with dozens of local and state governments pursuing innovative models for financing investment in residential energy efficiency beyond low-income households.
- DOE developed *Guidelines for Pilot PACE Financing Programs* in May 2010 to support local governments seeking to apply PACE to the residential sector. These

[1] EIA Annual Energy Review 2011, Table 3.6.

Guidelines were developed with insight and feedback from local government officials, energy investors, mortgage investors, and the independent financial regulators.

- DOE is currently consulting with local governments on implementation of PACE programs for commercial properties.

PACE is a property assessment program, distinct from a loan program.

- PACE programs enable energy efficiency and renewable energy improvements to be financed through property assessments that are determined by state law to have a valid public purpose.
- Property assessments are transferable from one homeowner to the next over many years, allowing owners to make long term investments even if they expect to own the house for a shorter period.
- PACE programs offer critical factors likely to lead to greater success than other potential energy efficiency financing options, including lower costs of capital, longer terms that align energy savings with assessment repayment, and transferability at time of sale.

Property tax assessments have not been identified as a source of financial risk to mortgage lenders.

- Property tax assessment programs administered by local governments are common in the United States, and none have been identified as posing systemic risk to the home mortgage market.

PACE assessments for energy efficiency improvements relieve a property of excess operating costs, reducing rather than increasing the cost of ownership.

- Under the *DOE Guidelines for Pilot PACE Financing Programs* , homeowners may only access a PACE program if the projected energy savings equal or exceed the payments for the assessment, thus improving the homeowner's cash flow.
- PACE provides a mechanism through which individual homeowners can reduce the financial burden of poor energy performance and rising energy prices on the cost of ownership.

There are contrasting views on the relationship between the financial performance of residential mortgages and the energy performance of residential properties.

- FHFA has raised concern that implementation of PACE programs would increase financial risk to mortgage lenders.
- FHFA proposes to mitigate any potential risk to the performance of home mortgages by taking actions that would effectively prevent any local or state government from proceeding with a PACE program.

- By contrast, energy inefficient houses impose on household budgets higher operating costs as well as more exposure to energy price volatility and rising prices over time. Reducing energy costs may reduce the risk of default on mortgages for those homes.
- This risk to the performance of mortgages for energy inefficient houses could be mitigated with a capital investment in energy performance improvements that yields average annual savings greater than fixed payments for assessments.

Data and analysis are needed in order to understand the effect of PACE programs on the performance of residential mortgages.

- For researchers outside the government-sponsored entities for housing and their contractors, mortgage data is difficult to access due to concerns about the confidential or proprietary nature of address-specific information.
- Insufficient data and analysis is available to validate a view that implementation of PACE programs would increase financial risk to mortgage lenders or that it would decrease financial risk to mortgage lenders.
- Drawing on sufficiently large data samples, study of both existing data as well as deliberate and controlled pilots would help test the logic underpinning either view.
- Three components are relevant to examine in order to evaluate any risk to the home mortgage market posed by PACE programs: (a) impairment to mortgages in the event of a default, (b) effect on the valuation of properties with PACE assessments, (c) likelihood of default.
- DOE is willing to work with FHFA on ways to approach the gathering and analysis of data from PACE programs, examining the three components of risk identified above among other aspects of interest.

The FHFA's Advisories and subsequent statements would discourage state and local governments from attempting residential PACE programs.

- The various documents issued by FHFA instruct regulated entities not to secure mortgages with PACE assessments, and the documents instruct them to tighten underwriting standards for all properties in a PACE district, regardless of whether those properties are participating in a PACE program.
- Due to the dominant role of the federally regulated entities in the mortgage securities market, the FHFA documents already issued, taken together, have effectively ended the development of PACE programs. Of the dozens of residential PACE programs in development in 2010, virtually all have been idled.
- In the absence of any PACE programs, there will remain insufficient data to perform the analysis necessary to examine and address concerns raised by FHFA.

Pilot projects would generate data for analysis without posing significant financial risk to mortgage lenders.

- Pilot PACE programs can be implemented with standards based on the *DOE Guidelines for Pilot PACE Financing Programs* (enclosed).
- Recognizing the importance of stability in home mortgage markets, the *Guidelines for Pilot PACE Financing Programs* provide protection to government-sponsored enterprises for housing as well as the secondary markets they support.

DOE would like to work with FHFA to examine the effect of home energy performance on mortgage performance.

- DOE seeks FHFA cooperation through instruction to its regulated entities to facilitate analysis of existing mortgage data in a way that protects private data.
- With instructions to an established third party for mortgage data analysis, Fannie Mae and Freddie Mac can provide or permit access to anonymized loan underwriting and servicing data for the purpose of evaluating the loan performance of energy efficient homes.

PACE is an innovative approach to addressing market barriers that have challenged other financing approaches to residential energy efficiency, and appropriate next steps toward its development should proceed.

- DOE strongly urges FHFA to partner with relevant stakeholders, including DOE, to ensure that pilot PACE programs are implemented with appropriate safeguards as outlined in the DOE *Guidelines for Pilot PACE Financing Programs.*
- The next step in understanding both the risk posed by energy waste in homes, and the most effective means for mitigating the risk, would be to conduct pilot PACE programs, tightly governed by the *Guidelines for Pilot PACE Financing Programs*.
- The number and scale of pilot PACE programs would need to yield a sample size of assessments sufficiently large to overcome concerns expressed about the validity of studies performed on small sample surveys. The necessary data can be collected for further analysis through the pilots, and the *Guidelines* can be reviewed and revised over time in collaboration with FHFA and stakeholders.

Department of Energy
Washington, DC 20585

Guidelines for Pilot PACE Financing Programs

May 7, 2010

This document provides best practice guidelines to help implement the Policy Framework for PACE Financing Programs announced on October 18, 2009.[1] Property Assessed Clean Energy (PACE) financing programs allow state and local governments, where permitted by state law, to extend the use of land-secured financing districts to fund energy efficiency and renewable energy improvements on private property.[2] PACE programs attach the obligation to repay the cost of improvements to the property, not to the individual borrower. After consultation within the federal government and with other stakeholders, the Department of Energy has prepared the following Best Practices to help ensure prudent financing practices during the current pilot PACE programs.

These best practice guidelines are significantly more rigorous than the underwriting standards currently applied to land-secured financing districts. Especially in light of the exceptionally challenging economic environment and recovering housing market, the following best practice guidelines for pilot PACE financing programs are important to provide an extra layer of protection to both participants who voluntarily opt into PACE programs, and to lenders who hold mortgages on properties with PACE tax liens. These best practice guidelines may evolve over time as we learn more about the performance of PACE programs and are able to identify new best practices.[3] All pilot PACE financing programs are strongly encouraged to follow these best practice guidelines. This document is divided into two sections: Program Design Best Practice Guidelines and Assessment Underwriting Best Practice Guidelines.

[1] The Policy Framework for PACE Financing Programs is available here: http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf.

[2] For more information on PACE programs, please visit: http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/PACE.html. PACE programs are paid through a tax lien on the property. Lien priority is a matter of state law, and these best practices do not (and cannot) pre-empt state law.

[3] These best practice guidelines are primarily for the residential market. Different standards may be appropriate in non-residential markets.

Program Design Best Practice Guidelines:

Local governments should consider the following program design features to increase the reliability of energy and economic performance for the benefit of program participants, mortgage holders, and investors.

1. Expected Savings-to-Investment Ratio (SIR) Greater Than One[4]

The primary rationale for PACE programs is to pursue a legally-defined "public purpose", which generally includes environmental, health, and energy independence benefits.[5] Although traditional land-secured assessment districts do not require projects to "pay for themselves", PACE financing should generally be limited to cost effective measures to protect both participants and mortgage holders until PACE program impacts become more widely understood.

The financed package of energy improvements should be designed to pay for itself over the life of the assessment. This program attribute improves the participant's debt-to-income ratio, increasing the participant's ability to repay PACE assessments and other debt, such as mortgage payments. Local governments should consider three program design features to ensure that the expected SIR is greater than one:[6]

- An energy audit and modeling of expected savings to identify energy efficiency and renewable energy property improvement measures that are likely to deliver energy and dollar savings in excess of financed costs over the assessment term. Local governments should limit investment to those identified measures.

---

[4] SIR = [Estimated savings over the life of the assessment, discounted back to present value using an appropriate discount rate] divided by [Amount financed through PACE assessment]

Savings are defined as the positive impacts of the energy improvements on participant cash flow. Savings can include reduced utility bills as well as any payments for renewable energy credits or other quantifiable environmental and health benefits that can be monetized. Savings should be calculated on an annual basis with an escalator for energy prices based either on the Energy Information Agency (EIA) U.S. forecast or a substantiated local energy price escalator.

[5] Specific public purposes are defined by the state's enabling legislation, which may vary somewhat between states. Existing legislation is available here: http://www.dsireusa.org/incentives/index.cfm?EE=1&RE=1&SPV=0&ST=0&searchtype=PTFAuth&sh=1

[6] These program options are not mutually exclusive and programs should consider deploying them in concert. In addition, these measures could be coordinated with the proposed HOMESTAR's Silver and Gold guidelines. More Information on HOMESTAR is available here: http://www.whitehouse.gov/the-press-office/fact-sheet-homestar-energy-efficiency-retrofit-program

- In lieu of audits, programs may choose to limit eligibility to those measures with well-documented energy and dollar savings for a given climate zone. There are a number of energy efficiency and renewable energy investments that are most likely to yield a SIR of greater than one for most properties in a region.
- Encourage energy efficiency before renewable energy improvements. The economics of renewable energy investments can be enhanced when packaged with energy efficiency measures. The SIR should be calculated for the entire package of investments, not individual measures.

2. The Term of the Assessment Should Not Exceed the Useful Life of the Improvements

This best practice guidelines document is intended to ensure that a property owner's ability to repay is enhanced throughout the life of the PACE assessment by the energy savings derived from the improvements. It is important to note that the useful life of the measure often exceeds the assessment term.

3. Mortgage Holder of Record Should Receive Notice When PACE Liens Are Placed

Mortgage holders should receive notice when residential property owners fund improvements using a PACE assessment.[7]

4. PACE Lien Non-Acceleration Upon Property Owner Default

In states where non-acceleration of the lien is standard for other special assessments, it should also be standard for PACE assessments. After a foreclosure, the successor owners are responsible for future assessment payments. Non-acceleration is an important mortgage holder protection because liability for the assessment in foreclosure is limited to any amount in arrears at the time; the total outstanding assessed amount is not due in full.

5. The Assessment Should Be Appropriately Sized

PACE assessments should generally not exceed 10% of a property's estimated value (i.e. a property value-to-lien ratio of 10:1). In addition, because of the administrative requirements of administering PACE programs, assessments should generally not be issued for projects below a minimum cost threshold of approximately $2500. These measures ensure that improvements are "right-sized" for properties and for the administrative costs of piloting PACE programs. PACE programs may also choose to set the maximum assessment relative to median home values.

[7] A different standard may apply to non-residential properties.

6. Quality Assurance and Anti-Fraud Measures

Quality assurance and anti-fraud measures are essential protections for property owners, mortgage holders, investors, and local governments. These measures should include:

- Only validly licensed auditors and contractors that adhere to PACE program terms and conditions should be permitted to conduct PACE energy audits and retrofits. Where feasible or necessary, auditors and contractors should have additional certifications appropriate to the installed measures.
- Inspections should be completed on at least a portion of participating properties upon project completion to ensure that contractors participating in the PACE program are adequately performing work.
- If work is not satisfactorily completed, contractor payment should be withheld until remedied. If not satisfactorily remedied, programs should disqualify contractors from further PACE-related work.
- Property owners should sign-off before payment is issued for the work.

7. Rebates and Tax Credits

The total amount of PACE financing should be net of any expected direct cash rebates for the energy efficiency or renewable energy improvements chosen. However, other non-direct cash incentives can be more difficult to manage. For example, calculating an expected income tax credit can be complicated, as not all participants will have access to the tax credit and there will be time lags between project completion and tax credit monetization. Programs should therefore consider alternative structures for financing this gap, including assignment of rebates and tax credits to repay PACE assessments, short-term assessment additions, and partnering with third party lenders that offer short-term bridge financing. At the minimum, programs should provide full disclosure to participants on the implications and options available for monetizing an income tax credit.

8. Participant Education

PACE may be an unfamiliar financing mechanism to program participants. As such, it is essential that programs educate potential participants on how the PACE model works, whether it is a property owner’s most appropriate financing mechanism, and the opportunities and risks PACE program participation creates for property owners. Programs should clearly explain and provide disclosures of the following:

- How PACE financing works

- Basic information on other financing options available to property owners for financing energy efficiency and renewable energy investments, and how PACE compares
- All program fees and how participants will pay for them
- Effective interest rate including all program fees, consistent with the Good Faith Estimate (GFE) of the Real Estate Settlement Procedure Act (RESPA) and the early and final disclosure of the Truth in Lending Act (TILA).
- PACE assessment impact on escrow payments (if applicable)
- Risk that assessment default may trigger foreclosure and property loss
- Information on transferring the assessment at time of sale
- Options for and implications of including tax credits in the financed amount

9. Debt Service Reserve Fund

For those PACE programs that seek third party investors, including investors in a municipal bond to fund the program, an assessment reserve fund should be created to protect investors from late payment or non-payment of PACE assessments.

10. Data Collection

Pilot programs should collect the data necessary to evaluate the efficacy of PACE programs. Examples of typically collected data would include: installed measures, investment amount, default and foreclosure data, expected savings, and actual energy use before and after measures installation. To the extent possible, it's important that programs have access to participant utility bills, ideally for 18 months before and after the improvements are made. The Department of Energy will provide more detailed information on collecting this data, obtaining permission to access utility bills, and how to report program information to enable a national PACE performance evaluation.

Assessment Underwriting Best Practices Guidelines:

Local governments should design underwriting criteria to reduce the risk of default and impairment to the property's mortgage holders. Many best practices for reducing these risks are included in the previous section. In addition, underwriting criteria for individual assessments should include the following:

1. Property Ownership

- Check that applicant has clear title to property and that the property is located in the financing district.

- Check the property title for restrictions such as details about power of attorney, easements, or subordination agreements.

2. Property-Based Debt and Property Valuation

- Estimated property value should be in excess of property owner's public and private debt on the property, including mortgages, home equity lines of credit (HELOCs), and the addition of the PACE assessment, to ensure that property owners have sufficient equity to support the PACE assessment. Local governments should be cautious about piloting the PACE model in areas with large numbers of "underwater" mortgages.
- To avoid placing an additional tax lien on properties that are in distress, have recently been in distress, or are at risk for distress, the following should be verified:
  - There are no outstanding taxes or involuntary liens on the property in excess of $1000 (i.e. liens placed on property for failure of the owner to comply with a payment obligation).
    Property is not in foreclosure and there have been no recent mortgage or other property-related debt defaults.
- Programs should attain estimated property value by reviewing assessed value. This is typically used in assessment districts. If assessed value appears low or high, programs should review comparable market data to determine the most appropriate valuation. If programs believe the estimated value remains inaccurate or there is a lack sufficient comparable market data to conduct an analysis, they should conduct a desktop appraisal.[8]

3. Property Owner Ability to Pay

PACE programs attach the obligation to repay the cost of improvements to the property (not to the individual borrower). The standard underwriting for other special assessments only consists of examining assessed value to public debt, the total tax rate, and the property tax delinquency rate. However, we deem certain precautions important due to the current vulnerability of mortgage lenders and of the housing market in many regions. These precautions include:

- A Savings-to-Investment Ratio (SIR) greater than one, as described above, to maintain or improve the property owner's debt-to-income ratio.
- Property owner is current on property taxes and has not been late more than once in the past 3 years, or since the purchase of the house if less than three years.[9]

[8] A desktop appraisal involves a licensed appraiser estimating the value of a property without a visual inspection. These appraisals cost approximately $100.
[9] Applicants that have purchased the property within 3 years have recently undergone rigorous credit analyses that compensate for the short property tax payment history.

- Property owner has not filed for or declared bankruptcy for 7 years.

These best practice guidelines will evolve over time with continued monitoring of the performance of pilot PACE financing programs.

Comptroller of the Currency
Administrator of National Banks

US Department of the Treasury

OCC Mortgage Metrics Report

Disclosure of National Bank and Federal Savings Association Mortgage Loan Data

First Quarter 2012

Office of the Comptroller of the Currency
Washington, D.C.

June 2012

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Executive Summary

This *OCC Mortgage Metrics Report* for the first quarter of 2012 provides performance data on first-lien residential mortgages serviced by selected national and federal savings banks. The mortgages in this portfolio comprise 60 percent of all mortgages outstanding in the United States—31.0 million loans totaling $5.3 trillion in principal balances. This report provides information on their performance through March 31, 2012.

The overall quality of the portfolio of serviced mortgages improved during the quarter with the percentage of mortgages that were current and performing at 88.9 percent, the highest level in three years. The percentages of mortgages that were 30 to 59 and 60 to 89 days delinquent also decreased to their lowest levels since the OCC began publishing the Mortgage Metrics report in first quarter of 2008 (see table 7). This improvement can be attributed to several factors, including strengthening economic conditions during the quarter, seasonal effects, servicing transfers, and the ongoing effects of both home retention loan modification programs as well as home forfeiture actions.

While the number of foreclosures in process has decreased from a year ago, the percentage of mortgages that were in the process of foreclosure at the end of the first quarter of 2012 increased by 1.8 percent from the previous quarter and 2.3 percent from a year earlier. The number of newly initiated foreclosures decreased by 1.8 percent from the previous quarter and 8.1 percent from a year earlier. The decrease in new foreclosures reflects the continued emphasis on home retention actions as well as the decrease in the number of seriously delinquent loans over the past few quarters. Many servicers have also slowed new foreclosure referrals in response to changing servicing standards and requirements. The number of completed foreclosures increased by 5.9 percent from the previous quarter and 2.7 percent a year earlier as the large number of foreclosures in process continues to progress.

Servicers continued to emphasize alternatives to foreclosure during the quarter, initiating nearly twice as many new home retention actions—loan modifications, trial-period plans, and payment plans—as completed foreclosures, short sales, and deed-in-lieu-of-foreclosure transactions. Servicers implemented 352,989 new home retention actions during the quarter, while starting 286,951 new foreclosures. The number of home retention actions implemented by servicers decreased 23.3 percent from the previous quarter and 36.7 percent from a year earlier as delinquencies have fallen to three-year lows and servicers exhaust alternatives to assist delinquent borrowers who have not already been assisted through available home retention programs.

Mortgage Performance

- The percentage of mortgages that were current and performing increased to 88.9 percent at the end of the first quarter of 2012 (see table 7).
- The percentage of mortgages in the portfolio that were 30 to 59 days delinquent at the end of the first quarter decreased by 17.3 percent from the previous quarter and by 3.8 percent from a year earlier (see table 7).
- The percentage of mortgages in the portfolio that were seriously delinquent at the end of the quarter was 4.5 percent—down 10.4 percent from the previous quarter and 6.2 percent from a year earlier (see table 7).

- The quality of serviced government-guaranteed mortgages improved during the quarter. Mortgages that were current and performing increased to 85.9 percent from 84.2 percent in the prior quarter. The percentage of these mortgages that were current and performing a year earlier was 87.0 percent (see table 9).
- Mortgages serviced for Fannie Mae and Freddie Mac (government-sponsored enterprises or GSEs) made up the majority—59 percent—of mortgages in the reporting servicers' portfolios. The overall percentage of these mortgages that were current and performing has remained relatively constant over the last year. The percentage of these mortgages that were current and performing at the end of the quarter was 93.7 percent (see table 10).

Home Retention Actions: Loan Modifications, Trial-Period Plans, and Payment Plans

- Servicers implemented 352,989 new home retention actions—modifications, trial-period plans, and payment plans—during the first quarter of 2012 (see table 1). This was nearly twice the number of completed foreclosures, short sales, and deed-in-lieu-of-foreclosure actions during the quarter (see table 5). The number of new home retention actions in the first quarter decreased by 23.3 percent percent from the previous quarter and decreased 36.7 percent from a year earlier.
- New home retention actions comprised 102,158 modifications, 129,016 trial-period plans, and 121,815 payment plans during the quarter. Home Affordable Modification Program (HAMP) modifications decreased 13.5 percent from the previous quarter to 36,554. Other modifications decreased by 11.2 percent to 65,604. Trial-period plans also decreased with HAMP trial-period plans decreasing by 2.9 percent and other trial-period plans decreasing 44.0 percent from the previous quarter.[1] During the past five quarters, servicers initiated more than 2.2 million home retention actions (see table 1) and more than 2.5 million modifications since 2008 (see table 2).

Table 1. **Number of New Home Retention Actions**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Other Modifications	106,650	80,398	83,598	73,878	65,604	-11.2%	-38.5%
HAMP Modifications	53,250	70,071	53,941	42,275	36,554	-13.5%	-31.4%
Other Trial-Period Plans	181,099	118,928	127,528	182,856	102,486	-44.0%	-43.4%
HAMP Trial-Period Plans	57,649	44,148	29,338	27,323	26,530	-2.9%	-54.0%
Payment Plans	158,821	142,678	164,566	133,881	121,815	-9.0%	-23.3%
Total	557,469	456,223	458,971	460,213	352,989	-23.3%	-36.7%

- Servicers reduced interest rates in 80.6 percent of all modifications made during the first quarter of 2012. Term extensions were used in 73.7 percent of modifications, principal deferrals in 24.6 percent, and principal reductions in 10.2 percent (see table 17). Among HAMP modifications, servicers reduced interest rates in 89.9 percent of those modifications,

[1] In the fourth quarter of 2011 certain servicers converted a significant number of borrowers in existing payment plans to trial period plans.

deferred principal in 32.8 percent, and reduced principal in 20.7 percent of all HAMP modifications (see table 18).

- Servicers reduced monthly principal and interest payments in 91.5 percent of modifications made in the quarter (see table 22). Servicers reduced monthly payments by an average of 27.4 percent for all borrowers who qualified for modifications, with an average decrease of $437. HAMP modifications reduced payments by an average of $588, or 35.4 percent, and other modifications reduced monthly payments by $353, or 22.9 percent (see table 24).

Modified Loan Performance

- Servicers modified 2,543,133 mortgages from the beginning of 2008 through the end of the fourth quarter of 2011. At the end of the first quarter of 2012, 50.7 percent of these modifications remained current or were paid off. Another 7.1 percent were 30 to 59 days delinquent, and 15.1 percent were seriously delinquent. Almost 11 percent were in the process of foreclosure, and 6.3 percent had completed the foreclosure process. More recent modifications that emphasized reduced payments, affordability and sustainability have outperformed modifications implemented in earlier periods (see table 2).

***Table 2.* Status of Mortgages Modified in 2008–2011**

	Total	Current	30–59 Days Delinquent	Seriously Delinquent	Foreclosures in Process	Completed Foreclosures	Paid Off	No Longer in the Portfolio*
2008	445,354	26.2%	5.3%	15.9%	16.1%	15.0%	3.3%	18.2%
2009	594,350	38.7%	6.6%	17.2%	14.1%	9.1%	2.0%	12.3%
2010	939,368	53.7%	7.5%	14.6%	9.9%	3.8%	0.8%	9.7%
2011	564,061	71.5%	8.6%	12.9%	4.8%	0.6%	0.3%	1.3%
Total	2,543,133	49.3%	7.1%	15.1%	10.8%	6.3%	1.4%	9.9%
HAMP Modification Performance Compared With Other Modifications**								
Other Modifications	1,194,442	53.4%	8.3%	16.8%	9.8%	4.1%	1.0%	6.6%
HAMP Modifications	565,751	68.2%	6.5%	9.3%	6.0%	1.9%	0.4%	7.7%
Modifications That Reduced Payments by 10 Percent or More								
Modifications That Reduced Payments by 10% or More	1,511,900	57.9%	7.1%	12.4%	8.3%	3.8%	0.9%	9.5%
Modifications That Reduced Payments by Less Than 10 Percent								
Modifications That Reduced Payments by Less Than 10%	1,031,233	36.8%	7.1%	18.9%	14.5%	9.9%	2.2%	10.5%

*Processing constraints prevented some servicers from reporting the reason for removal from the portfolio.

**Modifications used to compare with HAMP modifications only include modifications implemented from the third quarter of 2009 through the fourth quarter of 2011.

- HAMP modifications perform better than other modifications. Of the 565,751 HAMP modifications implemented since the third quarter of 2009, 68.2 percent remained current, compared with 53.4 percent of other modifications implemented during the same period (see table 2). The better performance of HAMP modifications reflects significantly reduced

monthly payments, its emphasis on affordability relative to borrower income, required income verification, and successfully completing a required trial period.

- Modifications that reduced borrower monthly payments by 10 percent or more performed better than those that reduced payments by less than 10 percent—the greater the payment decrease, the better the subsequent performance. At the end of the first quarter of 2012, 57.9 percent of modifications that reduced payments by 10 percent or more were current and performing, compared with 36.8 percent of those that reduced payments by less (see table 2).

- Modifications on mortgages held in the servicers' own portfolios or serviced for the GSEs performed better than modifications on mortgages serviced for others. Of the modifications implemented from January 1, 2008 through March 31, 2011 that were in effect at least one year, 23.4 percent of modifications on mortgages held in the servicers' own portfolios were 60 or more days delinquent after 12 months, 27.0 percent of Fannie Mae mortgages were 60 or more days delinquent, and 26.7 percent of Freddie Mac mortgages were 60 or more days delinquent after 12 months. Conversely, 48.3 percent of government-guaranteed mortgages and 45.8 percent of private investor-held loans were 60 or more days delinquent after 12 months. This variance may reflect differences in the underlying risk characteristics of the loans, differences in the modification programs, and servicers' additional flexibility when modifying mortgages they owned compared with mortgages serviced for others (see table 3).

***Table 3.* Re-Default Rates for Portfolio Loans and Loans Serviced for Others**
(60 or More Days Delinquent)*

Investor Loan Type	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fannie Mae	11.4%	18.3%	23.4%	27.0%
Freddie Mac	12.3%	18.6%	23.1%	26.7%
Government-Guaranteed	17.0%	34.2%	43.8%	48.3%
Private	23.3%	33.6%	40.8%	45.8%
Portfolio Loans	7.8%	14.7%	19.9%	23.4%
Overall	15.6%	25.4%	31.9%	36.2%

*Data include all modifications made since January 1, 2008 that have aged the indicated number of months.

Foreclosures and Other Home Forfeiture Actions

- Newly initiated foreclosures decreased 1.8 percent from the previous quarter and 8.1 percent from a year earlier. The number of foreclosures in process increased 0.6 percent from the previous quarter but decreased 3.0 percent from a year earlier (see table 4). This reduction in new foreclosures is attributable to servicers' ongoing emphasis on modifications and other loss mitigation programs, a declining number of seriously delinquent mortgages over the last year, and slower initiation of new foreclosure referrals.

***Table 4.* New Foreclosures and Foreclosures in Process**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Newly Initiated Foreclosures	312,235	287,162	347,726	292,173	286,951	-1.8%	-8.1%
Foreclosures in Process	1,308,757	1,319,987	1,327,077	1,262,294	1,269,921	0.6%	-3.0%

- Home forfeiture actions totaled 185,781 at the end of the quarter—an increase of 1.9 percent from the previous quarter and 8.3 percent from a year earlier. Completed foreclosures

increased 5.9 percent from the previous quarter and 2.7 percent from a year earlier. New short sales decreased by 5.2 percent from the previous quarter, but increased 19.7 percent from a year earlier, and comprise nearly one-third of home forfeiture actions. New deed-in-lieu-of-foreclosure actions decreased by 4.5 percent from the previous quarter but increased 65.1 percent from a year earlier (see table 5).

***Table 5.* Completed Foreclosures and Other Home Forfeiture Actions**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Completed Foreclosures	119,739	121,209	113,202	116,159	122,979	5.9%	2.7%
New Short Sales	50,108	56,406	57,479	63,257	59,996	-5.2%	19.7%
New Deed-in-Lieu-of-Foreclosure Actions	1,700	2,547	2,620	2,939	2,806	-4.5%	65.1%
Total	171,547	180,162	173,301	182,355	185,781	1.9%	8.3%

About Mortgage Metrics

The *OCC Mortgage Metrics Report* presents data on first-lien residential mortgages serviced by nine national and federal savings banks with the largest mortgage-servicing portfolios.[2] The data represent 60 percent of all first-lien residential mortgages outstanding in the country and focuses on credit performance, loss mitigation efforts, and foreclosures. More than 92 percent of the mortgages in the portfolio were serviced for investors other than the reporting institutions. At the end of March 2012, the reporting institutions serviced 31.0 million first-lien mortgage loans, totaling more than $5.3 trillion in unpaid balances (see table 6).

Although the loans reflected in this report represent a large percentage of the overall mortgage industry, they do not represent a statistically random sample of all mortgage loans. The characteristics of these loans may differ from the overall population of mortgages. This report does not attempt to quantify or adjust for known seasonal effects that occur within the mortgage industry.

In addition to providing information to the public, the report and its data support the supervision of national bank and thrift mortgage-servicing practices. Examiners use the data to help assess emerging trends, identify anomalies, compare servicers with peers, evaluate asset quality and necessary loan-loss reserves, and assess loss mitigation actions.

The report promotes the use of standardized terms and elements, which allow better comparisons across the industry and over time. The report uses standardized definitions for prime, Alt-A, and subprime mortgages based on commonly used credit score ranges.

The OCC and the participating institutions devote significant resources to ensuring that the information is reliable and accurate. Steps to ensure the validity of the data include quality assurance processes conducted by the banks and savings association, comprehensive data validation tests performed by a third-party data aggregator, and comparisons with the institutions' quarterly call and thrift financial reports. Data sets of this size and scope inevitably incur some degree of missing or inconsistent data and other imperfections. The OCC requires servicers to adjust previous data submissions when errors and omissions are detected. In some cases, data presented in this report reflect resubmissions from institutions that restate and correct earlier information.

The report also includes mortgage modification data by state and territories in appendix E. These data fulfill reporting requirements in the Dodd–Frank Wall Street Reform and Consumer Protection Act (Public Law 111-203).

Definitions and Method

The report uses standard definitions for three categories of mortgage creditworthiness based on the following ranges of borrowers' credit scores at the time of origination:

- **Prime**—660 and above.
- **Alt-A**—620 to 659.

[2] The eight national banks are Bank of America, JPMorgan Chase, Citibank, HSBC, MetLife, PNC, U.S. Bank, and Wells Fargo. The federal savings association is OneWest Bank.

- **Subprime**—below 620.

Approximately 11 percent of mortgages in the portfolio were not accompanied by credit scores and are classified as "other." This group includes a mix of prime, Alt-A, and subprime mortgages. In large part, the lack of credit scores results from acquisitions of portfolios from third parties for which borrower credit scores at origination were not available.

Additional definitions include:

- **Completed foreclosures**—Ownership of properties transferred to servicers or investors. The ultimate result is the loss of borrowers' homes because of nonpayment.
- **Deed-in-lieu-of-foreclosure actions**—Actions in which borrowers transfer ownership of the properties (deeds) to servicers in full satisfaction of the outstanding mortgage debt to lessen the adverse impact of the debt on borrowers' credit records. Deed-in-lieu-of-foreclosure actions typically have a less adverse impact than foreclosures on borrowers' credit records.
- **Foreclosures in process**—Number of mortgages for which servicers have begun formal foreclosure proceedings but have not yet completed the foreclosure process. The foreclosure process varies by state and can take 15 months or more to complete. Many foreclosures in process never result in the loss of borrowers' homes because servicers simultaneously pursue other loss mitigation actions, and borrowers may return their mortgages to current and performing status.
- **Government-guaranteed mortgages**—All mortgages with an explicit guaranty from the U.S. government, including the Federal Housing Administration (FHA), the Department of Veterans Affairs (VA), and, to a lesser extent, certain other departments. These loans may be held in pools backing Government National Mortgage Association (Ginnie Mae) securities, owned by or securitized through different third-party investors, or held in the portfolios of reporting institutions.
- **Home retention actions**—Loan modifications, trial-period plans, and payment plans that allow borrowers to retain ownership and occupancy of their homes while attempting to return the loans to a current and performing status.
- **Loan modifications**—Actions that contractually change the terms of mortgages with respect to interest rates, maturity, principal, or other terms of the loan.
- **Newly initiated foreclosures**—Mortgages for which the servicers initiate formal foreclosure proceedings during the quarter. Many newly initiated foreclosures do not result in the loss of borrowers' homes because servicers simultaneously pursue other loss mitigation actions, and borrowers may act to return their mortgages to current and performing status.
- **Payment plans**—Short-to-medium-term changes in scheduled terms and payments in order to return mortgages to a current and performing status.
- **Payment-option, adjustable rate mortgages (ARM)**—Mortgages that allow borrowers to choose a monthly payment that may initially reduce principal, pay interest only, or result in negative amortization, when some amount of unpaid interest is added to the principal balance of the loan and results in an increased balance.

- **Principal deferral modifications**—Modifications that remove a portion of the principal from the amount used to calculate monthly principal and interest payments for a set period. The deferred amount becomes due at the end of the loan term.
- **Principal reduction modifications**—Modifications that permanently forgive a portion of the principal amount owed on a mortgage.
- **Re-default rates**—Percentage of modified loans that subsequently become delinquent or enter the foreclosure process. As measures of delinquency, this report presents re-default rates using 30, 60, and 90 or more days delinquent and in process of foreclosure. It focuses on the 60-day-delinquent measure. All re-default data presented in this report are based on modified loans in effect for the specified amount of time after the modification. All loans that have been repaid in full, been refinanced, been sold, or completed the foreclosure process are removed from the calculation. Data include only modifications that have had time to age the indicated number of months following the modification.
- **Seriously delinquent loans**—Mortgages that are 60 or more days past due, and all mortgages held by bankrupt borrowers whose payments are 30 or more days past due.
- **Short sales**—Sales of the mortgaged properties at prices that net less than the total amount due on the mortgages. Servicers and borrowers negotiate repayment programs, forbearance, or forgiveness for any remaining deficiency on the debt. Short sales typically have a less adverse impact than foreclosures on borrowers' credit records.
- **Trial-period plans**—Home retention actions that allow borrowers to demonstrate capability and willingness to pay their modified mortgages for a set period of time. The action becomes permanent following the successful completion of the trial period.

Loan delinquencies are reported using the Mortgage Bankers Association convention that a loan is past due when a scheduled payment is unpaid for 30 days or more. The statistics and calculated ratios are based on the number of loans rather than on the dollar amount outstanding.

Percentages are rounded to one decimal place unless the result is less than 0.1 percent, which is rounded to two decimal places. The report uses whole numbers when approximating. Values in tables may not total 100 percent because of rounding.

In tables throughout this report, the quarters are indicated by the last day of the quarter (e.g., 3/31/12), quarter-to-quarter changes are shown under the column "1Q %Change" column, and year-to-year changes are shown under the column "1Y %Change" column.

In tables throughout this report, percentages shown under "1Q %Change" and "1Y %Change" are calculated using actual data, not the rounded values reported for each quarter. Calculating period-to-period changes from the rounded values reported in the tables may yield materially different values than those values indicated in the table.

Mortgage Metrics Report data may not agree with other published data because of timing delays in updating servicer-processing systems.

PART I: Mortgage Performance

Part I describes the performance of the overall mortgage portfolio, mortgages owned and held by the reporting banks and savings association, government-guaranteed mortgages, mortgages serviced for the GSEs, and mortgages within each risk category.

Overall Mortgage Portfolio

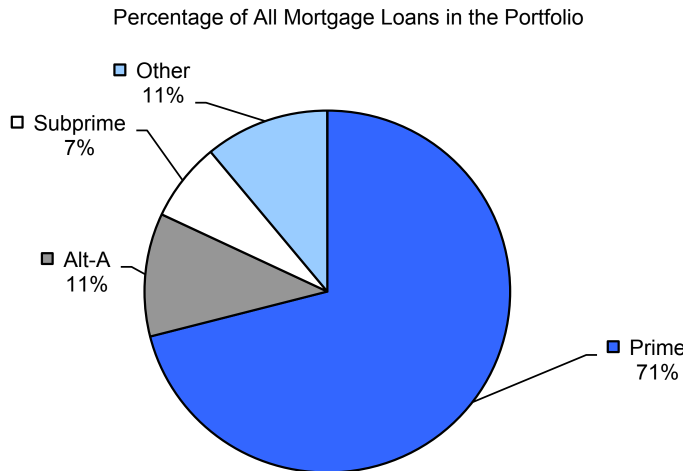
At the end of the first quarter of 2012, the servicing portfolio included 31.0 million loans with $5.3 trillion in unpaid balances (see table 6). Portfolio composition has remained essentially the same over the past year. Prime loans were 71 percent of the portfolio at quarter end, increased from 70 percent a year ago. Alt A and other loans were both 11 percent of the portfolio at quarter end, and subprime loans were 7 percent of the total serviced portfolio.

***Table 6.* Overall Mortgage Portfolio**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12
Total Servicing (Millions)	$5,686,103	$5,682,951	$5,598,366	$5,415,566	$5,332,795
Total Servicing (Number of Loans)	32,713,033	32,769,737	32,434,997	31,381,140	31,026,381
Composition (Percentage of All Mortgages in the Portfolio)					
Prime	70%	70%	70%	71%	71%
Alt-A	11%	11%	11%	11%	11%
Subprime	7%	8%	7%	7%	7%
Other	12%	12%	12%	11%	11%
Composition (Number of Loans in Each Risk Category of the Portfolio)					
Prime	22,804,671	22,904,910	22,765,207	22,311,549	22,142,982
Alt-A	3,505,201	3,522,896	3,499,907	3,388,098	3,359,124
Subprime	2,418,112	2,476,801	2,426,056	2,307,692	2,260,455
Other	3,985,049	3,865,130	3,743,827	3,373,801	3,263,820

***Figure 1.* Portfolio Composition**

Percentage of All Mortgage Loans in the Portfolio

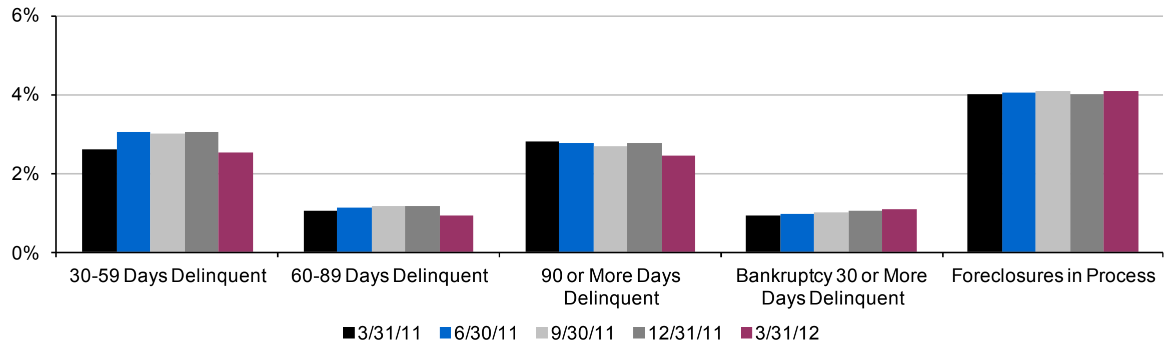


Overall Mortgage Performance

The overall performance of the portfolio of mortgages serviced by reporting banks and thrift improved from both the previous quarter and a year earlier. The percentage of mortgages that were current and performing at the end of the quarter was 88.9 percent, the highest level in three years. The percentages of mortgages that were 30 to 59 and 60 to 89 days past due decreased to their lowest levels since the the OCC began publishing the *Mortgage Metrics Report* (see table 7). Mortgages 30 to 59 days delinquent at quarter end were 2.5 percent of the portfolio, down 17.3 percent from the previous quarter and 3.8 percent from a year earlier. Seriously delinquent mortgages (those 60 or more days past due or in bankruptcy and 30 or more days past due) were 4.5 percent of the portfolio at quarter end, down 10.4 percent from the previous quarter and 6.2 percent from a year earlier. Foreclosures in process at the end of the quarter were 4.1 percent of the portfolio, up 1.8 percent from the prior quarter and 2.3 percent from a year earlier. The number of foreclosures in process increased 0.6 percent from the previous quarter but decreased 3.0 percent from a year earlier. The improvement in performance reflected in this report may not be generalized to the overall population of mortgage in the United States.

***Table 7.* Overall Portfolio Performance**							
(Percentage of Mortgages in the Portfolio)							
	3/31/2011	6/30/2011	9/30/2011	12/31/2011	3/31/2012	1Q %Change	1Y %Change
Current and Performing	88.6%	88.1%	88.0%	88.0%	88.9%	1.1%	0.3%
30–59 Days Delinquent	2.6%	3.0%	3.0%	3.0%	2.5%	-17.3%	-3.8%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	1.0%	1.1%	1.2%	1.2%	0.9%	-20.5%	-9.6%
90 or More Days Delinquent	2.8%	2.8%	2.7%	2.8%	2.5%	-11.3%	-12.9%
Bankruptcy 30 or More Days Delinquent	0.9%	1.0%	1.0%	1.0%	1.1%	3.7%	18.3%
Subtotal for Seriously Delinquent	**4.8%**	**4.9%**	**4.9%**	**5.0%**	**4.5%**	**-10.4%**	**-6.2%**
Foreclosures in Process	4.0%	4.0%	4.1%	4.0%	4.1%	1.8%	2.3%
(Number of Mortgages in the Portfolio)							
Current and Performing	28,991,538	28,853,845	28,550,780	27,600,497	27,589,940	0.0%	-4.8%
30–59 Days Delinquent	853,484	996,859	972,715	952,719	779,022	-18.2%	-8.7%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	340,258	371,716	384,638	371,164	291,663	-21.4%	-14.3%
90 or More Days Delinquent	920,363	910,183	875,943	867,508	760,736	-12.3%	-17.3%
Bankruptcy 30 or More Days Delinquent	298,633	317,147	323,844	326,958	335,099	2.5%	12.2%
Subtotal for Seriously Delinquent	**1,559,254**	**1,599,046**	**1,584,425**	**1,565,630**	**1,387,498**	**-11.4%**	**-11.0%**
Foreclosures in Process	1,308,757	1,319,987	1,327,077	1,262,294	1,269,921	0.6%	-3.0%
Total	**32,713,033**	**32,769,737**	**32,434,997**	**31,381,140**	**31,026,381**	**-1.1%**	**-5.2%**

Figure 2. **Overall Portfolio Performance**



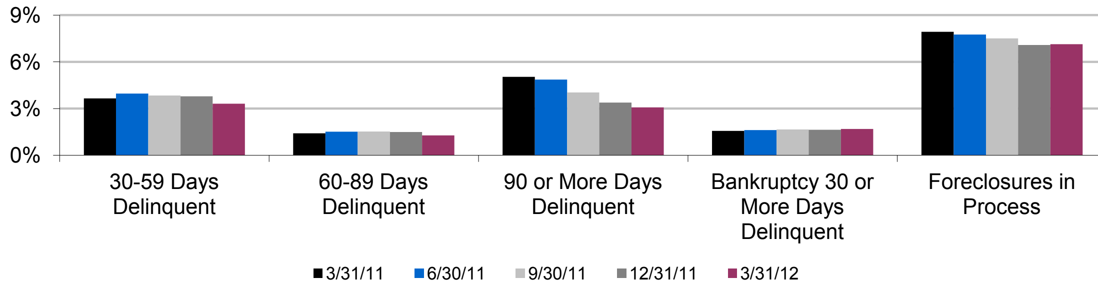
Performance of Mortgages Held by Reporting Banks and Thrift

The nine reporting institutions held 7.5 percent of all mortgages reviewed in their own portfolios (excluding government-guaranteed mortgages.) The remaining mortgages were serviced for others. The performance of mortgages held by the reporting banks improved during the quarter (see table 8). The percentage of these mortgages that were current at the end of the quarter was 83.5 percent, increased from 82.6 percent the previous quarter and 80.4 percent a year earlier. The percentage of these mortgages that were 30 to 59 days delinquent at the end of the quarter was 3.3 percent, a 12.4 percent reduction from the previous quarter and 9.1 percent reduction from a year earlier. The percentage of these mortgages that were seriously delinquent at quarter end was 6.0 percent, down 7.4 percent from the prior quarter and 24.7 percent from a year earlier. The percentage of these mortgages in the process of foreclosure was 7.1 percent, a 0.7 percent increase from the previous quarter but a 9.9 percent decrease from a year earlier. Historically, mortgages held by the reporting institutions have underperformed mortgages serviced for the GSEs, but performed better than government guaranteed mortgages. Mortgages held in bank portfolios include concentrations of loans with non-conforming risk characteristics that fall between GSE and government-guaranteed underwriting criteria, loans on properties located in weaker geographic markets acquired through the purchase of failed institutions, or more recently, loans repurchased from investors.

Table 8.* Performance of Mortgages Held by Reporting Banks and Thrift (Percentage)							
	3/31/2011	6/30/2011	9/30/2011	12/31/2011	3/31/2012	1Q %Change	1Y %Change
Current and Performing	80.4%	80.3%	81.4%	82.6%	83.5%	1.1%	3.9%
30–59 Days Delinquent	3.6%	4.0%	3.8%	3.8%	3.3%	-12.4%	-9.1%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	1.4%	1.5%	1.5%	1.5%	1.3%	-14.7%	-9.6%
90 or More Days Delinquent	5.0%	4.9%	4.0%	3.4%	3.1%	-9.0%	-39.0%
Bankruptcy 30 or More Days Delinquent	1.6%	1.6%	1.7%	1.6%	1.7%	2.8%	7.8%
Subtotal for Seriously Delinquent	**8.0%**	**8.0%**	**7.2%**	**6.5%**	**6.0%**	**-7.4%**	**-24.7%**
Foreclosures in Process	7.9%	7.8%	7.5%	7.1%	7.1%	0.7%	-9.9%
Performance of Mortgages Held by Reporting Banks and Thrift (Number)							
Current and Performing	1,899,820	1,870,675	1,909,516	1,971,555	1,939,317	-1.6%	2.1%
30–59 Days Delinquent	86,162	92,252	90,050	90,346	76,969	-14.8%	-10.7%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	33,286	35,294	35,675	35,636	29,561	-17.0%	-11.2%
90 or More Days Delinquent	118,953	113,134	94,524	80,609	71,355	-11.5%	-40.0%
Bankruptcy 30 or More Days Delinquent	36,963	37,712	38,799	39,148	39,150	0.0%	5.9%
Subtotal for Seriously Delinquent	**189,202**	**186,140**	**168,998**	**155,393**	**140,066**	**-9.9%**	**-26.0%**
Foreclosures in Process	187,173	180,549	175,969	169,064	165,679	-2.0%	-11.5%
Total	**2,362,357**	**2,329,616**	**2,344,533**	**2,386,358**	**2,322,031**	**-2.7%**	**-1.7%**

*The data in this table exclude government-guaranteed mortgages owned and held by the reporting institutions.

Figure 3. **Performance of Mortgages Held by Reporting Banks and Thrift**



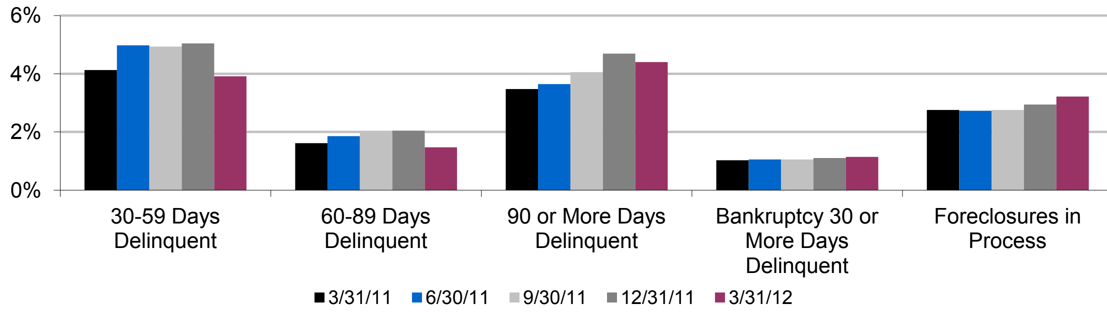
Performance of Government-Guaranteed Mortgages

Government-guaranteed mortgages were 22.3 percent of the portfolio at the end of the quarter, increased from 20.2 percent a year earlier. The performance of government-guaranteed mortgages improved in the first quarter but remained substantially weaker than a year earlier (see table 9). The percentage of these loans that were current and performing was 85.9 percent at the end of the quarter, up from 84.2 percent at the end of the previous quarter but down from 87.0 percent a year earlier. The percentage of these loans that were 30 to 59 days delinquent was 3.9 percent at the end of the quarter, a 22.4 percent decrease from the previous quarter and 5.1 percent decrease from a year earlier. The percentage of these loans that were seriously delinquent was 7.0 percent at quarter end, down 10.5 percent from the previous quarter but increased 14.8 percent from a year earlier. The percentage of these loans in the process of foreclosure at the end of the quarter was 3.2 percent, up 9.4 percent from the previous quarter and 16.7 percent from a year earlier. More than 79 percent of these loans were FHA loans, 15 percent were VA loans, and 6 percent were other government-guaranteed mortgages. Almost 86 percent of the government-guaranteed mortgages were in pools of loans backing Ginnie Mae securities.

Table 9. Performance of Government-Guaranteed Mortgages (Percentage)

	3/31/2011	6/30/2011	9/30/2011	12/31/2011	3/31/2012	1Q %Change	1Y %Change
Current and Performing	87.0%	85.7%	85.2%	84.2%	85.9%	2.0%	-1.3%
30–59 Days Delinquent	4.1%	5.0%	4.9%	5.0%	3.9%	-22.4%	-5.1%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	1.6%	1.9%	2.0%	2.0%	1.5%	-27.8%	-8.6%
90 or More Days Delinquent	3.5%	3.6%	4.1%	4.7%	4.4%	-6.3%	26.6%
Bankruptcy 30 or More Days Delinquent	1.0%	1.1%	1.1%	1.1%	1.1%	3.4%	11.6%
Subtotal for Seriously Delinquent	**6.1%**	**6.6%**	**7.1%**	**7.8%**	**7.0%**	**-10.5%**	**14.8%**
Foreclosures in Process	2.8%	2.7%	2.8%	2.9%	3.2%	9.4%	16.7%
Performance of Government-Guaranteed Mortgages (Number)							
Current and Performing	5,743,866	5,826,732	5,914,032	5,766,800	5,940,585	3.0%	3.4%
30–59 Days Delinquent	272,272	338,346	342,104	345,295	270,710	-21.6%	-0.6%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	106,493	126,264	136,485	139,849	101,989	-27.1%	-4.2%
90 or More Days Delinquent	229,401	247,804	281,264	321,608	304,492	-5.3%	32.7%
Bankruptcy 30 or More Days Delinquent	67,748	71,810	73,375	75,869	79,266	4.5%	17.0%
Subtotal for Seriously Delinquent	**403,642**	**445,878**	**491,124**	**537,326**	**485,747**	**-9.6%**	**20.3%**
Foreclosures in Process	182,041	185,423	191,055	201,460	222,648	10.5%	22.3%
Total	**6,601,821**	**6,796,379**	**6,938,315**	**6,850,881**	**6,919,690**	**1.0%**	**4.8%**

***Figure 4.* Performance of Government-Guaranteed Mortgages**



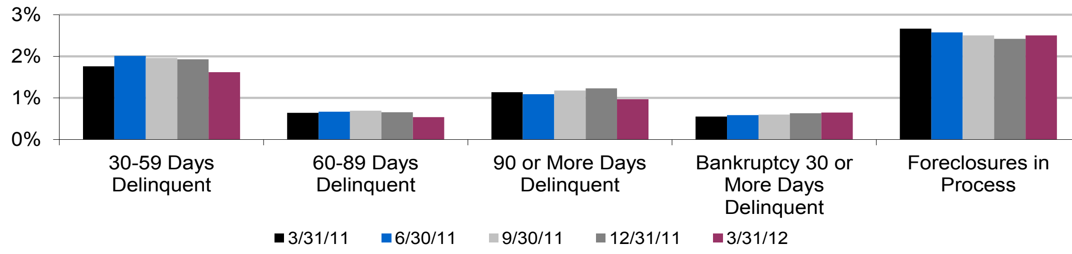
Performance of GSE Mortgages

GSE mortgages made up 59 percent of the overall portfolio, down from 61 percent a year earlier. The portfolio of GSE mortgages performs better than the overall portfolio because it contains more prime loans. The percentage of GSE mortgages that were current and performing at the end of the first quarter of 2012 was 93.7 percent, up from 93.1 percent the previous quarter and 93.2 percent a year earlier (see table 10). The percentage of GSE mortgages that were 30 to 59 days delinquent at the end of the quarter was 1.6 percent, down 16 percent from the previous quarter and 8.0 percent from a year earlier. The percentage of GSE mortgages that were seriously delinquent was 2.2 percent, down 14.2 percent from the previous quarter and 7.4 percent a year earlier. The percentage of these loans in the process of foreclosure was 2.5 percent, up 3.3 percent from the previous quarter but down 6.1 percent from the previous year. Of the GSE mortgages, 59 percent were serviced for Fannie Mae and 41 percent for Freddie Mac.

Table 10. Performance of GSE Mortgages (Percentage)

	3/31/2011	6/30/2011	9/30/2011	12/31/2011	3/31/2012	1Q %Change	1Y %Change
Current and Performing	93.2%	93.1%	93.1%	93.1%	93.7%	0.6%	0.5%
30–59 Days Delinquent	1.8%	2.0%	2.0%	1.9%	1.6%	-16.0%	-8.0%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	0.6%	0.7%	0.7%	0.7%	0.5%	-17.6%	-15.9%
90 or More Days Delinquent	1.1%	1.1%	1.2%	1.2%	1.0%	-21.1%	-14.7%
Bankruptcy 30 or More Days Delinquent	0.6%	0.6%	0.6%	0.6%	0.6%	2.6%	17.4%
Subtotal for Seriously Delinquent	**2.3%**	**2.3%**	**2.5%**	**2.5%**	**2.2%**	**-14.2%**	**-7.4%**
Foreclosures in Process	2.7%	2.6%	2.5%	2.4%	2.5%	3.3%	-6.1%
Performance of GSE Mortgages (Number)							
Current and Performing	18,538,139	18,351,805	18,011,623	17,265,388	17,153,725	-0.6%	-7.5%
30–59 Days Delinquent	350,152	396,676	379,596	357,477	296,501	-17.1%	-15.3%
The Following Three Categories Are Classified as Seriously Delinquent							
60–89 Days Delinquent	127,382	131,893	133,734	121,162	98,584	-18.6%	-22.6%
90 or More Days Delinquent	225,997	214,952	227,724	227,880	177,483	-22.1%	-21.5%
Bankruptcy 30 or More Days Delinquent	109,607	115,311	115,759	116,843	118,413	1.3%	8.0%
Subtotal for Seriously Delinquent	**462,986**	**462,156**	**477,217**	**465,885**	**394,480**	**-15.3%**	**-14.8%**
Foreclosures in Process	530,004	507,925	484,867	449,138	458,137	2.0%	-13.6%
Total	**19,881,281**	**19,718,562**	**19,353,303**	**18,537,888**	**18,302,843**	**-1.3%**	**-7.9%**

***Figure 5.* Performance of GSE Mortgages**



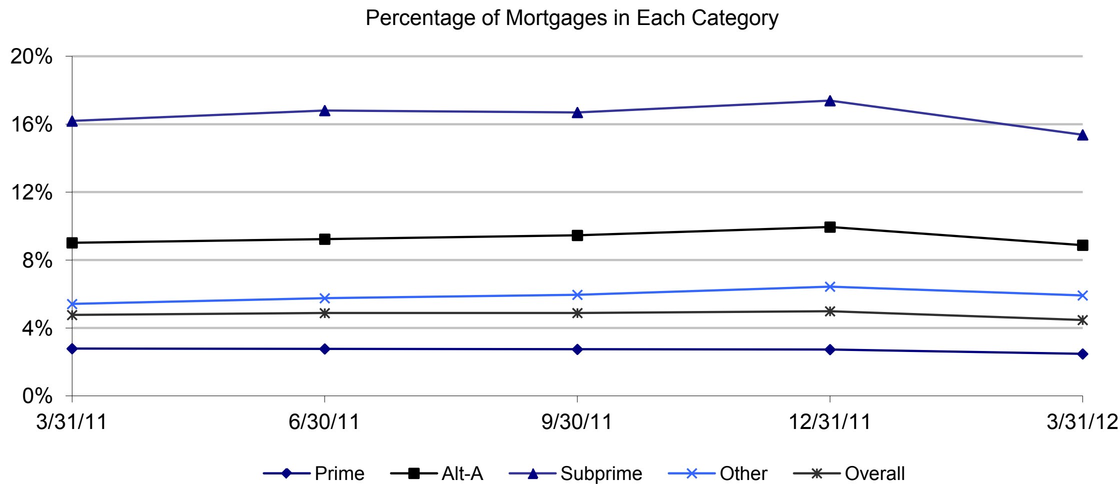
Seriously Delinquent Mortgages, by Risk Category

The portfolio contained 171,756 fewer seriously delinquent loans at the end of the first quarter of 2012 compared with a year earlier—an 11.0 percent decrease (see table 11). Seriously delinquent loans were 4.5 percent of the portfolio at the end of the quarter, down 10.4 percent from the previous quarter and 6.2 percent from a year earlier. Serious delinquencies decreased from the previous quarter across all risk categories.

Table 11. **Seriously Delinquent Mortgages, by Risk Category**
(Percentage of Mortgages in Each Category)

	3/31/2011	6/30/2011	9/30/2011	12/31/2011	3/31/2012	1Q %Change	1Y %Change
Prime	2.8%	2.8%	2.7%	2.7%	2.5%	-9.4%	-11.2%
Alt-A	9.0%	9.2%	9.5%	9.9%	8.9%	-10.7%	-1.6%
Subprime	16.2%	16.8%	16.7%	17.4%	15.4%	-11.6%	-5.0%
Other	5.4%	5.8%	6.0%	6.4%	5.9%	-8.0%	9.3%
Overall	4.8%	4.9%	4.9%	5.0%	4.5%	-10.4%	-6.2%
(Number of Mortgages in Each Category)							
Prime	635,769	634,950	625,338	610,063	548,312	-10.1%	-13.8%
Alt-A	316,184	325,337	330,978	337,061	298,284	-11.5%	-5.7%
Subprime	391,507	416,316	405,043	401,293	347,641	-13.4%	-11.2%
Other	215,794	222,443	223,066	217,213	193,261	-11.0%	-10.4%
Total	1,559,254	1,599,046	1,584,425	1,565,630	1,387,498	-11.4%	-11.0%

Figure 6. **Seriously Delinquent Mortgages, by Risk Category**



Mortgages 30 to 59 Days Delinquent, by Risk Category

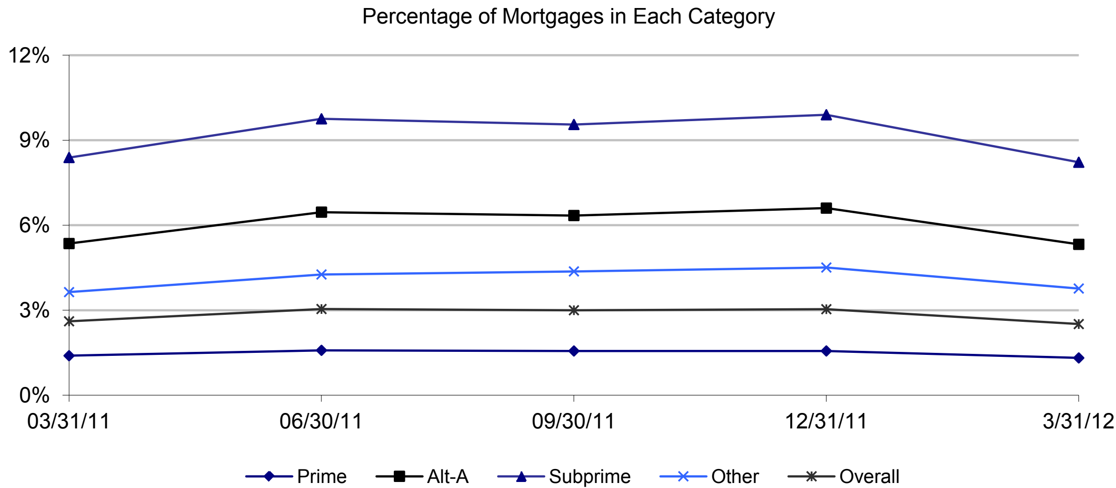
Both the number and the percentage of loans that were 30 to 59 days delinquent at the end of the first quarter of 2012 reached their lowest levels since the first quarter of 2008—the earliest period recorded by the *OCC Mortgage Metrics Report*. Overall, 2.5 percent of the total portfolio was 30 to 59 days delinquent at the end of the quarter—down 17.3 percent from the previous quarter and 3.8 percent from a year earlier. All categories of risk showed decreased 30 to 59 day delinquencies compared with the prior quarter.

***Table 12.* Mortgages 30 to 59 Days Delinquent, by Risk Category**
(Percentage of Mortgages in Each Category)

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	1.4%	1.6%	1.6%	1.6%	1.3%	-15.8%	-5.6%
Alt-A	5.4%	6.5%	6.3%	6.6%	5.3%	-19.4%	-0.5%
Subprime	8.4%	9.8%	9.6%	9.9%	8.2%	-16.9%	-2.0%
Other	3.6%	4.3%	4.4%	4.5%	3.8%	-16.4%	3.5%
Overall	2.6%	3.0%	3.0%	3.0%	2.5%	-17.3%	-3.8%
(Number of Mortgages in Each Category)							
Prime	318,045	362,953	355,420	348,561	291,413	-16.4%	-8.4%
Alt-A	187,606	227,621	221,929	223,717	178,864	-20.0%	-4.7%
Subprime	202,835	241,588	231,782	228,396	185,842	-18.6%	-8.4%
Other	144,998	164,697	163,584	152,045	122,903	-19.2%	-15.2%
Total	853,484	996,859	972,715	952,719	779,022	-18.2%	-8.7%

* Change reflects actual change rather than rounded amount.

***Figure 7.* Mortgages 30 to 59 Days Delinquent, by Risk Category**



PART II: Home Retention Actions

Home retention actions include loan modifications, in which servicers modify one or more mortgage contract terms; trial-period plans, in which the loans will be converted to modifications upon successful completion of the trial-periods; and payment plans, in which no terms are contractually modified, but borrowers are given time to catch up on missed payments. All of these actions can help the borrower become current on the loan, attain payment sustainability, and retain the home.

A. Loan Modifications, Trial-Period Plans, and Payment Plans

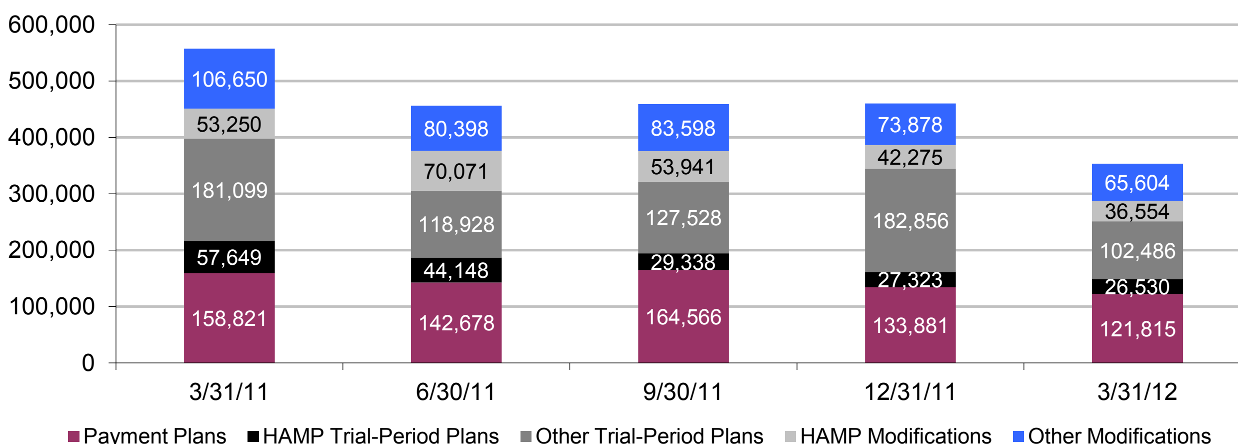
New Home Retention Actions

Servicers implemented 352,989 new home retention actions—loan modifications, trial-period plans, and payment plans—during the first quarter of 2012 (see table 13). The number of home retention actions decreased 23.3 percent from the previous quarter and 36.7 percent from a year earlier. Servicers implemented 102,158 modifications during the quarter—down 12.0 percent from the previous quarter and 36.1 percent from the previous year. New HAMP modifications decreased 13.5 percent to 36,554 during the quarter, and other modifications decreased 11.2 percent to 65,604. Servicers implemented 129,016 new trial-period plans—a 38.6 percent decrease from the previous quarter and 46.0 percent decrease from a year earlier.[3] New payment plans decreased by 9.0 percent during the first quarter to 121,815. During the past five quarters, servicers initiated almost 2.3 million home retention actions—666,219 modifications, 897,885 trial-period plans, and 721,761 payment plans.

Table 13. Number of New Home Retention Actions

	3/31/2011	6/30/2011	9/30/2011	12/31/2011	3/31/2012	1Q %Change	1Y %Change
Other Modifications	106,650	80,398	83,598	73,878	65,604	-11.2%	-38.5%
HAMP Modifications	53,250	70,071	53,941	42,275	36,554	-13.5%	-31.4%
Other Trial-Period Plans	181,099	118,928	127,528	182,856	102,486	-44.0%	-43.4%
HAMP Trial-Period Plans	57,649	44,148	29,338	27,323	26,530	-2.9%	-54.0%
Payment Plans	158,821	142,678	164,566	133,881	121,815	-9.0%	-23.3%
Total	557,469	456,223	458,971	460,213	352,989	-23.3%	-36.7%

Figure 8. Number of New Home Retention Actions



[3] In the fourth quarter of 2011 certain servicers converted a significant number of borrowers in existing payment plans to trial period plans.

HAMP Modifications and Trial-Period Plans, by Investor and Risk Category

Servicers implemented 36,554 HAMP modifications during the first quarter of 2012—down 13.5 percent from the previous quarter (see table 13). Almost 46 percent of HAMP modifications made during the quarter went to mortgages serviced for the GSEs. Prime mortgages, which represented 71 percent of the total portfolio, received 52.0 percent of all HAMP modifications, while subprime loans which represented 7 percent of the total portfolio received 20.4 percent of HAMP modifications during the quarter.

Table 14. **HAMP Modifications, by Investor and Risk Category**
(Modifications Implemented in the First Quarter of 2012)

	Fannie Mae	Freddie Mac	Government-Guaranteed	Portfolio	Private	Total
Prime	5,399	4,761	117	3,163	5,586	19,026
Alt-A	1,593	1,346	140	1,545	2,416	7,040
Subprime	911	599	105	1,767	4,063	7,445
Other	1,355	698	64	263	663	3,043
Total	9,258	7,404	426	6,738	12,728	36,554

Servicers implemented 26,530 new HAMP trial-period plans during the quarter, a decrease of 2.9 percent from the 27,323 HAMP trial plans initiated in the previous quarter (see table 13). GSE mortgages received 46.6 percent of HAMP trial-period plans initiated during the quarter. Prime mortgages received 52.7 percent of the HAMP trial-period plans implemented during the quarter, and Alt-A and subprime mortgages collectively received 37.4 percent.

Table 15. **HAMP Trial-Period Plans, by Investor and Risk Category**
(Trial-Period Plans Implemented in the First Quarter of 2012)

	Fannie Mae	Freddie Mac	Government-Guaranteed	Portfolio	Private	Total
Prime	3,535	3,922	210	1,991	4,318	13,976
Alt-A	1,029	1,046	199	854	1,758	4,886
Subprime	608	517	138	909	2,877	5,049
Other	1,119	575	93	158	674	2,619
Total	6,291	6,060	640	3,912	9,627	26,530

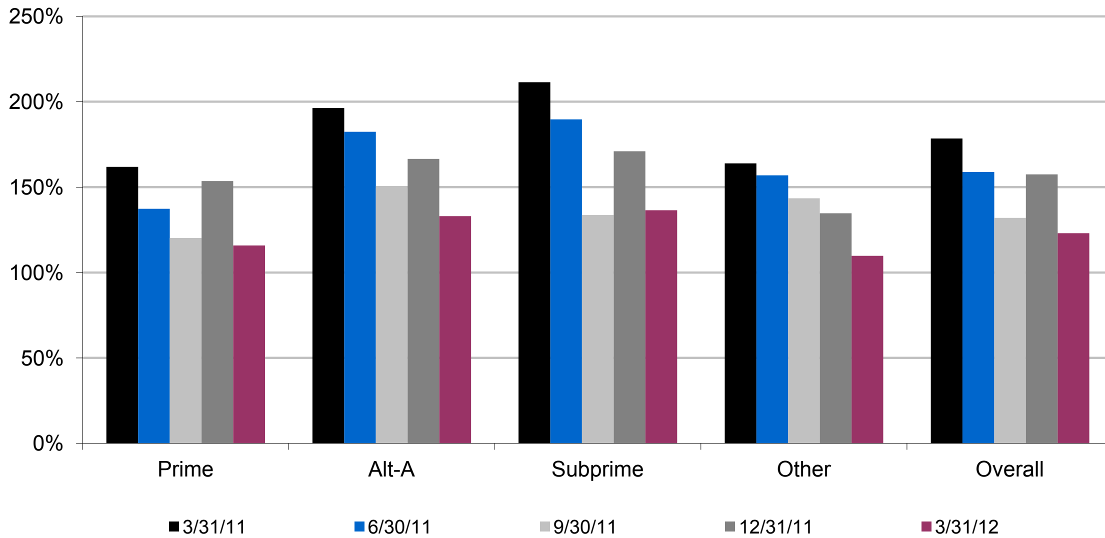
New Home Retention Actions Relative to Newly Initiated Foreclosures

The ratio of newly initiated home retention actions to newly initiated foreclosure actions decreased from both the previous quarter and the previous year. While both new home retention actions and new foreclosure actions have decreased, the decrease in new home retention actions was more than the decrease in new foreclosures (see table 16). Servicers continued to implement more new home retention actions than new foreclosures overall.

Table 16. **Percentage of New Home Retention Actions Relative to Newly Initiated Foreclosures, by Risk Category**

	3/31/2011	6/30/2011	9/30/2011	9/30/2011	3/31/2012	1Q %Change	1Y %Change
Prime	161.9%	137.3%	120.2%	153.6%	115.8%	-24.6%	-28.5%
Alt-A	196.3%	182.4%	150.7%	166.5%	133.0%	-20.1%	-32.2%
Subprime	211.4%	189.7%	133.7%	171.0%	136.5%	-20.2%	-35.4%
Other	163.9%	156.9%	143.5%	134.7%	109.8%	-18.5%	-33.0%
Overall	178.5%	158.9%	132.0%	157.5%	123.0%	-21.9%	-31.1%
Number of New Home Retention Actions	557,469	456,223	458,971	460,213	352,989	-23.3%	-36.7%
Number of Newly Initiated Foreclosures	312,235	287,162	347,726	292,173	286,951	-1.8%	-8.1%

Figure 9. **New Home Retention Actions Relative to Newly Initiated Foreclosures, by Risk Category**



Types of Modification Actions

The types of modification actions or combinations of actions have different effects on the borrowers' mortgages and their monthly principal and interest payments. Different actions may, over time, have different effects on the long-term sustainability of mortgages. Servicers often use a combination of actions when modifying mortgages, with more than 95 percent of modifications implemented during the first quarter of 2012 changing more than one of the original loan terms (see table 47 in appendix D). Capitalization, interest rate reduction, and term extension remain the primary actions taken with loan modifications, but the use of principal deferral or reduction in modifications has increased. During the first quarter of 2012, 24.6 percent of all modifications included principal deferral, and 10.2 percent included principal reduction compared with 11.2 percent and 3.0 percent, respectively, in the same period a year earlier (see table 17).

Servicers capitalized missed fees and payments in 91.6 percent of modifications made during the first quarter, reduced interest rates in 80.6 percent of the modified mortgages, and extended loan maturity in 73.7 percent (see table 17). Servicers deferred repayment of some portion of the principal balance in 24.6 percent of modifications made during the quarter, up from 11.2 percent a year earlier. The percentage of modifications that included principal reduction increased to 10.2 percent in the first quarter of 2012, up from 3.0 percent a year earlier. Because most modifications changed more than one term, the sum of the individual actions exceeded 100 percent of total modifications. Appendix D presents additional detail on combination modifications.

***Table 17.* Changes in Loan Terms for Modifications Made During the First Quarter of 2012**

(Percentage of Total Modifications in Each Category)

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Capitalization	86.9%	90.8%	88.5%	93.3%	91.6%	-1.8%	5.4%
Rate Reduction	82.6%	79.5%	77.5%	78.2%	80.6%	3.2%	-2.3%
Rate Freeze	2.0%	2.1%	4.6%	6.4%	6.2%	-2.8%	216.1%
Term Extension**	58.1%	61.1%	57.8%	55.5%	73.7%	32.7%	26.9%
Principal Reduction	3.0%	6.2%	8.1%	8.5%	10.2%	19.9%	237.4%
Principal Deferral	11.2%	18.6%	20.5%	24.5%	24.6%	0.4%	119.2%
Not Reported*	2.9%	1.7%	1.0%	1.5%	1.2%	-22.7%	-60.3%
(Number of Changes in Each Category)							
Capitalization	138,986	136,610	121,662	108,365	93,573	-13.7%	-32.7%
Rate Reduction	132,040	119,569	106,651	90,779	82,382	-9.2%	-37.6%
Rate Freeze	3,142	3,209	6,328	7,419	6,345	-14.5%	101.9%
Term Extension**	92,842	91,946	79,536	64,494	75,257	16.7%	-18.9%
Principal Reduction	4,826	9,401	11,183	9,867	10,404	5.4%	115.6%
Principal Deferral	17,958	27,989	28,133	28,496	25,154	-11.7%	40.1%
Not Reported*	4,694	2,574	1,327	1,750	1,190	-32.0%	-74.6%

*Processing constraints at some servicers prevented them from reporting specific modified term(s).

**Increase in the first quarter of 2012 results from process changes at some servicers that improved the reporting of this data element.

Types of HAMP Modification Actions

HAMP modifications follow a prescribed series of actions to attain a targeted monthly mortgage payment. Consistent with modification actions overall and the prescribed order of actions required by HAMP, HAMP modifications most often included capitalization of missed payments and fees, interest-rate reductions, and term extensions. Servicers used principal deferral, another prescribed action in the HAMP hierarchy, in 32.8 percent of HAMP modifications during the first quarter of 2012, down from 38.5 percent in the previous quarter. Principal reduction was used in 20.7 percent of HAMP modifications implemented during the quarter—up from 15.6 percent in the previous quarter and 6.2 percent a year earlier (see table 18).

Table 18. Changes in Loan Terms for HAMP Modifications During the First Quarter of 2012

(Percentage of Total Modifications in Each Category)

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Capitalization	96.5%	97.8%	93.7%	97.3%	96.9%	-0.4%	0.5%
Rate Reduction	94.4%	84.3%	86.8%	88.5%	89.9%	1.5%	-4.8%
Rate Freeze	0.3%	0.2%	2.2%	3.3%	4.0%	20.5%	1393.9%
Term Extension**	53.4%	53.7%	48.4%	49.9%	72.5%	45.3%	35.8%
Principal Reduction	6.2%	6.6%	11.1%	15.6%	20.7%	32.9%	234.0%
Principal Deferral	23.6%	33.0%	34.9%	38.5%	32.8%	-14.8%	39.2%
Not Reported*	0.2%	0.1%	0.2%	0.1%	0.1%	-21.9%	-69.1%
(Number of Changes in Each Category)							
Capitalization	51,371	68,521	50,522	41,143	35,434	-13.9%	-31.0%
Rate Reduction	50,278	59,060	46,813	37,418	32,846	-12.2%	-34.7%
Rate Freeze	141	141	1,186	1,388	1,446	4.2%	925.5%
Term Extension**	28,413	37,642	26,123	21,084	26,489	25.6%	-6.8%
Principal Reduction	3,305	4,609	5,978	6,596	7,578	14.9%	129.3%
Principal Deferral	12,565	23,097	18,827	16,295	12,003	-26.3%	-4.5%
Not Reported*	118	66	103	37	25	-32.4%	-78.8%

*Processing constraints at some servicers prevented them from reporting specific modified term(s).

** Increase in the first quarter of 2012 results from process changes at some servicers that improved the reporting of this data element.

Types of Modification Actions, by Risk Category

Servicers use a combination of actions when modifying mortgages, and no single action can be identified as the primary component of a successful modification. Modifications across all risk categories predominantly featured interest-rate reduction and term extension in addition to the capitalization of past-due interest and fees. Because most modifications changed more than one term, the sum of individual features changed exceeded the total number of modified loans in each risk category. While most actions were used relatively consistently across all risk categories, principal deferral was used most extensively in prime loans, and principal reduction was used more in Alt-A and subprime loans (see table 19).

Table 19. Changes in Loan Terms for Modifications, by Risk Category, in First Quarter 2012

(Percentage of Total Modifications in Each Category)					
	Prime	Alt-A	Subprime	Other	Overall
Capitalization	92.2%	91.3%	90.6%	92.2%	91.6%
Rate Reduction	81.3%	80.7%	78.7%	82.6%	80.6%
Rate Freeze	3.5%	5.8%	10.2%	9.2%	6.2%
Term Extension	74.5%	72.3%	71.8%	77.6%	73.7%
Principal Reduction	8.5%	10.7%	15.7%	2.9%	10.2%
Principal Deferral	30.5%	22.4%	19.8%	15.7%	24.6%
Not Reported*	1.3%	1.1%	0.6%	2.3%	1.2%
(Number of Changes in Each Category)					
Total Mortgages Modified	45,170	21,268	25,284	10,436	102,158
Capitalization	41,625	19,415	22,913	9,620	93,573
Rate Reduction	36,723	17,156	19,888	8,615	82,382
Rate Freeze	1,564	1,240	2,578	963	6,345
Term Extension	33,640	15,368	18,151	8,098	75,257
Principal Reduction	3,859	2,266	3,975	304	10,404
Principal Deferral	13,756	4,756	5,001	1,641	25,154
Not Reported*	582	232	141	235	1,190

*Processing constraints at some servicers prevented them from reporting specific modified term(s).

Types of Modification Actions, by Investor and Product Type

Modifications of mortgages serviced for the GSEs accounted for 40.7 percent of all modifications made during the quarter. Government-guaranteed loans received 13.9 percent of all modifications, mortgages serviced for private investors received 30.3 percent, and mortgages held in the servicers' own portfolios received 15.0 percent of all first-quarter modifications (see table 20). Interest-rate reduction and capitalization of missed payments and fees remained the primary types of modification actions for all investors, as well as term extension for all except private investors. Principal reduction was used almost exclusively in modifications of loans held in portfolio or serviced for private investors. Because modifications often change more than one loan term, the sum of the actions exceeded the number of modified loans for each investor.

Table 20. Type of Modification Action, by Investor and Product Type, in First Quarter 2012
(Percentage of Total Modifications in Each Category)

	Fannie Mae	Freddie Mac	Government-Guaranteed	Private Investor	Portfolio	Overall
Capitalization	98.4%	93.9%	90.1%	87.0%	86.7%	91.6%
Rate Reduction	73.5%	86.1%	94.5%	78.2%	83.9%	80.6%
Rate Freeze	5.7%	5.5%	3.7%	9.3%	3.9%	6.2%
Term Extension	83.4%	78.7%	92.4%	56.3%	68.0%	73.7%
Principal Reduction	0.0%	0.0%	0.7%	18.9%	28.9%	10.2%
Principal Deferral	31.3%	24.8%	0.1%	25.6%	31.5%	24.6%
Not Reported*	0.3%	0.1%	0.1%	2.6%	1.8%	1.2%
(Number of Changes in Each Category)						
Total Mortgages Modified	31,702	9,923	14,240	30,926	15,367	102,158
Capitalization	31,180	9,322	12,835	26,909	13,327	93,573
Rate Reduction	23,289	8,544	13,461	24,194	12,894	82,382
Rate Freeze	1,813	541	529	2,867	595	6,345
Term Extension	26,435	7,808	13,160	17,407	10,447	75,257
Principal Reduction**	9	0	100	5,857	4,438	10,404
Principal Deferral	9,927	2,457	16	7,906	4,848	25,154
Not Reported	88	9	8	805	280	1,190

*Processing constraints at some servicers prevented them from reporting specific modified term(s).

**Fannie Mae and Freddie Mac do not offer modifications that include principal reduction. The principal reduction actions reflected in this table represent coding errors to be corrected in subsequent reporting periods.

Types of HAMP Modification Actions, by Investor and Product Type

Of the 36,554 HAMP modifications implemented in the first quarter, 45.6 percent were on GSE mortgages, 34.8 percent were on mortgages serviced for private investors, 18.4 percent were on mortgages held in servicers' portfolios and 1.2 percent were on government-guaranteed loans (see table 21). Consistent with total modification actions, the prevailing actions among HAMP modifications were capitalization of past-due interest and fees, interest-rate reduction, and term extension. Principal deferral was used in a significant number of HAMP modifications for all investors other than government-guaranteed loans. HAMP modifications with principal reduction were centered in loans held in portfolio and serviced for private investors.

Table 21. **Type of HAMP Modification Action, by Investor and Product Type, in First Quarter 2012**

(Percentage of Total Modifications in Each Category)

	Fannie Mae	Freddie Mac	Government-Guaranteed	Private Investor	Portfolio	Overall
Capitalization	99.1%	99.0%	60.1%	99.4%	89.4%	96.9%
Rate Reduction	92.7%	96.8%	88.7%	85.4%	86.7%	89.9%
Rate Freeze	0.2%	0.2%	18.8%	8.7%	3.4%	4.0%
Term Extension	72.4%	79.3%	98.4%	62.7%	81.8%	72.5%
Principal Reduction	0.1%	0.0%	1.6%	33.8%	48.3%	20.7%
Principal Deferral	25.9%	28.4%	0.9%	32.8%	49.4%	32.8%
Not Reported	0.1%	0.1%	0.2%	0.0%	0.1%	0.1%
(Number of Changes in Each Category)						
Total Mortgages Modified	9,258	7,404	426	12,728	6,738	36,554
Capitalization	9,171	7,332	256	12,651	6,024	35,434
Rate Reduction	8,582	7,166	378	10,876	5,844	32,846
Rate Freeze	17	16	80	1,107	226	1,446
Term Extension	6,700	5,875	419	7,984	5,511	26,489
Principal Reduction*	9	0	7	4,305	3,257	7,578
Principal Deferral	2,397	2,101	4	4,174	3,327	12,003
Not Reported**	12	6	1	1	5	25

*Fannie Mae and Freddie Mac do not offer modifications that include principal reduction. The principal reduction actions reflected in this table represent coding errors to be corrected in subsequent reporting periods.

**Processing constraints at some servicers prevented them from reporting specific modified term(s).

Changes in Monthly Payments Resulting From Modification

The previous sections of this report describe the types of modification actions across risk categories, investors, and product types. This section describes the effect of those changes on borrowers' monthly principal and interest payments.

Modifications that decrease payments occur when servicers elect to lower interest rates, extend the amortization period, or defer or forgive principal. The reduced payments can make mortgages more affordable to borrowers and more sustainable over time. However, the lower payments also result in less monthly cash flow and interest income to mortgage investors.

Mortgage modifications may increase monthly payments when borrowers and servicers agree to add past-due interest, advances for taxes or insurance and other fees to the loan balances and re-amortize the new balances over the remaining life of the mortgages. The interest rate or maturity of the loans may be changed on these modifications but not enough to offset the increase in payments caused by the additional capitalized principal. Modifications may also result in increased monthly payments when interest rates or principal payments on adjustable rate mortgages and payment-option ARMs are reset higher but by less than the amount indicated in the original mortgage contracts.

Modifications that increase payments may be appropriate when borrowers resolve temporary problems with cash flow, or otherwise have reasonable prospects of making higher payments to repay the debt over time. However, during periods of prolonged economic stress, this strategy carries additional risk, underscoring the importance of verifying borrowers' income and debt-payment ability so that borrowers and servicers have confidence that the modifications will be sustainable.

Servicers also modify some mortgage contracts by simply leaving principal and interest payments unchanged. This occurs, for example, when servicers "freeze" current interest rates and payments instead of allowing them to increase to levels required by the original mortgage contracts.

Changes in Monthly Payments Resulting From Modifications, by Quarter

Almost 92 percent of modifications made in the first quarter reduced monthly principal and interest payments (see table 22). Almost 63 percent of the modifications reduced payments by 20 percent or more, up 5.3 percent from the previous quarter and 32.5 percent from a year earlier. Almost 16 percent reduced payments between 10 percent and 20 percent, and another 13.0 percent reduced payments by less than 10 percent.

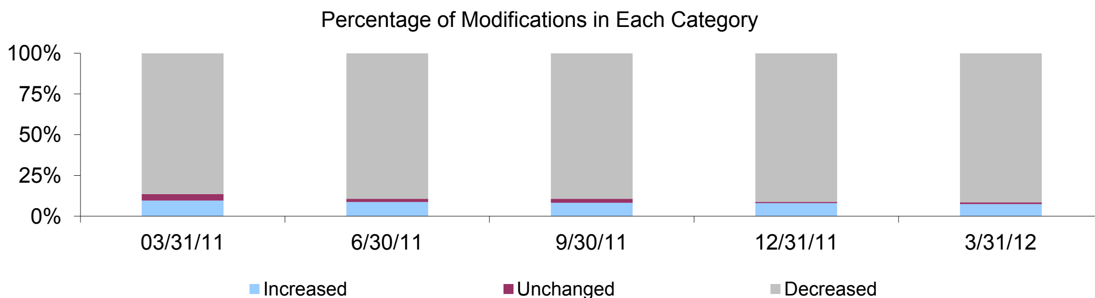
***Table 22.* Changes in Monthly Principal and Interest Payments Resulting From Modifications**

(Percentage of Modifications in Each Category)*

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Decreased by 20% or More	47.3%	53.8%	53.6%	59.5%	62.7%	5.3%	32.5%
Decreased by 10% to Less Than 20%	18.4%	17.1%	18.3%	16.7%	15.9%	-4.7%	-13.5%
Decreased by Less Than 10%	20.8%	18.4%	17.5%	15.0%	12.9%	-13.7%	-37.8%
Subtotal for Decreased	**86.5%**	**89.4%**	**89.4%**	**91.2%**	**91.5%**	**0.3%**	**5.8%**
Unchanged	4.0%	1.9%	2.4%	0.8%	1.0%	23.2%	-73.7%
Increased	9.5%	8.7%	8.2%	7.9%	7.4%	-6.4%	-22.0%
Subtotal for Unchanged and Increased	**13.5%**	**10.6%**	**10.6%**	**8.8%**	**8.5%**	**-3.6%**	**-37.2%**
Total	100.0%	100.0%	100.0%	100.0%	100.0%	--	--
(Number of Modifications in Each Category)							
Decreased by 20% or More	75,186	80,596	73,353	68,418	63,716	-6.9%	-15.3%
Decreased by 10% to Less Than 20%	29,330	25,670	25,055	19,256	16,218	-15.8%	-44.7%
Decreased by Less Than 10%	33,037	27,619	23,971	17,221	13,134	-23.7%	-60.2%
Subtotal for Decreased	**137,553**	**133,885**	**122,379**	**104,895**	**93,068**	**-11.3%**	**-32.3%**
Unchanged	6,290	2,853	3,335	972	1,059	9.0%	-83.2%
Increased	15,162	13,025	11,202	9,138	7,559	-17.3%	-50.1%
Subtotal for Unchanged and Increased	**21,452**	**15,878**	**14,537**	**10,110**	**8,618**	**-14.8%**	**-59.8%**
Total	159,005	149,763	136,916	115,005	101,686	-11.6%	-36.0%

*No payment change information was reported on 895 modifications in the first quarter of 2011, 706 in the second quarter of 2011, 623 in the third quarter of 2011, 1,148 in the fourth quarter of 2011 and 472 in the first quarter of 2012.

***Figure 10.* Changes in Monthly Principal and Interest Payments**



Changes in Monthly Payments Resulting From HAMP Modifications, by Quarter

Almost 98 percent of HAMP modifications made during the first quarter of 2012 reduced borrower monthly payments, with 76.1 percent reducing payments by 20 percent or more (see table 23). In addition to achieving lower payments, HAMP attempts to increase payment sustainability by targeting monthly housing payments at 31 percent of borrowers' income. Performance data on all modifications showed that reduced monthly payments result in lower re-default rates over time and that the greater the decrease in payment, the lower the rate of re-default.

Table 23. **Changes in Monthly Principal and Interest Payments Resulting From HAMP Modifications**
(Percentage of HAMP Modifications in Each Category)*/**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Decreased by 20% or More	75.9%	77.1%	75.8%	77.5%	76.1%	-1.8%	0.2%
Decreased by 10% to Less Than 20%	13.4%	13.1%	13.6%	12.5%	12.5%	0.0%	-7.0%
Decreased by Less Than 10%	8.7%	8.6%	9.2%	8.6%	8.9%	3.8%	2.9%
Subtotal for Decreased	**98.0%**	**98.8%**	**98.6%**	**98.6%**	**97.5%**	**-1.1%**	**-0.6%**
Unchanged	1.0%	0.2%	0.2%	0.1%	0.4%	139.1%	-64.3%
Increased	1.0%	1.0%	1.2%	1.3%	2.2%	69.4%	124.6%
Subtotal for Unchanged and Increased	**2.0%**	**1.2%**	**1.4%**	**1.4%**	**2.5%**	**76.6%**	**29.0%**
Total	100.0%	100.0%	100.0%	100.0%	100.0%	--	--
(Number of HAMP Modifications in Each Category)							
Decreased by 20% or More	40,321	53,941	40,756	32,719	27,719	-15.3%	-31.3%
Decreased by 10% to Less Than 20%	7,124	9,178	7,299	5,266	4,546	-13.7%	-36.2%
Decreased by Less Than 10%	4,604	6,024	4,957	3,632	3,253	-10.4%	-29.3%
Subtotal for Decreased	**52,049**	**69,143**	**53,012**	**41,617**	**35,518**	**-14.7%**	**-31.8%**
Unchanged	530	129	101	63	130	106.3%	-75.5%
Increased	517	683	650	545	797	46.2%	54.2%
Subtotal for Unchanged and Increased	**1,047**	**812**	**751**	**608**	**927**	**52.5%**	**-11.5%**
Total	53,096	69,955	53,763	42,225	36,445	-13.7%	-31.4%

*No payment change information was reported on 154 modifications in the first quarter of 2011, 116 in the second quarter of 2011, 178 in the third quarter of 2011, 50 in the fourth quarter of 2011 and 109 in the first quarter of 2012.

**Some HAMP modifications, like other modifications, may increase the borrowers' monthly principal and interest payments when loans with a previous interest-only or partial payment are modified to amortize the loans over their remaining terms, or when adjustable rate mortgages are reset to higher rates and payments but at lower rates than otherwise contractually required. While the principal and interest portion of the payment might increase, the total payment will reflect a housing expense ratio of 31 percent as specified by HAMP.

Average Change in Monthly Payments Resulting From Modifications, by Quarter

Modifications made during the first quarter of 2012 reduced monthly principal and interest payments by 27.4 percent on average, or $437 (see table 24). HAMP modifications made during the quarter reduced payments by 35.4 percent on average, or $588. Other modifications completed during the quarter reduced payments by $353 on average, a 22.9 percent average reduction. The average monthly payment reduction of $437 on all modifications completed during the first quarter of 2012 was over 31 percent more than the $334 average payment reduction on modifications completed during the first quarter of 2011.

Table 24. **Average Change in Monthly Payments Resulting From Modifications, by Quarter***

	3/31/11	6/30/11	9/30/11	12/30/11	3/31/12	1Q %Change	1Y %Change
All Modifications							
Decreased by 20% or More	(634)	(667)	(646)	(671)	(655)	-2.4%	3.3%
Decreased by 10% to Less Than 20%	(184)	(187)	(192)	(192)	(191)	-0.8%	4.0%
Decreased by Less Than 10%	(55)	(60)	(64)	(66)	(63)	-5.0%	14.8%
Unchanged	0	0	0	0	0	--	--
Increased**	122	106	128	145	162	11.4%	32.7%
Overall	(334)	(393)	(382)	(430)	(437)	1.7%	31.1%
Percentage Change	-21.6%	-25.1%	-24.4%	-26.5%	-27.4%	--	--
Other Modifications							
Decreased by 20% or More	(566)	(591)	(576)	(623)	(595)	-4.5%	5.1%
Decreased by 10% to Less Than 20%	(171)	(170)	(181)	(182)	(181)	-0.5%	5.9%
Decreased by Less Than 10%	(50)	(55)	(61)	(63)	(59)	-6.7%	16.8%
Unchanged	0	0	0	0	0	--	--
Increased**	120	103	126	143	158	10.0%	31.0%
Overall	(219)	(232)	(262)	(335)	(353)	5.3%	61.2%
Percentage Change	-15.1%	-15.6%	-17.5%	-21.1%	-22.9%	--	--
HAMP Modifications							
Decreased by 20% or More	(693)	(704)	(702)	(725)	(734)	1.3%	5.9%
Decreased by 10% to Less Than 20%	(222)	(219)	(219)	(219)	(216)	-1.7%	-2.8%
Decreased by Less Than 10%	(83)	(79)	(77)	(79)	(76)	-3.6%	-8.5%
Unchanged	0	0	0	0	0	--	--
Increased**	164	158	158	174	197	13.1%	
Overall	(562)	(577)	(567)	(593)	(588)	-1.0%	4.6%
Percentage Change	-34.6%	-35.9%	-35.1%	-36.0%	-35.4%	--	--

*Parentheses indicate that, on average, borrowers' monthly payments decreased by the amount enclosed within the parentheses.

**Some modifications may increase the borrowers' monthly principal and interest payments when past-due interest, advances for taxes or insurance and other fees are added to loan balances. The monthly payments may also increase when loans with a previous interest-only or partial payment are modified to amortize the loans over their remaining terms.

B. Modified Loan Performance

Re-Default Rates of Modified Loans: 60 or More Days Delinquent

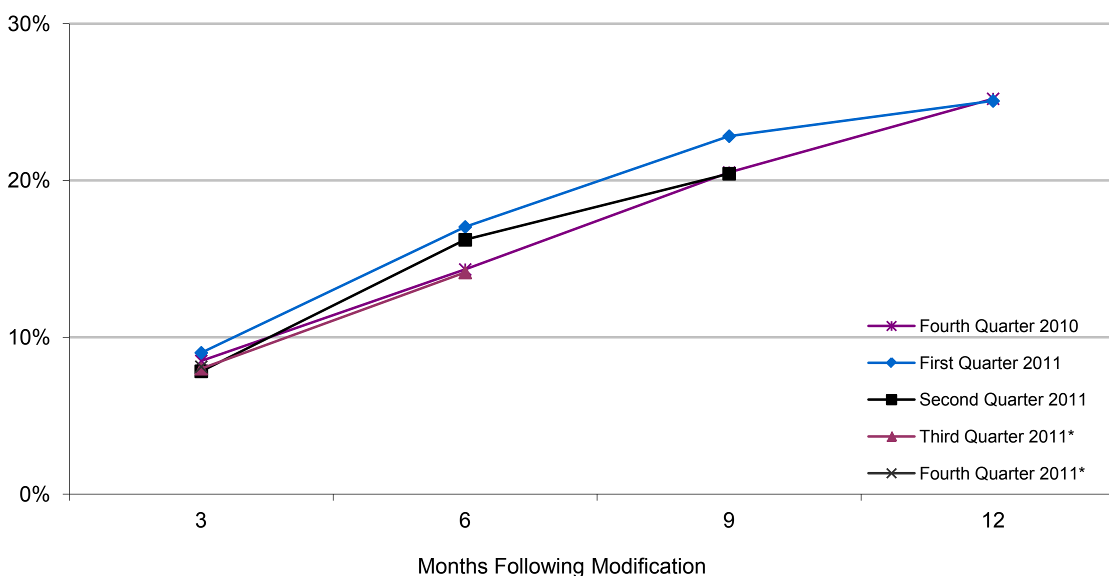
Modification performance may vary because of many factors, including the types of modification actions, the average amount of change in the borrower's monthly payment, the characteristics and geographic location of the modified loans, and the addition or deletion of modification programs among the reporting institutions. Despite differences in many of these factors, mortgages modified in each of the last five quarters have performed similarly over time. Among modifications completed in each of the last five quarters, approximately 9 percent of loans were 60 or more days delinquent three months after modification. Among modifications outstanding at least six or twelve months, about 16 percent were 60 or more days delinquent six months after modification and 25 percent were 60 or more days delinquent twelve months after modification (see table 25).

Table 25. **Modified Loans 60 or More Days Delinquent**

Modification Date*	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fourth Quarter 2010	8.5%	14.3%	20.5%	25.2%
First Quarter 2011	9.0%	17.0%	22.8%	25.1%
Second Quarter 2011	7.8%	16.2%	20.4%	--
Third Quarter 2011	8.0%	14.1%	--	--
Fourth Quarter 2011	8.1%	--	--	--

*All re-default data are based on modified loans that remain in effect at the specified amount of time after the modification. All loans that have been repaid in full, been refinanced, been sold, or completed the foreclosure process are removed from the calculation. Data include only modifications that have had time to age the indicated number of months.

Figure 11. **Modified Loans 60 or More Days Delinquent**



*The fourth quarter 2011 data is a single point (8.1 percent), and is obscured by the beginning of the trend line for the third quarter of 2011.

Re-Default Rates of Modified Loans: 30 or More Days Delinquent

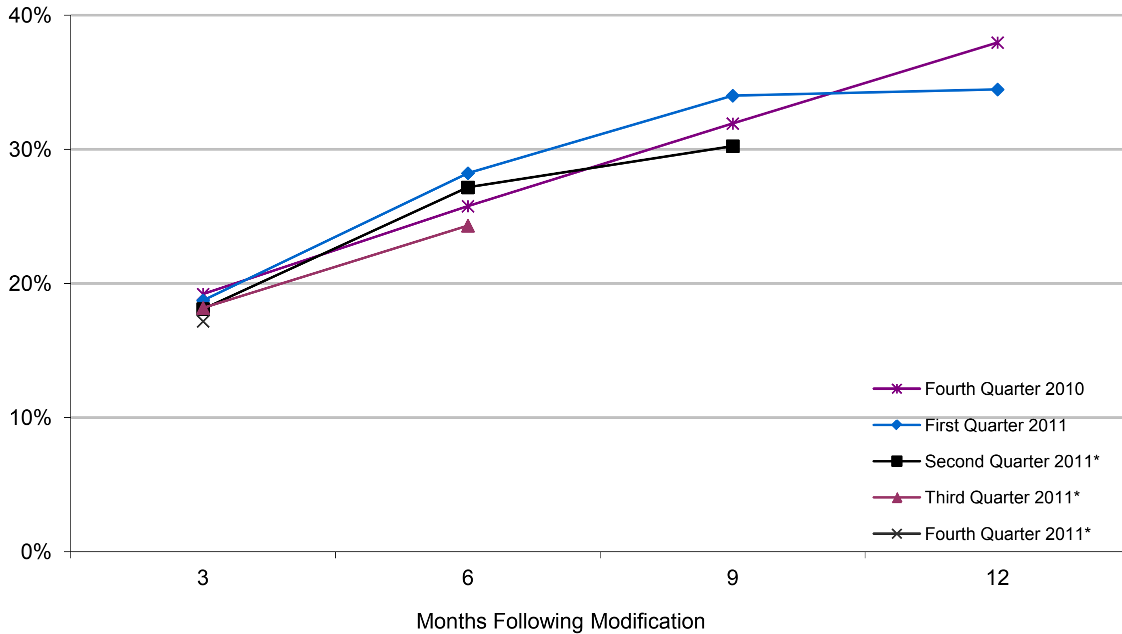
Re-default rates measured at 30 or more days delinquent provide an early indicator of mortgages that may need additional attention to prevent more serious delinquency or foreclosure. For modifications completed in each of the last five quarters, approximately 18 percent were 30 or more days delinquent three months after modification. Among modifications outstanding at least one year, about 35 to 38 percent were 30 or more days delinquent twelve months after modification (see table 26).

Table 26. **Modified Loans 30 or More Days Delinquent**

Modification Date	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fourth Quarter 2010	19.2%	25.8%	31.9%	38.0%
First Quarter 2011	18.7%	28.2%	34.0%	34.5%
Second Quarter 2011	18.1%	27.2%	30.2%	--
Third Quarter 2011	18.2%	24.3%	--	--
Fourth Quarter 2011	17.2%	--	--	--

*Data include only modifications that have had time to age the indicated number of months.

Figure 12. **Modified Loans 30 or More Days Delinquent**



*The fourth quarter 2011 data is a single point (17.2 percent), and is obscured by the beginning of the trend lines for the second and third quarters of 2011.

Re-Default Rates of Modified Loans: 90 or More Days Delinquent

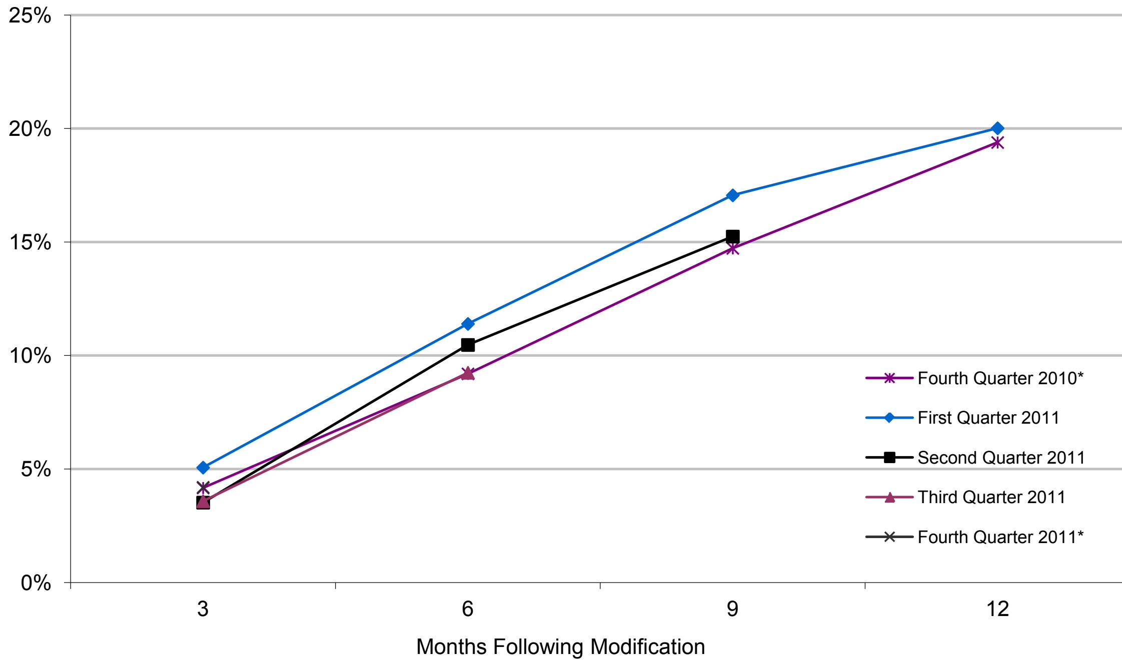
Among modifications completed during the last five quarters, about 20 percent were 90 or more days delinquent twelve months after modification (see table 27).

Table 27.* Modified Loans 90 or More Days Delinquent

Modification Date	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fourth Quarter 2010	4.2%	9.2%	14.7%	19.4%
First Quarter 2011	5.1%	11.4%	17.1%	20.0%
Second Quarter 2011	3.5%	10.5%	15.2%	--
Third Quarter 2011	3.6%	9.2%	--	--
Fourth Quarter 2011	4.2%	--	--	--

*Data include only modifications that have had time to age the indicated number of months.

***Figure 13.* Modified Loans 90 or More Days Delinquent**



*The fourth quarter 2011 data is a single point (4.2 percent), and is obscured by the beginning of the trend line for the fourth quarter of 2010.

Re-Default Rate, by Investor (60 or More Days Delinquent)

Modifications on mortgages held in the servicers' own portfolios or serviced for the GSEs—Fannie Mae and Freddie Mac—performed better than modifications on mortgages serviced for other investors. These lower re-default rates for portfolio and GSE mortgages may reflect differences in modification programs, loan risk characteristics, and, for portfolio mortgages, additional flexibility to modify terms for greater sustainability. Re-default rates for government-guaranteed mortgages and loans serviced for private investors were highest over time, reflecting the higher risk characteristics associated with those mortgages. For all investors, re-default rates have lessened over time as more recent modifications have focused more on reducing monthly payments and the borrower's ability to sustain the reduced payments over time.

***Table 28.* Re-Default Rates for Portfolio Loans and Loans Serviced for Others Modified in 2008**
(60 or More Days Delinquent)

Investor Loan Type	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fannie Mae	30.5%	45.0%	54.2%	59.5%
Freddie Mac	34.0%	44.9%	53.1%	59.2%
Government-Guaranteed	32.5%	53.5%	63.6%	67.8%
Private	37.5%	48.9%	56.0%	61.0%
Portfolio Loans	15.0%	25.3%	31.7%	36.2%
Overall	32.1%	44.7%	52.2%	57.1%

***Table 29.* Re-Default Rates for Portfolio Loans and Loans Serviced for Others Modified in 2009**
(60 or More Days Delinquent)

Investor Loan Type	3 Months After Modification	6 Months after Modification	9 Months after Modification	12 Months After Modification
Fannie Mae	18.0%	31.4%	37.9%	41.2%
Freddie Mac	29.2%	37.1%	42.0%	44.5%
Government-Guaranteed	23.5%	42.2%	51.7%	55.5%
Private	28.2%	40.8%	48.8%	52.5%
Portfolio Loans	7.2%	15.3%	21.0%	24.6%
Overall	20.1%	32.3%	39.5%	43.1%

***Table 30.* Re-Default Rates for Portfolio Loans and Loans Serviced for Others Modified in 2010**
(60 or More Days Delinquent)*

Investor Loan Type	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fannie Mae	9.7%	14.4%	18.2%	20.7%
Freddie Mac	7.4%	12.3%	15.6%	17.9%
Government-Guaranteed	12.4%	27.3%	36.0%	40.7%
Private	12.2%	19.9%	25.0%	28.3%
Portfolio Loans	6.6%	11.8%	15.7%	18.0%
Overall	10.0%	17.4%	22.4%	25.4%

Table 31. **Re-Default Rates for Portfolio Loans and Loans Serviced for Others Modified in 2011** (60 or More Days Delinquent)*				
Investor Loan Type	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Fannie Mae	7.2%	11.4%	15.0%	18.5%
Freddie Mac	6.0%	11.2%	14.7%	17.3%
Government-Guaranteed	11.9%	28.6%	38.5%	41.6%
Private	9.7%	16.2%	21.6%	26.6%
Portfolio Loans	5.0%	8.9%	11.8%	13.6%
Overall	8.3%	15.9%	21.7%	25.1%

*Data include all modifications implemented during 2011 that have aged the indicated number of months.

Performance of HAMP Modifications Compared With Other Modifications

HAMP modifications have performed better than other modifications implemented during the same periods. These lower post-modification delinquency rates reflect HAMP's emphasis on the affordability of monthly payments relative to the borrower's income, verification of income, and completion of a successful trial payment period (see table 32). While these criteria result in better performance of HAMP modifications over time, the greater flexibility in making other modifications results in a greater number of modifications.

Table 32. Performance of HAMP Modifications Compared With Other Modifications
(60 or More Days Delinquent)*

	Number of Modifications	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
HAMP Second Quarter 2010	108,155	8.3%	13.3%	15.9%	17.3%
Other Second Quarter 2010	158,900	12.3%	24.0%	29.2%	31.4%
HAMP Third Quarter 2010	58,856	7.5%	11.5%	13.5%	16.5%
Other Third Quarter 2010	174,862	9.7%	17.1%	21.1%	25.4%
HAMP Fourth Quarter 2010	56,340	9.0%	11.2%	14.7%	17.7%
Other Fourth Quarter 2010	152,513	8.3%	15.5%	22.7%	28.0%
HAMP First Quarter 2011	53,250	5.8%	9.9%	13.4%	14.9%
Other First Quarter 2011	106,650	10.7%	20.7%	27.7%	30.3%
HAMP Second Quarter 2011	70,071	5.4%	9.5%	12.1%	--
Other Second Quarter 2011	80,398	10.0%	22.1%	27.7%	--
HAMP Third Quarter 2011	53,941	5.5%	9.1%	--	--
Other Third Quarter 2011	83,598	9.6%	17.4%	--	--
HAMP Fourth Quarter 2011	42,275	4.6%	--	--	--
Other Fourth Quarter 2011	73,878	10.1%	--	--	--

*Data include all modifications that have had time to age the indicated number of months.

C. Modified Loan Performance, by Change in Monthly Payments

Modifications that reduce borrowers' monthly payments consistently show re-default rates lower than other modifications—the larger the reduction in monthly payment, the lower the subsequent re-default rates. Lower re-default rates may also result from setting monthly payments relative to the borrower's income and ability to repay, as well as verification of income and completion of a successful trial period.

For servicers and investors, determining the optimal type of modification often requires weighing the reduction in cash flow from loan terms that reduce monthly principal and interest payments, along with the possible costs of delaying foreclosure, against the potential for longer-term sustainability of the payments and ultimate repayment of the mortgage.

Re-Default Rates of Loans by Change in Payment

The following tables present re-default rates, measured as 60 or more days delinquent, for modifications made since January 1, 2008. Data show that re-default rates decrease as reductions in monthly principal and interest payments increase. Modification performance has continued to improve over time as more recent modifications, those made during 2010 and 2011, focused more on substantively reducing monthly payments and setting payments relative to the borrower's income and ability to pay.

Modifications that resulted in no change to the borrower's monthly payment have performed better than many modifications that reduced payments. These modifications generally freeze the interest rate on an adjustable rate mortgage so that the rate and payment do not increase, and tend to be offered to borrowers who were not in default on their payments.

Table 33. **Re-Default Rates of Loans Modified in 2008 by Change in Payment**
(60 or More Days Delinquent)

	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Decreased by 20% or More	15.8%	25.9%	33.2%	39.4%
Decreased by 10% to Less Than 20%	20.8%	32.9%	41.3%	47.9%
Decreased by Less Than 10%	23.8%	40.1%	49.5%	55.1%
Unchanged	47.8%	54.4%	59.6%	63.0%
Increased	34.6%	53.1%	61.9%	66.9%
Total	32.1%	44.5%	52.0%	57.0%

Table 34. **Re-Default Rates of Loans Modified in 2009 by Change in Payment**
(60 or More Days Delinquent)

	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months After Modification
Decreased by 20% or More	11.4%	19.3%	25.3%	28.7%
Decreased by 10% to Less Than 20%	15.9%	29.2%	37.3%	41.7%
Decreased by Less Than 10%	17.8%	33.9%	42.6%	46.7%
Unchanged	41.8%	49.6%	54.6%	57.0%
Increased	26.7%	46.6%	56.0%	59.8%
Total	20.0%	32.2%	39.5%	43.1%

Table 35. **Re-Default Rates of Loans Modified in 2010 by Change in Payment**
(60 or More Days Delinquent)

	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months after Modification
Decreased by 20% or More	7.3%	11.5%	15.0%	17.5%
Decreased by 10% to Less Than 20%	10.0%	19.8%	26.3%	30.2%
Decreased by Less Than 10%	13.5%	26.2%	33.5%	37.5%
Unchanged	17.6%	20.9%	23.8%	25.2%
Increased	18.2%	32.9%	40.4%	44.2%
Total	10.0%	17.4%	22.4%	25.4%

***Table 36.* Re-Default Rates of Loans Modified in 2011 by Change in Payment** (60 or More Days Delinquent)*				
	3 Months After Modification	6 Months After Modification	9 Months After Modification	12 Months after Modification
Decreased by 20% or More	5.6%	9.9%	13.6%	16.5%
Decreased by 10% to Less Than 20%	8.2%	17.3%	24.8%	29.2%
Decreased by Less Than 10%	11.0%	22.8%	30.3%	32.3%
Unchanged	10.0%	12.7%	15.9%	17.3%
Increased	18.6%	33.6%	43.3%	46.8%
Total	8.3%	15.9%	21.7%	25.1%

*Data include all modifications implemented during 2011 that have aged the indicated number of months.

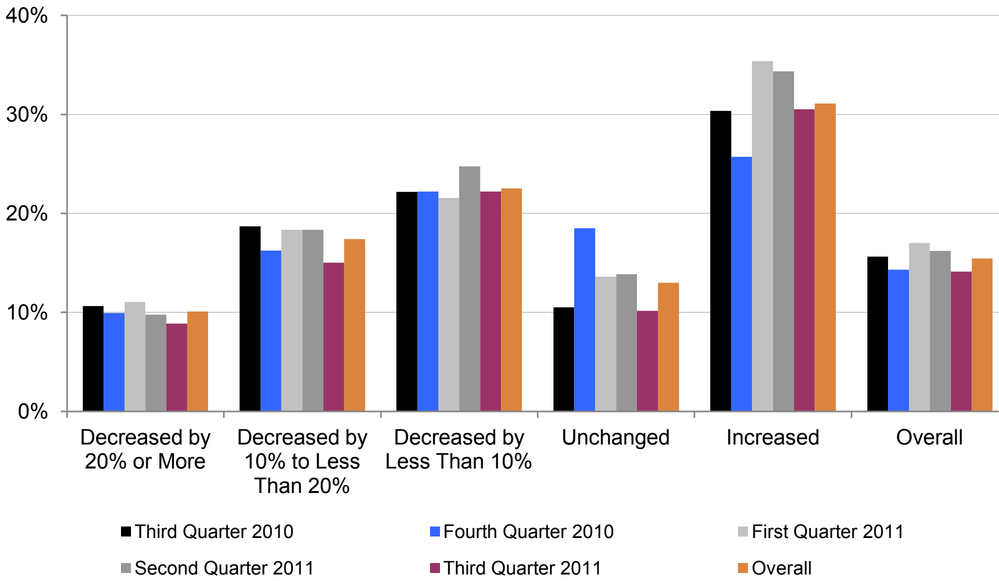
60+ Delinquency at Six Months After Modification by Change in Monthly Payment

Modifications that significantly reduced monthly principal and interest payments consistently performed better than other modifications. Modifications with the greatest decrease in monthly payments consistently had the lowest re-default rates (see table 37). Modifications that result in no change to the borrowers' monthly payments generally have performed better than many modifications that reduced payments because these modifications tend to be offered to borrowers with adjustable rate mortgages who had not defaulted on their payments.

Table 37. 60+ Delinquency at Six Months After Modification by Change in Monthly Payment

	Decreased by 20% or More	Decreased by 10% to Less Than 20%	Decreased by Less Than 10%	Unchanged	Increased	Overall
Third Quarter 2010	10.6%	18.7%	22.2%	10.5%	30.4%	15.6%
Fourth Quarter 2010	9.9%	16.2%	22.2%	18.5%	25.7%	14.3%
First Quarter 2011	11.1%	18.3%	21.5%	13.6%	35.4%	17.0%
Second Quarter 2011	9.8%	18.3%	24.8%	13.9%	34.3%	16.2%
Third Quarter 2011	8.9%	15.0%	22.2%	10.2%	30.5%	14.1%
Overall	10.1%	17.4%	22.5%	13.0%	31.1%	15.4%

Figure 14. 60+ Delinquency at Six Months After Modification by Change in Monthly Payment



Status of Mortgages Modified in 2008–2011

Servicers implemented 2,543,133 modifications from January 1, 2008 through December 31, 2011. Of these modifications, 49.3 percent were current and performing at the end of the first quarter of 2012 with another 1.4 percent paid off. More than 22 percent of these modifications were delinquent, while 17.1 percent were in process of foreclosure or had completed the foreclosure process. HAMP modifications implemented since the third quarter of 2009 have performed better than other modifications. Modifications that reduced borrowers' monthly payments by 10 percent or more performed significantly better than other modifications. Of the 1,511,900 modifications that reduced payments by 10 percent or more, 57.9 percent were current and performing at the end of the first quarter, compared with 36.8 percent of modifications that reduced payments less than 10 percent (see table 38). Modifications of mortgages held in the servicers' portfolios and those serviced for GSEs performed better than modifications of mortgages serviced for other investors (see tables 28 through 31).

Table 38. **Status of Mortgages Modified in 2008–2011**

	Total	Current	30–59 Days Delinquent	Seriously Delinquent	Foreclosures in Process	Completed Foreclosures	Paid Off	No Longer in the Portfolio*
2008	445,354	26.2%	5.3%	15.9%	16.1%	15.0%	3.3%	18.2%
2009	594,350	38.7%	6.6%	17.2%	14.1%	9.1%	2.0%	12.3%
2010	939,368	53.7%	7.5%	14.6%	9.9%	3.8%	0.8%	9.7%
2011	564,061	71.5%	8.6%	12.9%	4.8%	0.6%	0.3%	1.3%
Total	2,543,133	49.3%	7.1%	15.1%	10.8%	6.3%	1.4%	9.9%
HAMP Modification Performance Compared With Other Modifications**								
Other Modifications	1,194,442	53.4%	8.3%	16.8%	9.8%	4.1%	1.0%	6.6%
HAMP Modifications	565,751	68.2%	6.5%	9.3%	6.0%	1.9%	0.4%	7.7%
Modifications That Reduced Payments by 10 Percent or More								
Modifications That Reduced Payments by 10% or More	1,511,900	57.9%	7.1%	12.4%	8.3%	3.8%	0.9%	9.5%
Modifications That Reduced Payments by Less Than 10 Percent								
Modifications That Reduced Payments by Less Than 10%	1,031,233	36.8%	7.1%	18.9%	14.5%	9.9%	2.2%	10.5%

*Processing constraints prevented some servicers from reporting the reason for removal from the portfolio.

**Modifications used to compare with HAMP modifications only include modifications implemented from the third quarter of 2009 through the fourth quarter of 2011.

Part III: Home Forfeiture Actions—Foreclosures, Short Sales, and Deed-in-Lieu-of-Foreclosure Actions

Completed Foreclosures and Other Home Forfeiture Actions

Home forfeiture actions—foreclosure sales, short sales, and deed-in-lieu-of-foreclosure actions—totaled 185,781 during the first quarter of 2012, an increase of 1.9 percent from the previous quarter and 8.3 percent from a year earlier (see table 39). Completed foreclosures increased to 122,979—up 5.9 percent from the previous quarter and 2.7 percent from the same quarter the previous year. Short sales decreased 5.2 percent from the previous quarter but were up 19.7 percent from a year earlier. Short sales have increased to 32 percent of total home forfeiture actions, up from 29 percent during the first quarter of 2011. Deed-in-lieu-of-foreclosure actions, while up 65.1 percent from a year earlier, remained a small portion of total home forfeiture actions.

***Table 39.* Completed Foreclosures and Other Home Forfeiture Actions**

	3/31/11	6/0/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Completed Foreclosures	119,739	121,209	113,202	116,159	122,979	5.9%	2.7%
New Short Sales	50,108	56,406	57,479	63,257	59,996	-5.2%	19.7%
New Deed-in-Lieu-of-Foreclosure Actions	1,700	2,547	2,620	2,939	2,806	-4.5%	65.1%
Total	171,547	180,162	173,301	182,355	185,781	1.9%	8.3%

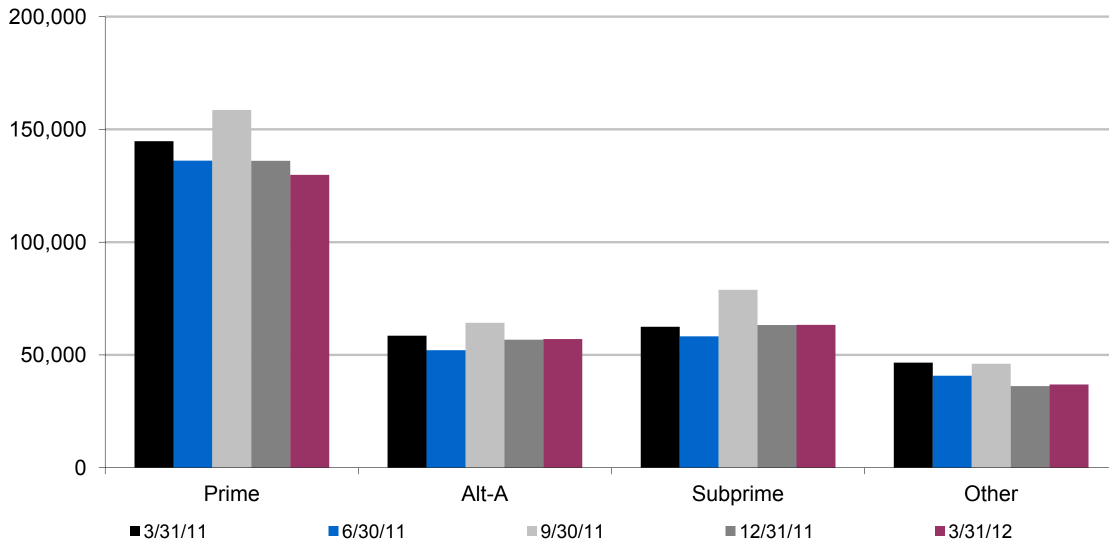
Newly Initiated Foreclosures

Servicers initiate foreclosure actions at defined stages of loan delinquency. Foreclosure actions will progress to sale of the property only if servicers and borrowers cannot arrange a permanent loss mitigation action, modification, or alternate workout solution or home sale. Newly initiated foreclosures decreased by 1.8 percent from the previous quarter, to 286,951 from 292,173, and decreased 8.1 percent from a year earlier (see table 40). Newly initiated foreclosures of Alt-A, subprime and other loans increased from the prior quarter. Prime loans experienced a decrease in newly initiated foreclosures from both the prior quarter and the same period in the prior year.

Table 40. **Number of Newly Initiated Foreclosures**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	144,742	136,119	158,632	136,026	129,823	-4.6%	-10.3%
Alt-A	58,474	52,064	64,215	56,736	56,996	0.5%	-2.5%
Subprime	62,459	58,229	78,852	63,225	63,286	0.1%	1.3%
Other	46,560	40,750	46,027	36,186	36,846	1.8%	-20.9%
Total	312,235	287,162	347,726	292,173	286,951	-1.8%	-8.1%

Figure 15. **Number of Newly Initiated Foreclosures**



Foreclosures in Process

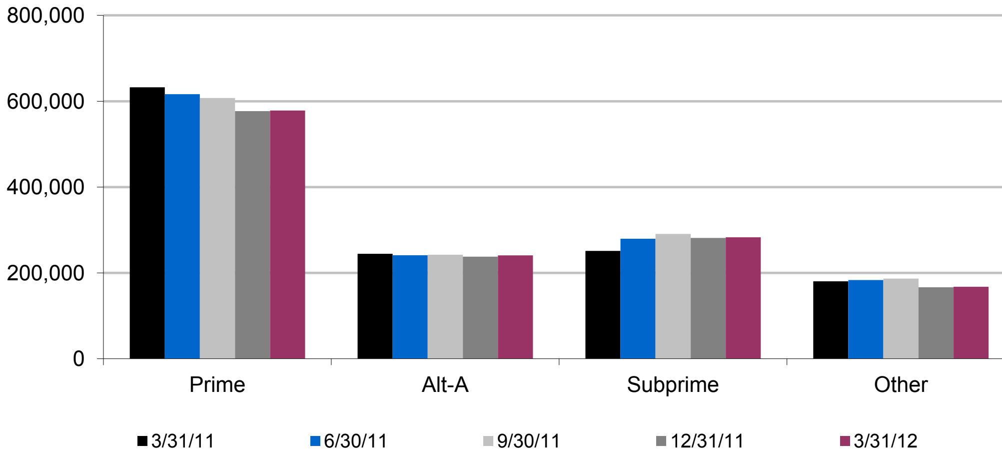
The number of mortgages in process of foreclosure increased 0.6 percent from the previous quarter, to 1,269,921. Foreclosures in process as a percentage of all mortgages serviced have remained relatively stable over the past five quarters at 4.0 to 4.1 percent (see table 41).

***Table 41.* Foreclosures in Process**

Percentage of Foreclosures in Process Relative to Mortgages in That Risk Category

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	2.8%	2.7%	2.7%	2.6%	2.6%	1.1%	-5.8%
Alt-A	7.0%	6.8%	6.9%	7.0%	7.2%	2.3%	2.8%
Subprime	10.4%	11.3%	12.0%	12.2%	12.5%	2.6%	20.5%
Other	4.5%	4.7%	5.0%	4.9%	5.1%	4.0%	13.5%
Total	4.0%	4.0%	4.1%	4.0%	4.1%	1.8%	2.3%
Number of Foreclosures in Process							
Prime	632,578	616,238	607,532	576,761	578,547	0.3%	-8.5%
Alt-A	244,588	241,010	242,376	237,558	240,876	1.4%	-1.5%
Subprime	251,201	279,636	290,556	281,440	282,879	0.5%	12.6%
Other	180,390	183,103	186,613	166,535	167,619	0.7%	-7.1%
Total	1,308,757	1,319,987	1,327,077	1,262,294	1,269,921	0.6%	-3.0%

***Figure 16.* Number of Foreclosures in Process**



Completed Foreclosures

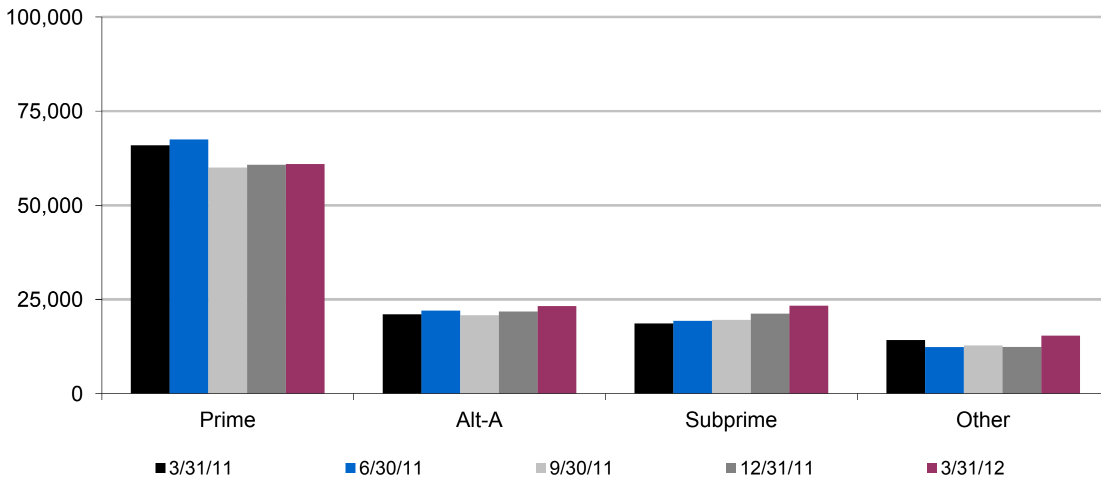
The number of completed foreclosures increased to 122,979 during the quarter—up 5.9 percent from the previous quarter and 2.7 percent from a year earlier (see table 42). The quarter-to-quarter and year-to-year increases were concentrated among Alt-A, subprime and other risk categories.

Table 42. **Completed Foreclosures**

Percentage of Completed Foreclosures Relative to Mortgages in That Risk Category

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	0.3%	0.3%	0.3%	0.3%	0.3%	1.1%	-4.7%
Alt-A	0.6%	0.6%	0.6%	0.6%	0.7%	7.4%	15.1%
Subprime	0.8%	0.8%	0.8%	0.9%	1.0%	12.4%	34.1%
Other	0.4%	0.3%	0.3%	0.4%	0.5%	29.0%	32.9%
Total	0.4%	0.4%	0.3%	0.4%	0.4%	7.1%	8.3%
Number of Completed Foreclosures							
Prime	65,889	67,451	60,033	60,777	60,984	0.3%	-7.4%
Alt-A	21,033	22,066	20,793	21,788	23,196	6.5%	10.3%
Subprime	18,644	19,364	19,598	21,230	23,373	10.1%	25.4%
Other	14,173	12,328	12,778	12,364	15,426	24.8%	8.8%
Total	119,739	121,209	113,202	116,159	122,979	5.9%	2.7%

Figure 17. **Number of Completed Foreclosures**



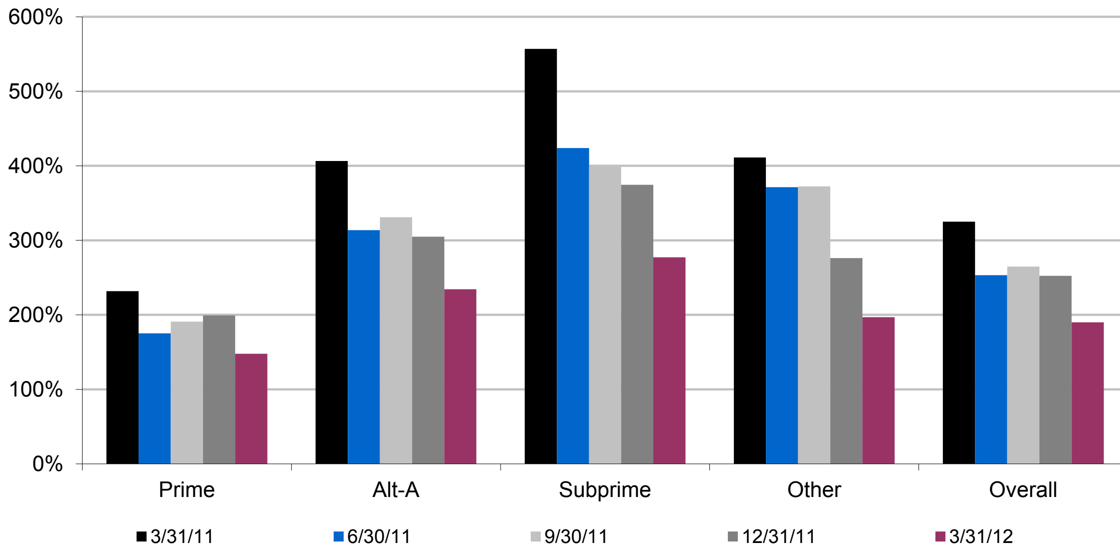
New Home Retention Actions Relative to Forfeiture Actions, by Risk Category

Home retention actions relative to home forfeitures decreased during the first quarter of 2012 because of a 23.3 percent decrease in new home retention actions compared to a 1.9 percent increase in completed foreclosures and other home forfeiture actions (see tables 1 and 5). The percentage of new home retention actions relative to home forfeitures continued to be highest for subprime loans and lowest for prime loans during first quarter 2012. New home retention actions continued to significantly exceed home forfeitures as servicers initiated 1.9 times as many home retention actions as home forfeiture actions during the quarter (see table 43).

Table 43. Percentage of New Home Retention Actions Relative to Forfeiture Actions, by Risk Category

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	231.9%	175.3%	190.9%	199.2%	147.8%	-25.8%	-36.3%
Alt-A	406.5%	313.6%	331.0%	304.9%	234.3%	-23.1%	-42.4%
Subprime	557.0%	423.8%	398.7%	374.5%	277.3%	-26.0%	-50.2%
Other	411.2%	371.4%	372.4%	276.1%	196.9%	-28.7%	-52.1%
Overall	325.0%	253.2%	264.8%	252.4%	190.0%	-24.7%	-41.5%

Figure 18. Percentage of New Home Retention Actions Relative to Forfeiture Actions, by Risk Category



Appendixes

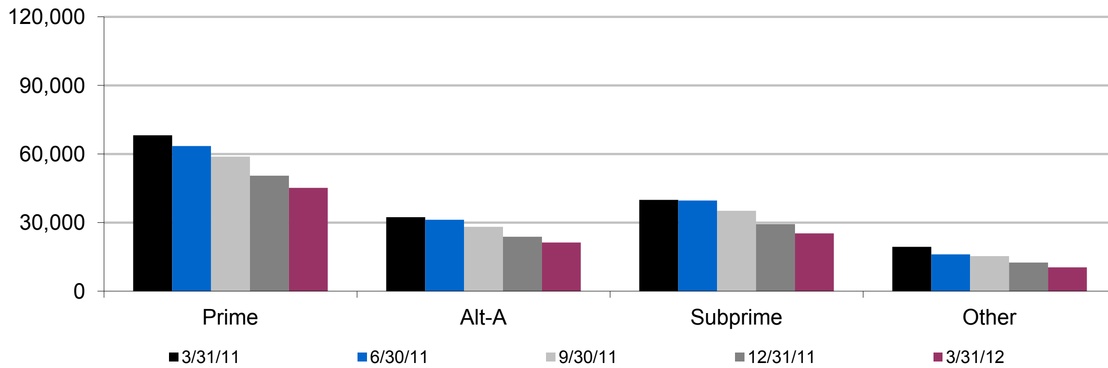
Appendix A—New Loan Modifications

There were 102,158 new loan modifications completed during the first quarter of 2012—a 12 percent decrease from the previous quarter and 36.1 percent decrease from a year earlier (see table 44). New modifications decreased across all risk categories during the quarter, the fourth consecutive quarterly decrease in each risk class.

Table 44. Number of New Loan Modifications

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	68,178	63,466	58,858	50,480	45,170	-10.5%	-33.7%
Alt-A	32,387	31,232	28,169	23,805	21,268	-10.7%	-34.3%
Subprime	39,957	39,663	35,177	29,367	25,284	-13.9%	-36.7%
Other	19,378	16,108	15,335	12,501	10,436	-16.5%	-46.1%
Total	159,900	150,469	137,539	116,153	102,158	-12.0%	-36.1%

Figure 19. Number of New Loan Modifications



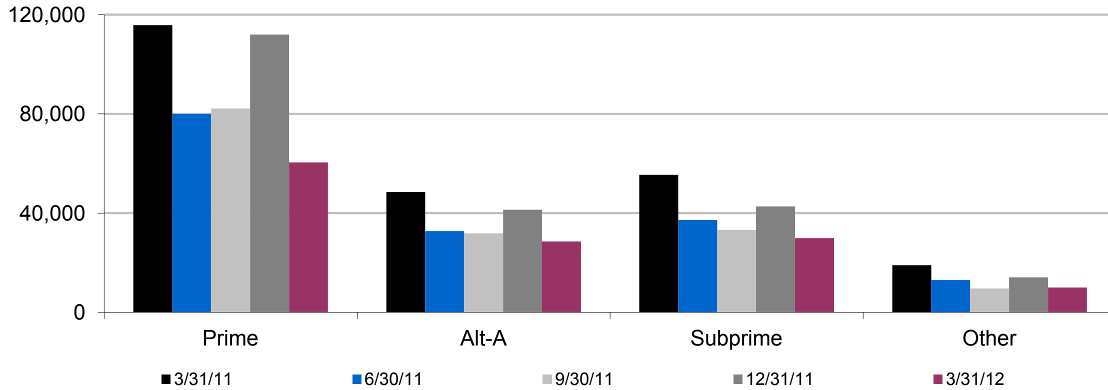
Appendix B—New Trial-Period Plans

Servicers initiated 129,016 trial-period plans during the first quarter of 2012, a 38.6 percent decrease from the previous quarter and 46.0 percent decrease from a year earlier. The size of the decreases from the prior quarter and prior year was affected by a spike in the number of plans reported as completed during the fourth quarter of 2011. In the fourth quarter of 2011 certain servicers converted a significant number of borrowers in existing payment plans to trial period plans. (see table 45).

Table 45. **Number of New Trial-Period Plans**

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	115,742	80,012	82,183	111,968	60,432	-46.0%	-47.8%
Alt-A	48,528	32,771	31,836	41,357	28,596	-30.9%	-41.1%
Subprime	55,455	37,275	33,228	42,708	29,937	-29.9%	-46.0%
Other	19,023	13,018	9,619	14,146	10,051	-28.9%	-47.2%
Total	238,748	163,076	156,866	210,179	129,016	-38.6%	-46.0%

Figure 20. **Number of New Trial-Period Plans**



Appendix C—New Payment Plans

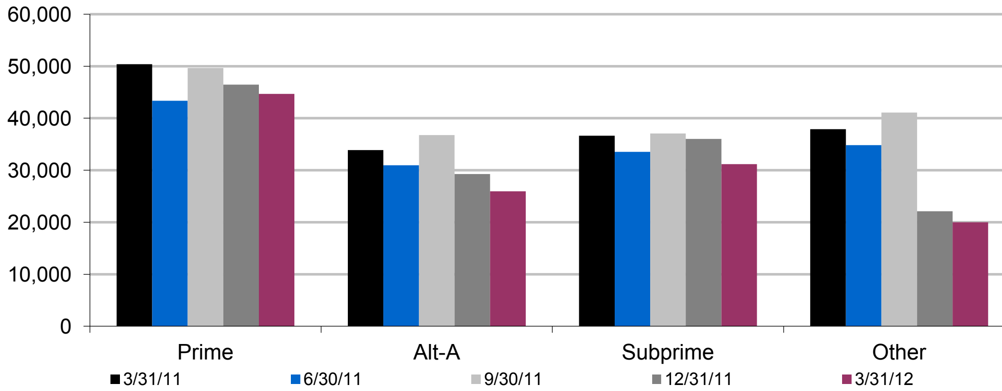
New payment plans decreased by 9.0 percent to 121,815 during the first quarter of 2012 (see table 46). New payment plans decreased across all risk categories during the quarter.

Table 46. **Number of New Payment Plans**

	3/31/11	6/30/11	9/30/11*	12/31/11	3/31/12	1Q %Change	1Y %Change
Prime	50,401	43,356	49,646	46,462	44,697	-3.8%	-11.3%
Alt-A	33,881	30,957	36,758	29,280	25,953	-11.4%	-23.4%
Subprime	36,632	33,544	37,058	36,036	31,177	-13.5%	-14.9%
Other	37,907	34,821	41,104	22,103	19,988	-9.6%	-47.3%
Total	158,821	142,678	164,566	133,881	121,815	-9.0%	-23.3%

*New payment plans completed in the third quarter of 2011 included a one-time increase due to a process change at some servicers that expanded the definition of payment plans to include short-term informal plans.

Figure 21. **Number of New Payment Plans**



Appendix D—Breakdown of Individual and Combination Modification Actions

Servicers generally use a combination of actions to reduce monthly payments and achieve payment sustainability when modifying a mortgage. Servicers changed more than one loan term in 95.3 percent of all modifications completed during the first quarter of 2012 (see table 47).

***Table 47.* Changes in Terms for Modifications Made Through the First Quarter of 2012**
(Percentage of Modifications in Each Category)

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Combination*	88.2%	94.2%	94.4%	94.5%	95.3%	0.9%	8.0%
Capitalization	3.6%	1.6%	2.5%	2.8%	1.9%	-34.1%	-48.2%
Rate Reduction	1.7%	1.3%	1.2%	0.7%	0.8%	15.1%	-53.0%
Rate Freeze	0.4%	0.3%	0.4%	0.0%	0.2%	1055.9%	-41.9%
Term Extension***	2.9%	0.8%	0.4%	0.4%	0.6%	33.5%	-80.4%
Principal Reduction	0.0%	0.0%	0.0%	0.0%	0.0%	-62.1%	-82.6%
Principal Deferral	0.2%	0.1%	0.0%	0.1%	0.1%	28.1%	-69.2%
Not Reported**	2.9%	1.7%	1.0%	1.5%	1.2%	-22.7%	-60.3%
(Number of Changes in Each Category)							
Combination*	141,030	141,730	129,896	109,726	97,350	-11.3%	-31.0%
Capitalization	5,750	2,385	3,487	3,284	1,902	-42.1%	-66.9%
Rate Reduction	2,709	1,971	1,682	803	813	1.2%	-70.0%
Rate Freeze	657	389	564	24	244	916.7%	-62.9%
Term Extension***	4,690	1,278	482	500	587	17.4%	-87.5%
Principal Reduction	9	10	40	3	1	-66.7%	-88.9%
Principal Deferral	361	132	61	63	71	12.7%	-80.3%
Not Reported**	4,694	2,574	1,327	1,750	1,190	-32.0%	-74.6%
All Modifications	159,900	150,469	137,539	116,153	102,158	-12.0%	-36.1%

*Combination modifications result in a change to two or more loan terms. All other modification types detailed in this table involve only the individual listed action.

**Processing constraints at some servicers prevented them from reporting specific modified term(s).

***Increase in the first quarter of 2012 results from process changes at some servicers that improved the reporting of this data element.

Changes in Terms for Combination Modification Actions

Of the 97,350 combination modifications implemented during the first quarter of 2012, 94.2 percent included capitalization of missed fees and payments, 83.8 percent included interest rate reduction, and 76.7 percent included an extension of the loan maturity. Principal deferral was included in 25.8 percent of the combination modifications implemented during the quarter and principal reduction was part of 10.7 percent of first-quarter combination modifications. Because combination modifications changed more than one term, the sum of the individual actions exceeded 100 percent of total combination modifications.

***Table 48.* Changes in Terms for Combination Modifications Through the First Quarter of 2012**

(Percentage of Modifications in Each Category)

	3/31/11	6/30/11	9/30/11	12/31/11	3/31/12	1Q %Change	1Y %Change
Capitalization	94.5%	94.7%	91.0%	95.8%	94.2%	-1.7%	-0.3%
Rate Reduction	91.7%	83.0%	80.8%	82.0%	83.8%	2.2%	-8.6%
Rate Freeze	1.8%	2.0%	4.4%	6.7%	6.3%	-7.0%	255.7%
Term Extension*	62.5%	64.0%	60.9%	58.3%	76.7%	31.5%	22.7%
Principal Reduction	3.4%	6.6%	8.6%	9.0%	10.7%	18.9%	212.9%
Principal Deferral	12.5%	19.7%	21.6%	25.9%	25.8%	-0.6%	106.5%
(Total Number of Changes in Each Category)							
Capitalization	133,236	134,225	118,175	105,081	91,671	-12.8%	-31.2%
Rate Reduction	129,331	117,598	104,969	89,976	81,569	-9.3%	-36.9%
Rate Freeze	2,485	2,820	5,764	7,395	6,101	-17.5%	145.5%
Term Extension*	88,152	90,668	79,054	63,994	74,670	16.7%	-15.3%
Principal Reduction	4,817	9,391	11,143	9,864	10,403	5.5%	116.0%
Principal Deferral	17,597	27,857	28,072	28,433	25,083	-11.8%	42.5%

*Increase in the first quarter of 2012 results from process changes at some servicers that improved the reporting of this data element.

Appendix E—Mortgage Modification Data by State

The following tables present certain mortgage modification data by state, the District of Columbia, and U.S. territories (the latter are included in the category labeled "Other"). This data fulfills reporting requirements in the Dodd–Frank Wall Street Reform and Consumer Protection Act (Public Law 111-203).

Table 49 presents the number and percentage of HAMP modifications and other modifications in each state during the first quarter of 2012. Tables 50 and 51 present the number and percentage of each type of action included in modifications made during the quarter in each state, the District of Columbia, and U.S. territories. Tables 52 and 53 present the number and percentage of each type of action included in combination modifications made during the quarter in each state, the District of Columbia, and U.S. territories. Tables 54 and 55 present the number and percentage of modifications made during the quarter in each state, the District of Columbia, and U.S. territories by the amount of change in the borrowers' monthly principal and interest payments. Tables 56 and 57 present the number and percentage of modifications made in the third quarter of 2011 that were 60 or more days delinquent or in process of foreclosure at the end of the first quarter of 2012.

Table 49. Number and Percentage of Mortgage Modifications
Implemented in the First Quarter of 2012

	HAMP Modifications		Other Modifications		Total Modifications	
States	Total	% of State Total	Total	% of State Total	Total	% of Total
Total - All States	36,554	35.8%	65,604	64.2%	102,158	100.0%
Alabama	189	18.5%	835	81.5%	1,024	1.0%
Alaska	22	32.8%	45	67.2%	67	0.1%
Arizona	946	39.7%	1,437	60.3%	2,383	2.3%
Arkansas	65	19.2%	273	80.8%	338	0.3%
California	10,740	49.9%	10,780	50.1%	21,520	21.1%
Colorado	495	36.9%	848	63.1%	1,343	1.3%
Connecticut	483	34.0%	939	66.0%	1,422	1.4%
Delaware	86	22.8%	291	77.2%	377	0.4%
District of Columbia	89	37.2%	150	62.8%	239	0.2%
Florida	4,333	39.1%	6,757	60.9%	11,090	10.9%
Georgia	1,380	30.3%	3,174	69.7%	4,554	4.5%
Hawaii	117	35.7%	211	64.3%	328	0.3%
Idaho	105	28.2%	268	71.8%	373	0.4%
Illinois	1,888	36.1%	3,346	63.9%	5,234	5.1%
Indiana	254	18.0%	1,158	82.0%	1,412	1.4%
Iowa	79	18.9%	339	81.1%	418	0.4%
Kansas	97	26.0%	276	74.0%	373	0.4%
Kentucky	118	18.8%	510	81.2%	628	0.6%
Louisiana	180	20.2%	713	79.8%	893	0.9%
Maine	94	30.9%	210	69.1%	304	0.3%
Maryland	1,112	33.5%	2,210	66.5%	3,322	3.3%
Massachusetts	791	38.9%	1,243	61.1%	2,034	2.0%
Michigan	769	29.9%	1,800	70.1%	2,569	2.5%
Minnesota	472	35.3%	866	64.7%	1,338	1.3%
Mississippi	77	17.1%	374	82.9%	451	0.4%
Missouri	348	27.5%	917	72.5%	1,265	1.2%
Montana	34	27.6%	89	72.4%	123	0.1%
Nebraska	32	14.9%	183	85.1%	215	0.2%
Nevada	673	41.4%	953	58.6%	1,626	1.6%
New Hampshire	140	41.4%	198	58.6%	338	0.3%
New Jersey	1,359	34.9%	2,530	65.1%	3,889	3.8%
New Mexico	96	24.8%	291	75.2%	387	0.4%
New York	2,444	40.9%	3,535	59.1%	5,979	5.9%
North Carolina	658	23.0%	2,197	77.0%	2,855	2.8%
North Dakota	6	18.8%	26	81.3%	32	0.0%
Ohio	529	21.4%	1,944	78.6%	2,473	2.4%
Oklahoma	80	16.8%	395	83.2%	475	0.5%
Oregon	409	40.5%	602	59.5%	1,011	1.0%
Pennsylvania	680	25.0%	2,038	75.0%	2,718	2.7%
Rhode Island	126	32.3%	264	67.7%	390	0.4%
South Carolina	282	21.7%	1,018	78.3%	1,300	1.3%
South Dakota	12	22.2%	42	77.8%	54	0.1%
Tennessee	330	24.5%	1,019	75.5%	1,349	1.3%
Texas	1,040	21.6%	3,783	78.4%	4,823	4.7%
Utah	282	35.4%	514	64.6%	796	0.8%
Vermont	18	16.5%	91	83.5%	109	0.1%
Virginia	761	33.2%	1,532	66.8%	2,293	2.2%
Washington	845	38.1%	1,374	61.9%	2,219	2.2%
West Virginia	31	16.7%	155	83.3%	186	0.2%
Wisconsin	324	29.0%	793	71.0%	1,117	1.1%
Wyoming	10	18.9%	43	81.1%	53	0.1%
Other	24	49.0%	25	51.0%	49	0.0%

Table 50. **Number of Mortgage Modification Actions**
Implemented in the First Quarter of 2012

States	Capitalization	Rate Reduction or Freeze	Term Extension	Principal Reductions	Principal Deferral	Combination	Not Reported	Total Modifications
Total - All States	1,902	1,057	587	1	71	97,350	1,190	102,158
Alabama	20	8	45	0	0	945	6	1,024
Alaska	3	0	0	0	0	64	0	67
Arizona	44	28	10	0	2	2,275	24	2,383
Arkansas	14	5	1	0	0	317	1	338
California	304	180	51	0	34	20,523	428	21,520
Colorado	24	14	7	0	1	1,290	7	1,343
Connecticut	30	14	4	0	0	1,356	18	1,422
Delaware	9	3	7	0	0	357	1	377
District of Columbia	8	2	1	0	0	228	0	239
Florida	133	97	37	0	6	10,656	161	11,090
Georgia	112	52	49	0	0	4,280	61	4,554
Hawaii	1	3	1	0	0	319	4	328
Idaho	6	11	6	0	1	344	5	373
Illinois	73	32	25	0	0	5,069	35	5,234
Indiana	30	12	14	0	0	1,349	7	1,412
Iowa	8	11	3	0	0	396	0	418
Kansas	6	2	4	0	0	358	3	373
Kentucky	18	10	12	0	0	587	1	628
Louisiana	25	18	8	0	1	838	3	893
Maine	5	1	0	0	0	297	1	304
Maryland	71	28	14	0	5	3,146	58	3,322
Massachusetts	36	17	3	0	1	1,960	17	2,034
Michigan	47	25	18	0	1	2,451	27	2,569
Minnesota	33	10	4	0	1	1,281	9	1,338
Mississippi	11	6	9	0	0	423	2	451
Missouri	50	20	8	0	2	1,178	7	1,265
Montana	3	3	0	0	0	117	0	123
Nebraska	2	2	1	0	0	209	1	215
Nevada	17	25	3	0	1	1,552	28	1,626
New Hampshire	6	1	1	0	0	328	2	338
New Jersey	42	27	17	0	0	3,755	48	3,889
New Mexico	15	5	0	0	0	365	2	387
New York	70	37	22	0	7	5,762	81	5,979
North Carolina	92	47	34	0	0	2,669	13	2,855
North Dakota	2	0	1	0	0	29	0	32
Ohio	57	34	24	1	1	2,350	6	2,473
Oklahoma	16	4	1	0	0	454	0	475
Oregon	17	16	7	0	0	970	1	1,011
Pennsylvania	54	26	23	0	1	2,600	14	2,718
Rhode Island	13	4	2	0	0	368	3	390
South Carolina	29	30	12	0	0	1,225	4	1,300
South Dakota	0	0	1	0	0	52	1	54
Tennessee	38	22	27	0	0	1,256	6	1,349
Texas	177	77	14	0	0	4,531	24	4,823
Utah	12	7	5	0	0	764	8	796
Vermont	1	0	6	0	0	98	4	109
Virginia	63	33	21	0	4	2,152	20	2,293
Washington	27	28	9	0	1	2,126	28	2,219
West Virginia	10	2	1	0	1	170	2	186
Wisconsin	16	16	12	0	0	1,066	7	1,117
Wyoming	2	2	2	0	0	47	0	53
Other	0	0	0	0	0	48	1	49

***Table 51.* Percentage of Mortgage Modification Actions** Implemented in the First Quarter of 2012								
States	Capitalization	Rate Reduction or Freeze	Term Extension	Principal Reduction	Principal Deferral	Combination	Not Reported	Total Modifications
Total - All States	1.9%	1.0%	0.6%	0.0%	0.1%	95.3%	1.2%	102,158
Alabama	2.0%	0.8%	4.4%	0.0%	0.0%	92.3%	0.6%	1,024
Alaska	4.5%	0.0%	0.0%	0.0%	0.0%	95.5%	0.0%	67
Arizona	1.8%	1.2%	0.4%	0.0%	0.1%	95.5%	1.0%	2,383
Arkansas	4.1%	1.5%	0.3%	0.0%	0.0%	93.8%	0.3%	338
California	1.4%	0.8%	0.2%	0.0%	0.2%	95.4%	2.0%	21,520
Colorado	1.8%	1.0%	0.5%	0.0%	0.1%	96.1%	0.5%	1,343
Connecticut	2.1%	1.0%	0.3%	0.0%	0.0%	95.4%	1.3%	1,422
Delaware	2.4%	0.8%	1.9%	0.0%	0.0%	94.7%	0.3%	377
District of Columbia	3.3%	0.8%	0.4%	0.0%	0.0%	95.4%	0.0%	239
Florida	1.2%	0.9%	0.3%	0.0%	0.1%	96.1%	1.5%	11,090
Georgia	2.5%	1.1%	1.1%	0.0%	0.0%	94.0%	1.3%	4,554
Hawaii	0.3%	0.9%	0.3%	0.0%	0.0%	97.3%	1.2%	328
Idaho	1.6%	2.9%	1.6%	0.0%	0.3%	92.2%	1.3%	373
Illinois	1.4%	0.6%	0.5%	0.0%	0.0%	96.8%	0.7%	5,234
Indiana	2.1%	0.8%	1.0%	0.0%	0.0%	95.5%	0.5%	1,412
Iowa	1.9%	2.6%	0.7%	0.0%	0.0%	94.7%	0.0%	418
Kansas	1.6%	0.5%	1.1%	0.0%	0.0%	96.0%	0.8%	373
Kentucky	2.9%	1.6%	1.9%	0.0%	0.0%	93.5%	0.2%	628
Louisiana	2.8%	2.0%	0.9%	0.0%	0.1%	93.8%	0.3%	893
Maine	1.6%	0.3%	0.0%	0.0%	0.0%	97.7%	0.3%	304
Maryland	2.1%	0.8%	0.4%	0.0%	0.2%	94.7%	1.7%	3,322
Massachusetts	1.8%	0.8%	0.1%	0.0%	0.0%	96.4%	0.8%	2,034
Michigan	1.8%	1.0%	0.7%	0.0%	0.0%	95.4%	1.1%	2,569
Minnesota	2.5%	0.7%	0.3%	0.0%	0.1%	95.7%	0.7%	1,338
Mississippi	2.4%	1.3%	2.0%	0.0%	0.0%	93.8%	0.4%	451
Missouri	4.0%	1.6%	0.6%	0.0%	0.2%	93.1%	0.6%	1,265
Montana	2.4%	2.4%	0.0%	0.0%	0.0%	95.1%	0.0%	123
Nebraska	0.9%	0.9%	0.5%	0.0%	0.0%	97.2%	0.5%	215
Nevada	1.0%	1.5%	0.2%	0.0%	0.1%	95.4%	1.7%	1,626
New Hampshire	1.8%	0.3%	0.3%	0.0%	0.0%	97.0%	0.6%	338
New Jersey	1.1%	0.7%	0.4%	0.0%	0.0%	96.6%	1.2%	3,889
New Mexico	3.9%	1.3%	0.0%	0.0%	0.0%	94.3%	0.5%	387
New York	1.2%	0.6%	0.4%	0.0%	0.1%	96.4%	1.4%	5,979
North Carolina	3.2%	1.6%	1.2%	0.0%	0.0%	93.5%	0.5%	2,855
North Dakota	6.3%	0.0%	3.1%	0.0%	0.0%	90.6%	0.0%	32
Ohio	2.3%	1.4%	1.0%	0.0%	0.0%	95.0%	0.2%	2,473
Oklahoma	3.4%	0.8%	0.2%	0.0%	0.0%	95.6%	0.0%	475
Oregon	1.7%	1.6%	0.7%	0.0%	0.0%	95.9%	0.1%	1,011
Pennsylvania	2.0%	1.0%	0.8%	0.0%	0.0%	95.7%	0.5%	2,718
Rhode Island	3.3%	1.0%	0.5%	0.0%	0.0%	94.4%	0.8%	390
South Carolina	2.2%	2.3%	0.9%	0.0%	0.0%	94.2%	0.3%	1,300
South Dakota	0.0%	0.0%	1.9%	0.0%	0.0%	96.3%	1.9%	54
Tennessee	2.8%	1.6%	2.0%	0.0%	0.0%	93.1%	0.4%	1,349
Texas	3.7%	1.6%	0.3%	0.0%	0.0%	93.9%	0.5%	4,823
Utah	1.5%	0.9%	0.6%	0.0%	0.0%	96.0%	1.0%	796
Vermont	0.9%	0.0%	5.5%	0.0%	0.0%	89.9%	3.7%	109
Virginia	2.7%	1.4%	0.9%	0.0%	0.2%	93.9%	0.9%	2,293
Washington	1.2%	1.3%	0.4%	0.0%	0.0%	95.8%	1.3%	2,219
West Virginia	5.4%	1.1%	0.5%	0.0%	0.5%	91.4%	1.1%	186
Wisconsin	1.4%	1.4%	1.1%	0.0%	0.0%	95.4%	0.6%	1,117
Wyoming	3.8%	3.8%	3.8%	0.0%	0.0%	88.7%	0.0%	53
Other	0.0%	0.0%	0.0%	0.0%	0.0%	98.0%	2.0%	49

Table 52. Number of Modification Actions in Combination Actions
Implemented in the First Quarter of 2012

States	Capitalization	Rate Reduction or Freeze	Term Extension	Principal Reduction	Principal Deferral	Total Combination Modifications
Total - All States	91,671	87,022	74,670	10,403	25,083	97,350
Alabama	788	885	722	32	88	945
Alaska	64	59	47	0	8	64
Arizona	2,151	1,946	1,646	304	738	2,275
Arkansas	302	292	231	15	24	317
California	19,608	18,557	14,971	3,807	7,957	20,523
Colorado	1,232	1,195	980	70	188	1,290
Connecticut	1,296	1,180	1,071	115	323	1,356
Delaware	319	325	284	15	60	357
District of Columbia	218	200	168	21	59	228
Florida	10,181	9,045	8,291	1,769	3,927	10,656
Georgia	3,943	3,932	3,326	307	848	4,280
Hawaii	307	264	218	13	80	319
Idaho	318	298	259	21	62	344
Illinois	4,809	4,363	4,098	507	1,503	5,069
Indiana	1,269	1,233	1,085	70	111	1,349
Iowa	375	357	326	16	33	396
Kansas	332	325	259	13	34	358
Kentucky	515	544	467	20	40	587
Louisiana	781	779	638	24	74	838
Maine	284	258	227	13	51	297
Maryland	2,993	2,768	2,300	307	818	3,146
Massachusetts	1,877	1,699	1,517	167	498	1,960
Michigan	2,281	2,145	1,868	228	566	2,451
Minnesota	1,210	1,150	974	93	282	1,281
Mississippi	367	396	300	23	40	423
Missouri	1,095	1,089	870	69	139	1,178
Montana	106	107	98	0	24	117
Nebraska	193	197	172	2	16	209
Nevada	1,503	1,245	1,094	215	599	1,552
New Hampshire	305	295	233	20	60	328
New Jersey	3,623	3,222	3,031	344	1,096	3,755
New Mexico	325	326	288	13	44	365
New York	5,599	5,265	4,636	524	1,423	5,762
North Carolina	2,365	2,448	2,140	66	294	2,669
North Dakota	21	26	25	0	1	29
Ohio	2,126	2,170	1,895	123	301	2,350
Oklahoma	420	426	346	10	24	454
Oregon	904	868	747	83	222	970
Pennsylvania	2,410	2,370	2,050	143	369	2,600
Rhode Island	345	319	292	27	105	368
South Carolina	1,099	1,114	979	47	149	1,225
South Dakota	51	50	40	2	3	52
Tennessee	1,125	1,180	945	70	121	1,256
Texas	4,278	4,252	3,599	175	370	4,531
Utah	728	690	553	44	130	764
Vermont	72	91	79	2	8	98
Virginia	1,950	1,967	1,629	163	428	2,152
Washington	2,008	1,896	1,677	187	528	2,126
West Virginia	148	160	126	5	20	170
Wisconsin	970	966	792	96	188	1,066
Wyoming	34	45	36	0	3	47
Other	48	43	25	3	6	48

Table 53. Percentage of Modification Actions in Combination Actions
Implemented in the First Quarter of 2012

States	Capitalization	Rate Reduction or Freeze	Term Extension	Principal Reduction	Principal Deferral	Total Combination Modifications
Total - All States	94.2%	89.4%	76.7%	10.7%	25.8%	97,350
Alabama	83.4%	93.7%	76.4%	3.4%	9.3%	945
Alaska	100.0%	92.2%	73.4%	0.0%	12.5%	64
Arizona	94.5%	85.5%	72.4%	13.4%	32.4%	2,275
Arkansas	95.3%	92.1%	72.9%	4.7%	7.6%	317
California	95.5%	90.4%	72.9%	18.5%	38.8%	20,523
Colorado	95.5%	92.6%	76.0%	5.4%	14.6%	1,290
Connecticut	95.6%	87.0%	79.0%	8.5%	23.8%	1,356
Delaware	89.4%	91.0%	79.6%	4.2%	16.8%	357
District of Columbia	95.6%	87.7%	73.7%	9.2%	25.9%	228
Florida	95.5%	84.9%	77.8%	16.6%	36.9%	10,656
Georgia	92.1%	91.9%	77.7%	7.2%	19.8%	4,280
Hawaii	96.2%	82.8%	68.3%	4.1%	25.1%	319
Idaho	92.4%	86.6%	75.3%	6.1%	18.0%	344
Illinois	94.9%	86.1%	80.8%	10.0%	29.7%	5,069
Indiana	94.1%	91.4%	80.4%	5.2%	8.2%	1,349
Iowa	94.7%	90.2%	82.3%	4.0%	8.3%	396
Kansas	92.7%	90.8%	72.3%	3.6%	9.5%	358
Kentucky	87.7%	92.7%	79.6%	3.4%	6.8%	587
Louisiana	93.2%	93.0%	76.1%	2.9%	8.8%	838
Maine	95.6%	86.9%	76.4%	4.4%	17.2%	297
Maryland	95.1%	88.0%	73.1%	9.8%	26.0%	3,146
Massachusetts	95.8%	86.7%	77.4%	8.5%	25.4%	1,960
Michigan	93.1%	87.5%	76.2%	9.3%	23.1%	2,451
Minnesota	94.5%	89.8%	76.0%	7.3%	22.0%	1,281
Mississippi	86.8%	93.6%	70.9%	5.4%	9.5%	423
Missouri	93.0%	92.4%	73.9%	5.9%	11.8%	1,178
Montana	90.6%	91.5%	83.8%	0.0%	20.5%	117
Nebraska	92.3%	94.3%	82.3%	1.0%	7.7%	209
Nevada	96.8%	80.2%	70.5%	13.9%	38.6%	1,552
New Hampshire	93.0%	89.9%	71.0%	6.1%	18.3%	328
New Jersey	96.5%	85.8%	80.7%	9.2%	29.2%	3,755
New Mexico	89.0%	89.3%	78.9%	3.6%	12.1%	365
New York	97.2%	91.4%	80.5%	9.1%	24.7%	5,762
North Carolina	88.6%	91.7%	80.2%	2.5%	11.0%	2,669
North Dakota	72.4%	89.7%	86.2%	0.0%	3.4%	29
Ohio	90.5%	92.3%	80.6%	5.2%	12.8%	2,350
Oklahoma	92.5%	93.8%	76.2%	2.2%	5.3%	454
Oregon	93.2%	89.5%	77.0%	8.6%	22.9%	970
Pennsylvania	92.7%	91.2%	78.8%	5.5%	14.2%	2,600
Rhode Island	93.8%	86.7%	79.3%	7.3%	28.5%	368
South Carolina	89.7%	90.9%	79.9%	3.8%	12.2%	1,225
South Dakota	98.1%	96.2%	76.9%	3.8%	5.8%	52
Tennessee	89.6%	93.9%	75.2%	5.6%	9.6%	1,256
Texas	94.4%	93.8%	79.4%	3.9%	8.2%	4,531
Utah	95.3%	90.3%	72.4%	5.8%	17.0%	764
Vermont	73.5%	92.9%	80.6%	2.0%	8.2%	98
Virginia	90.6%	91.4%	75.7%	7.6%	19.9%	2,152
Washington	94.4%	89.2%	78.9%	8.8%	24.8%	2,126
West Virginia	87.1%	94.1%	74.1%	2.9%	11.8%	170
Wisconsin	91.0%	90.6%	74.3%	9.0%	17.6%	1,066
Wyoming	72.3%	95.7%	76.6%	0.0%	6.4%	47
Other	100.0%	89.6%	52.1%	6.3%	12.5%	48

Table 54. **Changes in Monthly Principal and Interest Payments by State (Number)** Modifications Implemented in the First Quarter of 2012							
States	Decreased by 20% or More	Decreased by 10% to Less Than 20%	Decreased by Less Than 10%	Unchanged	Increased	Not Reported	Total Modifications
Total - All States	63,716	16,218	13,134	1,059	7,559	472	102,158
Alabama	475	215	192	42	95	5	1,024
Alaska	37	11	12	0	7	0	67
Arizona	1,551	377	270	29	147	9	2,383
Arkansas	142	92	60	3	37	4	338
California	15,089	2,676	2,013	240	1,442	60	21,520
Colorado	766	262	213	13	87	2	1,343
Connecticut	931	226	152	6	101	6	1,422
Delaware	201	78	57	7	32	2	377
District of Columbia	139	41	34	2	23	0	239
Florida	7,990	1,344	1,000	88	616	52	11,090
Georgia	2,615	737	758	59	353	32	4,554
Hawaii	229	52	31	2	12	2	328
Idaho	198	83	61	5	24	2	373
Illinois	3,577	757	559	31	293	17	5,234
Indiana	672	296	283	18	123	20	1,412
Iowa	223	82	75	2	35	1	418
Kansas	193	74	66	3	33	4	373
Kentucky	275	127	149	10	66	1	628
Louisiana	400	203	160	9	117	4	893
Maine	174	53	49	1	26	1	304
Maryland	2,015	550	467	17	262	11	3,322
Massachusetts	1,346	338	232	8	107	3	2,034
Michigan	1,581	421	336	50	169	12	2,569
Minnesota	776	232	189	6	116	19	1,338
Mississippi	189	118	86	14	41	3	451
Missouri	607	292	211	10	134	11	1,265
Montana	64	29	14	3	13	0	123
Nebraska	102	39	40	2	25	7	215
Nevada	1,156	203	146	26	89	6	1,626
New Hampshire	190	67	48	2	29	2	338
New Jersey	2,611	596	407	29	234	12	3,889
New Mexico	205	71	67	5	37	2	387
New York	4,179	862	585	34	299	20	5,979
North Carolina	1,437	507	536	57	302	16	2,855
North Dakota	12	3	10	1	5	1	32
Ohio	1,280	464	403	38	251	37	2,473
Oklahoma	188	123	90	5	60	9	475
Oregon	633	182	125	5	62	4	1,011
Pennsylvania	1,565	503	383	24	234	9	2,718
Rhode Island	251	55	52	4	28	0	390
South Carolina	660	273	223	18	122	4	1,300
South Dakota	20	14	12	1	7	0	54
Tennessee	669	266	250	24	131	9	1,349
Texas	2,212	952	981	36	627	15	4,823
Utah	429	177	117	8	61	4	796
Vermont	51	22	20	4	7	5	109
Virginia	1,281	416	375	26	184	11	2,293
Washington	1,393	387	287	17	127	8	2,219
West Virginia	86	34	35	3	27	1	186
Wisconsin	593	215	200	9	93	7	1,117
Wyoming	25	12	9	3	4	0	53
Other	33	9	4	0	3	0	49

***Table 55.* Changes in Monthly Principal and Interest Payments (Percentage)** Modifications Implemented During the First Quarter of 2012							
States	Decreased by 20% or More	Decreased by 10% to Less Than 20%	Decreased by Less Than 10%	Unchanged	Increased	Not Reported	Total Modifications
Total - All States	62.4%	15.9%	12.9%	1.0%	7.4%	0.5%	102,158
Alabama	46.4%	21.0%	18.8%	4.1%	9.3%	0.5%	1,024
Alaska	55.2%	16.4%	17.9%	0.0%	10.4%	0.0%	67
Arizona	65.1%	15.8%	11.3%	1.2%	6.2%	0.4%	2,383
Arkansas	42.0%	27.2%	17.8%	0.9%	10.9%	1.2%	338
California	70.1%	12.4%	9.4%	1.1%	6.7%	0.3%	21,520
Colorado	57.0%	19.5%	15.9%	1.0%	6.5%	0.1%	1,343
Connecticut	65.5%	15.9%	10.7%	0.4%	7.1%	0.4%	1,422
Delaware	53.3%	20.7%	15.1%	1.9%	8.5%	0.5%	377
District of Columbia	58.2%	17.2%	14.2%	0.8%	9.6%	0.0%	239
Florida	72.0%	12.1%	9.0%	0.8%	5.6%	0.5%	11,090
Georgia	57.4%	16.2%	16.6%	1.3%	7.8%	0.7%	4,554
Hawaii	69.8%	15.9%	9.5%	0.6%	3.7%	0.6%	328
Idaho	53.1%	22.3%	16.4%	1.3%	6.4%	0.5%	373
Illinois	68.3%	14.5%	10.7%	0.6%	5.6%	0.3%	5,234
Indiana	47.6%	21.0%	20.0%	1.3%	8.7%	1.4%	1,412
Iowa	53.3%	19.6%	17.9%	0.5%	8.4%	0.2%	418
Kansas	51.7%	19.8%	17.7%	0.8%	8.8%	1.1%	373
Kentucky	43.8%	20.2%	23.7%	1.6%	10.5%	0.2%	628
Louisiana	44.8%	22.7%	17.9%	1.0%	13.1%	0.4%	893
Maine	57.2%	17.4%	16.1%	0.3%	8.6%	0.3%	304
Maryland	60.7%	16.6%	14.1%	0.5%	7.9%	0.3%	3,322
Massachusetts	66.2%	16.6%	11.4%	0.4%	5.3%	0.1%	2,034
Michigan	61.5%	16.4%	13.1%	1.9%	6.6%	0.5%	2,569
Minnesota	58.0%	17.3%	14.1%	0.4%	8.7%	1.4%	1,338
Mississippi	41.9%	26.2%	19.1%	3.1%	9.1%	0.7%	451
Missouri	48.0%	23.1%	16.7%	0.8%	10.6%	0.9%	1,265
Montana	52.0%	23.6%	11.4%	2.4%	10.6%	0.0%	123
Nebraska	47.4%	18.1%	18.6%	0.9%	11.6%	3.3%	215
Nevada	71.1%	12.5%	9.0%	1.6%	5.5%	0.4%	1,626
New Hampshire	56.2%	19.8%	14.2%	0.6%	8.6%	0.6%	338
New Jersey	67.1%	15.3%	10.5%	0.7%	6.0%	0.3%	3,889
New Mexico	53.0%	18.3%	17.3%	1.3%	9.6%	0.5%	387
New York	69.9%	14.4%	9.8%	0.6%	5.0%	0.3%	5,979
North Carolina	50.3%	17.8%	18.8%	2.0%	10.6%	0.6%	2,855
North Dakota	37.5%	9.4%	31.3%	3.1%	15.6%	3.1%	32
Ohio	51.8%	18.8%	16.3%	1.5%	10.1%	1.5%	2,473
Oklahoma	39.6%	25.9%	18.9%	1.1%	12.6%	1.9%	475
Oregon	62.6%	18.0%	12.4%	0.5%	6.1%	0.4%	1,011
Pennsylvania	57.6%	18.5%	14.1%	0.9%	8.6%	0.3%	2,718
Rhode Island	64.4%	14.1%	13.3%	1.0%	7.2%	0.0%	390
South Carolina	50.8%	21.0%	17.2%	1.4%	9.4%	0.3%	1,300
South Dakota	37.0%	25.9%	22.2%	1.9%	13.0%	0.0%	54
Tennessee	49.6%	19.7%	18.5%	1.8%	9.7%	0.7%	1,349
Texas	45.9%	19.7%	20.3%	0.7%	13.0%	0.3%	4,823
Utah	53.9%	22.2%	14.7%	1.0%	7.7%	0.5%	796
Vermont	46.8%	20.2%	18.3%	3.7%	6.4%	4.6%	109
Virginia	55.9%	18.1%	16.4%	1.1%	8.0%	0.5%	2,293
Washington	62.8%	17.4%	12.9%	0.8%	5.7%	0.4%	2,219
West Virginia	46.2%	18.3%	18.8%	1.6%	14.5%	0.5%	186
Wisconsin	53.1%	19.2%	17.9%	0.8%	8.3%	0.6%	1,117
Wyoming	47.2%	22.6%	17.0%	5.7%	7.5%	0.0%	53
Other	67.3%	18.4%	8.2%	0.0%	6.1%	0.0%	49

Table 56. Number of Re-Defaults for Loans Modified in the Third Quarter of 2011
(60 or More Days Delinquent After 6 Months by Changes in Monthly Principal and Interest Payments)

States	Decreased by 20% or More	Decreased by 10% to Less Than 20%	Decreased by Less Than 10%	Unchanged	Increased	Not Reported	Total Modifications
Total - All States	6,439	3,730	5,272	332	3,379	87	19,239
Alabama	56	52	80	8	54	1	251
Alaska	2	4	1	0	2	0	9
Arizona	208	115	145	5	66	1	540
Arkansas	25	20	33	1	15	0	94
California	1,116	457	536	40	408	8	2,565
Colorado	65	60	82	6	36	0	249
Connecticut	93	47	60	4	41	2	247
Delaware	24	17	39	3	17	0	100
District of Columbia	8	9	17	0	6	0	40
Florida	723	304	326	35	188	9	1,585
Georgia	307	220	381	18	226	9	1,161
Hawaii	18	7	15	2	4	1	47
Idaho	24	17	28	1	11	0	81
Illinois	394	212	276	15	192	5	1,094
Indiana	90	96	128	4	79	2	399
Iowa	34	26	29	1	20	1	111
Kansas	27	20	27	0	15	2	91
Kentucky	41	40	38	5	33	0	157
Louisiana	68	52	63	3	59	0	245
Maine	24	10	11	2	15	1	63
Maryland	196	114	197	7	105	1	620
Massachusetts	115	72	91	4	47	0	329
Michigan	174	123	146	11	90	6	550
Minnesota	107	55	71	3	47	1	284
Mississippi	40	26	36	5	35	1	143
Missouri	106	64	93	5	41	1	310
Montana	8	3	13	0	6	0	30
Nebraska	16	12	17	0	11	0	56
Nevada	134	67	86	5	39	0	331
New Hampshire	26	12	16	0	7	0	61
New Jersey	254	130	199	16	160	3	762
New Mexico	30	13	30	0	15	0	88
New York	324	157	202	11	139	3	836
North Carolina	184	127	224	12	132	2	681
North Dakota	0	2	0	0	2	0	4
Ohio	167	125	186	15	129	4	626
Oklahoma	28	35	52	5	29	2	151
Oregon	62	33	41	2	35	1	174
Pennsylvania	178	116	175	11	117	4	601
Rhode Island	28	17	16	1	16	0	78
South Carolina	96	66	89	6	69	4	330
South Dakota	4	0	5	0	2	0	11
Tennessee	92	62	118	8	56	1	337
Texas	340	288	465	28	315	8	1,444
Utah	38	26	55	3	36	0	158
Vermont	6	3	8	0	5	0	22
Virginia	130	64	124	7	73	3	401
Washington	108	85	99	4	66	0	362
West Virginia	9	7	15	3	12	0	46
Wisconsin	87	36	77	7	51	0	258
Wyoming	1	3	6	0	3	0	13
Other	4	2	5	0	2	0	13

Table 57. Re-Default Rates for Loans Modified in the Third Quarter of 2011 (Percentage)
(60 or More Days Delinquent After 6 Months by Changes in Monthly Principal and Interest Payments)

States	Decreased by 20% or More	Decreased by 10% to Less Than 20%	Decreased by Less Than 10%	Unchanged	Increased	Not Reported	Total Modifications
Total - All States	8.9%	15.0%	22.2%	10.2%	30.5%	16.3%	14.1%
Alabama	11.8%	16.9%	27.5%	25.0%	40.9%	12.5%	20.1%
Alaska	7.1%	26.7%	4.3%	0.0%	12.5%	0.0%	10.7%
Arizona	8.9%	15.9%	22.7%	5.7%	26.0%	7.7%	13.3%
Arkansas	13.7%	18.5%	28.2%	11.1%	28.3%	0.0%	20.0%
California	6.1%	11.0%	13.7%	4.5%	22.7%	9.8%	8.8%
Colorado	7.4%	12.8%	18.3%	10.9%	21.6%	0.0%	12.3%
Connecticut	10.1%	15.1%	22.0%	11.8%	27.7%	33.3%	14.6%
Delaware	11.0%	16.5%	29.8%	30.0%	32.1%	0.0%	19.3%
District of Columbia	8.1%	23.1%	29.3%	0.0%	20.7%	0.0%	17.3%
Florida	8.5%	15.0%	18.6%	8.3%	24.2%	15.8%	11.7%
Georgia	10.4%	17.9%	29.9%	15.9%	42.8%	23.1%	18.9%
Hawaii	7.7%	11.7%	20.0%	50.0%	22.2%	50.0%	11.9%
Idaho	8.3%	17.0%	23.7%	20.0%	28.9%	0.0%	14.7%
Illinois	9.7%	18.6%	25.2%	11.0%	33.2%	22.7%	15.5%
Indiana	10.8%	17.1%	26.7%	10.0%	33.8%	18.2%	18.5%
Iowa	13.9%	18.3%	23.4%	12.5%	28.2%	25.0%	18.7%
Kansas	12.2%	16.7%	22.7%	0.0%	26.8%	50.0%	17.2%
Kentucky	12.3%	19.0%	21.0%	29.4%	34.7%	0.0%	18.6%
Louisiana	14.4%	21.1%	22.7%	15.8%	36.6%	0.0%	20.8%
Maine	14.7%	11.1%	18.0%	40.0%	36.6%	50.0%	17.4%
Maryland	9.6%	14.3%	23.4%	8.6%	28.4%	5.0%	15.0%
Massachusetts	8.3%	15.0%	21.7%	6.5%	25.5%	0.0%	13.0%
Michigan	8.1%	14.8%	19.9%	5.4%	26.2%	21.4%	12.8%
Minnesota	10.5%	13.7%	19.7%	4.9%	29.9%	8.3%	14.1%
Mississippi	14.2%	21.7%	25.5%	22.7%	41.7%	100.0%	22.0%
Missouri	13.1%	16.3%	24.9%	13.9%	26.3%	14.3%	17.4%
Montana	8.1%	9.7%	25.5%	0.0%	30.0%	0.0%	14.6%
Nebraska	12.6%	16.0%	26.2%	0.0%	25.6%	0.0%	17.8%
Nevada	8.3%	16.8%	23.7%	8.9%	28.3%	0.0%	12.8%
New Hampshire	9.7%	13.0%	15.5%	0.0%	18.4%	0.0%	11.8%
New Jersey	9.8%	15.8%	25.4%	20.5%	38.6%	23.1%	16.2%
New Mexico	12.1%	9.4%	25.2%	0.0%	29.4%	0.0%	15.6%
New York	8.8%	14.7%	21.3%	9.5%	32.3%	14.3%	13.3%
North Carolina	11.7%	15.9%	27.4%	17.1%	34.7%	8.7%	18.6%
North Dakota	0.0%	28.6%	0.0%	0.0%	25.0%	0.0%	10.0%
Ohio	11.4%	17.3%	25.5%	16.7%	33.1%	25.0%	18.4%
Oklahoma	11.5%	20.3%	30.8%	35.7%	29.6%	50.0%	21.6%
Oregon	8.0%	11.6%	20.0%	11.1%	32.7%	20.0%	12.5%
Pennsylvania	11.4%	15.8%	23.7%	14.9%	31.0%	33.3%	17.2%
Rhode Island	8.6%	20.7%	20.5%	9.1%	39.0%	0.0%	14.5%
South Carolina	13.4%	16.8%	22.3%	16.7%	39.0%	36.4%	19.0%
South Dakota	19.0%	0.0%	19.2%	0.0%	20.0%	0.0%	14.7%
Tennessee	12.1%	15.5%	28.6%	20.5%	29.8%	9.1%	18.6%
Texas	12.8%	19.1%	29.5%	45.2%	37.4%	34.8%	21.7%
Utah	7.1%	10.3%	22.4%	25.0%	34.0%	0.0%	13.7%
Vermont	11.1%	15.0%	23.5%	0.0%	45.5%	0.0%	17.5%
Virginia	9.1%	10.1%	20.5%	8.4%	29.8%	25.0%	13.3%
Washington	7.6%	14.6%	19.3%	5.9%	30.1%	0.0%	12.9%
West Virginia	9.2%	12.7%	21.7%	25.0%	37.5%	0.0%	17.1%
Wisconsin	12.2%	12.3%	24.8%	23.3%	33.1%	0.0%	17.1%
Wyoming	3.7%	13.6%	20.7%	0.0%	37.5%	0.0%	14.6%
Other	9.1%	7.1%	26.3%	0.0%	40.0%	0.0%	13.0%

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FEDERAL NATIONAL MORTGAGE ASSOCIATION
FANNIE MAE (FNMA)

10-K/A

Annual report pursuant to section 13 and 15(d)
Filed on 03/09/2012
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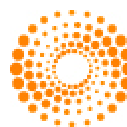

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K/A

(Amendment No. 1)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2011

Commission File No.: 0-50231

Federal National Mortgage Association

(Exact name of registrant as specified in its charter)

Fannie Mae

Federally chartered corporation *(State or other jurisdiction of incorporation or organization)*	**52-0883107** *(I.R.S. Employer Identification No.)*
3900 Wisconsin Avenue, NW Washington, DC *(Address of principal executive offices)*	**20016** *(Zip Code)*

Registrant's telephone number, including area code: (202) 752-7000

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
None	

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, without par value
(Title of class)

8.25% Non-Cumulative Preferred Stock, Series T, stated value $25 per share
(Title of class)

8.75% Non-Cumulative Mandatory Convertible Preferred Stock, Series 2008-1 stated value $50 per share
(Title of class)

Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series S, stated value $25 per share
(Title of class)

7.625% Non-Cumulative Preferred Stock, Series R, stated value $25 per share
(Title of class)

6.75% Non-Cumulative Preferred Stock, Series Q, stated value $25 per share
(Title of class)

Variable Rate Non-Cumulative Preferred Stock, Series P, stated value $25 per share
(Title of class)

Variable Rate Non-Cumulative Preferred Stock, Series O, stated value $50 per share
(Title of class)

5.375% Non-Cumulative Convertible Series 2004-1 Preferred Stock, stated value $100,000 per share
(Title of class)

5.50% Non-Cumulative Preferred Stock, Series N, stated value $50 per share
(Title of class)

4.75% Non-Cumulative Preferred Stock, Series M, stated value $50 per share
(Title of class)

5.125% Non-Cumulative Preferred Stock, Series L, stated value $50 per share
(Title of class)

5.375% Non-Cumulative Preferred Stock, Series I, stated value $50 per share
(Title of class)

5.81% Non-Cumulative Preferred Stock, Series H, stated value $50 per share
(Title of class)

Variable Rate Non-Cumulative Preferred Stock, Series G, stated value $50 per share
(Title of class)

Variable Rate Non-Cumulative Preferred Stock, Series F, stated value $50 per share
(Title of class)

5.10% Non-Cumulative Preferred Stock, Series E, stated value $50 per share
(Title of class)

5.25% Non-Cumulative Preferred Stock, Series D, stated value $50 per share
(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☑ Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of the common stock held by non-affiliates of the registrant computed by reference to the last reported sale price of the common stock quoted on the OTC Bulletin Board on June 30, 2011 (the last business day of the registrant's most recently completed second fiscal quarter) was approximately $383 million.

As of January 31, 2012, there were 1,158,072,058 shares of common stock of the registrant outstanding.

DOCUMENTS INCORPORATED BY REFERENCE: None

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EXPLANATORY NOTE

Fannie Mae (formally known as the Federal National Mortgage Association) is filing this Amendment No. 1 on Form 10-K/A (the "Amendment") to its Annual Report on Form 10-K for the fiscal year ended December 31, 2011, filed with the Securities and Exchange Commission ("SEC") on February 29, 2012 (the "Original Filing"), to: (1) amend and restate Part II, Item 9B to report certain changes to compensation arrangements with our named executive officers; and (2) amend and restate Part III, Item 11 to include the required disclosures that were omitted in the Original Filing pursuant to General Instruction G to Form 10-K.

In accordance with Rule 12b-15 under the U.S. Securities Exchange Act of 1934 (the "Exchange Act"), Part II, Item 9B and Part III, Item 11 of the Original Filing have been amended and restated in their entirety, and Part IV, Item 15 of the Original Filing has been amended and restated to include as exhibits the new certifications required by Rule 13a-14(a) under the Exchange Act. This Amendment does not amend or otherwise update any other information in the Original Filing. Accordingly, this Amendment should be read in conjunction with the Original Filing.

PART II

Item 9B. Other Information

Termination Agreement with Former Deputy Chief Financial Officer

David C. Hisey, our former Executive Vice President and Deputy Chief Financial Officer, left the company on February 24, 2012. We entered into a termination agreement with Mr. Hisey on February 28, 2012, the terms of which were approved by FHFA. The agreement provides that Mr. Hisey will receive $966,625, representing all of his corporate performance-adjusted 2011 deferred pay, in four installments on the same payment dates as other deferred pay recipients. The agreement also provides that Mr. Hisey may elect to receive outplacement services and a subsidy for up to 18 months of medical and dental premiums if he elects COBRA continuation coverage.

The termination agreement provides that Mr. Hisey may not solicit or accept employment with or act in any way, directly or indirectly, to solicit or obtain employment or work for Freddie Mac for a period of 12 months following termination. Under the termination agreement, Mr. Hisey agreed to a general release of the company from all claims relating to his employment with or termination from the company.

2012 Executive Compensation Program

On March 8, 2012, FHFA instituted new compensation arrangements for most of our named executives. See "Executive Compensation—Compensation Discussion and Analysis—2012 Executive Compensation Program" in Part III, Item 11 hereof for a description, which is incorporated herein by reference, of these new compensation arrangements.

Compensation Recoupment Policy

The Board revised the compensation recoupment policy applicable to our executive officers' compensation effective March 8, 2012 to cover deferred salary under the executive compensation program adopted in March 2012 identified above. See "Executive Compensation—Compensation Discussion and Analysis—Compensation Recoupment Policy" in Part III, Item 11 hereof for a description, which is incorporated herein by reference, of this compensation recoupment policy.

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PART III

Item 11. Executive Compensation

COMPENSATION DISCUSSION AND ANALYSIS

Executive Summary

Our 2011 executive compensation program was developed in December 2009 after we entered into conservatorship. The program was approved by the Federal Housing Finance Agency ("FHFA") in consultation with the Department of the Treasury. This Compensation Discussion and Analysis describes our compensation program that was in effect for 2011 executive compensation. As described below under "2012 Executive Compensation Program," FHFA instituted a new executive compensation program for our named executives that is applicable for 2012 compensation.

Our 2011 executive compensation program was designed to fulfill two primary objectives:

- attract and retain executive talent with the specialized skills and knowledge necessary to manage a large financial services company; and
- link pay to performance through the use of performance-based elements of compensation.

Attract and Retain Executive Talent

Management and the Board of Directors appreciate the public interest in executive compensation at companies receiving taxpayer support and understand our responsibility for appropriate stewardship of those resources at Fannie Mae. A market-based, competitive executive compensation program is consistent with good stewardship of taxpayer support, as it enables us to attract and retain able and experienced executives who are essential to effectively manage our $3.1 trillion book of business. We require highly qualified executives to continue to mitigate the losses in the legacy book of business that was acquired prior to conservatorship, as well as to continue to grow the strong new book of business that we have acquired since 2009.

We and FHFA believe that a failure to maintain a competitive compensation program could adversely affect our ability to attract and retain qualified executives, which would threaten our ability to continue to provide liquidity and stability to the mortgage market at this pivotal point for the U.S. housing finance system. Further, the departure of key executives could halt or reverse the progress we have made in mitigating losses on our legacy book of business and growing a strong new book of business, which could result in increased draws on Treasury or reduce the amounts we are able to pay Treasury in the future, thereby increasing taxpayer costs.

We operate in a difficult environment and face an uncertain future, potential limitations on our executive and employee compensation, and heightened scrutiny of our actions by Congress and our regulators. These conditions have made it more difficult to attract and retain qualified executive management. We have already had significant executive departures since entering into conservatorship in September 2008 and, in January 2012, our current Chief Executive Officer announced that he will step down from his position when his successor is appointed. These conditions may also make succession planning more challenging if they negatively affect our ability to attract and retain qualified employees below the senior executive level that could fill our senior executive level positions if there is further turnover.

We face competition from both within the financial services industry and from businesses outside of the financial services industry for qualified executives. These competitors do not face restrictions on their ability to pay market-based compensation to their executives. An improving economy is likely to create additional attractive opportunities for our executives, which could lead to further management turnover. Further turnover in key management positions could threaten our ability to fulfill our responsibilities under our Charter.

Congress recognized the imperative of market-based executive compensation when enacting the Federal National Mortgage Association Charter Act, which provides for compensation for Fannie Mae executives that is

comparable with compensation for employment in other similar businesses, including other publicly held financial institutions or major financial services companies, involving similar duties and responsibilities. The Charter Act also provides that Fannie Mae base a significant portion of our executive officers' potential compensation on the company's performance.

Although we recognize the importance of paying market-based executive compensation in order to attract and retain qualified executives, we also recognize that we must balance this objective with our conservatorship status and our efforts to reduce taxpayer costs. Management and the Board carefully consider the costs of executive compensation when making compensation determinations. We have substantially reduced these costs since entering into conservatorship in September 2008. Actual total direct compensation for our Chief Executive Officer for 2011 was more than 50% lower than such compensation for our Chief Executive Officer for 2007. Average actual total direct compensation for Fannie Mae's other named executive officers for 2011 was more than 50% lower than such 2007 compensation for our other named executive officers. In addition to lower compensation levels, we also have reduced executive compensation by reducing the total number of our senior executives (senior vice presidents and above) by approximately 28% from the beginning of conservatorship through year-end 2011. We also seek to compensate newly hired executives at lower amounts than the executives they are replacing. In addition, FHFA has prohibited us from awarding compensation increases for our named executives, as well as for all other employees of the company, in 2011 and 2012, except in cases of promotions or significant changes in responsibilities. Our aggregate salary and employee benefit expense as a percentage of net revenues was 6% in 2011.

The company and FHFA set total compensation targets for each named executive officer based on the position requirements and the executive's expertise and experience. We and FHFA considered the compensation paid for these positions at comparable financial services companies, with which we must compete for talent. We describe the executive compensation benchmarking process under "Comparator Group and Role of Benchmark Data" below. In accordance with directives from FHFA, the Board of Directors did not increase the named executive officers' compensation targets from 2009 levels in either 2010 or 2011. Further, as described below under "2012 Executive Compensation Program," FHFA has directed us to reduce the target compensation of each named executive who remains employed by us by 10% in 2012.

Link Pay to Performance

As described in more detail below, our 2011 executive compensation program consisted of three elements: base salary, deferred salary and a long-term incentive award. In order to align pay with performance, the long-term incentive award is based on performance against corporate goals and individual performance, and 50% of deferred salary is based on performance against corporate goals.

The Compensation Committee carefully evaluated our executives' performance against the company's performance goals to determine variable compensation for 2011. Our 2011 corporate performance goals were designed to support the company's business objectives, which include providing liquidity to the housing market, mitigating credit losses on our pre-2009 book of business, reducing administrative expenses, meeting our obligations as program administrator of Treasury's Making Home Affordable program, and improving the company's controls and infrastructure. These goals were approved by FHFA.

The Compensation Committee's evaluation of the company's performance against the 2011 performance goals concluded that the company achieved most of its goals in a challenging operating environment. The Committee determined that the company's performance was strong in many areas: the company acquired and managed a high-quality book of new business that we expect will be profitable over its lifetime, provided significant liquidity to the housing market, controlled credit-related expenses on its pre-2009 loans, and limited administrative expenses. Based on its evaluation and considering input from FHFA, the Committee determined that the pools for the first installment of the 2011 long-term incentive awards and for the second installment of the 2010 long-term incentive awards for executive officers would be funded at 85% of target, and the performance-based portion of 2011 deferred salary would be paid at 85% of target. In making these decisions, the Committee also took into account that, while the company made significant progress in improving its infrastructure and risk and

controls environment, it did not fully achieve all of the metrics relating to these goals. The Board of Directors and FHFA approved the Compensation Committee's determinations. See "Determination of 2011 Compensation" for more information about how compensation of our named executives was determined.

Named Executives for 2011

This Compensation Discussion and Analysis focuses on compensation decisions relating to our Chief Executive Officer, our Chief Financial Officer, our former Deputy Chief Financial Officer (who assumed the responsibilities of Chief Financial Officer from December 30, 2010 to July 10, 2011), and our next three most highly compensated executive officers during 2011. We refer to these individuals as our named executives. For 2011, our named executives were:

- Michael J. Williams, President and Chief Executive Officer;
- Susan R. McFarland, Executive Vice President and Chief Financial Officer;
- David C. Hisey, Executive Vice President and Deputy Chief Financial Officer;
- David C. Benson, Executive Vice President—Capital Markets;
- Terence W. Edwards, Executive Vice President—Credit Portfolio Management; and
- Timothy J. Mayopoulos, Executive Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary.

Impact of Conservatorship

As discussed in the Original Filing under "Business—Conservatorship and Treasury Agreements—Conservatorship," we have been under the conservatorship of FHFA since September 2008. The conservatorship has had a significant impact on the compensation received by our named executives, as well as the process by which executive compensation was determined. Regulatory requirements affecting our executive compensation include:

- Our directors serve on behalf of FHFA and exercise their authority subject to the direction of FHFA. More information about the role of our directors is described in the Original Filing in "Directors, Executive Officers and Corporate Governance—Corporate Governance—Conservatorship and Delegation of Authority to Board of Directors."
- While we are in conservatorship, FHFA, as our conservator, retains the authority to approve and to modify both the terms and amount of any compensation. FHFA, as our conservator, has directed that our Board consult with and obtain FHFA's consent before taking any actions involving hiring, compensation or termination benefits of any officer at the executive vice president level and above and other specified executives. In addition, FHFA has limited the amount of compensation that we can pay to other senior officers.
- FHFA, as our regulator, must approve any termination benefits we offer to our named executives and certain other officers identified by FHFA.
- Under the terms of the senior preferred stock purchase agreement with Treasury, we may not enter into any new compensation arrangements with, or increase amounts or benefits payable under existing compensation arrangements of, any named executives or executive officers without the consent of the Director of FHFA, in consultation with the Secretary of the Treasury.
- Under the terms of the senior preferred stock purchase agreement, we may not sell or issue any equity securities without the prior written consent of Treasury, other than as required by the terms of any binding agreement in effect on the date of the senior preferred stock purchase agreement. This effectively eliminates our ability to offer stock-based compensation.
- Under the Housing and Economic Recovery Act of 2008 and related regulations issued by FHFA, the Director of FHFA has the authority to prohibit or limit us from making any "golden parachute payment" to specified categories of persons, including our named executives.

As a result of these requirements, the 2011 compensation determinations for our named executives discussed in this Compensation Discussion and Analysis were approved by the Acting Director of FHFA.

2011 Executive Compensation Program

Overview of Program Objectives and Structure

Our 2011 executive compensation program was designed to fulfill two primary objectives:

- *Attract and Retain Executive Talent*. Our 2011 executive compensation program was intended to attract and retain executive talent with the specialized skills and knowledge necessary to manage a large financial services company. Executives with these qualifications are needed for the company to continue to fulfill its important role in providing liquidity to the mortgage market and supporting the housing market, as well as to prudently manage our book of business and be an effective steward of the government's and taxpayers' support.
- *Pay for Performance*. Our 2011 executive compensation program was also intended to drive a pay for performance environment through the use of performance-based long-term incentive awards and deferred salary.

Management, the Board of Directors and FHFA seek to balance these two objectives with our conservatorship status and our efforts to reduce taxpayer costs.

In 2009, FHFA worked with our management and Board of Directors, and sought the guidance of Treasury's Special Master for TARP Executive Compensation, to develop an executive compensation program that met these objectives and also reflected evolving standards regarding executive compensation and, to the extent appropriate, was generally consistent with the structural standards created for firms that received exceptional assistance under the Troubled Asset Relief Program, or TARP. The views of management and the Board of Directors in the development of this executive compensation program reflected input from management's and the Compensation Committee's compensation consultants.

As a result of these efforts, in December 2009, we adopted a compensation program based on FHFA's guidance consisting of three primary elements: base salary, deferred pay and a long-term incentive award. We now refer to the deferred pay element of our compensation program as "deferred salary" to better reflect our view of the nature of this compensation element and at FHFA's direction to present our executive compensation information on a consistent basis with Freddie Mac. With regard to the relative distribution of total compensation among these elements, based on guidance from FHFA, we targeted the long-term incentive award component at one-third of total direct compensation, with base salary and deferred salary together constituting the remaining two-thirds of total direct compensation. In addition, based on guidance from FHFA, we limited annual base salary rates to no more than $500,000, except in the case of our Chief Executive Officer and Chief Financial Officer. All elements of our named executives' direct compensation are paid in cash, due to the negligible market value of our common stock since entering into conservatorship and because we are prohibited from paying new stock-based compensation under the senior preferred stock purchase agreement without Treasury's consent. FHFA, in consultation with Treasury, approved our compensation program and the level of salary, deferred salary target and long-term incentive target for each of our named executives.

The Board and the Compensation Committee reviewed the compensation arrangements for the named executives in January 2011 and did not make any changes to the named executives' salaries, deferred salary targets or long-term incentive targets for 2011. As described below under "2012 Executive Compensation Program," FHFA instituted and the Board authorized management to implement a new executive compensation program and new compensation targets for the named executives that are applicable for 2012 compensation.

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Elements of 2011 Compensation Program

Direct Compensation

The table below summarizes the principal elements, objectives and key features of our 2011 compensation program for our named executives.

Compensation Element	Form	Compensation Objectives	Key Features
Base Salary	Fixed cash payments, paid during the year on a bi-weekly basis.	Attract and retain named executives by providing a fixed level of cash compensation.	Base salary reflects the named executive's level of responsibility and experience, as well as individual performance over time. Base salary is capped at $500,000 for all of our executive officers, including the named executives, other than our Chief Executive Officer and Chief Financial Officer.
Deferred Salary	Payments that are paid to the named executives in cash in quarterly installments in the year following the performance year. 50% of deferred salary is performance-based and the remaining 50% is service-based. 2011 deferred salary will be paid in four equal quarterly installments in March, June, September and December of 2012.	Retain named executives by deferring payment of additional cash compensation until the following year. The performance-based portion of deferred salary provides incentives to the named executives to achieve our corporate performance goals.	Half of 2011 deferred salary is based on the Board of Directors' determination of corporate performance in 2011, as approved by FHFA. The remaining half of 2011 deferred salary is service based. Except in the limited circumstances described under "Compensation Tables—Potential Payments Upon Termination or Change-in-Control" and "Termination Agreement with our Former Deputy Chief Financial Officer" below, we will pay installments of deferred salary only if the named executive is employed by Fannie Mae on the scheduled payment dates.
Long-term Incentive Award	A performance-based cash award that is paid over two calendar years. Half of the 2011 long-term incentive award was paid in February 2012 and the remaining half of the award will be paid in early 2013.	Provide incentives to named executives to achieve corporate and individual performance goals, and serve as a retention incentive.	A named executive's target for a long-term incentive award is one-third of the executive's target total direct compensation. Half of the 2011 long-term incentive award was determined in February 2012 based on corporate and individual performance for 2011. The remaining half of the award will be determined in early 2013 based on corporate and individual performance for both 2011 and 2012. Except in the limited circumstances described under "Compensation Tables—Potential Payments Upon Termination or Change-in-Control" below, we will pay installments of a long-term incentive award only if the named executive is employed by Fannie Mae on the scheduled payment dates. FHFA must approve each long-term incentive award paid to a named executive.

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Employee Benefits

Our employee benefits are a fundamental part of our executive compensation program, and serve as an important tool in attracting and retaining senior executives. We describe these employee benefits in the table below. We provide more detail on our retirement plans under "Compensation Tables—Pension Benefits" and "Compensation Tables—Nonqualified Deferred Compensation."

Benefit	Form	Primary Objective
Health, Welfare and Other Benefits	In general, the named executives are eligible for benefits available to our employee population as a whole, including our medical insurance plans, life insurance program and matching charitable gifts program. The named executives are also eligible to participate in our voluntary supplemental long-term disability plan, which is available to many of our employees.	Provide for the well-being of the named executive and his or her family.
Retirement Plans:		
Defined Benefit Pension Plans • *Qualified Retirement Plan* • *Non-qualified Supplemental Pension Plan and 2003 Supplemental Pension Plan* • *Non-qualified Executive Pension Plan*	Our Retirement Plan is a tax-qualified defined benefit pension plan that was generally available to employees before participation in the plan was frozen in 2007. Our non-qualified Supplemental Pension Plans and Executive Pension Plan provide supplemental retirement benefits in addition to those offered by the Retirement Plan. The named executives who joined the company prior to 2008 (Mr. Williams, Mr. Hisey and Mr. Benson) participate in the company's defined benefit pension plans. Mr. Williams is the only named executive with a benefit under the Executive Pension Plan. We froze benefits under this plan in 2009. The named executives who joined the company after 2007 are not eligible to participate in any of these plans.	Retain named executives by providing a level of retirement income.
Non-qualified Deferred Compensation ("Supplemental Retirement Savings Plan")	The Supplemental Retirement Savings Plan is an unfunded, non-tax-qualified defined contribution plan. The plan supplements the company's qualified defined contribution plan by providing benefits to participants whose annual eligible earnings exceed the IRS limit on eligible compensation for 401(k) plans. The named executives who joined the company after 2007 (Ms. McFarland, Mr. Edwards and Mr. Mayopoulos) participate in the company's Supplemental Retirement Savings Plan. The named executives who joined the company prior to 2008 are not eligible to participate in this plan, as they participate in some or all of the company's defined benefit pension plans.	Attract and retain named executives by providing retirement savings.
401(k) Plan ("Retirement Savings Plan")	A tax-qualified defined contribution plan (401(k) plan) available to our employee population as a whole. All of the named executives are eligible to participate in this plan.	Attract and retain named executives by providing retirement savings in a tax-efficient manner.

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Benefit	Form	Primary Objective
Relocation Benefits and Other Perquisites	From time to time, we offer relocation benefits to new executives. As described below under "Compensation Arrangements with our Chief Financial Officer," we agreed to provide up to $100,000 in relocation benefits to Ms. McFarland to facilitate her move to the Washington, D.C. area. We believe that perquisites should be a minimal part of the compensation package for our named executives. Except for the relocation benefits provided to Ms. McFarland described above, the perquisites we provided to our named executives in 2011 did not exceed $2,000 in the aggregate. Total perquisites for any named executive cannot exceed $25,000 per year without FHFA approval, and we do not provide a gross-up for taxes due on any perquisite.	Relocation benefits are provided to attract new named executives by reimbursing them for a specified amount of their costs associated with relocating to the Washington, D.C. area.

Sign-on Award

In addition to the direct compensation and employee benefits described in the tables above, from time to time, a new executive may be awarded a sign-on award to attract the executive to join Fannie Mae and/or to compensate him or her for compensation forfeited upon leaving a prior employer. As described in more detail under "Compensation Arrangements with our Chief Financial Officer," our Board of Directors awarded a $1.7 million sign-on award to our new Chief Financial Officer, Susan R. McFarland, in July 2011 to partially compensate her for equity grants forfeited upon leaving her prior employer. No other named executive was awarded a sign-on award in 2011.

Severance Benefits

We have not entered into agreements with any of our named executives that would entitle the executive to severance benefits, other than the termination agreement with Mr. Hisey described below under "Compensation Tables—Potential Payments Upon Termination or Change-in-Control—Termination Agreement with our Former Deputy Chief Financial Officer." Information on compensation that we may pay to a named executive in certain circumstances in the event the executive's employment is terminated is provided below in "Compensation Tables—Potential Payments Upon Termination or Change-in-Control." FHFA must approve any termination benefits we offer our named executives.

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Determination of 2011 Compensation

Summary of 2011 Compensation Actions

The table below displays the named executives' 2011 compensation targets compared to the actual payments to be received by the named executives. The amounts shown in the "Total Target" and "Total Actual" columns consist of the sum of 2011 base salary, 2011 deferred salary and amounts associated with the first installment of the 2011 long-term incentive award and the second installment of the 2010 long-term incentive award. This table is not intended to replace the summary compensation table, required under applicable SEC rules, which is included below under "Compensation Tables—Summary Compensation Table for 2011, 2010 and 2009."

		2011 Deferred Salary		Long-Term Incentive Award (First Installment of 2011 Award and Second Installment of 2010 Award)[2]		Total	
Named Executive	2011 Base Salary Rate	Target	Actual [1]	Target	Actual	Target	Actual
Michael Williams	$ 900,000	$ 3,100,000	$ 2,867,500	$ 2,000,000	$ 1,491,000	$ 6,000,000	$ 5,258,500
Susan McFarland[3]	600,000	1,533,333	1,418,333	254,247	218,906	2,387,580	2,237,239
David Hisey[4]	425,000	1,045,000	966,625	730,000	498,225	2,200,000	1,889,850
David Benson	500,000	1,369,667	1,266,942	930,333	820,553	2,800,000	2,587,495
Terence Edwards	500,000	1,369,667	1,266,942	930,333	854,744	2,800,000	2,621,686
Timothy Mayopoulos	500,000	1,469,667	1,359,442	980,333	952,149	2,950,000	2,811,591

(1) Target 2011 deferred salary is 50% service-based and 50% corporate performance-based. The Compensation Committee determined that the corporate performance-based portion of 2011 deferred salary will be paid at 85% of target.

(2) Except for Ms. McFarland, consists of the first installment of each named executive's 2011 long-term incentive award plus the second installment of each named executive's 2010 long-term incentive award. Amounts do not include the second installment of the 2011 long-term incentive awards.

(3) Ms. McFarland joined the company in July 2011. The 2011 base salary rate shown in this table represents her annual base salary rate. The actual amount of base salary she received in 2011 was $288,462. Ms. McFarland's 2011 long-term incentive award was prorated based on her hire date; her 2011 deferred salary was not prorated. Because she joined the company in 2011, Ms. McFarland did not receive a 2010 long-term incentive award. Ms. McFarland's total annual direct compensation target for 2011 including the second installment of her 2011 long-term incentive award is $3.2 million. The amounts shown in this table for Ms. McFarland do not include the $1.7 million sign-on award that she was awarded when she joined the company. See "Compensation Tables—Summary Compensation Table for 2011, 2010 and 2009" and "Compensation Arrangements with our Chief Financial Officer" for more information regarding Ms. McFarland's 2011 compensation.

(4) Mr. Hisey left the company in February 2012. Pursuant to his termination agreement with the company, he will receive all of his 2011 deferred salary on the same payment dates as other deferred salary recipients. See "Compensation Tables—Potential Payments Upon Termination or Change-in-Control—Termination Agreement with our Former Deputy Chief Financial Officer" for a description of this termination agreement.

2011 Corporate Performance Goals and Assessment of 2011 Corporate Performance

In March 2011, the Board established a challenging set of 2011 corporate performance goals for the performance-based portion of 2011 deferred salary and the first installment of the 2011 long-term incentive award, as well as 2012 corporate performance goals for the second installment of the 2011 long-term incentive award. FHFA approved these goals in April 2011. In addition, in 2010, the Board established, and FHFA approved, 2011 corporate performance goals for the second installment of the 2010 long-term incentive award. The Board did not assign any relative weight to the goals and the Compensation Committee may consider other factors in addition to the goals in assessing corporate performance.

In late 2011 and early 2012, the Compensation Committee reviewed our performance against each of our 2011 performance goals and related metrics to determine the funding of the pool for the first installment of the 2011 long-term incentive awards and the performance-based portion of 2011 deferred salary. The Compensation Committee also reviewed our performance against our 2010 performance goals and additional 2011 performance

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goals to determine the funding of the pool for the second installment of the 2010 long-term incentive awards. In this process, the Compensation Committee reviewed management's assessment of the company's performance against the goals and discussed the company's performance with the Chief Executive Officer. The results of the Compensation Committee's reviews are summarized below.

2011 Corporate Performance Goals

The first table below presents our 2011 corporate performance goals and related metrics for the first installment of the 2011 long-term incentive award and the performance-based portion of 2011 deferred salary, and management's assessment of our achievement against these goals and metrics. The second table below presents our 2011 goals for the second installment of the 2010 long-term incentive award, and management's assessment of our achievement against these goals. The results of the Compensation Committee's review of our performance against these goals and metrics are summarized following the tables.

2011 Long-term Incentive Award (First Installment) and 2011 Deferred Salary Goals

Goals and Related Metrics	Performance Against Goal/Metric
***Goal 1*: Achieve key financial targets, including acquiring and managing a profitable, high-quality book of new business from 2009 forward.**	**Achieved this goal.**
Profitability:	
Net revenue margin: Achieve a specified minimum projected lifetime net revenue margin on the company's new single-family book of business from 2009 forward (excluding loans purchased pursuant to the Administration's Home Affordable Refinance Program ("HARP loans")). Net revenue margin refers to our expected guaranty fee revenue on the loans less our expected credit losses on those loans over their lifetime.	Achieved this metric. See "Information Regarding Undisclosed Profitability and Credit Quality Metrics" below this table for further information.
Return on capital: Achieve projected returns at time of acquisition in excess of cost of capital on 2011 single-family and multifamily acquisitions (excluding HARP loans in the case of single-family acquisitions and excluding loan modifications in the case of multifamily acquisitions).	Achieved this metric. See "Information Regarding Undisclosed Profitability and Credit Quality Metrics" below this table for further information.
Credit Quality:	
Single-family: On 2011 acquisitions (excluding HARP loans), in the aggregate, do not exceed a specified internal metric that measures the likelihood of a loan becoming seriously delinquent within one year of acquisition.	Achieved this metric. See "Information Regarding Undisclosed Profitability and Credit Quality Metrics" below this table for further information.
Multifamily: On 2011 acquisitions, achieve a weighted average debt service coverage ratio greater than 1.25 and a weighted average loan-to-value ratio of less than 80%.	Achieved these metrics, with a weighted average debt service coverage ratio of 1.49 and a weighted average loan-to-value ratio of 65% on 2011 multifamily acquisitions.
Other Financial Targets:	
Expenses: Limit core administrative expenses for 2011 to no more than $1.8 billion, or a 10% reduction from 2010.	Achieved this metric, with core administrative expenses of $1.7 billion in 2011. (Core administrative expenses exclude $635 million in costs relating to the credit organization, Treasury's Making Home Affordable ("MHA") program and extraordinary expenses that are included in administrative expenses in our statement of operations for 2011.)
Losses: Limit 2011 net loss to no more than $21.6 billion.	Achieved this metric, with a net loss of $16.9 billion for 2011.

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Goals and Related Metrics	Performance Against Goal/Metric
***Goal 2*: Serve the housing market by being a major source of liquidity, effectively managing our legacy book of business, and assisting troubled borrowers.**	**Substantially achieved this goal.**
Liquidity:	
Single-family volume: Acquire a minimum of $300 billion in unpaid principal balance of single-family loans in 2011.	Achieved this metric, with 2011 single-family acquisition volumes of $563 billion that met our profitability and credit quality metrics described above.
Multifamily volume: Acquire a minimum of $17 billion in unpaid principal balance of multifamily loans in 2011.	Achieved this metric, with 2011 multifamily acquisition volumes of $24.4 billion that met our profitability and credit quality metrics described above.
Capital Markets revenues: Achieve a minimum of $300 million in transactional revenues from the Capital Markets group's liquidity activities.	Achieved this metric. The Capital Markets group generated approximately $600 million in estimated transaction fees and economic value from its 2011 liquidity activities.
Managing the Legacy (Pre-2009) Book: Limit 2011 single-family credit expenses to no more than $33 billion.	Achieved this metric, with single-family credit expenses of $27.2 billion for 2011.
Assisting Troubled Borrowers/MHA Program: Meet our obligations as program administrator of Treasury's MHA program.	Achieved this metric by meeting our program administrator obligations under the Financial Agency Agreement, which included deploying technology releases related to the MHA system of record, releasing a borrower net present value calculator, overseeing borrower outreach events in hard hit communities, overseeing program call centers, administering incentive payments, and supporting policy development and industry trainings.
Housing and Duty to Serve Goals:	
Housing goals: Meet our 2011 housing goals established by FHFA if feasible while pursuing economically sensible business.	We anticipate that we did not meet four out of five single-family housing goals benchmarks, due to market conditions and other factors. We anticipate that we met both multifamily housing goals. For the benchmarks we did not achieve, FHFA will measure our performance against goals-qualifying originations in the primary mortgage market to determine if we met the goals. FHFA is not expected to make the final determination regarding our achievement of the 2011 goals before late 2012. See "Business—Our Charter and Regulation of Our Activities—Regulation and Oversight of Our Activities —Housing Goals and Duty to Serve Underserved Markets" in the Original Filing for a description of our performance against our 2011 housing goals.
Duty to serve: Meet our duty to serve requirements established by FHFA.	This goal is no longer applicable because the final rule relating to these requirements had not been published as of December 31, 2011.
***Goal 3*: Improve the company's risk and control environment.**	**Partially achieved this goal.**
Resolve open controls issues: Resolve all significant deficiencies in our internal control over financial reporting and all high priority internal audit issues within agreed upon timeframes.	Substantially achieved this metric by resolving all significant deficiencies and high priority internal audit issues by year end; however, not all issues were resolved within the initially established timeframes.
Prevent new controls issues: Prevent the occurrence of any new material weaknesses in our internal control over financial reporting or any repeat internal audit findings.	Substantially achieved this metric. No new material weaknesses were identified in 2011; however, two repeat internal audit findings were identified in 2011.

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Goals and Related Metrics	Performance Against Goal/Metric
FHFA-identified risk and control matters:	
Open matters: Resolve all risk and control matters that were identified by FHFA on or before January 1, 2011 by no later than December 31, 2011.	Partially achieved this metric by closing 36 of the 42 open matters by December 31, 2011.
New matters: Submit initial responses and a remediation plan for all new risk and control matters identified by FHFA within 30 days of receiving FHFA's letter identifying the matter, and actively work with FHFA for their approval of submitted remediation plans.	Achieved this metric. We responded to all new risk and control matters identified by FHFA in 2011 in accordance with this requirement.
Operational risk plan: Achieve the 2011 milestones of the operational risk plan.	Achieved this metric.
***Goal 4*: Improve the company's capabilities, infrastructure and efficiency.**	**Substantially achieved this goal.**
Operating plan: Achieve the 2011 milestones of the operating plan within budget and scope.	Substantially achieved this metric. Successfully executed against most 2011 operating plan milestones within budget and scope, with the exception of two milestones that have been delayed to 2012. The milestones that were delayed relate to our uniform loan delivery data initiative and our centralized business rules initiative.
Servicing initiative: Achieve the 2011 milestones of the servicing compensation initiative.	Achieved this metric. The company worked with FHFA on the servicing compensation initiative throughout 2011 and FHFA released a discussion paper on the initiative in September 2011.
Human capital:	
Leadership: Focus our leadership development efforts on top talent and retain top talent at a higher rate than the overall workforce.	Achieved this metric. The company developed and implemented an engagement plan for top talent. Top talent has been retained at a higher rate than lower-rated employees.
Diversity: Maintain the diversity of our workforce and expand inclusion efforts at the officer ranks.	Achieved this metric.

2010 Long-term Incentive Award (Second Installment) Goals

Goals	Performance Against Goal
Goal 1: Reduce fixed general and administrative expenses by 5% in 2011.	Achieved this goal, reducing our 2011 core administrative expenses by more than 10% to $1.7 billion. The Board measured this goal based on core administrative expenses.
Goal 2: Achieve target relating to the reduction of 2011 single-family credit-related expenses to no more than $33 billion.	Achieved this goal, with single-family credit-related expenses of $27.2 billion in 2011.
***Goal 3*:**Achieve risk-adjusted return on economic capital targets on 2011 single-family and multifamily acquisitions (excluding HARP loans in the case of single-family acquisitions and excluding loan modifications in the case of multifamily acquisitions).	Achieved this goal.
Goal 4: Meet 2011 deliverables on business process and technology improvements, and make progress on strategic projects.	Achieved this goal by meeting 2011 operations and technology goals, and making significant progress on our operating plan and servicing compensation strategic initiatives.
Goal 5: Address all risk and control matters identified by our regulator within agreed-upon timeframe.	Partially achieved this goal by closing 36 of the 42 open matters by December 31, 2011.

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Information Regarding Undisclosed Profitability and Credit Quality Metrics

We have chosen not to disclose the specific target and/or actual results for three of the performance metrics in the tables above because we believe that such disclosure would cause us competitive harm. The targets and/or results that we have not disclosed are those relating to our net revenue margin metric, our return on capital metric and our single-family credit quality metric. If our customers or competitors obtained this information, it would provide insight into our pricing strategy that these customers or competitors could use to our competitive disadvantage.

For these three performance measures, management and the Board considered the company's business goals, as well as the likelihood of achievement, when recommending and approving the target. Each target was designed to help achieve the company's goal of acquiring a profitable, high-quality book of business from 2009 forward and was set at a level determined to be appropriate and achievable given the company's expectations for future economic and housing market conditions. Management and the Board also considered the company's historical performance relating to these metrics in setting the 2011 targets, as well as the extent to which achievement of the metrics were within management's control or dependent on market or economic conditions. Some housing market and economic conditions were different in 2011 than our initial expectations at the time we set the targets for these three metrics, including interest rates and the proportion of mortgage originations consisting of refinances. These conditions generally contributed to the achievement of our profitability and single-family credit quality metrics. For example, interest rates decreased in the second half of 2011, leading to more refinance activity and higher-quality and more profitable single-family mortgage acquisitions than we originally anticipated.

Compensation Committee Assessment of 2011 Corporate Performance

The Compensation Committee agreed with management's assessment of its performance against goals, as described in the tables above. The Committee determined that the company achieved most of its goals in a challenging operating environment. For example, the company:

- acquired and managed a strong, high-quality book of new business that is expected to be profitable over its lifetime and meets specified net revenue margin metrics, return on capital metrics and credit quality metrics;
- provided over $550 billion of liquidity to the housing market enabling families to buy and refinance homes;
- met the target for limiting credit-related expenses on loans acquired prior to 2009 by offering home retention solutions, such as loan modifications, and working with servicers to improve the servicing of delinquent loans;
- met its obligations as program administrator of Treasury's MHA program; and
- reduced core administrative expenses by over 10% from 2010.

In evaluating corporate performance, the Committee considered the challenging regulatory and operating environment and the challenges presented by management turnover. Additionally, the Committee took into account that, while the company made significant progress in improving its infrastructure and risk and controls environment, it did not fully achieve all of the metrics relating to these goals. In addition, for purposes of the second installment of the 2010 long-term incentive award, the Committee also considered the company's performance against its 2010 performance goals. In evaluating the company's performance against its goals, the Compensation Committee considered the company's performance against the goals as a whole and did not assign specific weightings to any goal or metric.

Based on its evaluation and considering input from FHFA, the Compensation Committee determined that the pools for the first installment of the 2011 long-term incentive awards and for the second installment of the 2010 long-term incentive awards for executive officers would be funded at 85% of target, and the performance-based portion of 2011 deferred salary would be paid at 85% of target. The Board of Directors and FHFA reviewed and approved these determinations.

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Assessment of 2011 Individual Performance

Overview. The amounts of the first installment of the 2011 long-term incentive awards and the second installment of the 2010 long-term incentive awards for the named executives took into account not only the company's performance against the corporate goals and metrics described above, but also an assessment by the Board of Directors of each named executive's performance during the applicable performance period, as well as retention considerations. The Board assessed the Chief Executive Officer's performance with input from the Compensation Committee and assessed each other named executive's performance with input from both the Compensation Committee and the Chief Executive Officer. Based on these assessments, the Board used its judgment and discretion to determine the amount of compensation it deemed appropriate for each named executive.

We describe the Board's determinations with respect to the first installment of each named executive's 2011 long-term incentive award and the second installment of each named executive's 2010 long-term incentive award, as well as the elements of each named executive's performance the Board considered in making these determinations, below. FHFA has reviewed and approved these determinations. More information on the compensation arrangements for each of our named executives is set forth below in the "Summary Compensation Table for 2011, 2010 and 2009."

Michael Williams, President and Chief Executive Officer. The Board determined that the first installment of Mr. Williams' 2011 long-term incentive award would be $714,000, which is approximately 71% of his target, and that the second installment of his 2010 long-term incentive award would be $777,000, which is approximately 78% of his target. Mr. Williams' individual performance was evaluated based on the company's performance against the corporate performance goals for the applicable performance periods, reflecting the fact that he is accountable for the success of the entire organization. In addition, other achievements not reflected in the corporate performance goals were considered. The Board determined that, under Mr. Williams' leadership in 2011, the company met the majority of its corporate goals and subgoals, made solid progress in mitigating credit losses on its pre-2009 book of business and acquired a 2011 book of business with a strong credit profile that is expected to be profitable. The Board also recognized the company's progress in improving its infrastructure and risk and controls environment, but determined that the company did not fully meet the corporate performance metrics in those areas. The Board also determined that, during his tenure as Chief Executive Officer, Mr. Williams has provided strong and steady leadership in an extraordinarily challenging period for the company and a difficult market environment, and has built and maintained good relationships with FHFA and Treasury. In addition, he has effectively managed turnover in senior management and has built a strong and effective executive management team.

Susan McFarland, Executive Vice President—Chief Financial Officer. The Chief Executive Officer recommended to the Board that the first installment of Ms. McFarland's 2011 long-term incentive award be $218,906, which is approximately 86% of her prorated target award. The Board approved this recommendation. In recommending the amount of Ms. McFarland's long-term incentive award, the Chief Executive Officer considered Ms. McFarland's many achievements since she joined the organization in July 2011, which included: introducing a new financial planning process, delivering a streamlined financial plan for 2012, improving the financial reporting close process, and restructuring the company's finance organization. Because Ms. McFarland joined the company in 2011, she did not receive a 2010 long-term incentive award. See "Compensation Arrangements with our Chief Financial Officer" for further information regarding Ms. McFarland's 2011 compensation.

David Hisey, Executive Vice President—Deputy Chief Financial Officer. The Chief Executive Officer recommended to the Board that the first installment of Mr. Hisey's 2011 long-term incentive award be $229,950, which is approximately 63% of his target, and that the second installment of his 2010 long-term incentive award be $268,275, which is approximately 74% of his target. The Board approved this recommendation. In recommending the amount of Mr. Hisey's long-term incentive awards, the Chief Executive Officer considered Mr. Hisey's assumption of the responsibilities of Chief Financial Officer from December 2010 to July 2011, his key role in the company's work assisting FHFA's servicing compensation initiative, his assistance in supporting

the company's strategic initiatives, and his support to our new Chief Financial Officer and the Finance organization during the leadership transition. Mr. Hisey left the company in February 2012. As described below under "Compensation Tables—Potential Payments Upon Termination or Change-in-Control—Termination Agreement with our Former Deputy Chief Financial Officer," we entered into a termination agreement with Mr. Hisey in February 2012.

David Benson, Executive Vice President—Capital Markets. The Chief Executive Officer recommended to the Board that the first installment of Mr. Benson's 2011 long-term incentive award be $410,276, which is approximately 88% of his target, and that the second installment of his 2010 long-term incentive award be $410,277, which is approximately 88% of his target. The Board approved this recommendation. In recommending the amount of Mr. Benson's long-term incentive awards, the Chief Executive Officer considered his many achievements in 2011, including serving as the company's primary point of contact for Treasury and the Department of Housing and Urban Development, leading the development of the company's strategic initiatives, and playing a lead role in three operating plan initiatives. The Chief Executive Officer also considered his outstanding leadership of the Capital Markets division. Under his effective leadership, the Capital Markets team exceeded their targets, implemented the Guaranteed Multifamily Structures (GEMS) program, and effectively managed the company's liquidity risk.

Terence Edwards, Executive Vice President—Credit Portfolio Management. The Chief Executive Officer recommended to the Board that the first installment of Mr. Edwards' 2011 long-term incentive award be $439,582, which is approximately 94% of his target, and that the second installment of his 2010 long-term incentive award be $415,162, which is approximately 89% of his target. The Board approved this recommendation. In recommending the amount of Mr. Edwards' long-term incentive award, the Chief Executive Officer considered Mr. Edwards' outstanding leadership in transforming the credit portfolio management division and the many accomplishments of his division in 2011. These accomplishments included: completing nearly 250,000 home retention solutions and almost 80,000 foreclosure alternatives, developing and implementing a tool to standardize workout solutions, executing more than 240,000 REO sales while maintaining high gross execution rates, increasing the amount of funds collected from lenders on outstanding repurchase requests, and contributing to the reduction in the company's seriously delinquent loan rate in 2011. The Chief Executive Officer also considered his leadership role in the servicing alignment initiative (SAI) and servicer total achievements reward system (STAR) program.

Timothy Mayopoulos, Executive Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary. The Chief Executive Officer recommended to the Board that the first installment of Mr. Mayopoulos' 2011 long-term incentive award be $483,794, which is approximately 99% of his target, and that the second installment of his 2010 long-term incentive award be $468,355, which is approximately 96% of his target. The Board approved this recommendation. In recommending the amount of Mr. Mayopoulos' long-term incentive award, the Chief Executive Officer considered his outstanding leadership of the Legal, Human Resources, Communications and Marketing Services, and Government and Industry Relations divisions of the company, as well as his leadership role in the company's operating plan. His accomplishments in 2011 included: resolving the SEC's investigation of the company, rebuilding the Communications and Marketing Services division, supporting FHFA, keeping the company apprised of major legislative developments, and overseeing the Human Resources division's retention and recruiting efforts.

Compensation Arrangements with our Chief Financial Officer

Ms. McFarland joined the company in July 2011. Her total annual direct compensation target for 2011, prior to the proration described below, was $3.2 million, consisting of: (1) $600,000 in base salary; (2) a $1,533,333 deferred salary target, payable in four equal installments in 2012; and (3) a $1,066,667 long-term incentive award target, payable in two installments in 2012 and 2013. Ms. McFarland's 2011 base salary and 2011 long-term incentive award were prorated based on her hire date; her 2011 deferred salary was not prorated.

In addition to this compensation, Ms. McFarland was awarded a $1.7 million sign-on award to partially compensate her for equity grants forfeited upon leaving her prior employer, which is to be paid as follows: $900,000 in July 2011, $600,000 in the first quarter of 2012, and $200,000 in July 2012. Each of these payments

is subject to repayment if Ms. McFarland leaves Fannie Mae within one year after the payment. We also agreed to provide Ms. McFarland with up to $100,000 in relocation benefits to facilitate her move to the Washington, D.C. area. See "Compensation Tables—Summary Compensation Table for 2011, 2010 and 2009" below for additional information regarding Ms. McFarland's 2011 compensation.

Other Executive Compensation Considerations

Role of Compensation Consultants

Our 2011 executive compensation program was developed in 2009 with assistance from the company's outside compensation consultant, McLagan, and the Compensation Committee's independent compensation consultant, Frederic W. Cook & Co., Inc. ("FW Cook").

In 2011, McLagan advised management, the Compensation Committee and FHFA on various compensation and human resources matters, including:

- providing recommendations for an expanded comparator group for select positions;
- advising on competitive pay levels, organization structure, and various compensation proposals for new hires and promotions; and
- providing actual and forecasted market compensation data for senior management positions, including the named executives' positions.

In 2011, FW Cook advised the Compensation Committee and the Board on various executive compensation matters, including:

- reviewing the company's risk assessment of its 2011 compensation program;
- reviewing the Chief Executive Officer's retirement benefits and various compensation proposals for new hires and promotions;
- evaluating the company's 2011 corporate performance goals and assisting the Compensation Committee in its assessment of the company's performance against these goals;
- informing the Compensation Committee of market trends in compensation;
- assisting the Compensation Committee in its evaluation of our executive compensation program, including preparing an analysis of the compensation of named executives at the comparator group companies described below, reviewing McLagan's recommendations for an expanded comparator group for select positions and reviewing additional market compensation data prepared by McLagan;
- attending all Compensation Committee meetings held during the year; and
- reviewing certain of the company's compensation-related disclosures.

FW Cook did not provide any services to management in 2011.

Comparator Group and Role of Benchmark Data

In 2009, the Compensation Committee selected the following comparator group of 18 companies for benchmarking named executive compensation:

- Allstate Corporation
- American International Group
- Bank of New York Mellon Corporation
- BB&T Corporation
- Capital One Financial Corporation
- Freddie Mac
- Fifth Third Bancorp
- Genworth Financial, Inc.
- GMAC LLC
- Hartford Financial Services Group
- Lincoln National Corporation
- Metlife, Inc.
- Principal Financial Group
- Prudential Financial, Inc.
- Regions Financial Corporation
- State Street Corporation
- SunTrust Banks Inc.
- US Bancorp.

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Finding comparable firms for purposes of benchmarking executive compensation is challenging due to our unique business, structure and mission, and the large size of our book of business compared to other financial services firms. The only directly comparable firm to us is Freddie Mac. Factors relevant to the selection of this comparator group included their status as U.S. public companies, the industry in which they operate (each is a commercial bank, public insurance company or government-sponsored enterprise) and their size (in terms of total assets, revenues and headcount) relative to the size of Fannie Mae.

In September 2011, we revised our approach to benchmarking certain senior executive positions. The revised approach uses our current comparator group and a broader group of companies against which to benchmark pay levels and practices for certain senior management roles:

- We benchmarked the compensation of our Executive Vice President—Chief Administrative Officer, General Counsel and Corporate Secretary (Mr. Mayopoulos) against both the current comparator group and a group of large banks consisting of Bank of America, Citigroup, JP Morgan Chase, PNC Financial Services and Wells Fargo.
- We benchmarked the compensation of our Executive Vice President—Credit Portfolio Management (Mr. Edwards) against the group of large banks previously described (other than PNC Financial Services because there was no comparable position), multifamily specialty firms, Freddie Mac and Ally Financial, Inc.
- We continued to benchmark the compensation of our Chief Executive Officer (Mr. Williams), Chief Financial Officer (Ms. McFarland), Deputy Chief Financial Officer (Mr. Hisey) and Executive Vice President—Capital Markets (Mr. Benson) against our comparator group identified above.

In each case, we compared the named executives' 2011 target direct compensation with the market median of 2010 direct compensation for comparable positions in the applicable comparator group of companies, as disclosed in the companies' annual reports, proxy statements and SEC filings, and taking into account individual variations in job scope for two of the named executives (Mr. Benson and Mr. Mayopoulos). Each named executive's target 2011 direct compensation was less than the market median and, in some cases, substantially less than the market median.

The table below displays the named executives' target and actual 2011 direct compensation, as compared to the market median of 2010 direct compensation for the applicable comparator group of companies.

Named Executive	Target Direct Compensation % below Market Median	Actual Direct Compensation % below Market Median
Michael Williams	–31%	–40%
Susan McFarland	–9	–36
David Hisey	–21	–33
David Benson	–4	–11
Terence Edwards	–18	–23
Timothy Mayopoulos	–18	–22

The Compensation Committee requested this benchmarking to understand how the named executives' compensation compared to the market median for these positions at comparable companies, in order to ensure that the company is prudently managing taxpayer support.

Compensation Recoupment Policy

Beginning with compensation for the 2009 performance year, our executive officers' compensation is subject to the following forfeiture and repayment provisions, also known as "clawback" provisions:

- *Materially Inaccurate Information*. If an executive officer has been granted deferred salary (defined in the compensation recoupment policy as deferred pay under the deferred pay program established in 2009 and deferred salary under the executive compensation program adopted in 2012) or incentive payments (including long-term incentive awards) based on materially inaccurate financial statements or any other materially inaccurate performance metric criteria, he or she will forfeit or must repay amounts granted in excess of the amounts the Board of Directors determines would likely have been granted using accurate metrics.
- *Termination for Cause*. If we terminate an executive officer's employment for cause, he or she will immediately forfeit all deferred salary, long-term incentive awards and any other incentive payments that have not yet been paid. We may terminate an executive officer's employment for cause if we determine that the officer has: (a) materially harmed the company by, in connection with the officer's performance of his or her duties for the company, engaging in gross misconduct or performing his or her duties in a grossly negligent manner, or (b) been convicted of, or pleaded *nolo contendere* with respect to, a felony.
- *Subsequent Determination of Cause*. If an executive officer's employment was not terminated for cause, but the Board of Directors later determines, within a specified period of time, that he or she could have been terminated for cause and that the officer's actions materially harmed the business or reputation of the company, the officer will forfeit or must repay, as the case may be, deferred salary, long-term incentive awards and any other incentive payments received by the officer to the extent the Board of Directors deems appropriate under the circumstances. The Board of Directors may require the forfeiture or repayment of all deferred salary, long-term incentive awards and any other incentive payments so that the officer is in the same economic position as if he or she had been terminated for cause as of the date of termination of his or her employment.
- *Effect of Willful Misconduct*. If an executive officer's employment: (a) is terminated for cause (or the Board of Directors later determines that cause for termination existed) due to either (i) willful misconduct by the officer in connection with his or her performance of his or her duties for the company or (ii) the officer has been convicted of, or pleaded *nolo contendere* with respect to, a felony consisting of an act of willful misconduct in the performance of his or her duties for the company and (b) in the determination of the Board of Directors, this has materially harmed the business or reputation of the company, then, to the extent the Board of Directors deems it appropriate under the circumstances, in addition to the forfeiture or repayment of deferred salary, long-term incentive awards and any other incentive payments described above, the executive officer will also forfeit or must repay, as the case may be, deferred salary and annual incentives or long-term awards paid to him or her in the two-year period prior to the date of termination of his or her employment or payable to him or her in the future. Misconduct is not considered willful unless it is done or omitted to be done by the officer in bad faith or without reasonable belief that his or her action or omission was in the best interest of the company.

Certain of the bonus or other incentive-based or equity-based compensation for our Chief Executive Officer and Chief Financial Officer also may be subject to a requirement that they be reimbursed to the company in the event that Section 304 of the Sarbanes-Oxley Act of 2002 applies to that compensation.

The Compensation Committee plans to review our compensation recoupment policy and revise it as necessary to comply with the Dodd-Frank Wall Street Reform and Consumer Protection Act once rules implementing the Act's clawback requirements have been finalized by the SEC.

Stock Ownership and Hedging Policies

In January 2009, our Board eliminated our stock ownership requirements because of the difficulty of meeting the requirements at current market prices and because we had ceased paying our executives stock-based

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compensation. All employees, including our named executives, are prohibited from transacting in derivative securities related to our securities, including options, puts and calls, other than pursuant to our stock-based benefit plans.

Tax Deductibility of our Compensation Expenses

Subject to certain exceptions, section 162(m) of the Internal Revenue Code imposes a $1 million limit on the amount that a company may annually deduct for compensation to its CEO and certain other named executives, unless, among other things, the compensation is "performance-based," as defined in section 162(m), and provided under a plan that has been approved by the shareholders. We have not adopted a policy requiring all compensation to be deductible under section 162(m). The impact of a potential lost deduction because of Section 162(m) is substantially mitigated by our current and projected tax losses, and this approach allows us flexibility in light of the conservatorship. Deferred salary and long-term incentive awards received by the named executives do not qualify as performance-based compensation under section 162(m).

2012 Executive Compensation Program

On March 8, 2012, FHFA instituted new compensation arrangements it designed for our named executives, in consultation with Treasury. The Board of Directors authorized management to implement these compensation arrangements. As further described below, the 2012 executive compensation program (the "2012 Program") applies to our named executives other than Mr. Hisey and is effective as of January 1, 2012. The 2012 Program does not apply to Mr. Hisey because he left the company in February 2012.

Under the 2012 Program, FHFA has directed us to reduce the target compensation of each named executive by 10% in 2012. This reduction in compensation seeks to balance our objective of reducing taxpayer costs with our objective of attracting and retaining the executives needed to effectively manage the company.

Under the 2012 Program, which is described in the table below, direct compensation consists solely of salary paid in cash. Salary has two components: base salary and deferred salary.

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Summary of 2012 Program

Compensation Element	Form	Primary Compensation Objectives	Key Features
Base Salary	Fixed cash payments, which are paid during the year on a bi-weekly basis.	Attract and retain named executives by providing a fixed level of current cash compensation.	Base salary reflects the named executive's level of responsibility and experience, as well as individual performance over time. Base salary is capped at $500,000 for all of our executive officers, including the named executives, other than our Chief Executive Officer and Chief Financial Officer.
Deferred Salary	Deferred salary is earned in bi-weekly installments over the course of the performance year, and is paid in quarterly installments in March, June, September and December of the following year. There are two elements of deferred salary: (1) fixed and (2) at-risk. The amount of fixed deferred salary is fixed, while the amount of at-risk deferred salary may be reduced based on corporate and individual performance.	*Fixed Deferred Salary*	
		Retain named executives.	Treatment of earned but unpaid fixed deferred salary upon termination of employment is described below under "Effect of Termination of Employment."
		At-Risk Deferred Salary	
		Retain named executives and provide incentives to named executives to achieve corporate and individual performance objectives.	Equal to 30% of the named executive's total target direct compensation, half of which is subject to reduction based on corporate performance and half of which is subject to reduction based on individual performance. The 2012 corporate objectives against which corporate performance will be measured for the named executives' 2012 at-risk deferred salary are described below under "2012 Corporate Performance Objectives." Treatment of earned but unpaid at-risk deferred salary upon termination of employment is described below under "Effect of Termination of Employment."

Effect of Termination of Employment. The treatment of deferred salary for 2012 and subsequent performance years upon the termination of a named executive's employment for any reason other than for cause is as follows:

- *Fixed Deferred Salary:* The named executive would receive the earned but unpaid portion of his or her fixed deferred salary, reduced by 2% for each full or partial month by which the named executive's termination precedes January 31, 2014.

- *At-Risk Deferred Salary:* The named executive would receive the earned but unpaid portion of his or her at-risk deferred salary, subject to reduction from the target level for corporate and individual performance.

All deferred salary paid following a named executive's termination of employment will be paid on the same quarterly schedule as if the named executive had not terminated employment.

Compensation Recoupment Policy. Deferred salary is subject to the terms of our forfeiture and repayment provisions for executive officers. Our compensation forfeiture and repayment provisions are described under "Other Executive Compensation Considerations—Compensation Recoupment Policy."

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2012 Corporate Performance Objectives

On March 8, 2012, FHFA directed us to implement the 2012 corporate performance objectives and related targets/measures set forth in the table below, including the relative weighting of each objective. FHFA developed these objectives with input from management and the Board of Directors. The Board of Directors authorized management to implement these corporate objectives. One-half of the named executives' 2012 at-risk deferred salary is subject to reduction based on the company's performance against these objectives. FHFA will have the primary role in determining whether the company has achieved these objectives, with advice from management and the Board of Directors.

Objectives	Weighting	Targets/Measures
1. Build a New Infrastructure	**30%**	
• Continued progress on, or completion of, mortgage market enhancement activities already underway	15%	
• Loan-level Disclosure in Mortgage-Backed Security (MBS)		• Develop template for enhanced loan-level disclosures for single-family MBS that incorporates market standards and is consistent with maintaining liquidity in the to-be-announced market. Template to be submitted to FHFA by June 30, 2012.
• Uniform Mortgage Data Program (UMDP)		• Meet articulated Uniform Mortgage Data Program (UMDP) timetables as follows: • Uniform Collateral Data Portal (UCDP) electronic appraisal submission requirement by March 19, 2012. • Uniform Loan Delivery Data (ULDD) format loan delivery data by July 23, 2012. • Deliver new ULDD data point in compliance with SEC Rule 15Ga-1 by November 30, 2012. • Notify market of optional ULDD data points, including those necessary to improve disclosure and for other business uses in 2012. • Notify market of servicing data standard, including data necessary to improve disclosure, and agree on timetable for data collection to begin in 2013 by December 31, 2012. • Develop plans that leverage uniform appraisal data and ULDD for enhanced risk management by December 31, 2012. • Cooperate with FHFA implementation of portal to accept electronic appraisals.
• Seller-Servicer Contract Harmonization		• Appropriate resource allocation to seller-servicer contract harmonization and commitment to targeted timetables as outlined in FHFA directive.
• Securitization Platform	10%	• In collaboration with FHFA and the other Enterprise, develop and finalize a plan by December 31, 2012 for the design and build of a single securitization platform that can serve both Enterprises and a post-conservatorship market with multiple future issuers.
• Pooling and Servicing Agreements	5%	• Propose a model pooling and servicing agreement (PSA), collaborate with other Enterprise and FHFA on a specific proposal, seek public comment, and produce final recommendations for standard Enterprise trust documentation by December 31, 2012.

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Objectives	Weighting	Targets/Measures
2. Contract the Enterprises dominant presence in the marketplace while simplifying and shrinking certain operations.	**30%**	
• Work with FHFA to evaluate options for meeting conservatorship goals, including shifting mortgage credit risk to private investors via assessment of: • Multifamily line of business • Investment assets and nonperforming loans	10%	• Undertake a market analysis by December 31, 2012, of the viability of multifamily business operations without government guarantees. Review the likely viability of these models operating on a stand-alone basis after attracting private capital and adjusting pricing if needed. • Perform analysis of investments portfolio as described in the strategic plan by the fourth quarter of 2012 and make preparations for the competitive disposition of a pool of nonperforming assets by September 30, 2012. • Review options with board of directors and FHFA and make appropriate recommendations for future actions. • Implement plan agreed to by board and FHFA.
• Risk Sharing	10%	• Initiate risk sharing transactions by September 30, 2012. • Execute new risk sharing transactions beyond the traditional charter required mortgage insurance coverage. • Propose timeline for continued growth in risk sharing through 2013.
• Pricing • Single-family Guarantee Fee Pricing Increases • Set plan to price for state law effects on mortgage credit losses given default	10%	• Develop and begin implementing plan to increase guarantee fee pricing to more closely approximate the private sector. • Set uniform pricing across loan sellers to extent practicable. • Work with FHFA to develop appropriate risk-based pricing by state. State-level pricing grid to be completed by August 31, 2012.
3. Maintain foreclosure prevention activities and credit availability for new and refinanced mortgages.	**20%**	
• Loss Mitigation through continued implementation and enhancement of Servicer Alignment Initiative • Short Sales • Deeds in Lieu and Deeds-for-Lease	10%	• Enhance transparency of servicer requirements around foreclosure timelines and compensatory fees and publish applicable announcements by September 30, 2012. • Enhance short sales programs that include efforts to identify program obstacles that impact utilization by June 30, 2012. Applicable lender announcements to foreclosure alternatives by September 30, 2012. • Design, develop, or enhance deed in lieu and deed-for-lease programs that include efforts to identify and resolve program obstacles that impact utilization by September 30, 2012. Applicable lender announcements to foreclosure alternatives by December 31, 2012.
• Real Estate Owned Sales	10%	• Implement, as needed, loans to facilitate real estate owned (REO) sales program by June 30, 2012. • Expand financing for small investors in REO properties by June 30, 2012. • Initiate disposition pilot, either through financing or bulk sales, by September 30, 2012. • Expand pilot programs and establish ongoing sales program, as agreed to with FHFA, during 2012.

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Objectives	Weighting	Targets/Measures
4. Manage Efficiently in Support of Conservatorship Goals	**20%**	
• Conservatorship / Board Priorities	20%	• Work closely with FHFA toward concluding litigation associated with private label securities and whole loan repurchase claims, as appropriate. • Prioritize and manage Enterprise operations in support of conservatorship goals and board directions. • Adapt to evolving conservatorship requirements. • Collaborate fully with FHFA and, when requested, the other Enterprise. • Actively seek and consider public input on conservatorship-related projects, as requested. • Effectively identify, communicate, and remediate situations that create risk for the conservatorships or avoidable taxpayer losses. • Ensure corporate governance procedures are maintained, including timely reporting to the board and adhering to board mandates and expectations. • Take steps to mitigate key person dependencies and maintain appropriate internal controls and risk management governance. • Achieve milestones agreed to within the year with regard to accounting alignment.

2012 Program Compensation Amounts

The following table sets forth the components of 2012 salary on an annual basis for each of our named executives, other than Mr. Hisey, who is not covered by the 2012 Program as he left the company in February 2012.

		2012 Deferred Salary(1)		
Name and Title	**2012 Base Salary Rate**	**Fixed**	**At-Risk (Target Amount)**	**Total Salary Target**
Michael Williams President and Chief Executive Officer	$ 900,000	$ 2,880,000	$ 1,620,000	$ 5,400,000
Susan McFarland Executive Vice President and Chief Financial Officer	600,000	1,416,000	864,000	2,880,000
David Benson Executive Vice President— Capital Markets	500,000	1,264,000	756,000	2,520,000
Terence Edwards Executive Vice President— Credit Portfolio Management	500,000	1,264,000	756,000	2,520,000
Timothy Mayopoulos Executive Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary	500,000	1,358,500	796,500	2,655,000

(1) Fixed deferred salary is subject to partial forfeiture upon termination of employment before January 31, 2014. In addition, at-risk deferred salary is subject to reduction based on corporate and individual performance. Fixed deferred salary and at-risk deferred salary are described in more detail above under "Summary of 2012 Program."

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COMPENSATION COMMITTEE REPORT

The Compensation Committee of the Board of Directors of Fannie Mae has reviewed and discussed the Compensation Discussion and Analysis included in this Form 10-K with management. Based on such review and discussions, the Compensation Committee has recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Form 10-K.

Compensation Committee:
Brenda J. Gaines, Chair
Egbert L. J. Perry (member since November 2011)
Jonathan Plutzik
David H. Sidwell

COMPENSATION RISK ASSESSMENT

We conducted a risk assessment of our 2011 employee compensation policies and practices. In conducting this risk assessment, we reviewed, among other things, our compensation plans, pay profiles, performance goals and performance appraisal management process. We also assessed whether policies, procedures or other mitigating controls existed that would reduce the opportunity for excessive or inappropriate risk-taking within our compensation policies and practices.

Based on the results of our risk assessment, we concluded that our 2011 employee compensation policies and practices do not create risks that are reasonably likely to have a material adverse effect on the company. Several factors contributed to our conclusion, including:

- Payment of incentive compensation is based on the achievement of performance metrics that we have concluded do not encourage unnecessary or excessive risk-taking. Our mix of multiple qualitative and quantitative performance metrics without undue emphasis on any one metric provides an appropriate balance of incentives.
- Our extensive performance appraisal process ensures achievement of goals without encouraging executives or employees to take inappropriate risks.
- Although we have an all cash compensation program while under conservatorship, FHFA approval of our executive compensation arrangements and our payment of most incentive payments over time, with a portion based on future performance, encourages appropriate decision-making.
- Our Board and Compensation Committee have an active and significant oversight role in compensation-related decisions, including approving the company's overall compensation structure, determining whether corporate goals have been achieved and determining the overall funding level of the pool for incentive awards, with final approval from FHFA.
- Deferred salary and incentive compensation for our executive officers are subject to the terms of a clawback policy.
- We have no pre-existing severance arrangements for our executive officers that would guarantee additional compensation when an executive leaves, and there is no guarantee that an executive would receive payments of previously awarded deferred salary or long-term incentive compensation if an executive's employment were terminated.

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COMPENSATION TABLES

Summary Compensation Table for 2011, 2010 and 2009

The following table shows summary compensation information for 2011, 2010 and 2009 for the named executives. The amounts shown in the "Long-Term Incentive Awards and Other" sub-column of the "Non-Equity Incentive Plan Compensation" column are not comparable for 2009, 2010 and 2011 because of a change to the company's compensation structure in 2010, as described in footnote 5 to the table.

		Salary ($)			Non-Equity Incentive Plan Compensation ($)				
Name and Principal Position	Year	Base Salary[1]	Deferred Salary (Service-Based)[2]	Bonus ($)[3]	Deferred Salary (Performance-Based)[4]	Long-Term Incentive Awards and Other[5][6]	Change in Pension Value and Nonqualified Deferred Compensation Earnings ($)[7]	All Other Compensation ($)[8]	Total ($)
Michael Williams President and Chief Executive Officer	2011	900,000	1,550,000	—	1,317,500	1,491,000	1,268,300	11,300	6,538,100
	2010	900,000	1,550,000	—	1,395,000	900,000	833,156	16,300	5,594,456
	2009	860,523	2,867,200	—	—	2,051,100	790,803	111,180	6,680,806
Susan McFarland[9] Executive Vice President and Chief Financial Officer	2011	288,462	766,667	900,000	651,667	218,906	—	94,391	2,920,093
David Hisey[10] Executive Vice President and Deputy Chief Financial Officer	2011	425,000	522,500	—	444,125	498,225	156,625	17,250	2,063,725
	2010	408,654	522,500	—	470,250	325,000	130,600	15,950	1,872,954
	2009	441,347	1,045,000	—	—	983,700	70,894	44,600	2,585,541
David Benson Executive Vice President— Capital Markets	2011	500,000	684,834	—	582,108	820,553	299,704	15,500	2,902,699
	2010	500,000	684,834	—	616,350	440,000	218,844	22,250	2,482,278
	2009	519,231	1,369,667	—	—	1,282,800	125,157	47,815	3,344,670
Terence Edwards Executive Vice President— Credit Portfolio Management	2011	500,000	684,834	—	582,108	854,744	—	80,000	2,701,686
	2010	500,000	684,834	—	616,350	420,000	—	54,439	2,275,623
Timothy Mayopoulos Executive Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary	2011	500,000	734,834	—	624,608	952,149	—	80,000	2,891,591
	2010	500,000	734,834	—	661,350	485,000	—	88,308	2,469,492
	2009	439,346	1,278,610	—	—	842,601	—	87,138	2,647,695

(1) Amounts shown in this sub-column consist of base salary paid during the year on a biweekly basis. Calendar year 2009 contained 27 biweekly pay periods, rather than the usual 26 biweekly pay periods. As a result, salary amounts for 2009 reflect an additional biweekly pay period.

(2) Amounts shown for 2010 and 2011 in this sub-column consist of the fixed, service-based portion of 2010 and 2011 deferred salary, which is 50% of the total deferred salary target for the year. As described in footnote 4 below, the remaining portion of 2010 and 2011 deferred salary is included in the "Non-Equity Incentive Plan Compensation" column because it is performance-based and the amount paid varies based on corporate performance for the year. Deferred salary for 2011 will be paid in four equal installments in March, June, September and December 2012. These amounts generally will be paid only if the named executive remains employed by us on the payment date. More information about deferred salary is presented in "Compensation Discussion and Analysis—2011 Executive Compensation Program—Elements of 2011 Compensation Program." Amounts shown for 2009 in this column consist of the entire amount of 2009 deferred salary, all of which was service-based.

We previously referred to deferred salary as "deferred pay" and reported this element of compensation under the "Bonus" column of this table. As described above under "Compensation Discussion and Analysis—2011 Executive Compensation Program—Overview of Program Objectives and Structure," we now refer to the deferred pay element of our compensation program as "deferred salary" to better reflect our view of the nature of this

compensation element and at FHFA's direction to present our compensation information on a consistent basis with Freddie Mac. We have reclassified amounts for 2010 and 2009 for consistency with this change in presentation.

(3) As described in footnote 9 below, amounts shown for 2011 in the "Bonus" column consist of the first installment of Ms. McFarland's sign-on award ($900,000).

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(4) Amount shown for 2010 and 2011 in this sub-column consist of the performance-based portion of 2010 and 2011 deferred salary, which were based on corporate performance for the applicable year. The amount of 2011 deferred salary awarded to each named executive represented 85% of the target amount of the performance-based portion of deferred salary. The amount of 2010 deferred salary awarded to each applicable named executive represented 90% of the target amount of the performance-based portion of deferred salary. As noted in footnote 2, 2011 deferred salary will be paid in four equal installments in March, June, September and December 2012. These amounts generally will be paid only if the named executive remains employed by us on the payment date. More information about deferred salary is presented in "Compensation Discussion and Analysis—2011 Executive Compensation Program—Elements of 2011 Compensation Program."

(5) Amounts shown for 2011 in this sub-column are higher than the amounts shown for 2010, because 2011 amounts include the second installment of the 2010 long-term incentive award, and 2010 amounts do not include the second installment of the 2009 long-term incentive award. The second installment of the 2010 long-term incentive award is reported as 2011 compensation because it was determined based on performance for both 2010 and 2011. The second installment of the 2009 long-term incentive award was not included as 2010 compensation because it was determined based on performance for 2009 only, and therefore was reported as 2009 compensation.

(6) For all of the named executives except for Ms. McFarland, amounts shown for 2011 in this sub-column consist of the following: (1) the first installment of the 2011 long-term incentive award, which was based on corporate and individual performance for 2011; and (2) the second installment of the 2010 long-term incentive award, which was based on corporate and individual performance for both 2010 and 2011. As described in footnote 9 below, Ms. McFarland joined the company in 2011 and therefore she did not receive a 2010 long-term incentive award. Accordingly, for Ms. McFarland, the amount shown for 2011 in this sub-column consists only of the first installment of her 2011 long-term incentive award, which was prorated based on her hire date.

The table below provides details on the amounts of each of these awards for each named executive:

Name	2011 Long-term Incentive Award (First Installment)	2010 Long-term Incentive Award (Second Installment)
Michael Williams	$ 714,000	$ 777,000
Susan McFarland	218,906	—
David Hisey	229,950	268,275
David Benson	410,276	410,277
Terence Edwards	439,582	415,162
Timothy Mayopoulos	483,794	468,355

Both the first installment of the 2011 long-term incentive award and the second installment of the 2010 long-term incentive award were paid in February 2012. The second installment of the 2011 long-term incentive award will be determined and paid in the first quarter of 2013 based on corporate and individual performance for both 2011 and 2012, and therefore is not included as 2011 compensation in this table. More information about long-term incentive awards is presented in "Compensation Discussion and Analysis—2011 Executive Compensation Program—Elements of 2011 Compensation Program."

Amounts shown for 2010 in this sub-column consist solely of the first installment of the 2010 long-term incentive award, which was based on corporate and individual performance for 2010.

Amounts shown for 2009 in this sub-column consist of: (1) the 2009 long-term incentive award, which was based on corporate and individual performance for 2009; and (2) for Messrs. Williams, Hisey and Benson, the performance-based portion of their 2008 Retention Program award, which was based on 2009 corporate performance. Mr. Mayopoulos joined the company in 2009 and therefore did not receive a 2008 Retention Program award.

The table below provides details on the amounts of each of these awards for each named executive who was employed by Fannie Mae in 2009:

Name	2009 Long-term Incentive Award	2008 Retention Program Award (Performance-Based Portion)
Michael Williams	$ 1,665,000	$ 386,100
David Hisey	657,000	326,700
David Benson	837,300	445,500
Timothy Mayopoulos	842,601	—

(7) The reported amounts represent change in pension value. We calculated these amounts using the same assumptions we use for financial reporting under GAAP, using a discount rate of 4.95% at December 31, 2011. None of our named executives received above-market or preferential earnings on nonqualified deferred compensation.

The discount rate used to determine pension value at December 31, 2011 decreased by 70 basis points from the rate used at December 31, 2010. Of the $1,268,300 increase in pension value reported for Mr. Williams, $604,900 was attributable to changes in actuarial assumptions (primarily the reduction in the discount rate noted above), $258,200 was attributable to financing cost, and $405,200 was attributable to amounts earned through his 2011 service. Of the $156,625 increase in pension value reported for Mr. Hisey, $70,000 was attributable to changes in actuarial assumptions (primarily the reduction in the discount rate noted above), $25,400 was attributable to financing cost, and $61,225 was attributable to amounts earned through his 2011 service. Of the $299,704 increase in pension value reported for Mr. Benson, $118,700 was attributable to changes in actuarial assumptions (primarily the reduction in the discount rate noted above), $43,100 was attributable to financing cost, and $137,904 was attributable to amounts earned through his 2011 service.

(8) The table below shows more information about the amounts reported for 2011 in the "All Other Compensation" column, which consist of (1) company contributions under our Retirement Savings Plan (401(k) Plan); (2) company credits to our Supplemental Retirement Savings Plan; (3) matching charitable contributions under our matching charitable gifts program; and (4) relocation benefits provided to our new Chief Financial Officer.

Name	Company Contributions to Retirement Savings (401(k)) Plan	Company Credits to Supplemental Retirement Savings Plan	Charitable Award Programs	Relocation Benefits
Michael Williams	$ 7,350	—	$ 3,950	—
Susan McFarland	19,600	$ 3,477	—	$ 71,314
David Hisey	12,250	—	5,000	—
David Benson	12,250	—	3,250	—
Terence Edwards	19,600	60,400	—	—
Timothy Mayopoulos	19,600	60,400	—	—

In accordance with SEC rules, amounts shown under "All Other Compensation" for 2011 do not include perquisites or personal benefits for a named executive that, in the aggregate, amount to less than $10,000.

The amount shown in the "Relocation Benefits" column for Ms. McFarland consists of relocation benefits provided to her in 2011, which include costs associated with finding and purchasing a new home and temporary living expenses such as housing expenses and other incidental living expenses. These benefits were provided to Ms. McFarland as part of a relocation benefit of up to $100,000 that we agreed to provide to her in connection with her hire in July 2011. This benefit expires in July 2012 in accordance with its terms. We calculated the incremental cost of providing Ms. McFarland's relocation benefits based on actual cost (that is, the total amount of expenses incurred by us in providing the benefits), excluding $122 in fees and interest paid to the relocation benefit administrator.

Amounts shown in the "Charitable Award Programs" column reflect gifts we made under our matching charitable gifts program, under which gifts made by our employees and directors to Section 501(c)(3) charities are matched, up to an aggregate total of $5,000 in any calendar year.

(9) Ms. McFarland joined Fannie Mae as our Chief Financial Officer on July 11, 2011. Her annual base salary rate is $600,000. In addition to base salary, a long-term incentive award and deferred salary, Ms. McFarland was awarded a

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$1.7 million sign-on award in 2011, which is to be paid as follows: $900,000 in July 2011, $600,000 in the first quarter of 2012, and $200,000 in July 2012. Each of these payments is subject to repayment if Ms. McFarland leaves Fannie Mae within one year after the payment. Amounts shown for 2011 in the "Bonus" column for Ms. McFarland consist of the first installment of her sign-on award ($900,000). Amounts shown for 2011 in the "Non-Equity Incentive Plan Compensation" column for Ms. McFarland consist of: (1) the first installment of her 2011 long-term incentive award, which was prorated based on her hire date ($218,906); and (2) the performance-based portion of her 2011 deferred salary, which was not prorated ($651,667). Because she joined the company in 2011, Ms. McFarland did not receive a 2010 long-term incentive award.

(10) Mr. Hisey left the company in February 2012. Pursuant to his termination agreement with the company, he will receive all of his 2011 deferred salary on the same payment dates as other deferred salary recipients. See "Potential Payments Upon Termination or Change-in-Control—Termination Agreement with our Former Deputy Chief Financial Officer" for a description of this termination agreement.

Grants of Plan-Based Awards in 2011

The following table shows grants of awards made to the named executives during 2011 under our long-term incentive plan and deferred salary plan. The terms of these long-term incentive and deferred salary awards are described above in "Compensation Discussion and Analysis—2011 Executive Compensation Program—Elements of 2011 Compensation Program." Deferred salary amounts shown represent only the performance-based portion (50%) of the named executives' 2011 deferred salary award.

		Estimated Future Payouts Under Non-Equity Incentive Plan Awards[(2)]		
		Threshold	Target	Maximum
Name	Award Type[(1)]	($)	($)	($)
Michael Williams	LTI	—	2,000,000	—
	DS	—	1,550,000	—
Susan McFarland[(3)]	LTI	—	508,493	—
	DS	—	766,667	—
David Hisey[(4)]	LTI	—	730,000	—
	DS	—	522,500	—
David Benson	LTI	—	930,333	—
	DS	—	684,834	—
Terence Edwards	LTI	—	930,333	—
	DS	—	684,834	—
Timothy Mayopoulos	LTI	—	980,333	—
	DS	—	734,834	—

(1) LTI indicates an award under our long-term incentive plan. DS indicates the corporate performance-based portion (50%) of the named executives' 2011 deferred salary award.

(2) For awards under our long-term incentive plan, the amounts shown are the target amounts of the named executives' 2011 long-term incentive awards established by our Board in 2011. The actual amount of the first installment (50%) of each named executive's 2011 long-term incentive award was determined in 2012 based on 2011 performance against pre-established corporate goals and individual performance. The second installment (50%) of each named executive's 2011 long-term incentive award will be determined in 2013 based on performance in 2011 and 2012 against pre-established corporate goals and individual performance. No amounts are shown in the "Threshold" and "Maximum" columns because our long-term incentive plan does not specify threshold or maximum payout amounts. Our Board has the discretion to pay awards in amounts below or above these target amounts, subject to the approval of FHFA; however, the sum of the individual long-term incentive awards to all executive officers cannot exceed the overall amount of the long-term incentive pool for our executive officers. The actual amounts of the first installment of the 2011 long-term incentive award awarded by the Board and approved by FHFA for 2011 performance are included in the "Non-Equity Incentive Plan Compensation" column of the "Summary Compensation Table for 2011, 2010 and 2009" and explained in footnote 6 to that table. The first installment of the long-term incentive award was paid to the named executives in February 2012. The second installment of the long-term incentive award will be determined and paid in the first quarter of 2013.

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For deferred salary awards, the amounts shown are the target amounts of the performance-based portion (50%) of the named executives' 2011 deferred salary award. The actual amount of the performance-based portion of 2011 deferred salary was determined in 2012 based on 2011 performance against pre-established corporate goals. No amounts are shown in the "Threshold" and "Maximum" columns because our deferred salary plan does not specify threshold or maximum payout amounts. Our Board has the discretion to pay awards in amounts below or above these target amounts, subject to the approval of FHFA. The actual amounts of the performance-based portion of 2011 deferred salary awarded by the Board and approved by FHFA for 2011 performance are included in the "Non-Equity Incentive Plan Compensation" column of the "Summary Compensation Table for 2011, 2010 and 2009 and explained in footnote 4 to that table. The performance-based portion of 2011 deferred salary will be paid to the named executives in four equal quarterly installments in March, June, September and December 2012.

(3) Ms. McFarland joined the company in July 2011. Her 2011 long-term incentive award was prorated based on her hire date; the amount shown in this table reflects the prorated amount. Her 2011 deferred salary was not prorated. See "Compensation Discussion and Analysis—Determination of 2011 Compensation—Compensation Arrangements with our Chief Financial Officer" for further information.

(4) Mr. Hisey left the company in February 2012. Pursuant to his termination agreement with the company, he will receive all of his 2011 deferred salary on the same payment dates as other deferred salary recipients. See "Potential Payments Upon Termination or Change-in-Control—Termination Agreement with our Former Deputy Chief Financial Officer" for a description of this termination agreement.

Outstanding Equity Awards at 2011 Fiscal Year-End

The following table shows outstanding stock option awards and unvested restricted stock held by the named executives as of December 31, 2011. The market value of stock awards shown in the table below is based on a per share price of $0.2012, which was the closing market price of our common stock on December 30, 2011. As of December 30, 2011, the exercise prices of all of the outstanding options referenced in the table below were substantially higher than the market price of our common stock.

			Option Awards[2]			Stock Awards[2]	
Name	Award Type[1]	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)
Michael Williams	O	1/21/2003	63,836	69.43	1/21/2013		
	O	1/23/2004	73,880	78.32	1/23/2014		
	RS	1/28/2008				37,189	7,482
Susan McFarland	N/A						
David Hisey	O	1/3/2005	10,000	71.31	1/3/2015		
	RS	1/28/2008				7,311	1,471
David Benson	O	6/3/2002	12,000	79.33	6/3/2012		
	O	6/3/2002	20,080[3]	79.33	6/3/2012		
	O	1/21/2003	9,624	69.43	1/21/2013		
	O	1/23/2004	12,223	78.32	1/23/2014		
	RS	1/28/2008				5,986	1,204
Terence Edwards	N/A						
Timothy Mayopoulos	N/A						

(1) O indicates stock options and RS indicates restricted stock.

(2) Except as otherwise indicated, all awards of options and restricted stock listed in this table vested in four equal annual installments beginning on the first anniversary of the date of grant. Amounts reported in this table for restricted stock represent only the unvested portion of awards. Amounts reported in this table for options represent only the unexercised portions of awards.

(3) This option award had special vesting provisions: 3,860 options vested immediately upon grant, 9,080 vested on August 31, 2002, 4,370 vested on January 31, 2003, 1,610 vested on January 31, 2004 and 1,160 vested on January 31, 2005.

Option Exercises and Stock Vested in 2011

The following table shows information regarding vesting of restricted stock held by the named executives during 2011. We have calculated the value realized on vesting by multiplying the number of shares of stock by the fair market value (based on the average of the high and low prices) of our common stock on the vesting date. We have provided no information regarding stock option exercises because no named executives exercised stock options during 2011.

	Stock Awards	
Name	**Number of Shares Acquired on Vesting (#)**	**Value Realized on Vesting ($)**
Michael Williams	60,345	31,617
Susan McFarland	—	—
David Hisey	11,333	5,931
David Benson	8,968	4,688
Terence Edwards	—	—
Timothy Mayopoulos	—	—

Pension Benefits

Retirement Savings Plan

The Retirement Savings Plan is a defined contribution plan that includes a 401(k) before-tax feature, a regular after-tax feature and a Roth after-tax feature. Under the plan, eligible employees may allocate investment balances to a variety of investment options. Subject to IRS limits for 401(k) plans, we match in cash employee contributions up to 3% of base salary for employees who are grandfathered participants in our Retirement Plan and up to 6% of base salary and eligible incentive compensation (which for the applicable named executives includes deferred salary under our executive compensation program in place for 2009 through 2011) for employees who are not grandfathered participants in our Retirement Plan. All non-grandfathered employees are 100% vested in our matching contributions. Grandfathered employees receive benefits under the 3% of base salary matching program and are fully vested in our matching contributions after five years of service. Messrs. Williams, Hisey and Benson are grandfathered employees under our Retirement Plan and therefore receive benefits under the 3% matching program, while Ms. McFarland and Messrs. Edwards and Mayopoulos are non-grandfathered employees and therefore receive benefits under the 6% matching program.

All regular employees, with the exception of those who participated in the Executive Pension Plan (which includes Mr. Williams), receive an additional 2% contribution (based on base salary for grandfathered employees and on base salary and eligible incentive compensation for non-grandfathered employees) from the company regardless of employee contributions to this plan. Participants are fully vested in this 2% contribution after three years of service.

Defined Benefit Pension Plans

Retirement Plan. Participation in the Retirement Plan has been frozen, and employees hired after December 31, 2007 and employees who did not satisfy the age and service requirements to be grandfathered participants under the Retirement Plan do not earn benefits under the Retirement Plan. Prior to 2007, participation in the Retirement Plan was generally available to employees. Participants are fully vested in the Retirement Plan when they complete five years of credited service. Messrs. Williams, Hisey and Benson are the only named executives who participate in the Retirement Plan.

Under the Retirement Plan, normal retirement benefits are computed on a single life basis using a formula based on final average annual earnings and years of credited service. For years of service after 1988, the pension formula is:

- 1 $^{1}/2$% multiplied by final average annual earnings, plus

- 1/2% multiplied by final average annual earnings over Social Security-covered compensation multiplied by years of credited service.

A different formula applies for years of service after 35 years. Final average annual earnings are average annual earnings in the participant's highest paid 36 consecutive calendar months during the participant's last 120 calendar months of employment. Earnings are base salary. Provisions of the Internal Revenue Code of 1986, as amended, limit the amount of annual compensation that may be used for calculating pension benefits and the annual benefit that may be paid. For 2011, the statutory compensation and benefit caps were $245,000 and $195,000, respectively. Early retirement under the Retirement Plan is generally available at age 55. For employees who retire before age 65, benefits are reduced by stated percentages for each year that they are younger than 65.

Supplemental Pension Plan and 2003 Supplemental Pension Plan. The purpose of the Supplemental Pension Plan is to provide supplemental retirement benefits to employees whose base salary exceeds the statutory compensation cap applicable to the Retirement Plan or whose benefit under the Retirement Plan is limited by the statutory benefit cap applicable to the Retirement Plan. The purpose of the Supplemental Pension Plan of 2003 (the "2003 Supplemental Pension Plan") is to provide additional benefits based on eligible incentive compensation not taken into account under the Retirement Plan or the Supplemental Pension Plan. For executive officers, eligible incentive compensation includes Annual Incentive Plan bonuses, and awards under the 2008 Retention Program. Eligible incentive compensation for executive officers also includes deferred salary awards under our executive compensation program in place for 2009 through 2011. For purposes of determining benefits under the 2003 Supplemental Pension Plan, the amount of an officer's eligible incentive compensation taken into account is limited in the aggregate to 50% of the officer's base salary. Benefits under these plans vest at the same time as benefits under the Retirement Plan, and benefits under these plans typically commence at the later of age 55 or separation from service. Messrs. Williams, Hisey and Benson are the only named executives who participate in the Supplemental Pension Plan and the 2003 Supplemental Pension Plan.

In general, officers who are eligible to participate in the Executive Pension Plan receive the greater of their Executive Pension Plan benefits or combined Supplemental Pension Plan and 2003 Supplemental Pension Plan benefits. However, for 2010 and 2011, Mr. Williams accrued benefits under the Supplemental Pension Plan and the 2003 Supplemental Pension Plan that will not be offset by his Executive Pension Plan benefit. In light of its decision to freeze Mr. Williams' benefit under the Executive Pension Plan, the Board adopted this change for 2010 and 2011, with the approval of FHFA, to provide Mr. Williams a pension benefit for 2010 and 2011.

Executive Pension Plan. The Executive Pension Plan was designed to supplement the benefits payable under our tax-qualified defined benefit retirement plan (the Federal National Mortgage Association Retirement Plan for Employees Not Covered Under Civil Service Retirement Law or "Retirement Plan"). Mr. Williams is the only named executive with a benefit under the Executive Pension Plan, and his benefit under the plan was frozen as of December 31, 2009. Because the Executive Pension Plan is frozen, Mr. Williams' compensation, years of service and Retirement Plan benefits earned for years after 2009 are not taken into account in determining his benefit under the Executive Pension Plan.

Executive Pension Plan benefits vested after ten years of participation in the plan, and Mr. Williams was 90% vested at the time the plan was frozen. Mr. Williams' maximum annual pension benefit under the Executive Pension Plan, based on his status as 90% vested and a pension goal formula of 40%, is 36% of his average annual covered compensation earned for the years 2007, 2008 and 2009. Covered compensation is Mr. Williams' average annual base salary, including deferred compensation, plus eligible incentive compensation. For this purpose, eligible incentive compensation is limited in the aggregate to 50% of Mr. Williams' base salary, and consists of Annual Incentive Plan cash bonuses and 2008 Retention Program awards. His payments under the Executive Pension Plan are reduced by his Retirement Plan benefit determined as of December 31, 2009.

Early retirement is available under the plan at age 55, with a reduction in the plan benefit of 2% for each year between the year in which benefit payments begin and the year in which the participant turns 60. The benefit payment for Mr. Williams is a monthly amount equal to 1/12th of his annual retirement benefit payable during

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the lives of Mr. Williams and his surviving spouse. If he dies before receiving benefits under the Executive Pension Plan, his surviving spouse will be entitled to a death benefit that begins when Mr. Williams would have reached age 55, based on his pension benefit at the date of death.

The table below shows the years of credited service and the present value of accumulated benefits for each named executive under our defined benefit pension plans as of December 31, 2011.

Pension Benefits for 2011

Name	Plan Name	Number of Years Credited Service (#)[(1)]	Present Value of Accumulated Benefit ($)[(2)]
Michael Williams	Retirement Plan	21	644,087
	Supplemental Pension Plan[(3)]	21	536,623
	2003 Supplemental Pension Plan[(3)]	21	317,590
	Executive Pension Plan	9	3,874,631
Susan McFarland	Not applicable		
David Hisey	Retirement Plan	7	195,604
	Supplemental Pension Plan	7	158,893
	2003 Supplemental Pension Plan	7	169,429
David Benson	Retirement Plan	10	271,283
	Supplemental Pension Plan	10	311,674
	2003 Supplemental Pension Plan	10	305,562
Terence Edwards	Not applicable		
Timothy Mayopoulos	Not applicable		

(1) Mr. Williams has fewer years of credited service under the Executive Pension Plan than under the Retirement Plan because he worked at Fannie Mae prior to becoming a participant in the Executive Pension Plan. In addition, because benefit accruals under the Executive Pension Plan for years after 2009 were frozen, Mr. Williams' credited service under the Executive Pension Plan was frozen in 2009 at 9 years.

(2) The present value for the Executive Pension Plan assumes that Mr. Williams will remain in service until age 60, the normal retirement age under the Executive Pension Plan. The present value for the Retirement Plan, Supplemental Pension Plan and 2003 Supplemental Pension Plan assumes that the named executives will remain in service until age 65, the normal retirement age under those plans. The values also assume that benefits under the Executive Pension Plan will be paid in the form of a monthly annuity for Mr. Williams' life and that of Mr. Williams' surviving spouse, and benefits under the Retirement Plan will be paid in the form of a single life monthly annuity for Mr. Williams' life. The postretirement mortality assumption is based on the IRS prescribed mortality table for 2011 funding purposes. Under the terms of the 2003 Supplemental Pension Plan, the deferred salary award for 2011 has been taken into account for the purpose of determining present value as of December 31, 2011. For additional information regarding the calculation of present value and the assumptions underlying these amounts, see "Note 13, Employee Retirement Benefits" in the Original Filing.

In January 2012, Mr. Williams notified the company that he will step down from his position as President and Chief Executive Officer and as a member of the Board of Directors when a new President and Chief Executive Officer is appointed. If Mr. Williams leaves the company prior to reaching the normal retirement age for the Executive Pension Plan, Supplemental Pension Plan, 2003 Supplemental Pension Plan and Retirement Plan, the present value of his accumulated benefits under these plans as of December 31, 2011 will be different than the values shown in this table.

Mr. Hisey left the company in February 2012, which was prior to reaching the normal retirement age for the Supplemental Pension Plan, 2003 Supplemental Pension Plan and Retirement Plan. Accordingly, the present value of his accumulated benefits under these plans as of December 31, 2011 will be different than the values shown in this table.

(3) The present value of accumulated benefit for Mr. Williams for the Supplemental Pension Plan and 2003 Supplemental Pension Plan shown in this table reflects only the amounts accrued under these plans in 2010 and 2011. Although Mr. Williams has 21 years of credited service under the Supplemental Pension Plan and 2003 Supplemental Pension Plan, as of December 31, 2011, his benefit for years prior to 2010 under these plans is offset by the benefit that he would receive upon his retirement under the Executive Pension Plan.

Nonqualified Deferred Compensation

Our Supplemental Retirement Savings Plan is an unfunded, non-tax-qualified defined contribution plan for non-grandfathered employees. The Supplemental Retirement Savings Plan is intended to supplement our Retirement Savings Plan, or 401(k) plan, by providing benefits to participants whose annual eligible earnings exceed the IRS annual limit on eligible compensation for 401(k) plans (for 2011, the limit was $245,000). Ms. McFarland and Messrs. Edwards and Mayopoulos are the named executives who participated in the Supplemental Retirement Savings Plan in 2011.

For 2011, we credited 8% of the eligible compensation for Ms. McFarland and Messrs. Edwards and Mayopoulos that exceeded the IRS annual limit for 2011. Eligible compensation for Ms. McFarland and Messrs. Edwards and Mayopoulos consists of base salary plus any eligible incentive compensation (which includes deferred salary under our executive compensation program in place for 2009 through 2011) earned for that year, up to a combined maximum of two times base salary. The 8% credit consists of two parts: (1) a 2% credit that will vest after the participant has completed three years of service with us; and (2) a 6% credit that is immediately vested.

While the Supplemental Retirement Savings Plan is not funded, amounts credited on behalf of a participant under the Supplemental Retirement Savings Plan are deemed to be invested in mutual fund investments similar to the investments offered under our 401(k) plan. Participants may change their investment elections on a daily basis.

Amounts deferred under the Supplemental Retirement Savings Plan are payable to participants in the January or July following separation from service with us, subject to a six month delay in payment for the 50 most highly-compensated officers. Participants may not withdraw amounts from the Supplemental Retirement Savings Plan while they are employed by us.

The table below provides information on the nonqualified deferred compensation of the named executives for 2011.

Nonqualified Deferred Compensation for 2011

Name	Executive Contributions in Last Fiscal Year ($)	Company Contributions in Last Fiscal Year ($)[1]	Aggregate Earnings in Last Fiscal Year ($)[2]	Aggregate Withdrawals/ Distributions ($)	Aggregate Balance at Last Fiscal Year-End ($)[3]
Michael Williams					
2001 Special Stock Award[4]	—	—	(136)	—	276
Susan McFarland					
Supplemental Retirement Savings Plan	—	3,477	33	—	3,510
David Hisey	—	—	—	—	—
David Benson	—	—	—	—	—
Terence Edwards					
Supplemental Retirement Savings Plan	—	60,400	(1,941)	—	90,207
Timothy Mayopoulos					
Supplemental Retirement Savings Plan	—	60,400	(3,838)	—	121,271

(1) All amounts reported in this column for Ms. McFarland and Messrs. Edwards and Mayopoulos as company contributions in the last fiscal year pursuant to the Supplemental Retirement Savings Plan are also reported as 2011 compensation in the "All Other Compensation" column of the "Summary Compensation Table for 2011, 2010 and 2009."

(2) None of the earnings reported in this column are reported as 2011 compensation in the "Summary Compensation Table for 2011, 2010 and 2009" because the earnings are neither above-market nor preferential.

(3) Amounts reported in this column for Mr. Edwards include company contributions in 2010 to the Supplemental Retirement Savings Plan of $30,339 that are also reported as 2010 compensation in the "All Other Compensation" column of the "Summary Compensation Table for 2011, 2010 and 2009."

Amounts reported in this column for Mr. Mayopoulos include company contributions in 2010 and 2009 to the Supplemental Retirement Savings Plan of $48,708 and $8,708, respectively, that are also reported as 2010 and 2009 compensation, respectively, in the "All Other Compensation" column of the "Summary Compensation Table for 2011, 2010 and 2009."

(4) The Board previously approved a special stock award to officers for 2001 performance. On January 15, 2002, Mr. Williams deferred until retirement 1,142 shares he received in connection with this award. Aggregate earnings on these shares reflect changes in stock price. Mr. Williams' number of shares grew through the reinvestment of dividends prior to 2009 to 1,373 shares as of December 31, 2011. Fannie Mae has not paid dividends on common stock since 2008.

Potential Payments upon Termination or Change-in-Control

The information below describes and quantifies certain compensation and benefits that may have become payable to each of our named executives under our existing plans and arrangements if our named executive's employment had terminated on December 31, 2011, taking into account the named executive's compensation and service levels as of that date and based on a per share price of $0.2012, which was the closing price of our common stock on December 30, 2011. The discussion below does not reflect retirement or deferred compensation benefits to which our named executives may be entitled, as these benefits are described above under "Pension Benefits" and "Nonqualified Deferred Compensation." The information below also does not generally reflect compensation and benefits available to all salaried employees upon termination of employment with us under similar circumstances. We are not obligated to provide any additional compensation to our named executives in connection with a change-in-control.

As described above under "Compensation Discussion and Analysis—2012 Executive Compensation Program," FHFA has instituted a new executive compensation program effective for 2012 named executive compensation that has different provisions for payments on termination of employment than what are described below under "Potential Payments to Named Executives."

FHFA Must Approve Any Termination Benefits We Provide Named Executives

FHFA, as our regulator, must approve any termination benefits we offer our named executives. Moreover, as our conservator, FHFA has directed that our Board consult with and obtain FHFA's consent before taking any action involving termination benefits for any officer at the executive vice president level and above and other specified executives. In addition, as described below under "Potential Payments to Named Executives," any determination by the Board to pay termination benefits to a named executive is subject to the approval of FHFA in consultation with Treasury.

Potential Payments to Named Executives

We have not entered into agreements with any of our named executives that would entitle the executive to severance benefits, other than the termination agreement with Mr. Hisey described below under "Termination Agreement with our Former Deputy Chief Financial Officer." Below we discuss various elements of compensation that may become payable in the event a named executive dies or retires, or that may be paid in the event his or her employment is terminated by Fannie Mae. We then quantify the amounts that might have been paid to our named executives in these circumstances, in each case as of December 31, 2011.

- *Deferred Salary and Long-Term Incentive Awards.* In general, an executive officer, including our named executives, must continue to be employed to receive payments of deferred salary or the long-term incentive award, and will forfeit any unpaid amounts upon termination of his or her employment. Exceptions to this general rule apply in the case of an executive officer's death or retirement, and may apply in the event an executive officer's employment is terminated by Fannie Mae other than for cause, as follows:
  - *Death.* In the event an executive officer's employment is terminated due to his or her death, his or her estate will receive the remaining installment payments of deferred salary for the prior year, as well as a pro rata portion of deferred salary for the current year, based on time worked during the year. In addition, his or her estate will receive any remaining installment payment of a long-term incentive award for a completed performance year and a pro rata portion of a long-term incentive award for the current performance year, based on time worked during the year; provided that the executive officer was employed at least one complete calendar quarter during the current performance year.
  - *Retirement.* If an executive officer retires from Fannie Mae at or after age 65 with at least 5 years of service, he or she will receive the remaining installment payments of deferred salary for the prior year. In addition, he or she will receive any remaining installment payment of a long-term incentive award for a completed performance year.

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- *Termination by Fannie Mae*. If Fannie Mae terminates an executive officer's employment other than for cause, the Board of Directors may determine, subject to the approval of FHFA in consultation with Treasury, that he or she may receive certain unpaid deferred salary or long-term incentive awards. The determination to pay amounts of unpaid deferred salary or long-term incentive awards is in the discretion of the Board of Directors and FHFA; except for Mr. Hisey, the named executives do not have any contractual right or right under the terms of the deferred salary plan or the long-term incentive plan to receive any unpaid deferred salary or long-term incentive awards in the event of a termination by Fannie Mae. FHFA has advised us that, to the extent that it approves the payment of termination pay to an executive officer at the executive vice president level or above, the maximum amount that it would approve would be limited to up to $1,000,000 of the executive's earned but unpaid deferred salary. As described in more detail under "Termination Agreement with our Former Deputy Chief Financial Officer" below, we entered into a termination agreement with Mr. Hisey in February 2012, pursuant to which he is entitled to receive his unpaid 2011 deferred salary.

In each case, for any portion of a long-term incentive award or any performance-based portion of a deferred salary award that has not been finally determined, the award will be adjusted based on performance relative to the applicable performance goals and, in the case of a termination by Fannie Mae, cannot exceed 100% of the target award. In addition, installment payments of the awards will be made on the original payment schedule, rather than being provided in a lump sum. In the case of a termination by Fannie Mae, an executive officer must agree to the terms of a standard termination agreement with the company in order to receive these post-termination of employment payments. More information about deferred salary and the long-term incentive awards is provided above in "Compensation Discussion and Analysis—2011 Executive Compensation Program—Elements of 2011 Compensation Program."

- *Stock Compensation Plans*. Under the Fannie Mae Stock Compensation Plan of 2003, stock options, restricted stock and restricted stock units held by our employees, including our named executives, fully vest upon the employee's death, total disability or retirement. Under both the Fannie Mae Stock Compensation Plan of 2003 and the Fannie Mae Stock Compensation Plan of 1993, upon the occurrence of these events, or if an option holder leaves our employment after age 55 with at least 5 years of service, the option holder, or the holder's estate in the case of death, can exercise any stock options until the initial expiration date of the stock option, which is generally 10 years after the date of grant. For these purposes, "retirement" generally means that the executive retires at or after age 60 with 5 years of service or age 65 (with no service requirement).
- *Retiree Medical Benefits*. We currently make certain retiree medical benefits available to our full-time employees who retire and meet certain age and service requirements.

Potential Payments Upon Death

The table below shows the amounts that would have become payable if a named executive's employment had terminated on December 31, 2011 as a result of his or her death. The table below does not show any amounts that would have become payable if a named executive had retired on December 31, 2011 since as of that date none of the named executives had reached the minimum age required to receive any of these amounts upon his or her retirement.

Potential Payments Upon Death as of December 31, 2011[1]

Name	Restricted Stock[2]	2011 Deferred Salary[3]	2010 Long-Term Incentive Award[4]	2011 Long-Term Incentive Award[5]	Total
Michael Williams	$ 7,482	$ 2,867,500	$ 777,000	$ 714,000	$ 4,365,982
Susan McFarland	—	1,418,333	—	218,906	1,637,239
David Hisey	1,471	966,625	268,275	229,950	1,466,321
David Benson	1,204	1,266,942	410,277	410,276	2,088,699
Terence Edwards	—	1,266,942	415,162	439,582	2,121,686
Timothy Mayopoulos	—	1,359,442	468,355	483,794	2,311,591

(1) The named executives would also have received the applicable amounts shown in the "Restricted Stock" column of this table in the event of their total disability, but not the amounts shown under any other column.

(2) These values are based on a per share price of $0.2012, which was the closing price of our common stock on December 30, 2011.

(3) Assumes that each named executive would have received the 2011 deferred salary awarded to him or her, which is payable in March, June, September and December 2012. Each named executive was awarded 92.5% of his or her target 2011 deferred salary (50% of deferred salary was based on corporate performance, which the Compensation Committee determined would be paid at 85% of target, and the remaining 50% of deferred salary was service based).

(4) Assumes that each named executive, other than Ms. McFarland, would have received the second installment of his or her 2010 long-term incentive award, which was determined and paid in February 2012. Ms. McFarland joined the company in 2011 and therefore did not receive a 2010 long-term incentive award.

(5) Assumes that each named executive would have received the first installment of his or her 2011 long-term incentive award, which was determined and paid in February 2012. The named executives would not have received the second installment of the 2011 long-term incentive award in the event of their death on December 31, 2011, because that installment will be determined in the first quarter of 2013 based on corporate and individual performance for both 2011 and 2012.

Potential Payments Upon Termination Other Than For Cause

The table below shows the estimated maximum amounts that could have become payable to the named executive if his or her employment was terminated other than for cause on December 31, 2011. Except for Mr. Hisey, the named executives do not have any contractual right or right under the terms of the deferred salary plan or the long-term incentive plan to receive any unpaid deferred salary or long-term incentive awards in the event of a termination by Fannie Mae. Any amounts paid to the named executives if they are terminated other than for cause will be determined on a case-by-case basis in the discretion of our Board of Directors and also subject to the approval of FHFA in consultation with Treasury. We therefore cannot make a reasonable estimate of the amounts that would become payable in such cases. However, FHFA has advised us that, to the extent that it approves the payment of termination pay to an executive officer at the executive vice president level or above, the maximum amount that it would approve would be limited to up to $1,000,000 of the executive's earned but unpaid deferred salary. As described in more detail under "Termination Agreement with our Former Deputy Chief Financial Officer" below, we entered into a termination agreement with Mr. Hisey in February 2012, pursuant to which he is entitled to receive his unpaid 2011 deferred salary.

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Maximum Potential Payments Upon Termination Other Than For Cause as of December 31, 2011

Name	2011 Deferred Salary[1]
Michael Williams	$ 1,000,000
Susan McFarland	1,000,000
David Hisey	966,625
David Benson	1,000,000
Terence Edwards	1,000,000
Timothy Mayopoulos	1,000,000

(1) Assumes that each named executive would have received up to $1,000,000 of the 2011 deferred salary awarded to him or her, which is payable in March, June, September and December 2012. The actual amount of unpaid deferred salary a named executive would receive in the event his or her employment is terminated would be in the discretion of our Board of Directors and also subject to the approval of FHFA in consultation with Treasury, and could range from 0% to 100% of the amount shown in this column.

Termination Agreement with our Former Deputy Chief Financial Officer

Mr. Hisey left the company in February 2012. We entered into a termination agreement with Mr. Hisey in February 2012, the terms of which were approved by FHFA. The agreement provides that Mr. Hisey will receive all of his corporate performance-adjusted 2011 deferred salary ($966,625), in four installments, on the same payment dates as other deferred salary recipients, and that he may elect to receive outplacement services and a subsidy for up to 18 months of medical and dental premiums if he elects COBRA continuation coverage. He will not receive the second installment of his 2011 long-term incentive award.

The termination agreement provides that Mr. Hisey may not solicit or accept employment with or act in any way, directly or indirectly, to solicit or obtain employment or work for Freddie Mac for a period of 12 months following termination. Under the termination agreement, Mr. Hisey agreed to a general release of the company from all claims relating to his employment with or termination from the company.

Director Compensation

Our non-management directors receive cash compensation pursuant to a program authorized by FHFA in November 2008. This compensation for the directors is designed to be reasonable, appropriate and commensurate with the duties and responsibilities of their Board service.

The total 2011 compensation for our non-management directors is shown in the table below. Mr. Williams, our only director who also served as an employee of Fannie Mae during 2011, was not entitled to receive any of the benefits provided to our non-management directors other than those provided under the matching charitable gifts program, which is available to all of our employees.

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2011 Non-Employee Director Compensation Table

Name	Fees Earned or Paid in Cash ($)	All Other Compensation ($)[1]	Total ($)
Dennis R. Beresford	185,000	—	185,000
William Thomas Forrester	170,000	—	170,000
Brenda J. Gaines	180,000	—	180,000
Charlynn Goins	170,000	—	170,000
Frederick B. "Bart" Harvey III	168,694	—	168,694
Robert H. Herz[2]	92,556	—	92,556
Philip A. Laskawy	290,000	—	290,000
Egbert L. J. Perry	160,000	—	160,000
Jonathan Plutzik	160,000	—	160,000
David H. Sidwell	173,750	—	173,750

(1) "All Other Compensation" consists only of gifts we made or will make under our matching charitable gifts program. None of our non-employee directors participated in this program in 2011. Our matching charitable gifts program is discussed in greater detail following this table.

(2) Mr. Herz has been a Fannie Mae director since June 2011.

Compensation Arrangements for our Non-Management Directors

Our non-management directors receive a retainer at an annual rate of $160,000, with no meeting fees. Committee chairs and Audit Committee members receive an additional retainer at an annual rate of $25,000 for the Audit Committee chair, $15,000 for the Risk Policy and Capital Committee chair and $10,000 for all other committee chairs and each member of the Audit Committee. In recognition of the substantial amount of time and effort necessary to fulfill the duties of non-executive Chairman of the Board, the annual retainer for our non-executive Chairman, Mr. Laskawy, is $290,000. Our directors receive no equity compensation.

Additional Arrangements with our Non-Management Directors

Matching Charitable Gifts Program. To further our support for charitable giving, non-employee directors are able to participate in our corporate matching gifts program on the same terms as our employees. Under this program, gifts made by employees and directors to Section 501(c)(3) charities are matched, up to an aggregate total of $5,000 in any calendar year. None of our non-employee directors participated in this program in 2011.

Stock Ownership Guidelines for Directors. In January 2009, our Board eliminated our stock ownership requirements for directors and for senior officers in light of the difficulty of meeting the requirements at current market prices and because we have ceased paying stock-based compensation.

Other Expenses. We also pay for or reimburse directors for out-of-pocket expenses incurred in connection with their service on the Board, including travel to and from our meetings, accommodations, meals and training.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this report

1. Consolidated Financial Statements

The consolidated financial statements required to be filed in our annual report on Form 10-K are included on pages F-1 to F-134 of our Original Filing filed on February 29, 2012.

2. Financial Statement Schedules

None.

3. Exhibits

An index to exhibits has been filed as part of this report beginning on page E-1 and is incorporated herein by reference.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Federal National Mortgage Association

/s/ Michael J. Williams

Michael J. Williams
President and Chief Executive Officer
Date: March 9, 2012

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INDEX TO EXHIBITS

Item	Description
3.1	Fannie Mae Charter Act (12 U.S.C. § 1716 et seq.) as amended through July 30, 2008 (Incorporated by reference to Exhibit 3.1 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2010, filed February 24, 2011)
3.2	Fannie Mae Bylaws, as amended through January 30, 2009 (Incorporated by reference to Exhibit 3.2 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
4.1	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series D (Incorporated by reference to Exhibit 4.1 to Fannie Mae's registration statement on Form 10, filed March 31, 2003.)
4.2	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series E (Incorporated by reference to Exhibit 4.2 to Fannie Mae's registration statement on Form 10, filed March 31, 2003.)
4.3	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series F (Incorporated by reference to Exhibit 4.3 to Fannie Mae's registration statement on Form 10, filed March 31, 2003.)
4.4	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series G (Incorporated by reference to Exhibit 4.4 to Fannie Mae's registration statement on Form 10, filed March 31, 2003.)
4.5	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series H (Incorporated by reference to Exhibit 4.5 to Fannie Mae's registration statement on Form 10, filed March 31, 2003.)
4.6	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series I (Incorporated by reference to Exhibit 4.6 to Fannie Mae's registration statement on Form 10, filed March 31, 2003.)
4.7	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series L (Incorporated by reference to Exhibit 4.7 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 8, 2008.)
4.8	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series M (Incorporated by reference to Exhibit 4.8 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 8, 2008.)
4.9	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series N (Incorporated by reference to Exhibit 4.9 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 8, 2008.)
4.10	Certificate of Designation of Terms of Fannie Mae Non-Cumulative Convertible Preferred Stock, Series 2004-1(Incorporated by reference to Exhibit 4.10 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)
4.11	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series O (Incorporated by reference to Exhibit 4.11 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)
4.12	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series P (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed September 28, 2007.)
4.13	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series Q (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed October 5, 2007.)
4.14	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series R (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed November 21, 2007.)
4.15	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series S (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed December 11, 2007.)

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4.16	Certificate of Designation of Terms of Fannie Mae Preferred Stock, Series T (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed May 19, 2008.)
4.17	Certificate of Designation of Terms of Variable Liquidation Preference Senior Preferred Stock, Series 2008-2 (Incorporated by reference to Exhibit 4.2 to Fannie Mae's Current Report on Form 8-K, filed September 11, 2008.)
4.18	Warrant to Purchase Common Stock, dated September 7, 2008 (Incorporated by reference to Exhibit 4.3 to Fannie Mae's Current Report on Form 8-K, filed September 11, 2008.)
4.19	Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of September 26, 2008, between the United States Department of the Treasury and Federal National Mortgage Association, acting through the Federal Housing Finance Agency as its duly appointed conservator (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed October 2, 2008.)
4.20	Amendment to Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of May 6, 2009, between the United States Department of the Treasury and Federal National Mortgage Association, acting through the Federal Housing Finance Agency as its duly appointed conservator (Incorporated by reference to Exhibit 4.21 to Fannie Mae's Quarterly Report on Form 10-Q, filed May 8, 2009.)
4.21	Second Amendment to Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of December 24, 2009, between the United States Department of the Treasury and Federal National Mortgage Association, acting through the Federal Housing Finance Agency as its duly appointed conservator (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed December 30, 2009.)
10.1	Fannie Mae's Elective Deferred Compensation Plan, as amended effective November 15, 2004† (Incorporated by reference to Exhibit 10.21 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.2	Amendment to Fannie Mae Elective Deferred Compensation Plan I, effective October 27, 2008† (Incorporated by reference to Exhibit 10.7 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.3	Fannie Mae Elective Deferred Compensation Plan II† (Incorporated by reference to Exhibit 10.7 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.4	Amendment to Fannie Mae Elective Deferred Compensation Plan II, effective April 29, 2008† (Incorporated by reference to Exhibit 10.1 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 8, 2008.)
10.5	Amendment to Fannie Mae Elective Deferred Compensation Plan II, effective October 27, 2008† (Incorporated by reference to Exhibit 10.10 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.6	Compensation Repayment Provisions† (Incorporated by reference to Exhibit 99.1 to Fannie Mae's Current Report on Form 8-K, filed December 24, 2009.)
10.7	Long-Term Incentive Plan, effective December 16, 2009† (Incorporated by reference to Exhibit 10.9 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)
10.8	Deferred Pay Plan, effective December 16, 2009† (Incorporated by reference to Exhibit 10.10 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)

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10.9	Fannie Mae Form of Indemnification Agreement for directors and officers of Fannie Mae (Incorporated by reference to Exhibit 10.15 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.10	Federal National Mortgage Association Supplemental Pension Plan, as amended November 20, 2007† (Incorporated by reference to Exhibit 10.10 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.11	Amendment to Fannie Mae Supplemental Pension Plan for Internal Revenue Code Section 409A, effective January 1, 2009† (Incorporated by reference to Exhibit 10.11 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.12	Amendment to Fannie Mae Supplemental Pension Plan, executed December 22, 2008† (Incorporated by reference to Exhibit 10.18 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.13	Fannie Mae Supplemental Pension Plan of 2003, as amended November 20, 2007† (Incorporated by reference to Exhibit 10.12 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.14	Amendment to Fannie Mae Supplemental Pension Plan of 2003 for Internal Revenue Code Section 409A, effective January 1, 2009† (Incorporated by reference to Exhibit 10.13 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.15	Amendment to Fannie Mae Supplemental Pension Plan of 2003 for Internal Revenue Code Section 409A, adopted December 22, 2008† (Incorporated by reference to Exhibit 10.21 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.16	Amendment to Fannie Mae Supplement Pension Plan of 2003, effective May 14, 2010† (Incorporated by reference to Exhibit 10.1 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 5, 2010.)
10.17	Executive Pension Plan of the Federal National Mortgage Association as amended and restated† (Incorporated by reference to Exhibit 10.10 to Fannie Mae's registration statement on Form 10, filed March 31, 2003)
10.18	Amendment to the Executive Pension Plan of the Federal National Mortgage Association, as amended and restated, effective March 1, 2007† (Incorporated by reference to Exhibit 10.20 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2005, filed May 2, 2007.)
10.19	Amendment to Fannie Mae Executive Pension Plan, effective November 20, 2007† (Incorporated by reference to Exhibit 10.16 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.20	Amendment to the Executive Pension Plan of the Federal National Mortgage Association, effective January 1, 2008† (Incorporated by reference to Exhibit 10.25 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.21	Amendment to the Executive Pension Plan of the Federal National Mortgage Association, effective December 16, 2009† (Incorporated by reference to Exhibit 10.23 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)
10.22	Amendment to the Executive Pension Plan of the Federal National Mortgage Association, effective January 1, 2010† (Incorporated by reference to Exhibit 10.22 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2010, filed February 24, 2011.)

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10.23	Fannie Mae Annual Incentive Plan, as amended December 10, 2007† (Incorporated by reference to Exhibit 10.17 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.24	Fannie Mae Stock Compensation Plan of 2003, as amended through December 14, 2007† (Incorporated by reference to Exhibit 10.18 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.25	Amendment to Fannie Mae Stock Compensation Plan of 2003, as amended, for Internal Revenue Code Section 409A, adopted December 22, 2008† (Incorporated by reference to Exhibit 10.28 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.26	Fannie Mae Stock Compensation Plan of 1993† (Incorporated by reference to Exhibit 10.26 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
10.27	2009 Amendment to Fannie Mae Stock Compensation Plans of 1993 and 2003† (Incorporated by reference to Exhibit 10.1 to Fannie Mae's Quarterly Report on Form 10-Q, filed November 5, 2009.)
10.28	Fannie Mae Procedures for Deferral and Diversification of Awards, as amended effective December 10, 2007† (Incorporated by reference to Exhibit 10.30 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.29	Fannie Mae Supplemental Retirement Savings Plan, as amended through April 29, 2008† (Incorporated by reference to Exhibit 10.2 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 8, 2008.)
10.30	Amendment to Fannie Mae Supplemental Retirement Savings Plan, effective October 8, 2008† (Incorporated by reference to Exhibit 10.32 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2008, filed February 26, 2009.)
10.31	Amendment to Fannie Mae Supplemental Retirement Savings Plan, effective May 14, 2010† (Incorporated by reference to Exhibit 10.2 to Fannie Mae's Quarterly Report on Form 10-Q, filed August 5, 2010.)
10.32	Form of Nonqualified Stock Option Grant Award Document† (Incorporated by reference to Exhibit 10.33 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)
10.33	Form of Restricted Stock Award Document† (Incorporated by reference to Exhibit 10.33 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
10.34	Form of Restricted Stock Units Award Document adopted January 23, 2008† (Incorporated by reference to Exhibit 10.27 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2007, filed February 27, 2008.)
10.35	Form of Restricted Stock Units Award Document† (Incorporated by reference to Exhibit 10.35 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
10.36	Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of September 26, 2008, between the United States Department of the Treasury and Federal National Mortgage Association, acting through the Federal Housing Finance Agency as its duly appointed conservator (Incorporated by reference Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed October 2, 2008.)
10.37	Amendment to Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of May 6, 2009, between the United States Department of the Treasury and Federal National Mortgage Association, acting through the Federal Housing Finance Agency as its duly appointed conservator (Incorporated by reference to Exhibit 4.21 to Fannie Mae's Quarterly Report on Form 10-Q, filed May 8, 2009.)

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10.38	Second Amendment to Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of December 24, 2009, between the United States Department of the Treasury and Federal National Mortgage Association, acting through the Federal Housing Finance Agency as its duly appointed conservator (Incorporated by reference to Exhibit 4.1 to Fannie Mae's Current Report on Form 8-K, filed December 30, 2009.)
10.39	Letters, dated September 1, 2005, setting forth an agreement between Fannie Mae and OFHEO (Incorporated by reference to Exhibit 10.39 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
10.40	Letter Agreement between Fannie Mae and Timothy J. Mayopoulos, dated March 9, 2009† (Incorporated by reference to Exhibit 10.44 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2009, filed February 26, 2010.)
10.41	Memorandum of Understanding among the Department of the Treasury, the Federal Housing Finance Agency, the Federal National Mortgage Association, and the Federal Home Loan Mortgage Corporation, dated October 19, 2009 (Incorporated by reference to Exhibit 99.1 to Fannie Mae's Current Report on Form 8-K, filed October 23, 2009.)
10.42	Omnibus Consent to HFA Initiative Program Modifications among the Department of Treasury, the Federal Housing Finance Agency, Federal National Mortgage Association, and Federal Home Loan Mortgage Corporation, dated November 23, 2011 (Incorporated by reference to Exhibit 10.42 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
12.1	Statement re: computation of ratio of earnings to fixed charges (Incorporated by reference to Exhibit 12.1 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
12.2	Statement re: computation of ratio of earnings to combined fixed charges and preferred stock dividends and issuance cost at redemption (Incorporated by reference to Exhibit 12.2 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
31.1	Certification of Chief Executive Officer pursuant to Securities Exchange Act Rule 13a-14(a) (Incorporated by reference to Exhibit 31.1 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
31.2	Certification of Chief Financial Officer pursuant to Securities Exchange Act Rule 13a-14(a) (Incorporated by reference to Exhibit 31.2 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
31.3	Certification of Chief Executive Officer pursuant to Securities Exchange Act Rule 13a-14(a) with respect to this Amendment No. 1 on Form 10-K/A
31.4	Certification of Chief Financial Officer pursuant to Securities Exchange Act Rule 13a-14(a) with respect to this Amendment No. 1 on Form 10-K/A
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 (Incorporated by reference to Exhibit 32.1 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 (Incorporated by reference to Exhibit 32.2 to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)

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101. INS	XBRL Instance Document* (Incorporated by reference to Exhibit 101.INS to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
101. SCH	XBRL Taxonomy Extension Schema* (Incorporated by reference to Exhibit 101.SCH to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
101. DEF	XBRL Taxonomy Extension Definition* (Incorporated by reference to Exhibit 101.DEF to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
101. LAB	XBRL Taxonomy Extension Labels* (Incorporated by reference to Exhibit 101.LAB to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)
101. PRE	XBRL Taxonomy Extension Presentation* (Incorporated by reference to Exhibit 101.PRE to Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 29, 2012.)

* The financial information contained in these XBRL documents is unaudited. The information in these exhibits shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liabilities of Section 18, nor shall they be deemed incorporated by reference into any disclosure document relating to Fannie Mae, except to the extent, if any, expressly set forth by specific reference in such filing.

† This Exhibit is a management contract or compensatory plan or arrangement.

Exhibit 31.3

CERTIFICATION

PURSUANT TO SECURITIES EXCHANGE ACT RULE 13a-14(a)

I, Michael J. Williams, certify that:

1. I have reviewed this Amendment No. 1 on Form 10-K/A to the Annual Report on Form 10-K for the year ended December 31, 2011 of Fannie Mae (formally, the Federal National Mortgage Association); and

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: March 9, 2012

/s/ Michael J. Williams

Michael J. Williams
President and Chief Executive Officer

Exhibit 31.4

CERTIFICATION

PURSUANT TO SECURITIES EXCHANGE ACT RULE 13a-14(a)

I, Susan R. McFarland, certify that:

1. I have reviewed this Amendment No. 1 on Form 10-K/A to the Annual Report on Form 10-K for the year ended December 31, 2011 of Fannie Mae (formally, the Federal National Mortgage Association); and

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: March 9, 2012

/s/ Susan R. McFarland

Susan R. McFarland
Executive Vice President and
Chief Financial Officer

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2011

Commission File Number: 001-34139

Federal Home Loan Mortgage Corporation

(Exact name of registrant as specified in its charter)

Freddie Mac

Federally chartered corporation	**8200 Jones Branch Drive McLean, Virginia 22102-3110**	**52-0904874**	**(703) 903-2000**
(State or other jurisdiction of incorporation or organization)	*(Address of principal executive offices, including zip code)*	*(I.R.S. Employer Identification No.)*	*(Registrant's telephone number, including area code)*

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Voting Common Stock, no par value per share (OTC: FMCC)
Variable Rate, Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCI)
5% Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCKK)
Variable Rate, Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCG)
5.1% Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCH)
5.79% Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCK)
Variable Rate, Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCL)
Variable Rate, Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCM)
Variable Rate, Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCN)
5.81% Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCO)
6% Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCP)
Variable Rate, Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCCJ)
5.7% Non-Cumulative Preferred Stock, par value $1.00 per share (OTC: FMCKP)
Variable Rate, Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCCS)
6.42% Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCCT)
5.9% Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCKO)
5.57% Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCKM)
5.66% Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCKN)
6.02% Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCKL)
6.55% Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCKI)
Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share (OTC: FMCKJ)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☒
Non-accelerated filer (Do not check if a smaller reporting company) ☐ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the common stock held by non-affiliates computed by reference to the price at which the common equity was last sold on June 30, 2011 (the last business day of the registrant's most recently completed second fiscal quarter) was $227.4 million.

As of February 27, 2012, there were 649,733,472 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE: None

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PART I

This Annual Report on Form 10-K includes forward-looking statements that are based on current expectations and are subject to significant risks and uncertainties. These forward-looking statements are made as of the date of this Form 10-K and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date of this Form 10-K. Actual results might differ significantly from those described in or implied by such statements due to various factors and uncertainties, including those described in "BUSINESS — Forward-Looking Statements," and "RISK FACTORS" in this Form 10-K.

Throughout this Form 10-K, we use certain acronyms and terms that are defined in the "GLOSSARY."

ITEM 1. BUSINESS

Conservatorship

We continue to operate under the direction of FHFA, as our Conservator. We are also subject to certain constraints on our business activities imposed by Treasury due to the terms of, and Treasury's rights under, the Purchase Agreement. We are dependent upon the continued support of Treasury and FHFA in order to continue operating our business. Our ability to access funds from Treasury under the Purchase Agreement is critical to keeping us solvent and avoiding the appointment of a receiver by FHFA under statutory mandatory receivership provisions. The conservatorship and related matters have had a wide-ranging impact on us, including our regulatory supervision, management, business, financial condition, and results of operations.

As our Conservator, FHFA succeeded to all rights, titles, powers and privileges of Freddie Mac, and of any stockholder, officer or director thereof, with respect to the company and its assets. FHFA, as Conservator, has directed and will continue to direct certain of our business activities and strategies. FHFA has delegated certain authority to our Board of Directors to oversee, and to management to conduct, day-to-day operations. The directors serve on behalf of, and exercise authority as directed by, the Conservator.

There is significant uncertainty as to whether or when we will emerge from conservatorship, as it has no specified termination date, and as to what changes may occur to our business structure during or following conservatorship, including whether we will continue to exist. We are not aware of any current plans of our Conservator to significantly change our business model or capital structure in the near-term. Our future structure and role will be determined by the Administration and Congress, and there are likely to be significant changes beyond the near-term. We have no ability to predict the outcome of these deliberations.

A number of bills have been introduced in Congress that would bring about changes in the business model of Freddie Mac and Fannie Mae. In addition, on February 11, 2011, the Administration delivered a report to Congress that lays out the Administration's plan to reform the U.S. housing finance market, including options for structuring the government's long-term role in a housing finance system in which the private sector is the dominant provider of mortgage credit. The report recommends winding down Freddie Mac and Fannie Mae, and states that the Administration will work with FHFA to determine the best way to responsibly reduce the role of Freddie Mac and Fannie Mae in the market and ultimately wind down both institutions. The report states that these efforts must be undertaken at a deliberate pace, which takes into account the impact that these changes will have on borrowers and the housing market.

The report states that the government is committed to ensuring that Freddie Mac and Fannie Mae have sufficient capital to perform under any guarantees issued now or in the future and the ability to meet any of their debt obligations, and further states that the Administration will not pursue policies or reforms in a way that would impair the ability of Freddie Mac and Fannie Mae to honor their obligations. The report states the Administration's belief that under the companies' senior preferred stock purchase agreements with Treasury, there is sufficient funding to ensure the orderly and deliberate wind down of Freddie Mac and Fannie Mae, as described in the Administration's plan.

On February 2, 2012, the Administration announced that it expects to provide more detail concerning approaches to reform the U.S. housing finance market in the spring, and that it plans to begin exploring options for legislation more intensively with Congress. On February 21, 2012, FHFA sent to Congress a strategic plan for the next phase of the conservatorships of Freddie Mac and Fannie Mae. For more information on current legislative and regulatory initiatives, see "Regulation and Supervision — *Legislative and Regulatory Developments*."

Our business objectives and strategies have in some cases been altered since we were placed into conservatorship, and may continue to change. Based on our charter, other legislation, public statements from Treasury and FHFA officials, and guidance and directives from our Conservator, we have a variety of different, and potentially competing, objectives. Certain changes to our business objectives and strategies are designed to provide support for the mortgage market in a

manner that serves our public mission and other non-financial objectives. However, these changes to our business objectives and strategies may not contribute to our profitability. Some of these changes increase our expenses, while others require us to forego revenue opportunities in the near-term. In addition, the objectives set forth for us under our charter and by our Conservator, as well as the restrictions on our business under the Purchase Agreement, have adversely impacted and may continue to adversely impact our financial results, including our segment results. For example, our current business objectives reflect, in part, direction given to us by the Conservator. These efforts are expected to help homeowners and the mortgage market and may help to mitigate future credit losses. However, some of our activities are expected to have an adverse impact on our near- and long-term financial results. The Conservator and Treasury also did not authorize us to engage in certain business activities and transactions, including the purchase or sale of certain assets, which we believe might have had a beneficial impact on our results of operations or financial condition, if executed. Our inability to execute such transactions may adversely affect our profitability, and thus contribute to our need to draw additional funds under the Purchase Agreement.

We had a net worth deficit of $146 million as of December 31, 2011, and, as a result, FHFA, as Conservator, will submit a draw request, on our behalf, to Treasury under the Purchase Agreement in the amount of $146 million. Upon funding of the draw request: (a) our aggregate liquidation preference on the senior preferred stock owned by Treasury will increase to $72.3 billion; and (b) the corresponding annual cash dividend owed to Treasury will increase to $7.23 billion. Under the Purchase Agreement, our ability to repay the liquidation preference of the senior preferred stock is limited and we will not be able to do so for the foreseeable future, if at all. The aggregate liquidation preference of the senior preferred stock and our related dividend obligations will increase further if we receive additional draws under the Purchase Agreement or if any dividends or quarterly commitment fees payable under the Purchase Agreement are not paid in cash. The amounts we are obligated to pay in dividends on the senior preferred stock are substantial and will have an adverse impact on our financial position and net worth. We expect to make additional draws under the Purchase Agreement in future periods.

Our annual dividend obligation on the senior preferred stock exceeds our annual historical earnings in all but one period. Although we may experience period-to-period variability in earnings and comprehensive income, it is unlikely that we will regularly generate net income or comprehensive income in excess of our annual dividends payable to Treasury. As a result, there is significant uncertainty as to our long-term financial sustainability. Continued cash payment of senior preferred dividends, combined with potentially substantial quarterly commitment fees payable to Treasury under the Purchase Agreement, will have an adverse impact on our future financial condition and net worth. The payment of dividends on our senior preferred stock in cash reduces our net worth. For periods in which our earnings and other changes in equity do not result in positive net worth, draws under the Purchase Agreement effectively fund the cash payment of senior preferred dividends to Treasury.

For more information on our current business objectives, see "Executive Summary — *Our Primary Business Objectives*." For more information on the conservatorship and government support for our business, see "Executive Summary — *Government Support for Our Business*" and "Conservatorship and Related Matters."

Executive Summary

You should read this Executive Summary in conjunction with our MD&A and consolidated financial statements and related notes for the year ended December 31, 2011.

Overview

Freddie Mac is a GSE chartered by Congress in 1970 with a public mission to provide liquidity, stability, and affordability to the U.S. housing market. We have maintained a consistent market presence since our inception, providing mortgage liquidity in a wide range of economic environments. During the worst housing and financial crisis since the Great Depression, we are working to support the recovery of the housing market and the nation's economy by providing essential liquidity to the mortgage market and helping to stem the rate of foreclosures. We believe our actions are helping communities across the country by providing America's families with access to mortgage funding at low rates while helping distressed borrowers keep their homes and avoid foreclosure, where feasible.

Summary of Financial Results

Our financial performance in 2011 was impacted by the ongoing weakness in the economy, including in the mortgage market, and by a significant reduction in long-term interest rates and changes in OAS levels. Our total comprehensive income (loss) was $(1.2) billion and $282 million for 2011 and 2010, respectively, consisting of:

(a) $5.3 billion and $14.0 billion of net loss, respectively; and (b) $4.0 billion and $14.3 billion of total other comprehensive income, respectively.

Our total equity (deficit) was $(146) million at December 31, 2011, reflecting our total comprehensive income of $1.5 billion for the fourth quarter of 2011 and our dividend payment of $1.7 billion on our senior preferred stock on December 30, 2011. To address our deficit in net worth, FHFA, as Conservator, will submit a draw request on our behalf to Treasury under the Purchase Agreement for $146 million. Following receipt of the draw, the aggregate liquidation preference on the senior preferred stock owned by Treasury will increase to $72.3 billion.

During 2011, we paid cash dividends to Treasury of $6.5 billion on our senior preferred stock. We received cash proceeds of $8.0 billion from draws under Treasury's funding commitment during 2011 related to quarterly deficits in equity at December 31, 2010, June 30, 2011, and September 30, 2011.

Our Primary Business Objectives

Under conservatorship, we are focused on the following primary business objectives: (a) meeting the needs of the U.S. residential mortgage market by making home ownership and rental housing more affordable by providing liquidity to mortgage originators and, indirectly, to mortgage borrowers; (b) working to reduce the number of foreclosures and helping to keep families in their homes, including through our role in FHFA and other governmental initiatives, such as the FHFA-directed servicing alignment initiative, HAMP and HARP, as well as our own workout and refinancing initiatives; (c) minimizing our credit losses; (d) maintaining sound credit quality of the loans we purchase and guarantee; and (e) strengthening our infrastructure and improving overall efficiency while also focusing on retention of key employees.

Our business objectives reflect, in part, direction we have received from the Conservator. We also have a variety of different, and potentially competing, objectives based on our charter, other legislation, public statements from Treasury and FHFA officials, and other guidance and directives from our Conservator. For more information, see "Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business.*" We are in discussions with FHFA regarding their strategic plan for Freddie Mac and Fannie Mae. See "Regulation and Supervision — *Legislative and Regulatory Developments — FHFA's Strategic Plan for Freddie Mac and Fannie Mae Conservatorships*" for further information.

We believe our risks related to employee turnover are increasing. Uncertainty surrounding our future business model, organizational structure, and compensation structure has contributed to increased levels of voluntary employee turnover. Disruptive levels of turnover at both the executive and employee levels could lead to breakdowns in many of our operations. As a result of the increasing risk of employee turnover, we are exploring options to enter into various strategic arrangements with outside firms to provide operational capability and staffing for key functions, if needed. However, these or other efforts to manage this risk to the enterprise may not be successful.

Providing Mortgage Liquidity and Conforming Loan Availability

We provide liquidity and support to the U.S. mortgage market in a number of important ways:

- Our support enables borrowers to have access to a variety of conforming mortgage products, including the prepayable 30-year fixed-rate mortgage, which historically has represented the foundation of the mortgage market.
- Our support provides lenders with a constant source of liquidity for conforming mortgage products. We estimate that we, Fannie Mae, and Ginnie Mae collectively guaranteed more than 90% of the single-family conforming mortgages originated during 2011.
- Our consistent market presence provides assurance to our customers that there will be a buyer for their conforming loans that meet our credit standards. We believe this liquidity provides our customers with confidence to continue lending in difficult environments.
- We are an important counter-cyclical influence as we stay in the market even when other sources of capital have withdrawn.

During 2011 and 2010, we guaranteed $304.6 billion and $384.6 billion in UPB of single-family conforming mortgage loans, respectively, representing more than 1.4 million and 1.8 million borrowers, respectively, who purchased homes or refinanced their mortgages.

Borrowers typically pay a lower interest rate on loans acquired or guaranteed by Freddie Mac, Fannie Mae, or Ginnie Mae. Mortgage originators are generally able to offer homebuyers and homeowners lower mortgage rates on conforming loan products, including ours, in part because of the value investors place on GSE-guaranteed mortgage-related securities. Prior to 2007, mortgage markets were less volatile, home values were stable or rising, and there were many sources of

mortgage funds. We estimate that, for 20 years prior to 2007, the average effective interest rates on conforming, fixed-rate single-family mortgage loans were about 30 basis points lower than on non-conforming loans. Since 2007, we estimate that, at times, interest rates on conforming, fixed-rate loans, excluding conforming jumbo loans, have been lower than those on non-conforming loans by as much as 184 basis points. In December 2011, we estimate that borrowers were paying an average of 56 basis points less on these conforming loans than on non-conforming loans. These estimates are based on data provided by HSH Associates, a third-party provider of mortgage market data. Future increases in our management and guarantee fee rates, such as those required under the recently enacted Temporary Payroll Tax Cut Continuation Act of 2011, may reduce the difference in rates between conforming and non-conforming loans over time. For more information, see "Regulation and Supervision — *Legislative and Regulatory Developments — Legislated Increase to Guarantee Fees*."

Reducing Foreclosures and Keeping Families in Homes

We are focused on reducing the number of foreclosures and helping to keep families in their homes. In addition to our participation in HAMP, we introduced several new initiatives during the last few years to help eligible borrowers keep their homes or avoid foreclosure, including our relief refinance mortgage initiative. During 2011 and 2010, we helped more than 208,000 and 275,000 borrowers, respectively, either stay in their homes or sell their properties and avoid foreclosure through HAMP and our various other workout initiatives.

On April 28, 2011, FHFA announced a new set of aligned standards for servicing non-performing loans owned or guaranteed by Freddie Mac and Fannie Mae. The servicing alignment initiative provides for consistent ongoing processes for non-HAMP loan modifications. We implemented most aspects of this initiative in 2011. We believe that the servicing alignment initiative will ultimately change, among other things, the way servicers communicate and work with troubled borrowers, bring greater consistency and accountability to the servicing industry, and help more distressed homeowners avoid foreclosure. For information on changes to mortgage servicing and foreclosure practices that could adversely affect our business, see "Regulation and Supervision — *Legislative and Regulatory Developments — Developments Concerning Single-Family Servicing Practices.*"

In addition to these loan workout initiatives, our relief refinance opportunities, including HARP (which is the portion of our relief refinance initiative for loans with LTV ratios above 80%), are a significant part of our effort to keep families in their homes. Relief refinance loans have been provided to more than 480,000 borrowers with LTV ratios above 80% since the initiative began in 2009, including nearly 185,000 such loans during 2011.

The table below presents our single-family loan workout activities for the last five quarters.

Table 1 — Total Single-Family Loan Workout Volumes[(1)]

	For the Three Months Ended				
	12/31/2011	09/30/2011	06/30/2011	03/31/2011	12/31/2010
	(number of loans)				
Loan modifications	19,048	23,919	31,049	35,158	37,203
Repayment plans	8,008	8,333	7,981	9,099	7,964
Forbearance agreements[(2)]	3,867	4,262	3,709	7,678	5,945
Short sales and deed in lieu of foreclosure transactions	12,675	11,744	11,038	10,706	12,097
Total single-family loan workouts	43,598	48,258	53,777	62,641	63,209

(1) Based on actions completed with borrowers for loans within our single-family credit guarantee portfolio. Excludes those modification, repayment, and forbearance activities for which the borrower has started the required process, but the actions have not been made permanent or effective, such as loans in modification trial periods. Also excludes certain loan workouts where our single-family seller/servicers have executed agreements in the current or prior periods, but these have not been incorporated into certain of our operational systems, due to delays in processing. These categories are not mutually exclusive and a loan in one category may also be included within another category in the same period.
(2) Excludes loans with long-term forbearance under a completed loan modification. Many borrowers complete a short-term forbearance agreement before another loan workout is pursued or completed. We only report forbearance activity for a single loan once during each quarterly period; however, a single loan may be included under separate forbearance agreements in separate periods.

We continue to directly assist troubled borrowers through targeted outreach, loan workouts, and other efforts. Highlights of these efforts include the following:

- We completed 208,274 single-family loan workouts during 2011, including 109,174 loan modifications (HAMP and non-HAMP) and 46,163 short sales and deed in lieu of foreclosure transactions.

- Based on information provided by the MHA Program administrator, our servicers had completed 152,519 loan modifications under HAMP from the introduction of the initiative in 2009 through December 31, 2011 and, as of December 31, 2011, 12,802 loans were in HAMP trial periods (this figure only includes borrowers who made at least their first payment under the trial period).

On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to allow more borrowers to participate in the program and benefit from refinancing their home mortgages. The Acting Director of FHFA stated that the goal of pursuing these changes is to create refinancing opportunities for more borrowers whose mortgages are owned or guaranteed by Freddie Mac and Fannie Mae while reducing risk for these entities and bringing a measure of stability to housing markets. The revisions to HARP enable us to expand the assistance we provide to homeowners by making their mortgage payments more affordable through one or more of the following ways: (a) a reduction in payment; (b) a reduction in rate; (c) movement to a more stable mortgage product type (*i.e.*, from an adjustable-rate mortgage to a fixed-rate mortgage); or (d) a reduction in amortization term.

In November 2011, Freddie Mac and Fannie Mae issued guidance with operational details about the HARP changes to mortgage lenders and servicers after receiving information from FHFA about the fees that we may charge associated with the refinancing program. Since industry participation in HARP is not mandatory, we anticipate that implementation schedules will vary as individual lenders, mortgage insurers, and other market participants modify their processes. It is too early to estimate how many eligible borrowers are likely to refinance under the revised program.

For more information about HAMP, our new non-HAMP standard loan modification, other loan workout programs, HARP and our relief refinance mortgage initiative, and other initiatives to help eligible borrowers keep their homes or avoid foreclosure, see "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program.*"

Minimizing Credit Losses

To help minimize the credit losses related to our guarantee activities, we are focused on:

- pursuing a variety of loan workouts, including foreclosure alternatives, in an effort to reduce the severity of losses we experience over time;
- managing foreclosure timelines to the extent possible, given the increasingly lengthy foreclosure process in many states;
- managing our inventory of foreclosed properties to reduce costs and maximize proceeds; and
- pursuing contractual remedies against originators, lenders, servicers, and insurers, as appropriate.

We establish guidelines for our servicers to follow and provide them default management tools to use, in part, in determining which type of loan workout would be expected to provide the best opportunity for minimizing our credit losses. We require our single-family seller/servicers to first evaluate problem loans for a repayment or forbearance plan before considering modification. If a borrower is not eligible for a modification, our seller/servicers pursue other workout options before considering foreclosure.

Our servicers pursue repayment plans and loan modifications for borrowers facing financial or other hardships since the level of recovery (if a loan reperforms) may often be much higher than with foreclosure or foreclosure alternatives. In cases where these alternatives are not possible or successful, a short sale transaction typically provides us with a comparable or higher level of recovery than what we would receive through property sales from our REO inventory. In large part, the benefit of short sales arises from the avoidance of costs we would otherwise incur to complete the foreclosure and dispose of the property, including maintenance and other property expenses associated with holding REO property, legal fees, commissions, and other selling expenses of traditional real estate transactions. The foreclosure process is a lengthy one in many jurisdictions with significant associated costs to complete, including, in times of home value decline, foregone recovery we might receive from an earlier sale.

We have contractual arrangements with our seller/servicers under which they agree to sell us mortgage loans, and represent and warrant that those loans have been originated under specified underwriting standards. If we subsequently discover that the representations and warranties were breached (*i.e.*, contractual standards were not followed), we can exercise certain contractual remedies to mitigate our actual or potential credit losses. These contractual remedies include requiring the seller/servicer to repurchase the loan at its current UPB or make us whole for any credit losses realized with respect to the loan. The amount we expect to collect on outstanding repurchase requests is significantly less than the UPB of the loans subject to the repurchase requests primarily because many of these requests will likely be satisfied by the seller/servicers reimbursing us for realized credit losses. Some of these requests also may be rescinded in the course of the contractual appeals process. As of December 31, 2011, the UPB of loans subject to repurchase requests issued to our single-family seller/servicers was approximately $2.7 billion, and approximately 39% of these requests were outstanding for more than four months since issuance of our initial repurchase request (this figure includes repurchase requests for

which appeals were pending). Of the total amount of repurchase requests outstanding at December 31, 2011, approximately $1.2 billion were issued due to mortgage insurance rescission or mortgage insurance claim denial.

Our credit loss exposure is also partially mitigated by mortgage insurance, which is a form of credit enhancement. Primary mortgage insurance is required to be purchased, typically at the borrower's expense, for certain mortgages with higher LTV ratios. As of December 31, 2011, we had mortgage insurance coverage on loans that represent approximately 13% of the UPB of our single-family credit guarantee portfolio. We received payments under primary and other mortgage insurance of $2.5 billion and $1.8 billion in 2011 and 2010, respectively, which helped to mitigate our credit losses. See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES — Table 4.5 — Recourse and Other Forms of Credit Protection" for more detail. The financial condition of many of our mortgage insurers continued to deteriorate in 2011. We expect to receive substantially less than full payment of our claims from Triad Guaranty Insurance Corp., Republic Mortgage Insurance Company, and PMI Mortgage Insurance Co., which are three of our mortgage insurance counterparties. We believe that certain other of our mortgage insurance counterparties may lack sufficient ability to meet all their expected lifetime claims paying obligations to us as those claims emerge. Our loan loss reserves reflect our estimates of expected insurance recoveries related to probable incurred losses. As of December 31, 2011, only six insurance companies remained as eligible insurers for Freddie Mac loans, which means that, in the future, our mortgage insurance exposure will be concentrated among a smaller number of counterparties.

See "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk*" for further information on our agreements with our seller/servicers and our exposure to mortgage insurers.

Maintaining Sound Credit Quality of New Loan Purchases and Guarantees

We continue to focus on maintaining credit policies, including our underwriting standards, that allow us to purchase and guarantee loans made to qualified borrowers that we believe will provide management and guarantee fee income, over the long-term, that exceeds our expected credit-related and administrative expenses on such loans.

The credit quality of the single-family loans we acquired in 2011 (excluding relief refinance mortgages, which represented approximately 26% of our single-family purchase volume during 2011) is significantly better than that of loans we acquired from 2005 through 2008, as measured by early delinquency rate trends, original LTV ratios, FICO scores, and the proportion of loans underwritten with fully documented income. As of December 31, 2011 and December 31, 2010, approximately 51% and 39%, respectively, of our single-family credit guarantee portfolio consisted of mortgage loans originated after 2008 (including relief refinance mortgages), which have experienced lower serious delinquency trends in the early years of their terms than loans originated in 2005 through 2008.

The improvement in credit quality of loans we have purchased during the last three years (excluding relief refinance mortgages) is primarily the result of the combination of: (a) changes in our credit policies, including changes in our underwriting standards; (b) fewer purchases of loans with higher risk characteristics; and (c) changes in mortgage insurers' and lenders' underwriting practices.

Our underwriting procedures for relief refinance mortgages are limited in many cases, and such procedures generally do not include all of the changes in underwriting standards we have implemented in the last several years. As a result, relief refinance mortgages generally reflect many of the credit risk attributes of the original loans. However, borrower participation in our relief refinance mortgage initiative may help reduce our exposure to credit risk in cases where borrower payments under their mortgages are reduced, thereby strengthening the borrower's potential to make their mortgage payments.

Approximately 92% of our single-family purchase volume in 2011 consisted of fixed-rate amortizing mortgages. Approximately 78% and 80% of our single-family purchase volumes in 2011 and 2010, respectively, were refinance mortgages, including approximately 33% and 35%, respectively, of these loans that were relief refinance mortgages, based on UPB.

There is an increase in borrower default risk as LTV ratios increase, particularly for loans with LTV ratios above 80%. Over time, relief refinance mortgages with LTV ratios above 80% (HARP loans) may not perform as well as relief refinance mortgages with LTV ratios of 80% and below because of the continued high LTV ratios of these loans. In addition, relief refinance mortgages may not be covered by mortgage insurance for the full excess of their UPB over 80%. Approximately 12% of our single-family purchase volume in both 2011 and 2010 was relief refinance mortgages with LTV ratios above 80%. Relief refinance mortgages of all LTV ratios comprised approximately 11% and 7% of the UPB in our total single-family credit guarantee portfolio at December 31, 2011 and 2010, respectively.

The table below presents the composition, loan characteristics, and serious delinquency rates of loans in our single-family credit guarantee portfolio, by year of origination at December 31, 2011.

Table 2 — Single-Family Credit Guarantee Portfolio Data by Year of Origination[1]

	At December 31, 2011					
	% of Portfolio	Average Credit Score[2]	Original LTV Ratio[3]	Current LTV Ratio[4]	Current LTV Ratio >100%[4][5]	Serious Delinquency Rate[6]
Year of Origination						
2011	14%	755	70%	70%	5%	0.06%
2010	19	754	70	71	6	0.25
2009	18	753	69	72	6	0.52
2008	7	725	74	92	36	5.65
2007	10	705	77	113	61	11.58
2006	7	710	75	112	56	10.82
2005	8	716	73	96	39	6.51
2004 and prior	17	719	71	61	9	2.83
Total	100%	735	72	80	20	3.58

(1) Based on the loans remaining in the portfolio at December 31, 2011, which totaled $1,746 billion, rather than all loans originally guaranteed by us and originated in the respective year.
(2) Based on FICO score of the borrower as of the date of loan origination and may not be indicative of the borrowers' creditworthiness at December 31, 2011. Excludes approximately $10 billion in UPB of loans where the FICO scores at origination were not available at December 31, 2011.
(3) See endnote (4) to "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for information on our calculation of original LTV ratios.
(4) We estimate current market values by adjusting the value of the property at origination based on changes in the market value of homes in the same geographical area since origination. See endnote (5) of "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for additional information on our calculation of current LTV ratios.
(5) Calculated as a percentage of the aggregate UPB of loans with LTV ratios greater than 100% in relation to the total UPB of loans in the category.
(6) See "MD&A — RISK MANAGEMENT— Credit Risk— *Mortgage Credit Risk — Single-family Mortgage Credit Risk* — Delinquencies" for further information about our reported serious delinquency rates.

Mortgages originated after 2008, including relief refinance mortgages, represent a growing proportion of our single-family credit guarantee portfolio. The UPB of loans originated in 2005 to 2008 within our single-family credit guarantee portfolio continues to decline due to liquidations, which include prepayments, refinancing activity, foreclosure alternatives, and foreclosure transfers. We currently expect that, over time, the replacement (other than through relief refinance activity) of the 2005 to 2008 vintages, which have a higher composition of loans with higher-risk characteristics, should positively impact the serious delinquency rates and credit-related expenses of our single-family credit guarantee portfolio. However, the rate at which this replacement is occurring slowed beginning in 2010, due primarily to a decline in the volume of home purchase mortgage originations and delays in the foreclosure process. See "Table 19 — Segment Earnings Composition — Single-Family Guarantee Segment" for an analysis of the contribution to Segment Earnings (loss) by loan origination year.

Strengthening Our Infrastructure and Improving Overall Efficiency

We are working to both enhance the quality of our infrastructure and improve our efficiency in order to preserve the taxpayers' investment. We are focusing our resources primarily on key projects, many of which will likely take several years to fully implement, and on making significant improvements to our systems infrastructure in order to: (a) implement mandatory initiatives from FHFA or other governmental bodies; (b) replace legacy hardware or software systems at the end of their lives and to strengthen our disaster recovery capabilities; and (c) improve our data collection and administration as well as our ability to assist in the servicing of loans.

We continue to actively manage our general and administrative expenses, while also continuing to focus on retaining key talent. Our general and administrative expenses declined in 2011 compared to 2010, largely due to a reduction in the number of our employees. We do not expect that our general and administrative expenses for 2012 will continue to decline, in part due to the continually changing mortgage market, an environment in which we are subject to increased regulatory oversight and mandates and strategic arrangements that we may enter into with outside firms to provide operational capability and staffing for key functions, if needed.

Single-Family Credit Guarantee Portfolio

The UPB of our single-family credit guarantee portfolio declined approximately 3.5% and 5.0% during 2011 and 2010, respectively, as the amount of single-family loan liquidations has exceeded new loan purchase and guarantee activity in the last two years. We believe this is due, in part, to declines in the amount of single-family mortgage debt outstanding in the market and increased competition from Ginnie Mae and FHA/VA. Although the number of seriously delinquent loans declined in both 2010 and 2011, our delinquency rates were higher than they otherwise would have been, because the size of our portfolio has declined and therefore these rates are calculated on a smaller base of loans at the end of each period. The table below provides certain credit statistics for our single-family credit guarantee portfolio.

Table 3 — Credit Statistics, Single-Family Credit Guarantee Portfolio

	As of				
	12/31/2011	9/30/2011	6/30/2011	3/31/2011	12/31/2010
Payment status —					
One month past due	2.02%	1.94%	1.92%	1.75%	2.07%
Two months past due	0.70%	0.70%	0.67%	0.65%	0.78%
Seriously delinquent[1]	3.58%	3.51%	3.50%	3.63%	3.84%
Non-performing loans (in millions)[2]	$120,514	$119,081	$114,819	$115,083	$115,478
Single-family loan loss reserve (in millions)[3]	$ 38,916	$ 39,088	$ 38,390	$ 38,558	$ 39,098
REO inventory (in properties)	60,535	59,596	60,599	65,159	72,079
REO assets, net carrying value (in millions)	$ 5,548	$ 5,539	$ 5,834	$ 6,261	$ 6,961
	For the Three Months Ended				
	12/31/2011	9/30/2011	6/30/2011	3/31/2011	12/31/2010
	(in units, unless noted)				
Seriously delinquent loan additions[1]	95,661	93,850	87,813	97,646	113,235
Loan modifications[4]	19,048	23,919	31,049	35,158	37,203
Foreclosure starts ratio[5]	0.54%	0.56%	0.55%	0.58%	0.73%
REO acquisitions	24,758	24,378	24,788	24,707	23,771
REO disposition severity ratio:[6]					
California	44.6%	45.5%	44.9%	44.5%	43.9%
Arizona	46.7%	48.7%	51.3%	50.8%	49.5%
Florida	50.1%	53.3%	52.7%	54.8%	53.0%
Nevada	54.2%	53.2%	55.4%	53.1%	53.1%
Illinois	51.2%	50.5%	49.4%	49.5%	49.4%
Total U.S.	41.2%	41.9%	41.7%	43.0%	41.3%
Single-family credit losses (in millions)	$ 3,209	$ 3,440	$ 3,106	$ 3,226	$ 3,086

(1) See "MD&A — RISK MANAGEMENT— Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Delinquencies*" for further information about our reported serious delinquency rates.
(2) Consists of the UPB of loans in our single-family credit guarantee portfolio that have undergone a TDR or that are seriously delinquent. As of December 31, 2011 and December 31, 2010, approximately $44.4 billion and $26.6 billion in UPB of TDR loans, respectively, were no longer seriously delinquent.
(3) Consists of the combination of: (a) our allowance for loan losses on mortgage loans held for investment; and (b) our reserve for guarantee losses associated with non-consolidated single-family mortgage securitization trusts and other guarantee commitments.
(4) Represents the number of completed modifications under agreement with the borrower during the quarter. Excludes forbearance agreements, repayment plans, and loans in modification trial periods.
(5) Represents the ratio of the number of loans that entered the foreclosure process during the respective quarter divided by the number of loans in the single-family credit guarantee portfolio at the end of the quarter. Excludes Other Guarantee Transactions and mortgages covered under other guarantee commitments.
(6) States presented represent the five states where our credit losses have been greatest during 2011. Calculated as the amount of our losses recorded on disposition of REO properties during the respective quarterly period, excluding those subject to repurchase requests made to our seller/servicers, divided by the aggregate UPB of the related loans. The amount of losses recognized on disposition of the properties is equal to the amount by which the UPB of the loans exceeds the amount of sales proceeds from disposition of the properties. Excludes sales commissions and other expenses, such as property maintenance and costs, as well as applicable recoveries from credit enhancements, such as mortgage insurance.

In discussing our credit performance, we often use the terms "credit losses" and "credit-related expenses." These terms are significantly different. Our "credit losses" consist of charge-offs and REO operations income (expense), while our "credit-related expenses" consist of our provision for credit losses and REO operations income (expense).

Since the beginning of 2008, on an aggregate basis, we have recorded provision for credit losses associated with single-family loans of approximately $73.2 billion, and have recorded an additional $4.3 billion in losses on loans purchased from PC trusts, net of recoveries. The majority of these losses are associated with loans originated in 2005 through 2008. While loans originated in 2005 through 2008 will give rise to additional credit losses that have not yet been incurred and, thus, have not yet been provisioned for, we believe that, as of December 31, 2011, we have reserved for or charged-off the majority of the total expected credit losses for these loans. Nevertheless, various factors, such as continued high unemployment rates or further declines in home prices, could require us to provide for losses on these loans beyond our current expectations.

The quarterly number of seriously delinquent loan additions declined during the first half of 2011; however, we experienced a small increase in the quarterly number of seriously delinquent loan additions during the second half of 2011. As of December 31, 2011 and December 31, 2010, the percentage of seriously delinquent loans that have been delinquent for more than six months was 70% and 66%, respectively. Several factors, including delays in the foreclosure process, have resulted in loans remaining in serious delinquency for longer periods than prior to 2008, particularly in states that require a judicial foreclosure process. The credit losses and loan loss reserves associated with our single-family credit guarantee portfolio remained elevated in 2011, due in part to:

- Losses associated with the continued high volume of foreclosures and foreclosure alternatives. These actions relate to the continued efforts of our servicers to resolve our large inventory of seriously delinquent loans. Due to the length of time necessary for servicers either to complete the foreclosure process or pursue foreclosure alternatives

on seriously delinquent loans in our portfolio, we expect our credit losses will continue to remain high even if the volume of new serious delinquencies declines.

- Continued negative impact of certain loan groups within the single-family credit guarantee portfolio, such as those underwritten with certain lower documentation standards and interest-only loans, as well as other 2005 through 2008 vintage loans. These groups continue to be large contributors to our credit losses.
- Cumulative declines in national home prices during the last five years, based on our own index. As a result of these price declines, approximately 20% of loans in our single-family credit guarantee portfolio, based on UPB, had estimated current LTV ratios in excess of 100% (underwater loans) as of December 31, 2011.
- Deterioration in the financial condition of many of our mortgage insurers, which reduced our estimates of expected recoveries from these counterparties.

Some of our loss mitigation activities create fluctuations in our delinquency statistics. For example, loans that we report as seriously delinquent before they enter a modification trial period continue to be reported as seriously delinquent until the modifications become effective and the loans are removed from delinquent status by our servicers. See "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-family Mortgage Credit Risk — Credit Performance — Delinquencies*" for further information about factors affecting our reported delinquency rates.

Government Support for our Business

We are dependent upon the continued support of Treasury and FHFA in order to continue operating our business. Our ability to access funds from Treasury under the Purchase Agreement is critical to keeping us solvent and avoiding the appointment of a receiver by FHFA under statutory mandatory receivership provisions.

Under the Purchase Agreement, Treasury made a commitment to provide funding, under certain conditions, to eliminate deficits in our net worth. The $200 billion cap on Treasury's funding commitment will increase as necessary to eliminate any net worth deficits we may have during 2010, 2011, and 2012. We believe that the support provided by Treasury pursuant to the Purchase Agreement currently enables us to maintain our access to the debt markets and to have adequate liquidity to conduct our normal business activities, although the costs of our debt funding could vary.

To address our net worth deficit of $146 million at December 31, 2011, FHFA, as Conservator, will submit a draw request on our behalf to Treasury under the Purchase Agreement in the amount of $146 million. FHFA will request that we receive these funds by March 31, 2012. Upon funding of the draw request: (a) our aggregate liquidation preference on the senior preferred stock owned by Treasury will increase to $72.3 billion; and (b) the corresponding annual cash dividend owed to Treasury will increase to $7.23 billion.

We pay cash dividends to Treasury at an annual rate of 10%. During 2011, we paid dividends to Treasury of $6.5 billion. We received cash proceeds of $8.0 billion from draws under Treasury's funding commitment during 2011. Through December 31, 2011, we paid aggregate cash dividends to Treasury of $16.5 billion, an amount equal to 23% of our aggregate draws received under the Purchase Agreement. As of December 31, 2011, our annual cash dividend obligation to Treasury on the senior preferred stock exceeded our annual historical earnings in all but one period.

We expect to request additional draws under the Purchase Agreement in future periods. Over time, our dividend obligation to Treasury will increasingly drive future draws. Although we may experience period-to-period variability in earnings and comprehensive income, it is unlikely that we will generate net income or comprehensive income in excess of our annual dividends payable to Treasury over the long term. In addition, we are required under the Purchase Agreement to pay a quarterly commitment fee to Treasury, which could contribute to future draws if the fee is not waived. Treasury waived the fee for all quarters of 2011 and the first quarter of 2012, but it has indicated that it remains committed to protecting taxpayers and ensuring that our future positive earnings are returned to taxpayers as compensation for their investment. The amount of the quarterly commitment fee has not yet been established and could be substantial.

There continues to be significant uncertainty in the current mortgage market environment, and continued high levels of unemployment, weakness in home prices, and adverse changes in interest rates, mortgage security prices, and spreads could lead to additional draws. For discussion of other factors that could result in additional draws, see "RISK FACTORS — Conservatorship and Related Matters — *We expect to make additional draws under the Purchase Agreement in future periods, which will adversely affect our future results of operations and financial condition*."

On August 5, 2011, S&P lowered the long-term credit rating of the U.S. government to "AA+" from "AAA" and assigned a negative outlook to the rating. On August 8, 2011, S&P lowered our senior long-term debt credit rating to "AA+" from "AAA" and assigned a negative outlook to the rating. While this could adversely affect our liquidity and the supply and cost of debt financing available to us in the future, we have not yet experienced such adverse effects. For more

information, see "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Other Debt Securities — Credit Ratings*."

Neither the U.S. government nor any other agency or instrumentality of the U.S. government is obligated to fund our mortgage purchase or financing activities or to guarantee our securities or other obligations.

For more information on the Purchase Agreement, see "Conservatorship and Related Matters."

Consolidated Financial Results — 2011 versus 2010

Net loss was $5.3 billion and $14.0 billion for the years ended December 31, 2011 and 2010, respectively. Key highlights of our financial results include:

- Net interest income for the year ended December 31, 2011 increased to $18.4 billion from $16.9 billion for the year ended December 31, 2010, mainly due to lower funding costs, partially offset by a decline in the average balances of mortgage-related assets.
- Provision for credit losses for the year ended December 31, 2011 decreased to $10.7 billion, compared to $17.2 billion for the year ended December 31, 2010. The provision for credit losses in 2011 reflects a decline in the rate at which single-family loans transition into serious delinquency or are modified, but was partially offset by our lowered expectations for mortgage insurance recoveries, which is due to the continued deterioration in the financial condition of the mortgage insurance industry in 2011.
- Non-interest income (loss) was $(10.9) billion for the year ended December 31, 2011, compared to $(11.6) billion for the year ended December 31, 2010, largely driven by substantial derivative losses in both periods. However, there was a significant decline in net impairments of available-for-sale securities recognized in earnings during the year ended December 31, 2011 compared to the year ended December 31, 2010.
- Non-interest expense was $2.5 billion and $2.9 billion in the years ended December 31, 2011 and 2010, respectively, as we had higher expenses in 2010 than in 2011 associated with transfers and terminations of mortgage servicing, primarily related to Taylor, Bean & Whitaker Mortgage Corp., or TBW.
- Total comprehensive income (loss) was $(1.2) billion for the year ended December 31, 2011 compared to $282 million for the year ended December 31, 2010. Total comprehensive income (loss) for the year ended December 31, 2011 was driven by the $5.3 billion net loss, partially offset by a reduction in gross unrealized losses related to our available-for-sale securities.

Our Business

We conduct business in the U.S. residential mortgage market and the global securities market, subject to the direction of our Conservator, FHFA, and under regulatory supervision of FHFA, the SEC, HUD, and Treasury. The size of the U.S. residential mortgage market is affected by many factors, including changes in interest rates, home ownership rates, home prices, the supply of housing and lender preferences regarding credit risk and borrower preferences regarding mortgage debt. The amount of residential mortgage debt available for us to purchase and the mix of available loan products are also affected by several factors, including the volume of mortgages meeting the requirements of our charter (which is affected by changes in the conforming loan limit determined by FHFA), our own preference for credit risk reflected in our purchase standards and the mortgage purchase and securitization activity of other financial institutions. We conduct our operations solely in the U.S. and its territories, and do not generate any revenue from or have assets in geographic locations outside of the U.S. and its territories.

Our charter forms the framework for our business activities, the initiatives we bring to market and the services we provide to the nation's residential housing and mortgage industries. Our charter also determines the types of mortgage loans that we are permitted to purchase. Our statutory mission as defined in our charter is to:

- provide stability in the secondary market for residential mortgages;
- respond appropriately to the private capital market;
- provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages for low- and moderate-income families, involving a reasonable economic return that may be less than the return earned on other activities); and
- promote access to mortgage credit throughout the U.S. (including central cities, rural areas, and other underserved areas).

Our charter does not permit us to originate mortgage loans or lend money directly to consumers in the primary mortgage market. We provide liquidity, stability and affordability to the U.S. housing market primarily by providing our credit guarantee for residential mortgages originated by mortgage lenders and investing in mortgage loans and mortgage-related securities. We use mortgage securitization as an integral part of our activities. Mortgage securitization is a process by which we purchase mortgage loans that lenders originate, and pool these loans into guaranteed mortgage securities that are sold in global capital markets, generating proceeds that support future loan origination activity by lenders. The primary Freddie Mac guaranteed mortgage-related security is the single-class PC. We also aggregate and resecuritize mortgage-related securities that are issued by us, other GSEs, HFAs, or private (non-agency) entities, and issue other single-class and multiclass mortgage-related securities to third-party investors. We also enter into certain other guarantee commitments for mortgage loans, HFA bonds under the HFA initiative, and multifamily housing revenue bonds held by third parties.

Our charter limits our purchases of single-family loans to the conforming loan market. The conforming loan market is defined by loans originated with UPBs at or below limits determined annually based on changes in FHFA's housing price index, a method established and maintained by FHFA for determining the national average single-family home price. Since 2006, the base conforming loan limit for a one-family residence has been set at $417,000, and higher limits have been established in certain "high-cost" areas (currently, up to $625,500 for a one-family residence). Higher limits also apply to two- to four-family residences and for mortgages secured by properties in Alaska, Guam, Hawaii, and the U.S. Virgin Islands.

Beginning in 2008, pursuant to a series of laws, our loan limits in certain high-cost areas were increased temporarily above the limits that otherwise would have been applicable (up to $729,750 for a one-family residence). The latest of these increases expired on September 30, 2011. We refer to loans that we have purchased with UPB exceeding the base conforming loan limit (*i.e.*, $417,000) as conforming jumbo loans.

Our charter generally prohibits us from purchasing first-lien single-family mortgages if the outstanding UPB of the mortgage at the time of our purchase exceeds 80% of the value of the property securing the mortgage unless we have one of the following credit protections:

- mortgage insurance from a mortgage insurer that we determine is qualified on the portion of the UPB of the mortgage that exceeds 80%;
- a seller's agreement to repurchase or replace any mortgage that has defaulted; or
- retention by the seller of at least a 10% participation interest in the mortgage.

Under our charter, our mortgage purchase operations are confined, so far as practicable, to mortgages that we deem to be of such quality, type and class as to meet generally the purchase standards of other private institutional mortgage investors. This is a general marketability standard.

Our charter requirement for credit protection on mortgages with LTV ratios greater than 80% does not apply to multifamily mortgages or to mortgages that have the benefit of any guarantee, insurance or other obligation by the U.S. or any of its agencies or instrumentalities (*e.g.*, the FHA, the VA or the USDA Rural Development).

As part of HARP under the MHA Program, we may purchase single-family mortgages that refinance borrowers whose mortgages we currently own or guarantee without obtaining additional credit enhancement in excess of that already in place for any such loan, even if the LTV ratio of the new loan is above 80%.

Our Business Segments

Our operations consist of three reportable segments, which are based on the type of business activities each performs — Single-family Guarantee, Investments, and Multifamily. Certain activities that are not part of a reportable segment are included in the All Other category.

We evaluate segment performance and allocate resources based on a Segment Earnings approach. Beginning January 1, 2010, we revised our method for presenting Segment Earnings to reflect changes in how management measures and assesses the financial performance of each segment and the company as a whole. For more information on our segments, including financial information, see "MD&A — CONSOLIDATED RESULTS OF OPERATIONS — Segment Earnings" and "NOTE 14: SEGMENT REPORTING."

Single-Family Guarantee Segment

The Single-family Guarantee segment reflects results from our single-family credit guarantee activities. In our Single-family Guarantee segment, we purchase single-family mortgage loans originated by our seller/servicers in the primary

mortgage market. In most instances, we use the mortgage securitization process to package the purchased mortgage loans into guaranteed mortgage-related securities. We guarantee the payment of principal and interest on the mortgage-related security in exchange for management and guarantee fees.

Our Customers

Our customers are predominantly lenders in the primary mortgage market that originate mortgages for homeowners. These lenders include mortgage banking companies, commercial banks, savings banks, community banks, credit unions, HFAs, and savings and loan associations.

We acquire a significant portion of our mortgages from several large lenders. These lenders are among the largest mortgage loan originators in the U.S. Since 2007, the mortgage industry has consolidated significantly and a smaller number of large lenders originate most single-family mortgages. As a result, mortgage origination volume during 2011 was concentrated in a smaller number of institutions. During 2011, two mortgage lenders (Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A.) each accounted for more than 10% of our single-family mortgage purchase volume and collectively accounted for approximately 40% of our single-family mortgage purchase volume. Our top ten lenders accounted for approximately 82% of our single-family mortgage purchase volume during 2011.

Our customers also service loans in our single-family credit guarantee portfolio. A significant portion of our single-family mortgage loans are serviced by several of our large customers. Because we do not have our own servicing operation, if our servicers lack appropriate process controls, experience a failure in their controls, or experience an operating disruption in their ability to service mortgage loans, our business and financial results could be adversely affected. For information about our relationships with our customers, see "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Single-Family Mortgage Seller/Servicers.*"

Our Competition

Historically, our principal competitors have been Fannie Mae, Ginnie Mae and FHA/VA, and other financial institutions that retain or securitize mortgages, such as commercial and investment banks, dealers, and thrift institutions. Since 2008, most of our competitors, other than Fannie Mae, Ginnie Mae, and FHA/VA, have ceased their activities in the residential mortgage securitization business or severely curtailed these activities relative to their previous levels. We compete on the basis of price, products, the structure of our securities, and service. Competition to acquire single-family mortgages can also be significantly affected by changes in our credit standards.

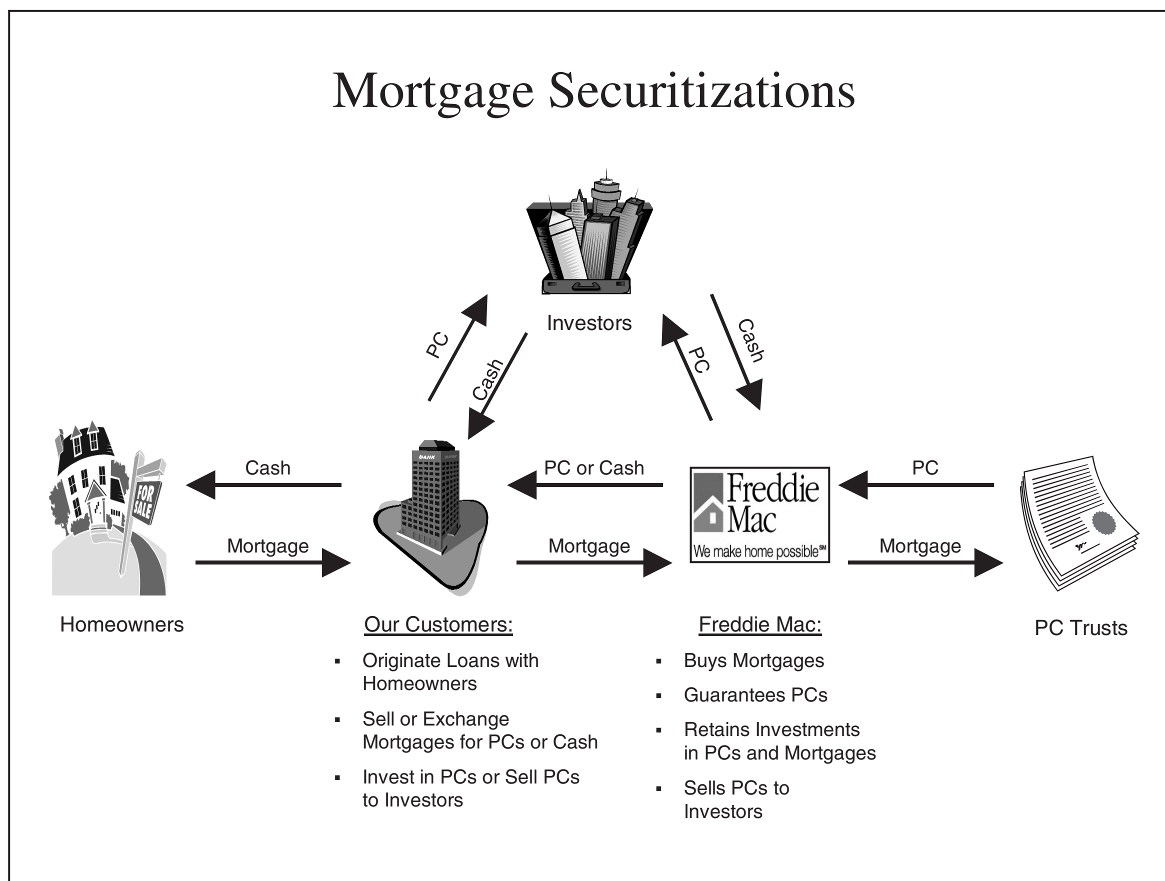
Ginnie Mae, which became a more significant competitor beginning in 2009, guarantees the timely payment of principal and interest on mortgage-related securities backed by federally insured or guaranteed loans, primarily those insured by FHA or guaranteed by VA. Ginnie Mae maintained a significant market share in 2011 and 2010, in large part due to favorable pricing of loans insured by FHA, the increase in the FHA loan limit and the availability, through FHA, of a mortgage product for borrowers seeking greater than 80% financing who could not otherwise qualify for a conventional mortgage.

The conservatorship, including direction provided to us by our Conservator, and the restrictions on our activities under the Purchase Agreement may affect our ability to compete in the business of securitizing mortgages. On multiple occasions, FHFA has directed us and Fannie Mae to confer and suggest to FHFA possible uniform approaches to particular business and accounting issues and problems. In most such cases, FHFA subsequently directed us and Fannie Mae to adopt a specific uniform approach. It is possible that in some areas FHFA could require us and Fannie Mae to take a uniform approach that, because of differences in our respective businesses, could place Freddie Mac at a competitive disadvantage to Fannie Mae. For more information, see "RISK FACTORS — Conservatorship and Related Matters — *FHFA directives that we and Fannie Mae adopt uniform approaches in some areas could have an adverse impact on our business or on our competitive position with respect to Fannie Mae.*"

Overview of the Mortgage Securitization Process

Mortgage securitization is a process by which we purchase mortgage loans that lenders originate, and pool these loans into mortgage securities that are sold in global capital markets. The following diagram illustrates how we support

mortgage market liquidity when we create PCs through mortgage securitizations. These PCs can be sold to investors or held by us or our customers:



The U.S. residential mortgage market consists of a primary mortgage market that links homebuyers and lenders and a secondary mortgage market that links lenders and investors. We participate in the secondary mortgage market by purchasing mortgage loans and mortgage-related securities for investment and by issuing guaranteed mortgage-related securities. In the Single-family Guarantee segment, we purchase and securitize "single-family mortgages," which are mortgages that are secured by one- to four-family properties.

In general, the securitization and Freddie Mac guarantee process works as follows: (a) a lender originates a mortgage loan to a borrower purchasing a home or refinancing an existing mortgage loan; (b) we purchase the loan from the lender and place it with other mortgages into a security that is sold to investors (this process is referred to as "pooling"); (c) the lender may then use the proceeds from the sale of the loan or security to originate another mortgage loan; (d) we provide a credit guarantee, for a fee (generally a portion of the interest collected on the mortgage loan), to those who invest in the security; (e) the borrower's monthly payment of mortgage principal and interest (net of a servicing fee and our management and guarantee fee) is passed through to the investors in the security; and (f) if the borrower stops making monthly payments — because a family member loses a job, for example — we step in and, pursuant to our guarantee, make the applicable payments to investors in the security. In the event a borrower defaults on the mortgage, our servicer works with the borrower to find a solution to help them stay in the home, or sell the property and avoid foreclosure, through our many different workout options. If this is not possible, we ultimately foreclose and sell the home.

The terms of single-family mortgages that we purchase or guarantee allow borrowers to prepay these loans, thereby allowing borrowers to refinance their loans when mortgage rates decline. Because of the nature of long-term, fixed-rate mortgages, borrowers with these mortgages are protected against rising interest rates, but are able to take advantage of declining rates through refinancing. When a borrower prepays a mortgage that we have securitized, the outstanding balance of the security owned by investors is reduced by the amount of the prepayment. Unscheduled reductions in loan principal, regardless of whether they are voluntary or involuntary (*e.g.* foreclosure), result in prepayments of security balances. Consequently, the owners of our guaranteed securities are subject to prepayment risk on the related mortgage

loans, which is principally that the investor will receive an unscheduled return of the principal, and therefore may not earn the rate of return originally expected on the investment.

We guarantee these mortgage-related securities in exchange for compensation, which consists primarily of a combination of management and guarantee fees paid on a monthly basis as a percentage of the UPB of the underlying loans and initial upfront payments referred to as delivery fees. We may also make upfront payments to buy-up the monthly management and guarantee fee rate, or receive upfront payments to buy-down the monthly management and guarantee fee rate. These fees are paid in conjunction with the formation of a PC to provide for a uniform coupon rate for the mortgage pool underlying the issued PC.

We enter into mortgage purchase volume commitments with many of our single-family customers in order to have a supply of loans for our guarantee business. These commitments provide for the lenders to deliver to us a certain volume of mortgages during a specified period of time. Some commitments may also provide for the lender to deliver to us a minimum percentage of their total sales of conforming loans. The purchase and securitization of mortgage loans from customers under these contracts have pricing schedules for our management and guarantee fees that are negotiated at the outset of the contract with initial terms that may range from one month to one year. We call these transactions "flow" activity and they represent the majority of our purchase volumes. The remainder of our purchases and securitizations of mortgage loans occurs in "bulk" transactions for which purchase prices and management and guarantee fees are negotiated on an individual transaction basis. Mortgage purchase volumes from individual customers can fluctuate significantly. If a mortgage lender fails to meet its contractual commitment, we have a variety of contractual remedies, which may include the right to assess certain fees. Our mortgage purchase contracts contain no penalty or liquidated damages clauses based on our inability to take delivery of presented mortgage loans. However, if we were to fail to meet our contractual commitment, we could be deemed to be in breach of our contract and could be liable for damages in a lawsuit.

We seek to issue guarantees on our PCs with fee terms that we believe will, over the long-term, provide management and guarantee fee income that exceeds our anticipated credit-related and administrative expenses on the underlying loans. Historically, we have varied our guarantee and delivery fee pricing for different customers, mortgage products, and mortgage or borrower underwriting characteristics based on our assessment of credit risk and loss mitigation related to single-family loans. However, on December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. Among its provisions, this new law directs FHFA to require Freddie Mac and Fannie Mae to increase guarantee fees by no less than 10 basis points above the average guarantee fees charged in 2011 on single-family mortgage-backed securities. Under the law, the proceeds from this increase will be remitted to Treasury to fund the payroll tax cut, rather than retained by the companies. See "Regulation and Supervision — *Legislative and Regulatory Developments*" for further information on the impact of this new law. For more information on fees, see "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Other Credit Risk Management Activities*."

For information on how we account for our securitization activities, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES."

Securitization Activities

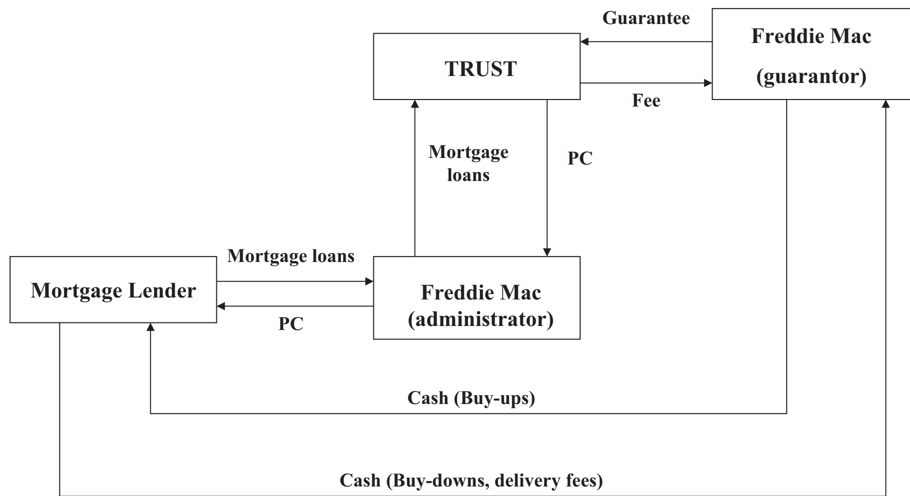
The types of mortgage-related securities we issue and guarantee include the following:

- PCs;
- REMICs and Other Structured Securities; and
- Other Guarantee Transactions.

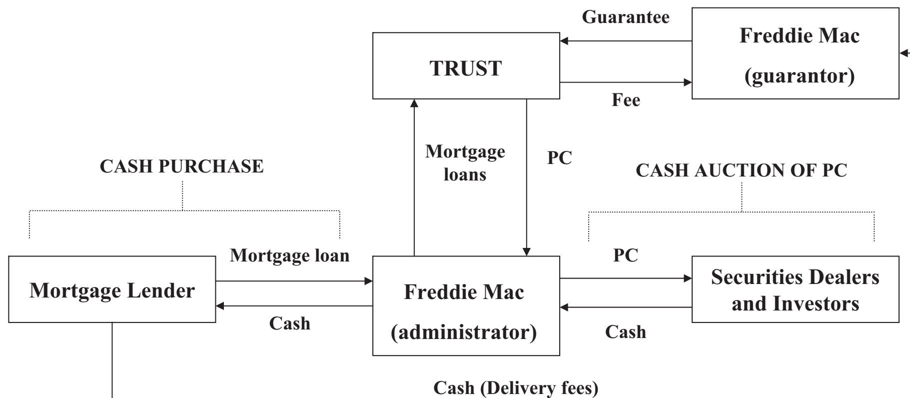
PCs

Our PCs are single-class pass-through securities that represent undivided beneficial interests in trusts that hold pools of mortgages we have purchased. Holding single-family loans in the form of PCs rather than as unsecuritized loans gives us greater flexibility in managing the composition of our mortgage portfolio, as it is generally easier to purchase and sell PCs than unsecuritized mortgage loans, and allows more cost effective interest-rate risk management. For our fixed-rate PCs, we guarantee the timely payment of principal and interest. For our single-family ARM PCs, we guarantee the timely payment of the weighted average coupon interest rate for the underlying mortgage loans. We also guarantee the full and final payment of principal for ARM PCs; however, we do not guarantee the timely payment of principal on ARM PCs. We issue most of our single-family PCs in transactions in which our customers provide us with mortgage loans in

exchange for PCs. We refer to these transactions as guarantor swaps. The following diagram illustrates a guarantor swap transaction:



We also issue PCs in exchange for cash. The following diagram illustrates an exchange for cash in a "cash auction" of PCs:



Institutional and other fixed-income investors, including pension funds, insurance companies, securities dealers, money managers, commercial banks and foreign central banks, purchase our PCs. Treasury and the Federal Reserve have also purchased mortgage-related securities issued by us, Fannie Mae and Ginnie Mae under their purchase programs. The most recent of these programs ended in March 2010. During 2011, the Federal Reserve took several actions designed to support an economic recovery and maintain historically low interest rates, including resumption of purchases of agency securities, which impacted and will continue to impact the demand for and value of our PCs in the market.

PCs differ from U.S. Treasury securities and other fixed-income investments in two ways. First, single-family PCs can be prepaid at any time. Homeowners have the right to prepay their mortgage at any time (known as the prepayment option), and homeowner mortgage prepayments are passed through to the PC holder. Consequently, our securities implicitly have a call option that significantly reduces the average life of the security from the contractual loan maturity. As a result, our PCs generally provide a higher nominal yield than certain other fixed-income products. Second, unlike U.S. Treasury securities, PCs are not backed by the full faith and credit of the United States.

In addition, in our Single-family Guarantee segment we historically sought to support the liquidity of the market for our PCs and the relative price performance of our PCs to comparable Fannie Mae securities through a variety of activities, including the resecuritization of PCs into REMICs and Other Structured Securities. Other strategies may include: (a) encouraging sellers to pool mortgages that they deliver to us into PC pools with a larger and more diverse population

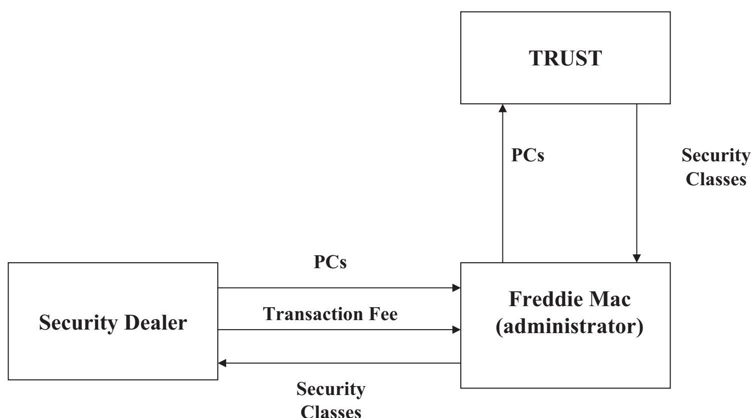
of mortgages; (b) influencing the volume and characteristics of mortgages delivered to us by tailoring our loan eligibility guidelines and other means; and (c) engaging in portfolio purchase and retention activities. Beginning in 2012, under guidance from FHFA we expect to curtail mortgage-related investments portfolio purchase and retention activities that are undertaken for the primary purpose of supporting the price performance of our PCs, which may result in a significant decline in the market share of our single-family guarantee business, lower comprehensive income, and a more rapid decline in the size of our total mortgage portfolio. See *"Investments Segment — PC Support Activities"* and "RISK FACTORS — Competitive and Market Risks — *Any decline in the price performance of or demand for our PCs could have an adverse effect on the volume and profitability of our new single-family guarantee business"* for additional information about our support of market liquidity for PCs.

REMICs and Other Structured Securities

We issue single-class and multiclass securities. Single-class securities involve the straight pass-through of all of the cash flows of the underlying collateral to holders of the beneficial interests. Our primary multiclass securities qualify for tax treatment as REMICs. Multiclass securities divide all of the cash flows of the underlying mortgage-related assets into two or more classes designed to meet the investment criteria and portfolio needs of different investors by creating classes of securities with varying maturities, payment priorities and coupons, each of which represents a beneficial ownership interest in a separate portion of the cash flows of the underlying collateral. Usually, the cash flows are divided to modify the relative exposure of different classes to interest-rate risk, or to create various coupon structures. The simplest division of cash flows is into principal-only and interest-only classes. Other securities we issue can involve the creation of sequential payment and planned or targeted amortization classes. In a sequential payment class structure, one or more classes receive all or a disproportionate percentage of the principal payments on the underlying mortgage assets for a period of time until that class or classes are retired, following which the principal payments are directed to other classes. Planned or targeted amortization classes involve the creation of classes that have relatively more predictable amortization schedules across different prepayment scenarios, thus reducing prepayment risk, extension risk, or both.

Our REMICs and Other Structured Securities represent beneficial interests in pools of PCs and/or certain other types of mortgage-related assets. We create these securities primarily by using PCs or previously issued REMICs and Other Structured Securities as the underlying collateral. Similar to our PCs, we guarantee the payment of principal and interest to the holders of tranches of our REMICs and Other Structured Securities. We do not charge a management and guarantee fee for these securities if the underlying collateral is already guaranteed by us since no additional credit risk is introduced. Because the collateral underlying nearly all of our single-family REMICs and Other Structured Securities consists of other mortgage-related securities that we guarantee, there are no concentrations of credit risk in any of the classes of these securities that are issued, and there are no economic residual interests in the related securitization trust. The following diagram provides a general example of how we create REMICs and Other Structured Securities.

REMICs and Other Structured Securities

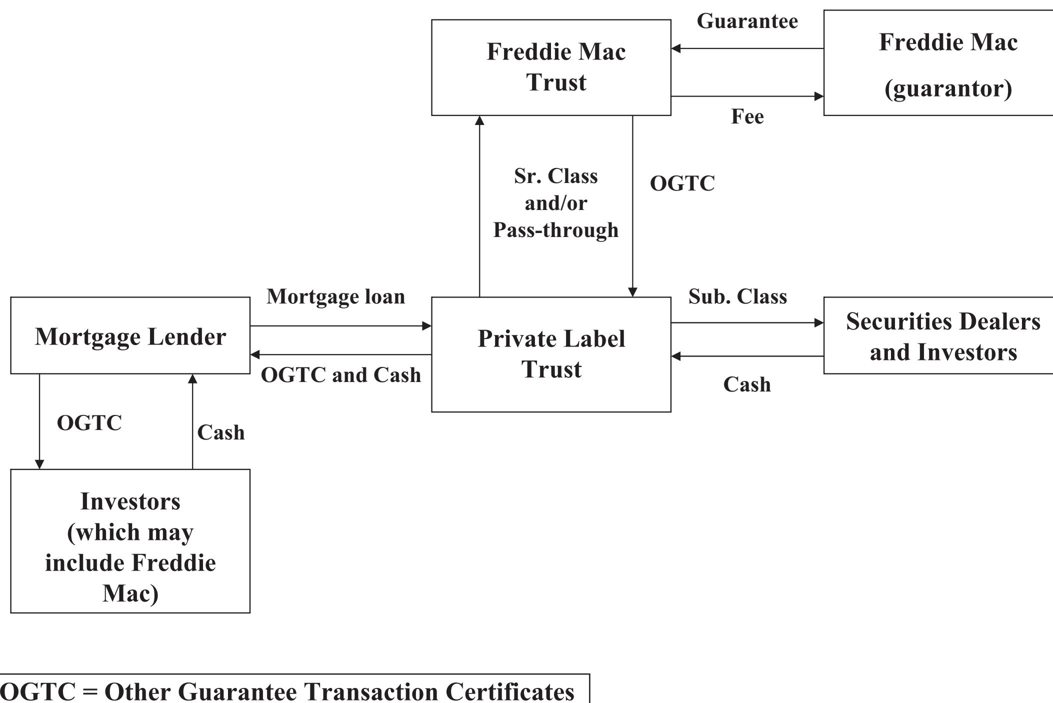


We issue many of our REMICs and Other Structured Securities in transactions in which securities dealers or investors sell us mortgage-related assets or we use our own mortgage-related assets (*e.g.*, PCs and REMICs and Other Structured Securities) in exchange for the REMICs and Other Structured Securities. The creation of REMICs and Other Structured Securities allows for setting differing terms for specific classes of investors, and our issuance of these securities can expand the range of investors in our mortgage-related securities to include those seeking specific security attributes. For REMICs and Other Structured Securities that we issue to third parties, we typically receive a transaction, or

resecuritization, fee. This transaction fee is compensation for facilitating the transaction, as well as future administrative responsibilities.

Other Guarantee Transactions

We also issue mortgage-related securities to third parties in exchange for non-Freddie Mac mortgage-related securities. We refer to these as Other Guarantee Transactions. The non-Freddie Mac mortgage-related securities are transferred to trusts that were specifically created for the purpose of issuing securities, or certificates, in the Other Guarantee Transactions. The following diagram illustrates an example of an Other Guarantee Transaction:



Other Guarantee Transactions can generally be segregated into two different types. In one type, we purchase only senior tranches from a non-Freddie Mac senior-subordinated securitization, place the senior tranches into securitization trusts, and issue Other Guarantee Transaction certificates guaranteeing the principal and interest payments on those certificates. In this type of transaction, our credit risk is reduced by the structural credit protections from the related subordinated tranches, which we do not guarantee. In the second type, we purchase single-class pass-through securities, place them in securitization trusts, and issue Other Guarantee Transaction certificates guaranteeing the principal and interest payments on those certificates. Our Other Guarantee Transactions backed by single-class pass-through securities do not benefit from structural or other credit enhancement protections.

Although Other Guarantee Transactions generally have underlying mortgage loans with varying risk characteristics, we do not issue tranches that have concentrations of credit risk beyond those embedded in the underlying assets, as all cash flows of the underlying collateral are passed through to the holders of the securities and there are no economic residual interests in the securitization trusts. Additionally, there may be other credit enhancements and structural features retained by the seller, such as excess interest or overcollateralization, that provide credit protection to our interests, and reduce the likelihood that we will have to perform under our guarantee of the senior tranches. In exchange for providing our guarantee, we may receive a management and guarantee fee or other delivery fees, if the underlying collateral is not already guaranteed by us.

In 2010 and 2009, we entered into transactions under Treasury's NIBP with HFAs, for the partial guarantee of certain single-family and multifamily HFA bonds, which were Other Guarantee Transactions with significant credit enhancement provided by Treasury. While we did not engage in any of these transactions in 2011, we continue to participate in and

support this program and these guarantees remain outstanding. The securities issued by us pursuant to the NIBP were purchased by Treasury. See "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Housing Finance Agency Initiative" for further information.

For information about the amount of mortgage-related securities we have issued, see "Table 35 — Freddie Mac Mortgage-Related Securities." For information about the relative performance of mortgages underlying these securities, refer to our "MD&A — RISK MANAGEMENT — Credit Risk" section.

Single-Family PC Trust Documents

We establish trusts for all of our issued PCs pursuant to our PC master trust agreement. In accordance with the terms of our PC trust documents, we have the option, and in some instances the requirement, to remove specified mortgage loans from the trust. To remove these loans, we pay the trust an amount equal to the current UPB of the mortgage, less any outstanding advances of principal that have been distributed to PC holders. Our payments to the trust are distributed to the PC holders at the next scheduled payment date. From time to time, we reevaluate our practice of removing delinquent loans from PCs and alter it if circumstances warrant. Our practice is to remove mortgages that are 120 days or more delinquent from pools underlying our PCs when:

- the mortgages have been modified;
- foreclosure sales occur;
- the mortgages are delinquent for 24 months; or
- the cost of guarantee payments to PC holders, including advances of interest at the PC coupon rate, exceeds the expected cost of holding the nonperforming loans.

In February 2010, we began the practice of removing substantially all 120 days or more delinquent single-family mortgage loans from our issued PCs. This change in practice was made based on a determination that the cost of guarantee payments to the security holders will exceed the cost of holding unsecuritized non-performing loans on our consolidated balance sheets. The cost of holding unsecuritized non-performing loans on our consolidated balance sheets was significantly affected by our January 1, 2010 adoption of amendments to certain accounting guidance and changing economics pursuant to which the recognized cost of removing most delinquent loans from PC trusts was less than the recognized cost of continued guarantee payments to security holders. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Recently Adopted Accounting Guidance" for additional information.

In accordance with the terms of our PC trust documents, we are required to remove a mortgage loan (or, in some cases, substitute a comparable mortgage loan) from a PC trust in the following situations:

- if a court of competent jurisdiction or a federal government agency, duly authorized to oversee or regulate our mortgage purchase business, determines that our purchase of the mortgage was unauthorized and a cure is not practicable without unreasonable effort or expense, or if such a court or government agency requires us to repurchase the mortgage;
- if a borrower exercises its option to convert the interest rate from an adjustable-rate to a fixed-rate on a convertible ARM; and
- in the case of balloon-reset loans, shortly before the mortgage reaches it's scheduled balloon-reset date.

The To Be Announced Market

Because our fixed-rate single-family PCs are considered to be homogeneous, and are issued in high volume and are highly liquid, they generally trade on a "generic" basis by PC coupon rate, also referred to as trading in the TBA market. A TBA trade in Freddie Mac securities represents a contract for the purchase or sale of PCs to be delivered at a future date; however, the specific PCs that will be delivered to fulfill the trade obligation, and thus the specific characteristics of the mortgages underlying those PCs, are not known (*i.e.*, "announced") at the time of the trade, but only shortly before the trade is settled. The use of the TBA market increases the liquidity of mortgage investments and improves the distribution of investment capital available for residential mortgage financing, thereby helping us to accomplish our statutory mission. The Securities Industry and Financial Markets Association publishes guidelines pertaining to the types of mortgages that are eligible for TBA trades. Certain of our PC securities are not eligible for TBA trades, including those backed by: (a) relief refinance mortgages with LTV ratios greater than 105%; and (b) previously modified mortgage loans where the borrower has missed one or more monthly payments in a twelve month period.

Underwriting Requirements and Quality Control Standards

We use a process of delegated underwriting for the single-family mortgages we purchase or securitize. In this process, our contracts with seller/servicers describe mortgage underwriting standards and the seller/servicers represent and warrant to us that the mortgages sold to us meet these standards. In our contracts with individual seller/servicers, we may waive or modify selected underwriting standards. Through our delegated underwriting process, mortgage loans and the borrowers' ability to repay the loans are evaluated using several critical risk characteristics, including, but not limited to, the borrower's credit score and credit history, the borrower's monthly income relative to debt payments, the loan's original LTV ratio, the documentation level, the number of borrowers, the type of mortgage product, and the occupancy type of the loan. We subsequently review a sample of these loans and, if we determine that any loan is not in compliance with our contractual standards, we may require the seller/servicer to repurchase that mortgage. In lieu of a repurchase, we may agree to allow a seller/servicer to indemnify us against loss in the event of a default by the borrower or enter into some other remedy. During 2011 and 2010, we reviewed a significant number of loans that defaulted in order to assess the sellers' compliance with our purchase contracts. For more information on our seller/servicers' repurchase obligations, including recent performance under those obligations, see "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Single-family Mortgage Seller/Servicers*."

The majority of our single-family mortgage purchase volume is evaluated using an automated underwriting software tool, either our tool (Loan Prospector), the seller/servicers' own tool, or Fannie Mae's tool. The percentage of our single-family mortgage purchase flow activity volume evaluated by the loan originator using Loan Prospector prior to being purchased by us was 41%, 39%, and 45% during 2011, 2010, and 2009, respectively. Beginning in 2009, we added a number of additional credit standards for loans evaluated by other underwriting tools to improve the quality of loans we purchase that are evaluated using these other tools. Consequently, we do not currently believe that the use of a tool other than Loan Prospector significantly increases our loan performance risk.

Other Guarantee Commitments

In certain circumstances, we provide our guarantee of mortgage-related assets held by third parties, in exchange for a guarantee fee, without securitizing the related assets. For example, we provide long-term standby commitments to certain of our single-family customers, which obligate us to purchase seriously delinquent loans that are covered by those agreements. In addition, during 2010 and 2009, we issued guarantees under the TCLFP on securities backed by HFA bonds as part of the HFA Initiative. See "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Housing Finance Agency Initiative" for further information.

Credit Enhancements

Our charter requires that single-family mortgages with LTV ratios above 80% at the time of purchase be covered by specified credit enhancements or participation interests. Primary mortgage insurance is the most prevalent type of credit enhancement protecting our single-family credit guarantee portfolio, and is typically provided on a loan-level basis. In addition, we employ other types of credit enhancements to further manage certain credit risk, including indemnification agreements, collateral pledged by lenders and subordinated security structures. We also have pool insurance covering certain single-family loans, though we did not purchase any pool insurance on single-family loans during 2011 or 2010.

Loss Mitigation and Loan Workout Activities

Loan workout activities are a key component of our loss mitigation strategy for managing and resolving troubled assets and lowering credit losses. Our single-family loss mitigation strategy emphasizes early intervention by servicers in delinquent mortgages and provides alternatives to foreclosure. Other single-family loss mitigation activities include providing our single-family servicers with default management tools designed to help them manage non-performing loans more effectively and to assist borrowers in retaining home ownership where possible, or facilitate foreclosure alternatives when continued homeownership is not an option. Loan workouts are intended to reduce the number of delinquent mortgages that proceed to foreclosure and, ultimately, mitigate our total credit losses by reducing or eliminating a portion of the costs related to foreclosed properties and avoiding the additional credit losses that likely would be incurred in a REO sale.

Our loan workouts include:

- Forbearance agreements, where reduced payments or no payments are required during a defined period, generally less than one year. They provide additional time for the borrower to return to compliance with the original terms of the mortgage or to implement another loan workout. During 2011, the average time period granted for completed

short-term forbearance agreements was between two and four months. In January 2012, we announced new unemployment forbearance terms, which permit forbearance of up to 12 months for unemployed borrowers.

- Repayment plans, which are contractual plans to make up past due amounts. They mitigate our credit losses because they assist borrowers in returning to compliance with the original terms of their mortgages. During 2011, the average time period granted for completed repayment plans was between two and five months.
- Loan modifications, which may involve changing the terms of the loan, or adding outstanding indebtedness, such as delinquent interest, to the UPB of the loan, or a combination of both. We require our servicers to examine the borrower's capacity to make payments under the new terms by reviewing the borrower's qualifications, including income. During 2011, we granted principal forbearance but did not utilize principal forgiveness for our loan modifications. Principal forbearance is a change to a loan's terms to designate a portion of the principal as non-interest -bearing. A borrower may only receive one HAMP modification, and loans may be modified once under other Freddie Mac loan modification programs. However, we reserve the right to approve subsequent non-HAMP loan modifications to the same borrower, based on the borrower's individual facts and circumstances.
- Short sale and deed in lieu of foreclosure transactions.

In addition to these loan workout initiatives, our relief refinance opportunities, including HARP (which is the portion of our relief refinance initiative for loans with LTV ratios above 80%), are a significant part of our effort to keep families in their homes.

In 2009, we began participating in HARP, which gives eligible homeowners (whose monthly payments are current) with existing loans owned or guaranteed by us or Fannie Mae an opportunity to refinance into loans with more affordable monthly payments and/or fixed-rate terms. Only borrowers with Freddie Mac owned or guaranteed mortgages are eligible for our relief refinance mortgage initiative, which is our implementation of HARP. Through December 2011, under HARP, eligible borrowers who had mortgages with current LTV ratios above 80% and up to 125% were allowed to refinance their mortgages without obtaining new mortgage insurance in excess of what is already in place. On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to attract more eligible borrowers who can benefit from refinancing their home mortgages. The revisions to HARP are available to borrowers with loans that were sold to Freddie Mac and Fannie Mae on or before May 31, 2009 and who have current LTV ratios above 80%. The program enhancements include:

- eliminating certain risk-based fees for borrowers who refinance into shorter-term mortgages, and lowering fees for other borrowers;
- removing the 125% LTV ratio ceiling for fixed-rate mortgages;
- eliminating the requirement for lenders to provide us with certain representations and warranties that they would ordinarily be required to commit to in selling loans to us;
- eliminating the need for a new property appraisal where there is a reliable automated valuation model estimate provided by the purchasing GSE; and
- extending the end date for HARP until December 31, 2013.

See "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*" for additional information on our implementation of HARP through our relief refinance mortgage initiative. For more information regarding credit risk, see "MD&A — RISK MANAGEMENT — Credit Risk," "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES," and "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS."

Investments Segment

The Investments segment reflects results from our investment, funding and hedging activities. In our Investments segment, we invest principally in mortgage-related securities and single-family performing mortgage loans, which are funded by other debt issuances and hedged using derivatives. In our Investments segment, we also provide funding and hedging management services to the Single-family Guarantee and Multifamily segments. In the Investments segment, we are not currently a substantial buyer or seller of mortgage assets.

Our Customers

Our customers for our debt securities predominantly include insurance companies, money managers, central banks, depository institutions, and pension funds. Within the Investments segment, we buy securities through various market sources. We also invest in performing single-family mortgage loans, which we intend to aggregate and securitize. We

purchase a significant portion of these loans from several lenders, as discussed in "*Single-Family Guarantee Segment — Our Customers*."

Our Competition

Historically, our principal competitors have been Fannie Mae and other financial institutions that invest in mortgage-related securities and mortgage loans, such as commercial and investment banks, dealers, thrift institutions, and insurance companies. The conservatorship, including direction provided to us by our Conservator and the restrictions on our activities under the Purchase Agreement has affected and will continue to affect our ability to compete in the business of investing in mortgage-related securities and mortgage loans.

We compete for low-cost debt funding with Fannie Mae, the FHLBs and other institutions. Competition for debt funding from these entities can vary with changes in economic, financial market and regulatory environments.

Assets

Historically, we have primarily been a buy-and-hold investor in mortgage-related securities and single-family performing mortgage loans. We may sell assets to reduce risk, provide liquidity, and improve our returns. However, due to limitations under the Purchase Agreement and those imposed by FHFA, our ability to acquire and sell mortgage assets is significantly constrained. For more information, see "Conservatorship and Related Matters" and "MD&A — CONSOLIDATED RESULTS OF OPERATIONS — Segment Earnings — *Segment Earnings-Results — Investments*."

We may enter into a variety of transactions to improve investment returns, including: (a) dollar roll transactions, which are transactions in which we enter into an agreement to purchase and subsequently resell (or sell and subsequently repurchase) agency securities; (b) purchases of agency securities (including agency REMICs); and (c) purchases of performing single-family mortgage loans. In addition, we may create REMICs from existing agency securities and sell tranches that are in demand by investors to reduce our asset balance, while conserving value for the taxpayer. We estimate our expected investment returns using an OAS approach, which is an estimate of the yield spread between a given financial instrument and a benchmark (LIBOR, agency or Treasury) yield curve. In this approach, we consider potential variability in the instrument's cash flows resulting from any options embedded in the instrument, such as the prepayment option. Additionally, in this segment we hold reperforming and modified single-family mortgage loans related to our single-family business. For our liquidity needs, we maintain a portfolio comprised primarily of cash and cash equivalents, non-mortgage-related securities, and securities purchased under agreements to resell.

Debt Financing

We fund our investment activities by issuing short-term and long-term debt. The conservatorship, and the resulting support we receive from Treasury, has enabled us to access debt funding on terms sufficient for our needs. While we believe that the support provided by Treasury pursuant to the Purchase Agreement currently enables us to maintain our access to the debt markets and to have adequate liquidity to conduct our normal business activities, the costs of our debt funding could vary due to the uncertainty about the future of the GSEs and potential investor concerns about the adequacy of funding available under the Purchase Agreement after 2012. Additionally, the Purchase Agreement limits the amount of indebtedness we can incur.

For more information, see "Conservatorship and Related Matters" and "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Liquidity."

Risk Management

Our Investments segment has responsibility for managing our interest rate risk and certain liquidity risks. Derivatives are an important part of our risk management strategy. We use derivatives primarily to: (a) regularly adjust or rebalance our funding mix in response to changes in the interest-rate characteristics of our mortgage-related assets; (b) hedge forecasted issuances of debt; (c) synthetically create callable and non-callable funding; and (d) hedge foreign-currency exposure. For more information regarding our use of derivatives, see "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK" and "NOTE 11: DERIVATIVES." For information regarding our liquidity management, see "MD&A — LIQUIDITY AND CAPITAL RESOURCES."

PC Support Activities

Our PCs are an integral part of our mortgage purchase program. Our Single-family Guarantee segment purchases many of our mortgages by issuing PCs in exchange for those mortgage loans in guarantor swap transactions. We also issue PCs backed by mortgage loans that we purchased for cash. Our competitiveness in purchasing single-family

mortgages from our seller/servicers, and thus the volume and profitability of new single-family business, can be directly affected by the relative price performance of our PCs and comparable Fannie Mae securities.

Historically, we sought to support the liquidity of the market for our PCs and the relative price performance of our PCs to comparable Fannie Mae securities through a variety of activities conducted by our Investments segment, including the purchase and sale of Freddie Mac and other agency mortgage-related securities (*e.g.*, dollar roll transactions), as well as through the issuance of REMICs and Other Structured Securities. Our purchases and sales of mortgage-related securities and our issuances of REMICs and Other Structured Securities influence the relative supply and demand for these securities, helping to support the price performance of our PCs. Depending upon market conditions, including the relative prices, supply of and demand for our mortgage-related securities and comparable Fannie Mae securities, as well as other factors, there may be substantial variability in any period in the total amount of securities we purchase or sell, and in the success of our efforts to support the liquidity and price performance of our mortgage-related securities. Historically, we incurred costs to support the liquidity and price performance of our securities, including engaging in transactions below our target rate of return. We may increase, reduce or discontinue these or other related activities at any time, which could affect the liquidity and price performance of our mortgage-related securities. Beginning in 2012, under guidance from FHFA we expect to curtail mortgage-related investments portfolio purchase and retention activities that are undertaken for the primary purpose of supporting the price performance of our PCs, which may result in a significant decline in the market share of our single-family guarantee business, lower comprehensive income, and a more rapid decline in the size of our total mortgage portfolio. For more information, see "RISK FACTORS — Competitive and Market Risks — *Any decline in the price performance of or demand for our PCs could have an adverse effect on the volume and profitability of our new single-family guarantee business.*"

Multifamily Segment

The Multifamily segment reflects results from our investment (both purchases and sales), securitization, and guarantee activities in multifamily mortgage loans and securities. Although we hold multifamily mortgage loans and non-agency CMBS that we purchased for investment, our purchases of such multifamily mortgage loans for investment have declined significantly since 2010, and our purchases of CMBS have declined significantly since 2008. The only CMBS that we have purchased since 2008 have been senior, mezzanine, and interest-only tranches related to certain of our securitization transactions, and these purchases have not been significant. Currently, our primary business strategy is to purchase multifamily mortgage loans for aggregation and then securitization. We guarantee the senior tranches of these securitizations in Other Guarantee Transactions. Our Multifamily segment also issues Other Structured Securities, but does not issue REMIC securities. Our Multifamily segment also enters into other guarantee commitments for multifamily HFA bonds and housing revenue bonds held by third parties. Historically, we issued multifamily PCs, but this activity has been insignificant in recent years.

The multifamily property market is affected by local and regional economic factors, such as employment rates, construction cycles, and relative affordability of single-family home prices, all of which influence the supply and demand for multifamily properties and pricing for apartment rentals. Our multifamily loan volume is largely sourced through established institutional channels where we are generally providing post-construction financing to larger apartment project operators with established performance records.

Our lending decisions are largely based on the assessment of the property's ability to provide rents that will generate sufficient operating cash flows to support payment of debt service obligations as measured by the expected DSCR and the loan amount relative to the value of the property as measured by the LTV ratio. Multifamily mortgages generally are without recourse to the borrower (*i.e.*, the borrower is not personally liable for any deficiency remaining after foreclosure and sale of the property), except in the event of fraud or certain other specified types of default. Therefore, repayment of the mortgage depends on the ability of the underlying property to generate cash flows sufficient to cover the related debt obligations. That in turn depends on conditions in the local rental market, local and regional economic conditions, the physical condition of the property, the quality of property management, and the level of operating expenses.

Prior to 2010, our Multifamily segment also reflected results from our investments in LIHTC partnerships formed for the purpose of providing equity funding for affordable multifamily rental properties. In these investments, we provided equity contributions to partnerships designed to sponsor the development and ongoing operations for low- and moderate-income multifamily apartments. We planned to realize a return on our investment through reductions in income tax expense that result from federal income tax credits and the deductibility of operating losses generated by the partnerships. However, we no longer make investments in such partnerships because we do not expect to be able to use the underlying federal income tax credits or the operating losses generated from the partnerships as a reduction to our taxable income

because of our inability to generate sufficient taxable income or to sell these interests to third parties. See "NOTE 3: VARIABLE INTEREST ENTITIES" for additional information.

Our Customers

We acquire a significant portion of our multifamily mortgage loans from several large seller/servicers. For 2011, our top two multifamily sellers, CBRE Capital Markets, Inc. and NorthMarq Capital, LLC, each accounted for more than 10% of our multifamily purchase volume, and together accounted for approximately 32% of our multifamily purchase volume. Our top 10 multifamily lenders represented an aggregate of approximately 81% of our multifamily purchase volume for 2011.

A significant portion of our multifamily mortgage loans are serviced by several of our large customers. See "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk* — Seller/Servicers" for additional information.

Our Competition

Historically, our principal competitors have been Fannie Mae, FHA, and other financial institutions that retain or securitize multifamily mortgages, such as commercial and investment banks, dealers, thrift institutions, and insurance companies. During 2009, many of our competitors, other than Fannie Mae and FHA, significantly curtailed their activities in the multifamily mortgage business relative to their previous levels. Beginning in 2010, some market participants began to re-emerge in the multifamily market, and we have faced increased competition from some other institutional investors. We compete on the basis of price, products, structure and service.

Underwriting Requirements and Quality Control Standards

Our process and standards for underwriting multifamily mortgages differ from those used for single-family mortgages. Unlike single-family mortgages, we generally do not use a delegated underwriting process for the multifamily mortgages we purchase or securitize. Instead, we typically underwrite and evaluate each mortgage prior to purchase. This process includes review of third-party appraisals and cash flow analysis. Our underwriting standards focus on loan quality measurement based, in part, on the LTV ratio and DSCR at origination. The DSCR is one indicator of future credit performance. The DSCR estimates a multifamily borrower's ability to service its mortgage obligation using the secured property's cash flow, after deducting non-mortgage expenses from income. The higher the DSCR, the more likely a multifamily borrower will be able to continue servicing its mortgage obligation. Our standards for multifamily loans specify maximum original LTV ratio and minimum DSCR that vary based on the loan characteristics, such as loan type (new acquisition or supplemental financing), loan term (intermediate or longer-term), and loan features (interest-only or amortizing, fixed- or variable-rate). Since the beginning of 2009, our multifamily loans are generally underwritten with requirements for a maximum original LTV ratio of 80% and a DSCR of greater than 1.25. In certain circumstances, our standards for multifamily loans allow for certain types of loans to have an original LTV ratio over 80% and/or a DSCR of less than 1.25, typically where this will serve our mission and contribute to achieving our affordable housing goals. In cases where we commit to purchase or guarantee a permanent loan upon completion of construction or rehabilitation, we generally require additional credit enhancements, because underwriting for these loans typically requires estimates of future cash flows for calculating the DSCR that is expected after construction or rehabilitation is completed.

We issue other guarantee commitments under which we guarantee payments under multifamily mortgages that back tax-exempt bonds issued by state or local HFAs. In addition, we issue other guarantee commitments guaranteeing payments on securities backed by such bonds. We underwrite the mortgages in these cases in the same manner as for mortgages that we purchase.

Multifamily seller/servicers make representations and warranties to us about the mortgage and about certain information submitted to us in the underwriting process. We have the right to require that a seller/servicer repurchase a multifamily mortgage for which there has been a breach of representation or warranty. However, because of our evaluation of underwriting information for most multifamily properties prior to purchase, repurchases have been rare.

We generally require multifamily seller/servicers to service mortgage loans they have sold to us in order to mitigate potential losses. This includes property monitoring tasks beyond those typically performed by single-family servicers. We do not oversee servicing with respect to multifamily loans we have securitized (*i.e.*, those underlying our Other Guarantee Transactions) as that oversight task is performed by subordinated bondholders. For loans over $1 million and where we have servicing oversight, servicers must generally submit an annual assessment of the mortgaged property to us based on the servicer's analysis of financial and other information about the property. In situations where a borrower or property is in distress, the frequency of communications with the borrower may be increased. Because the activities of multifamily

seller/servicers are an important part of our loss mitigation process, we rate their performance regularly and may conduct on-site reviews of their servicing operations in an effort to confirm compliance with our standards.

For loans for which we oversee servicing, if a borrower is in distress, we may offer a workout option to the borrower. For example, we may modify the terms of a multifamily mortgage loan, which gives the borrower an opportunity to bring the loan current and retain ownership of the property. These arrangements are made with the expectation that we will recover our initial investment or minimize our losses. We do not enter into these arrangements in situations where we believe we would experience a loss in the future that is greater than or equal to the loss we would experience if we foreclosed on the property at the time of the agreement.

Conservatorship and Related Matters

Overview and Entry into Conservatorship

We have been operating under conservatorship, with FHFA acting as our conservator, since September 6, 2008. The conservatorship and related matters have had a wide-ranging impact on us, including our regulatory supervision, management, business, financial condition and results of operations.

On September 7, 2008, the then Secretary of the Treasury and the then Director of FHFA announced several actions taken by Treasury and FHFA regarding Freddie Mac and Fannie Mae. These actions included the execution of the Purchase Agreement, pursuant to which we issued to Treasury both senior preferred stock and a warrant to purchase common stock. At that time, FHFA set forth the purpose and goals of the conservatorship as follows: "The purpose of appointing the Conservator is to preserve and conserve the company's assets and property and to put the company in a sound and solvent condition. The goals of the conservatorship are to help restore confidence in Fannie Mae and Freddie Mac, enhance their capacity to fulfill their mission, and mitigate the systemic risk that has contributed directly to the instability in the current market." We refer to the Purchase Agreement and the warrant as the "Treasury Agreements."

There is significant uncertainty as to whether or when we will emerge from conservatorship, as it has no specified termination date, and as to what changes may occur to our business structure during or following conservatorship, including whether we will continue to exist. We are not aware of any current plans of our Conservator to significantly change our business model or capital structure in the near-term. Our future structure and role will be determined by the Administration and Congress, and there are likely to be significant changes beyond the near-term. We have no ability to predict the outcome of these deliberations. On February 2, 2012, the Administration announced that it expects to provide more detail concerning approaches to reform the U.S. housing finance market in the spring, and that it plans to begin exploring options for legislation more intensively with Congress. On February 21, 2012, FHFA sent to Congress a strategic plan for the next phase of the conservatorships of Freddie Mac and Fannie Mae.

We receive substantial support from Treasury and FHFA, as our Conservator and regulator, and are dependent upon their continued support in order to continue operating our business. This support includes our ability to access funds from Treasury under the Purchase Agreement, which is critical to: (a) keeping us solvent; (b) allowing us to focus on our primary business objectives under conservatorship; and (c) avoiding the appointment of a receiver by FHFA under statutory mandatory receivership provisions. During 2011, the Federal Reserve took several actions designed to support an economic recovery and maintain historically low interest rates, including resumption of purchases of agency securities, which impacted and will continue to impact the demand for and value of our PCs in the market.

Our annual dividend obligation on the senior preferred stock exceeds our annual historical earnings in all but one period. Although we may experience period-to-period variability in earnings and comprehensive income, it is unlikely that we will regularly generate net income or comprehensive income in excess of our annual dividends payable to Treasury. As a result, there is significant uncertainty as to our long-term financial sustainability.

For a description of certain risks to our business relating to the conservatorship and Treasury Agreements, see "RISK FACTORS."

Supervision of Our Company During Conservatorship

Upon its appointment, FHFA, as Conservator, immediately succeeded to all rights, titles, powers and privileges of Freddie Mac, and of any stockholder, officer or director of Freddie Mac with respect to Freddie Mac and its assets, and succeeded to the title to all books, records and assets of Freddie Mac held by any other legal custodian or third party. Under conservatorship, we have additional heightened supervision and direction from our regulator, FHFA, which is also acting as our Conservator.

During the conservatorship, the Conservator has delegated certain authority to the Board of Directors to oversee, and to management to conduct, day-to-day operations so that the company can continue to operate in the ordinary course of

business. The directors serve on behalf of, and exercise authority as directed by, the Conservator. The Conservator retains the authority to withdraw or revise its delegations of authority at any time. The Conservator also retained certain significant authorities for itself, and did not delegate them to the Board. For more information on limitations on the Board's authority during conservatorship, see "DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE — Authority of the Board and Board Committees."

Because the Conservator succeeded to the powers, including voting rights, of our stockholders, who therefore do not currently have voting rights of their own, we do not expect to hold stockholders' meetings during the conservatorship, nor will we prepare or provide proxy statements for the solicitation of proxies.

We describe the powers of our Conservator in detail below under "Powers of the Conservator."

Impact of Conservatorship and Related Actions on Our Business

We conduct our business subject to the direction of FHFA as our Conservator. While the conservatorship has benefited us through, for example, improved access to the debt markets because of the support we receive from Treasury, we are also subject to certain constraints on our business activities by Treasury due to the terms of, and Treasury's rights under, the Purchase Agreement.

While in conservatorship, we can, and have continued to, enter into and enforce contracts with third parties. The Conservator continues to direct the efforts of the Board of Directors and management to address and determine the strategic direction for the company. While the Conservator has delegated certain authority to management to conduct day-to-day operations, many management decisions are subject to review and approval by FHFA and Treasury. In addition, management frequently receives directions from FHFA on various matters involving day-to-day operations.

Our business objectives and strategies have in some cases been altered since we were placed into conservatorship, and may continue to change. Based on our charter, other legislation, public statements from Treasury and FHFA officials and guidance and directives from our Conservator, we have a variety of different, and potentially competing, objectives, including:

- minimizing our credit losses;
- conserving assets;
- providing liquidity, stability and affordability in the mortgage market;
- continuing to provide additional assistance to the struggling housing and mortgage markets;
- managing to a positive stockholders' equity and reducing the need to draw funds from Treasury pursuant to the Purchase Agreement; and
- protecting the interests of taxpayers.

These objectives create conflicts in strategic and day-to-day decision making that will likely lead to suboptimal outcomes for one or more, or possibly all, of these objectives. We regularly receive direction from our Conservator on how to pursue these objectives, including direction to focus our efforts on assisting homeowners in the housing and mortgage markets. Given the important role the Administration and our Conservator have placed on Freddie Mac in addressing housing and mortgage market conditions and our public mission, we may be required to take additional actions that could have a negative impact on our business, operating results or financial condition. Because we expect many of these objectives and related initiatives to result in significant costs, there is significant uncertainty as to the ultimate impact these initiatives will have on our future capital or liquidity needs. Certain of these objectives are expected to help homeowners and the mortgage market and may help to mitigate future credit losses. However, some of our initiatives are expected to have an adverse impact on our near- and long-term financial results.

Certain changes to our business objectives and strategies are designed to provide support for the mortgage market in a manner that serves our public mission and other non-financial objectives, but may not contribute to profitability. Our efforts to help struggling homeowners and the mortgage market, in line with our mission, may help to mitigate credit losses, but in some cases may increase our expenses or require us to forego revenue opportunities in the near term. As a result, in some cases the objective of reducing the need to draw funds from Treasury will be subordinated as we provide this assistance. There is significant uncertainty as to the ultimate impact that our efforts to aid the housing and mortgage markets will have on our future capital or liquidity needs and we cannot estimate whether, and the extent to which, costs we incur in the near term as a result of these efforts, which for the most part we are not reimbursed for, will be offset by the prevention or reduction of potential future costs.

The Conservator and Treasury also did not authorize us to engage in certain business activities and transactions, including the purchase or sale of certain assets, which we believe might have had a beneficial impact on our results of operations or financial condition, if executed. Our inability to execute such transactions may adversely affect our profitability, and thus contribute to our need to draw additional funds from Treasury.

The Conservator has stated that it is taking actions in support of the objectives of a gradual transition to greater private capital participation in housing finance and greater distribution of risk to participants other than the government.

These actions and objectives create risks and uncertainties that we discuss in "RISK FACTORS." For more information on the impact of conservatorship and our current business objectives, see "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS" and "Executive Summary — *Our Primary Business Objectives.*"

Limits on Investment Activity and Our Mortgage-Related Investments Portfolio

The conservatorship has significantly impacted our investment activity. Under the terms of the Purchase Agreement and FHFA regulation, our mortgage-related investments portfolio is subject to a cap that decreases by 10% each year until the portfolio reaches $250 billion. As a result, the UPB of our mortgage-related investments portfolio could not exceed $729 billion as of December 31, 2011 and may not exceed $656.1 billion as of December 31, 2012. FHFA has indicated that such portfolio reduction targets should be viewed as minimum reductions and has encouraged us to reduce the mortgage-related investments portfolio at a faster rate than required, consistent with FHFA guidance, safety and soundness and the goal of conserving and preserving assets. We are also subject to limits on the amount of mortgage assets we can sell in any calendar month without review and approval by FHFA and, if FHFA so determines, Treasury. We are working with FHFA to identify ways to prudently accelerate the rate of contraction of the portfolio.

The table below presents the UPB of our mortgage-related investments portfolio, for purposes of the limit imposed by the Purchase Agreement and FHFA regulation.

Table 4 — Mortgage-Related Investments Portfolio[1]

	December 31, 2011	December 31, 2010
	(in millions)	
Investments segment — Mortgage investments portfolio	$449,273	$481,677
Single-family Guarantee segment — Single-family unsecuritized mortgage loans[2]	62,469	69,766
Multifamily segment — Mortgage investments portfolio	141,571	145,431
Total mortgage-related investments portfolio	$653,313	$696,874

(1) Based on UPB and excludes mortgage loans and mortgage-related securities traded, but not yet settled.
(2) Represents unsecuritized seriously delinquent single-family loans managed by the Single-family Guarantee segment.

FHFA has stated that we will not be a substantial buyer or seller of mortgages for our mortgage-related investments portfolio. FHFA also stated that, given the size of our current mortgage-related investments portfolio and the potential volume of delinquent mortgages to be removed from PC pools, it expects that any net additions to our mortgage-related investments portfolio would be related to that activity. We expect that our holdings of unsecuritized single-family loans will continue to increase during 2012 due to the revisions to HARP, which will result in our purchase of mortgage loans with LTV ratios greater than 125%, as we have not yet implemented a securitization process for such loans.

Our mortgage-related investments portfolio includes assets that are less liquid than agency securities, including unsecuritized performing single-family mortgage loans, multifamily mortgage loans, CMBS, and housing revenue bonds. Our less liquid assets collectively represented approximately 32% of the UPB of the portfolio at December 31, 2011, as compared to 30% as of December 31, 2010. Our mortgage-related investments portfolio also includes illiquid assets, including unsecuritized seriously delinquent and modified single-family mortgage loans which we removed from PC trusts, and our investments in non-agency mortgage-related securities backed by subprime, option ARM, and Alt-A and other loans. Our illiquid assets collectively represented approximately 29% of the UPB of the portfolio at December 31, 2011, as compared to 27% as of December 31, 2010. The changing composition of our mortgage-related investments portfolio to a greater proportion of illiquid assets may influence our decisions regarding funding and hedging. The description above of the liquidity of our assets is based on our own internal expectations given current market conditions. Changes in market conditions could continue to affect the liquidity of our assets at any given time.

Powers of the Conservator

Under the GSE Act, the conservatorship provisions applicable to Freddie Mac are based generally on federal banking law. As discussed below, FHFA has broad powers when acting as our conservator. For more information on the GSE Act, see "Regulation and Supervision."

General Powers of the Conservator

Upon its appointment, the Conservator immediately succeeded to all rights, titles, powers and privileges of Freddie Mac, and of any stockholder, officer or director of Freddie Mac with respect to Freddie Mac and its assets. The Conservator also succeeded to the title to all books, records and assets of Freddie Mac held by any other legal custodian or third party.

Under the GSE Act, the Conservator may take any actions it determines are necessary and appropriate to carry on our business, support public mission objectives, and preserve and conserve our assets and property. The Conservator's powers include the ability to transfer or sell any of our assets or liabilities (subject to certain limitations and post-transfer notice provisions for transfers of qualified financial contracts, as defined below under "Special Powers of the Conservator — *Security Interests Protected; Exercise of Rights Under Qualified Financial Contracts*") without any approval, assignment of rights or consent of any party. The GSE Act, however, provides that mortgage loans and mortgage-related assets that have been transferred to a Freddie Mac securitization trust must be held for the beneficial owners of the trust and cannot be used to satisfy our general creditors.

Under the GSE Act, in connection with any sale or disposition of our assets, the Conservator must conduct its operations to maximize the NPV return from the sale or disposition of such assets, to minimize the amount of any loss realized in the resolution of cases, and to ensure adequate competition and fair and consistent treatment of offerors. The Conservator is required to maintain a full accounting of the conservatorship and make its reports available upon request to stockholders and members of the public.

We remain liable for all of our obligations relating to our outstanding debt and mortgage-related securities. FHFA has stated that our obligations will be paid in the normal course of business during the conservatorship.

Special Powers of the Conservator

Disaffirmance and Repudiation of Contracts

Under the GSE Act, the Conservator may disaffirm or repudiate contracts (subject to certain limitations for qualified financial contracts) that we entered into prior to its appointment as Conservator if it determines, in its sole discretion, that performance of the contract is burdensome and that disaffirmance or repudiation of the contract promotes the orderly administration of our affairs. The GSE Act requires FHFA to exercise its right to disaffirm or repudiate most contracts within a reasonable period of time after its appointment as Conservator. In a final rule published in June 2011, FHFA defines a reasonable period of time following appointment of a conservator or receiver to be 18 months. The Conservator has advised us that it has no intention of repudiating any guarantee obligation relating to Freddie Mac's mortgage-related securities because it views repudiation as incompatible with the goals of the conservatorship. We can, and have continued to, enter into, perform and enforce contracts with third parties.

Limitations on Enforcement of Contractual Rights by Counterparties

The GSE Act provides that the Conservator may enforce most contracts entered into by us, notwithstanding any provision of the contract that provides for termination, default, acceleration, or exercise of rights upon the appointment of, or the exercise of rights or powers by, a conservator.

Security Interests Protected; Exercise of Rights Under Qualified Financial Contracts

Notwithstanding the Conservator's powers under the GSE Act described above, the Conservator must recognize legally enforceable or perfected security interests, except where such an interest is taken in contemplation of our insolvency or with the intent to hinder, delay or defraud us or our creditors. In addition, the GSE Act provides that no person will be stayed or prohibited from exercising specified rights in connection with qualified financial contracts, including termination or acceleration (other than solely by reason of, or incidental to, the appointment of the Conservator), rights of offset, and rights under any security agreement or arrangement or other credit enhancement relating to such contract. The term qualified financial contract means any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, and any similar agreement as determined by FHFA by regulation, resolution or order.

Avoidance of Fraudulent Transfers

Under the GSE Act, the Conservator may avoid, or refuse to recognize, a transfer of any property interest of Freddie Mac or of any of our debtors, and also may avoid any obligation incurred by Freddie Mac or by any debtor of Freddie Mac, if the transfer or obligation was made: (a) within five years of September 6, 2008; and (b) with the intent to hinder, delay, or defraud Freddie Mac, FHFA, the Conservator or, in the case of a transfer in connection with a qualified financial

contract, our creditors. To the extent a transfer is avoided, the Conservator may recover, for our benefit, the property or, by court order, the value of that property from the initial or subsequent transferee, other than certain transfers that were made for value, including satisfaction or security of a present or antecedent debt, and in good faith. These rights are superior to any rights of a trustee or any other party, other than a federal agency, under the U.S. bankruptcy code.

Modification of Statutes of Limitations

Under the GSE Act, notwithstanding any provision of any contract, the statute of limitations with regard to any action brought by the Conservator is: (a) for claims relating to a contract, the longer of six years or the applicable period under state law; and (b) for tort claims, the longer of three years or the applicable period under state law, in each case, from the later of September 6, 2008 or the date on which the cause of action accrues. In addition, notwithstanding the state law statute of limitation for tort claims, the Conservator may bring an action for any tort claim that arises from fraud, intentional misconduct resulting in unjust enrichment, or intentional misconduct resulting in substantial loss to us, if the state's statute of limitations expired not more than five years before September 6, 2008.

Suspension of Legal Actions

Under the GSE Act, in any judicial action or proceeding to which we are or become a party, the Conservator may request, and the applicable court must grant, a stay for a period not to exceed 45 days.

Treatment of Breach of Contract Claims

Under the GSE Act, any final and unappealable judgment for monetary damages against the Conservator for breach of an agreement executed or approved in writing by the Conservator will be paid as an administrative expense of the Conservator.

Attachment of Assets and Other Injunctive Relief

Under the GSE Act, the Conservator may seek to attach assets or obtain other injunctive relief without being required to show that any injury, loss or damage is irreparable and immediate.

Subpoena Power

The GSE Act provides the Conservator, with the approval of the Director of FHFA, with subpoena power for purposes of carrying out any power, authority or duty with respect to Freddie Mac.

Treasury Agreements

The Reform Act granted Treasury temporary authority (through December 31, 2009) to purchase any obligations and other securities issued by Freddie Mac on such terms and conditions and in such amounts as Treasury may determine, upon mutual agreement between Treasury and Freddie Mac. Pursuant to this authority, Treasury entered into several agreements with us, as described below.

Purchase Agreement and Related Issuance of Senior Preferred Stock and Common Stock Warrant

Purchase Agreement

On September 7, 2008, we, through FHFA, in its capacity as Conservator, and Treasury entered into the Purchase Agreement. The Purchase Agreement was subsequently amended and restated on September 26, 2008, and further amended on May 6, 2009 and December 24, 2009. Pursuant to the Purchase Agreement, on September 8, 2008 we issued to Treasury: (a) one million shares of Variable Liquidation Preference Senior Preferred Stock (with an initial liquidation preference of $1 billion), which we refer to as the senior preferred stock; and (b) a warrant to purchase, for a nominal price, shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding on a fully diluted basis at the time the warrant is exercised, which we refer to as the warrant. The terms of the senior preferred stock and warrant are summarized in separate sections below. We did not receive any cash proceeds from Treasury as a result of issuing the senior preferred stock or the warrant. However, deficits in our net worth have made it necessary for us to make substantial draws on Treasury's funding commitment under the Purchase Agreement. As a result, the aggregate liquidation preference of the senior preferred stock has increased from $1.0 billion as of September 8, 2008 to $72.2 billion at December 31, 2011 (this figure reflects the receipt of funds requested in the draw to address our net worth deficit as of September 30, 2011). Our dividend obligation on the senior preferred stock, based on that liquidation preference, is $7.22 billion, which exceeds our annual earnings in all but one period.

The senior preferred stock and warrant were issued to Treasury as an initial commitment fee in consideration of the initial commitment from Treasury to provide up to $100 billion (subsequently increased to $200 billion) in funds to us

under the terms and conditions set forth in the Purchase Agreement. Under the Purchase Agreement, the $200 billion maximum amount of the commitment from Treasury will increase as necessary to accommodate any cumulative reduction in our net worth during 2010, 2011 and 2012. If we do not have a capital surplus (*i.e.*, positive net worth) at the end of 2012, then the amount of funding available after 2012 will be $149.3 billion ($200 billion funding commitment reduced by cumulative draws for net worth deficits through December 31, 2009). In the event we have a capital surplus at the end of 2012, then the amount of funding available after 2012 will depend on the size of that surplus relative to cumulative draws needed for deficits during 2010 to 2012, as follows:

- If the year-end 2012 surplus is lower than the cumulative draws needed for 2010 to 2012, then the amount of available funding is $149.3 billion less the surplus.
- If the year-end 2012 surplus exceeds the cumulative draws for 2010 to 2012, then the amount of available funding is $149.3 billion less the amount of those draws.

In addition to the issuance of the senior preferred stock and warrant, we are required under the Purchase Agreement to pay a quarterly commitment fee to Treasury. Under the Purchase Agreement, the fee is to be determined in an amount mutually agreed to by us and Treasury with reference to the market value of Treasury's funding commitment as then in effect, and reset every five years. We may elect to pay the quarterly commitment fee in cash or add the amount of the fee to the liquidation preference of the senior preferred stock. Treasury may waive the quarterly commitment fee for up to one year at a time, in its sole discretion, based on adverse conditions in the U.S. mortgage market. The fee was originally scheduled to begin accruing on January 1, 2010 (with the first fee payable on March 31, 2010), but was delayed until January 1, 2011 (with the first fee payable on March 31, 2011) pursuant to an amendment to the Purchase Agreement. Treasury waived the fee for all quarters of 2011 and the first quarter of 2012, but has indicated that it remains committed to protecting taxpayers and ensuring that our future positive earnings are returned to taxpayers as compensation for their investment. Treasury stated that it would reevaluate whether the quarterly commitment fee should be set in the second quarter of 2012. Absent Treasury waiving the commitment fee in the second quarter of 2012, this quarterly commitment fee will begin accruing on April 1, 2012 and must be paid each quarter for as long as the Purchase Agreement is in effect. The amount of the fee has not yet been determined and could be substantial.

The Purchase Agreement provides that, on a quarterly basis, we generally may draw funds up to the amount, if any, by which our total liabilities exceed our total assets, as reflected on our GAAP balance sheet for the applicable fiscal quarter (referred to as the deficiency amount), provided that the aggregate amount funded under the Purchase Agreement may not exceed Treasury's commitment. The Purchase Agreement provides that the deficiency amount will be calculated differently if we become subject to receivership or other liquidation process. The deficiency amount may be increased above the otherwise applicable amount upon our mutual written agreement with Treasury. In addition, if the Director of FHFA determines that the Director will be mandated by law to appoint a receiver for us unless our capital is increased by receiving funds under the commitment in an amount up to the deficiency amount (subject to the maximum amount that may be funded under the agreement), then FHFA, in its capacity as our Conservator, may request that Treasury provide funds to us in such amount. The Purchase Agreement also provides that, if we have a deficiency amount as of the date of completion of the liquidation of our assets, we may request funds from Treasury in an amount up to the deficiency amount (subject to the maximum amount that may be funded under the agreement). Any amounts that we draw under the Purchase Agreement will be added to the liquidation preference of the senior preferred stock. No additional shares of senior preferred stock are required to be issued under the Purchase Agreement. As a result, the expiration on December 31, 2009 of Treasury's temporary authority to purchase obligations and other securities issued by Freddie Mac did not affect Treasury's funding commitment under the Purchase Agreement.

Under the Purchase Agreement, our ability to repay the liquidation preference of the senior preferred stock is limited and we will not be able to do so for the foreseeable future, if at all. The amounts payable for dividends on the senior preferred stock are substantial and will have an adverse impact on our financial position and net worth. The payment of dividends on our senior preferred stock in cash reduces our net worth. For periods in which our earnings and other changes in equity do not result in positive net worth, draws under the Purchase Agreement effectively fund the cash payment of senior preferred dividends to Treasury. It is unlikely that, over the long-term, we will generate net income or comprehensive income in excess of our annual dividends payable to Treasury, although we may experience period-to-period variability in earnings and comprehensive income. As a result, we expect to make additional draws in future periods.

The Purchase Agreement provides that the Treasury's funding commitment will terminate under any of the following circumstances: (a) the completion of our liquidation and fulfillment of Treasury's obligations under its funding commitment at that time; (b) the payment in full of, or reasonable provision for, all of our liabilities (whether or not

contingent, including mortgage guarantee obligations); and (c) the funding by Treasury of the maximum amount of the commitment under the Purchase Agreement. In addition, Treasury may terminate its funding commitment and declare the Purchase Agreement null and void if a court vacates, modifies, amends, conditions, enjoins, stays or otherwise affects the appointment of the Conservator or otherwise curtails the Conservator's powers. Treasury may not terminate its funding commitment under the Purchase Agreement solely by reason of our being in conservatorship, receivership or other insolvency proceeding, or due to our financial condition or any adverse change in our financial condition.

The Purchase Agreement provides that most provisions of the agreement may be waived or amended by mutual written agreement of the parties; however, no waiver or amendment of the agreement is permitted that would decrease Treasury's aggregate funding commitment or add conditions to Treasury's funding commitment if the waiver or amendment would adversely affect in any material respect the holders of our debt securities or Freddie Mac mortgage guarantee obligations.

In the event of our default on payments with respect to our debt securities or Freddie Mac mortgage guarantee obligations, if Treasury fails to perform its obligations under its funding commitment and if we and/or the Conservator are not diligently pursuing remedies in respect of that failure, the holders of these debt securities or Freddie Mac mortgage guarantee obligations may file a claim in the United States Court of Federal Claims for relief requiring Treasury to fund to us the lesser of: (a) the amount necessary to cure the payment defaults on our debt and Freddie Mac mortgage guarantee obligations; and (b) the lesser of: (i) the deficiency amount; and (ii) the maximum amount of the commitment less the aggregate amount of funding previously provided under the commitment. Any payment that Treasury makes under those circumstances will be treated for all purposes as a draw under the Purchase Agreement that will increase the liquidation preference of the senior preferred stock.

The Purchase Agreement has an indefinite term and can terminate only in limited circumstances, which do not include the end of the conservatorship. The Purchase Agreement therefore could continue after the conservatorship ends.

Issuance of Senior Preferred Stock

Shares of the senior preferred stock have a par value of $1, and have a stated value and initial liquidation preference equal to $1,000 per share. The liquidation preference of the senior preferred stock is subject to adjustment. Dividends that are not paid in cash for any dividend period will accrue and be added to the liquidation preference of the senior preferred stock. In addition, any amounts Treasury pays to us pursuant to its funding commitment under the Purchase Agreement and any quarterly commitment fees that are not paid in cash to Treasury nor waived by Treasury will be added to the liquidation preference of the senior preferred stock. As described below, we may make payments to reduce the liquidation preference of the senior preferred stock in limited circumstances.

Treasury, as the holder of the senior preferred stock, is entitled to receive, when, as and if declared by our Board of Directors, cumulative quarterly cash dividends at the annual rate of 10% per year on the then-current liquidation preference of the senior preferred stock. Through December 31, 2011, we have paid cash dividends of $16.5 billion at the direction of the Conservator. If at any time we fail to pay cash dividends in a timely manner, then immediately following such failure and for all dividend periods thereafter until the dividend period following the date on which we have paid in cash full cumulative dividends (including any unpaid dividends added to the liquidation preference), the dividend rate will be 12% per year.

The senior preferred stock is senior to our common stock and all other outstanding series of our preferred stock, as well as any capital stock we issue in the future, as to both dividends and rights upon liquidation. The senior preferred stock provides that we may not, at any time, declare or pay dividends on, make distributions with respect to, or redeem, purchase or acquire, or make a liquidation payment with respect to, any common stock or other securities ranking junior to the senior preferred stock unless: (a) full cumulative dividends on the outstanding senior preferred stock (including any unpaid dividends added to the liquidation preference) have been declared and paid in cash; and (b) all amounts required to be paid with the net proceeds of any issuance of capital stock for cash (as described in the following paragraph) have been paid in cash. Shares of the senior preferred stock are not convertible. Shares of the senior preferred stock have no general or special voting rights, other than those set forth in the certificate of designation for the senior preferred stock or otherwise required by law. The consent of holders of at least two-thirds of all outstanding shares of senior preferred stock is generally required to amend the terms of the senior preferred stock or to create any class or series of stock that ranks prior to or on parity with the senior preferred stock.

We are not permitted to redeem the senior preferred stock prior to the termination of Treasury's funding commitment set forth in the Purchase Agreement; however, we are permitted to pay down the liquidation preference of the outstanding shares of senior preferred stock to the extent of: (a) accrued and unpaid dividends previously added to the liquidation

preference and not previously paid down; and (b) quarterly commitment fees previously added to the liquidation preference and not previously paid down. In addition, if we issue any shares of capital stock for cash while the senior preferred stock is outstanding, the net proceeds of the issuance must be used to pay down the liquidation preference of the senior preferred stock; however, the liquidation preference of each share of senior preferred stock may not be paid down below $1,000 per share prior to the termination of Treasury's funding commitment. Following the termination of Treasury's funding commitment, we may pay down the liquidation preference of all outstanding shares of senior preferred stock at any time, in whole or in part. If, after termination of Treasury's funding commitment, we pay down the liquidation preference of each outstanding share of senior preferred stock in full, the shares will be deemed to have been redeemed as of the payment date.

Issuance of Common Stock Warrant

The warrant gives Treasury the right to purchase shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding on a fully diluted basis on the date of exercise. The warrant may be exercised in whole or in part at any time on or before September 7, 2028, by delivery to us of: (a) a notice of exercise; (b) payment of the exercise price of $0.00001 per share; and (c) the warrant. If the market price of one share of our common stock is greater than the exercise price, then, instead of paying the exercise price, Treasury may elect to receive shares equal to the value of the warrant (or portion thereof being canceled) pursuant to the formula specified in the warrant. Upon exercise of the warrant, Treasury may assign the right to receive the shares of common stock issuable upon exercise to any other person.

As of March 9, 2012, Treasury has not exercised the warrant.

Covenants Under Treasury Agreements

The Purchase Agreement and warrant contain covenants that significantly restrict our business activities. For example, as a result of these covenants, we can no longer obtain additional equity financing (other than pursuant to the Purchase Agreement) and we are limited in the amount and type of debt financing we may obtain.

Purchase Agreement Covenants

The Purchase Agreement provides that, until the senior preferred stock is repaid or redeemed in full, we may not, without the prior written consent of Treasury:

- declare or pay any dividend (preferred or otherwise) or make any other distribution with respect to any Freddie Mac equity securities (other than with respect to the senior preferred stock or warrant);
- redeem, purchase, retire or otherwise acquire any Freddie Mac equity securities (other than the senior preferred stock or warrant);
- sell or issue any Freddie Mac equity securities (other than the senior preferred stock, the warrant and the common stock issuable upon exercise of the warrant and other than as required by the terms of any binding agreement in effect on the date of the Purchase Agreement);
- terminate the conservatorship (other than in connection with a receivership);
- sell, transfer, lease or otherwise dispose of any assets, other than dispositions for fair market value: (a) to a limited life regulated entity (in the context of a receivership); (b) of assets and properties in the ordinary course of business, consistent with past practice; (c) in connection with our liquidation by a receiver; (d) of cash or cash equivalents for cash or cash equivalents; or (e) to the extent necessary to comply with the covenant described below relating to the reduction of our mortgage-related investments portfolio;
- issue any subordinated debt;
- enter into a corporate reorganization, recapitalization, merger, acquisition or similar event; or
- engage in transactions with affiliates unless the transaction is: (a) pursuant to the Purchase Agreement, the senior preferred stock or the warrant; (b) upon arm's length terms; or (c) a transaction undertaken in the ordinary course or pursuant to a contractual obligation or customary employment arrangement in existence on the date of the Purchase Agreement.

These covenants also apply to our subsidiaries.

The Purchase Agreement also provides that we may not own mortgage assets with UPB in excess of: (a) $900 billion on December 31, 2009; or (b) on December 31 of each year thereafter, 90% of the aggregate amount of mortgage assets we are permitted to own as of December 31 of the immediately preceding calendar year, provided that we are not

required to own less than $250 billion in mortgage assets. Under the Purchase Agreement, we also may not incur indebtedness that would result in the par value of our aggregate indebtedness exceeding 120% of the amount of mortgage assets we are permitted to own on December 31 of the immediately preceding calendar year. The mortgage asset and indebtedness limitations are determined without giving effect to the changes to the accounting guidance for transfers of financial assets and consolidation of VIEs, under which we consolidated our single-family PC trusts and certain of our Other Guarantee Transactions in our financial statements as of January 1, 2010.

In addition, the Purchase Agreement provides that we may not enter into any new compensation arrangements or increase amounts or benefits payable under existing compensation arrangements of any named executive officer or other executive officer (as such terms are defined by SEC rules) without the consent of the Director of FHFA, in consultation with the Secretary of the Treasury.

As of March 9, 2012, we believe we were in compliance with the covenants under the Purchase Agreement.

Warrant Covenants

The warrant we issued to Treasury includes, among others, the following covenants: (a) we may not permit any of our significant subsidiaries to issue capital stock or equity securities, or securities convertible into or exchangeable for such securities, or any stock appreciation rights or other profit participation rights; (b) we may not take any action to avoid the observance or performance of the terms of the warrant and we must take all actions necessary or appropriate to protect Treasury's rights against impairment or dilution; and (c) we must provide Treasury with prior notice of specified actions relating to our common stock, such as setting a record date for a dividend payment, granting subscription or purchase rights, authorizing a recapitalization, reclassification, merger or similar transaction, commencing a liquidation of the company or any other action that would trigger an adjustment in the exercise price or number or amount of shares subject to the warrant.

As of March 9, 2012, we believe we were in compliance with the covenants under the warrant.

Effect of Conservatorship and Treasury Agreements on Existing Stockholders

The conservatorship, the Purchase Agreement and the senior preferred stock and warrant issued to Treasury have materially limited the rights of our common and preferred stockholders (other than Treasury as holder of the senior preferred stock) and had a number of adverse effects on our common and preferred stockholders. See "RISK FACTORS — Conservatorship and Related Matters — *The conservatorship and investment by Treasury has had, and will continue to have, a material adverse effect on our common and preferred stockholders.*"

As described above, the conservatorship and Treasury Agreements also impact our business in ways that indirectly affect our common and preferred stockholders. By their terms, the Purchase Agreement, senior preferred stock and warrant will continue to exist even if we are released from the conservatorship. For a description of the risks to our business relating to the conservatorship and Treasury Agreements, see "RISK FACTORS."

Regulation and Supervision

In addition to our oversight by FHFA as our Conservator, we are subject to regulation and oversight by FHFA under our charter and the GSE Act, which was modified substantially by the Reform Act. We are also subject to certain regulation by other government agencies.

Federal Housing Finance Agency

FHFA is an independent agency of the federal government responsible for oversight of the operations of Freddie Mac, Fannie Mae and the FHLBs. The Director of FHFA is appointed by the President and confirmed by the Senate for a five-year term, removable only for cause. In the discussion below, we refer to Freddie Mac and Fannie Mae as the "enterprises."

The Federal Housing Finance Oversight Board, or the Oversight Board, is responsible for advising the Director of FHFA with respect to overall strategies and policies. The Oversight Board consists of the Director of FHFA as Chairperson, the Secretary of the Treasury, the Chair of the SEC and the Secretary of HUD.

Under the GSE Act, FHFA has safety and soundness authority that is comparable to, and in some respects, broader than that of the federal banking agencies. The GSE Act also provides FHFA with powers that, even if we were not in conservatorship, include the authority to raise capital levels above statutory minimum levels, regulate the size and content of our mortgage-related investments portfolio, and approve new mortgage products.

FHFA is responsible for implementing the various provisions of the GSE Act that were added by the Reform Act. In general, we remain subject to existing regulations, orders and determinations until new ones are issued or made.

Receivership

Under the GSE Act, FHFA must place us into receivership if FHFA determines in writing that our assets are less than our obligations for a period of 60 days. FHFA has notified us that the measurement period for any mandatory receivership determination with respect to our assets and obligations would commence no earlier than the SEC public filing deadline for our quarterly or annual financial statements and would continue for 60 calendar days after that date. FHFA has also advised us that, if, during that 60-day period, we receive funds from Treasury in an amount at least equal to the deficiency amount under the Purchase Agreement, the Director of FHFA will not make a mandatory receivership determination.

In addition, we could be put into receivership at the discretion of the Director of FHFA at any time for other reasons, including conditions that FHFA has already asserted existed at the time the then Director of FHFA placed us into conservatorship. These include: (a) a substantial dissipation of assets or earnings due to unsafe or unsound practices; (b) the existence of an unsafe or unsound condition to transact business; (c) an inability to meet our obligations in the ordinary course of business; (d) a weakening of our condition due to unsafe or unsound practices or conditions; (e) critical undercapitalization; (f) the likelihood of losses that will deplete substantially all of our capital; or (g) by consent.

On June 20, 2011, FHFA published a final rule that addresses conservatorship and receivership operations of Freddie Mac, Fannie Mae and the FHLBs. The final rule establishes a framework to be used by FHFA when acting as conservator or receiver, supplementing and clarifying statutory authorities. Among other provisions, the final rule indicates that FHFA will not permit payment of securities litigation claims during conservatorship and that claims by current or former shareholders arising as a result of their status as shareholders would receive the lowest priority of claim in receivership. In addition, the final rule indicates that administrative expenses of the conservatorship will also be deemed to be administrative expenses of a subsequent receivership and that capital distributions may not be made during conservatorship, except as specified in the final rule.

Capital Standards

FHFA has suspended capital classification of us during conservatorship in light of the Purchase Agreement. The existing statutory and FHFA-directed regulatory capital requirements are not binding during the conservatorship. We continue to provide our submission to FHFA on minimum capital. FHFA continues to publish relevant capital figures (minimum capital requirement, core capital, and GAAP net worth) but does not publish our critical capital, risk-based capital or subordinated debt levels during conservatorship.

On October 9, 2008, FHFA also announced that it will engage in rulemaking to revise our minimum capital and risk-based capital requirements. The GSE Act provides that FHFA may increase minimum capital levels from the existing statutory percentages either by regulation or on a temporary basis by order. On March 3, 2011, FHFA issued a final rule setting forth procedures and standards for such a temporary increase in minimum capital levels. FHFA may also, by regulation or order, establish capital or reserve requirements with respect to any product or activity of an enterprise, as FHFA considers appropriate. In addition, under the GSE Act, FHFA must, by regulation, establish risk-based capital requirements to ensure the enterprises operate in a safe and sound manner, maintaining sufficient capital and reserves to support the risks that arise in their operations and management. In developing the new risk-based capital requirements, FHFA is not bound by the risk-based capital standards in effect prior to the amendment of the GSE Act by the Reform Act.

Our regulatory minimum capital is a leverage-based measure that is generally calculated based on GAAP and reflects a 2.50% capital requirement for on-balance sheet assets and 0.45% capital requirement for off-balance sheet obligations. Pursuant to regulatory guidance from FHFA, our minimum capital requirement was not automatically affected by our January 1, 2010 adoption of amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs. Specifically, upon adoption of this accounting guidance, FHFA directed us, for purposes of minimum capital, to continue reporting our PCs held by third parties and other aggregate off-balance sheet obligations using a 0.45% capital requirement. Notwithstanding this guidance, FHFA reserves the authority under the GSE Act to raise the minimum capital requirement for any of our assets or activities.

For additional information, see "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Capital Resources" and "NOTE 15: REGULATORY CAPITAL." Also, see "RISK FACTORS — Legal and Regulatory Risks" for more information.

New Products

The GSE Act requires the enterprises to obtain the approval of FHFA before initially offering any product, subject to certain exceptions. The GSE Act provides for a public comment process on requests for approval of new products. FHFA may temporarily approve a product without soliciting public comment if delay would be contrary to the public interest. FHFA may condition approval of a product on specific terms, conditions and limitations. The GSE Act also requires the enterprises to provide FHFA with written notice of any new activity that we or Fannie Mae consider not to be a product.

On July 2, 2009, FHFA published an interim final rule on prior approval of new products, implementing the new product provisions for us and Fannie Mae in the GSE Act. The rule establishes a process for Freddie Mac and Fannie Mae to provide prior notice to the Director of FHFA of a new activity and, if applicable, to obtain prior approval from the Director if the new activity is determined to be a new product. On August 31, 2009, Freddie Mac and Fannie Mae filed joint public comments on the interim final rule with FHFA. FHFA has stated that permitting us to engage in new products is inconsistent with the goals of conservatorship and has instructed us not to submit such requests under the interim final rule. This could have an adverse effect on our business and profitability in future periods. We cannot currently predict when or if FHFA will permit us to engage in new products under the interim final rule, nor when the rule will be finalized.

Affordable Housing Goals

We are subject to annual affordable housing goals. In light of these housing goals, we may make adjustments to our mortgage loan sourcing and purchase strategies, which could further increase our credit losses. These strategies could include entering into some purchase and securitization transactions with lower expected economic returns than our typical transactions. We at times relax some of our underwriting criteria to obtain goal-qualifying mortgage loans and make additional investments in higher risk mortgage loan products that we believe are more likely to serve the borrowers targeted by the goals, but have not done so to the same extent since 2010.

If the Director of FHFA finds that we failed to meet a housing goal and that achievement of the housing goal was feasible, the GSE Act states that the Director may require the submission of a housing plan with respect to the housing goal for approval by the Director. The housing plan must describe the actions we would take to achieve the unmet goal in the future. FHFA has the authority to take actions against us, including issuing a cease and desist order or assessing civil money penalties, if we: (a) fail to submit a required housing plan or fail to make a good faith effort to comply with a plan approved by FHFA; or (b) fail to submit certain data relating to our mortgage purchases, information or reports as required by law. See “RISK FACTORS — Legal and Regulatory Risks — *We may make certain changes to our business in an attempt to meet the housing goals and subgoals set for us by FHFA that may increase our losses*.”

Effective beginning calendar year 2010, the Reform Act requires that FHFA establish, by regulation, four single-family housing goals, one multifamily special affordable housing goal and requirements relating to multifamily housing for very low-income families. Our housing goals for 2010 and 2011, as established by FHFA, are described below. FHFA has not yet established our housing goals for 2012.

Affordable Housing Goals for 2010 and 2011 and Results for 2010

On September 14, 2010, FHFA published in the Federal Register a final rule establishing new affordable housing goals for Freddie Mac and Fannie Mae for 2010 and 2011. The final rule was effective on October 14, 2010. The rule establishes four goals and one subgoal for single-family owner-occupied housing, one multifamily special affordable housing goal, and one multifamily special affordable housing subgoal. Three of the single-family housing goals and the subgoal target purchase money mortgages for: (a) low-income families; (b) very low-income families; and/or (c) families that reside in low-income areas. The single-family housing goals also include one that targets refinancing mortgages for low-income families. The multifamily special affordable housing goal targets multifamily rental housing affordable to low-income families. The multifamily special affordable housing subgoal targets multifamily rental housing affordable to very low-income families.

The single-family goals are expressed as a percentage of the total number of eligible mortgages underlying our total single-family mortgage purchases. The multifamily goals are expressed in terms of minimum numbers of units financed.

With respect to the single-family goals, the rule includes: (a) an assessment of performance as compared to the actual share of the market that meets the criteria for each goal; and (b) a benchmark level to measure performance. Where our performance on a single-family goal falls short of the benchmark for a goal, we still could achieve the goal if our performance meets or exceeds the actual share of the market that meets the criteria for the goal for that year. For example, if the actual market share of mortgages to low-income families relative to all mortgages originated to finance

owner-occupied single-family properties is lower than the 27% benchmark rate, we would still satisfy this goal if we achieve that actual market percentage.

The rule makes a number of changes to the previous counting methods for goals credit, including prohibiting housing goals credit for purchases of private-label securities. However, the rule allows credit under the low-income refinance goal for permanent MHA Program loan modifications. The rule also states that FHFA does not intend for the enterprises to undertake economically adverse or high-risk activities in support of the goals, nor does it intend for the enterprises' state of conservatorship to be a justification for withdrawing support from these important market segments.

Our housing goals for 2010 and 2011 and results for 2010 are set forth in the table below.

Table 5 — Affordable Housing Goals for 2010 and 2011 and Results for 2010

	Goals for 2010 and 2011	Market Level for 2010(1)	Results for 2010(2)
Single-family purchase money goals (benchmark levels):			
Low-income	27%	27.2%	26.8%
Very low-income	8%	8.1%	7.9%
Low-income areas(3)	24%	24.0%	23.0%
Low-income areas subgoal	13%	12.1%	10.4%
Single-family refinance low-income goal (benchmark level)	21%	20.2%	22.0%
Multifamily low-income goal (in units)	161,250	N/A	161,500
Multifamily low-income subgoal (in units)	21,000	N/A	29,656

(1) Determined by FHFA based on its analysis of market data for 2010.
(2) In February 2012, at the direction of FHFA, we revised our single-family results for 2010 to exclude mortgages underlying certain HFA bonds.
(3) FHFA will annually set the benchmark level for the low-income areas goal based on the benchmark level for the low-income areas subgoal, plus an adjustment factor reflecting the additional incremental share of mortgages for moderate-income families in designated disaster areas in the most recent year for which such data is available. For 2010 and 2011, FHFA set the benchmark level for the low-income areas goal at 24% for both periods.

We previously reported that we did not achieve the benchmark levels for the single-family low-income areas goal and the related low-income areas subgoal for 2010 and that we did achieve the benchmark levels for the single-family low-income purchase and very low-income purchase goals. In February 2012, at the direction of FHFA, we revised our single-family results for 2010 to exclude mortgages underlying certain HFA bonds. FHFA determined that the resulting small shortfalls were not sufficient to require reopening its previous determination that the single-family low-income purchase and very low-income purchase goals had been met. FHFA has informed us that, given that 2010 is the first year under which FHFA utilized the benchmark or market level for the housing goals and that we continue to operate under conservatorship, FHFA will not be requiring housing plans for goals that we did not achieve.

We expect to report our performance with respect to the 2011 affordable housing goals in March 2012. At this time, based on preliminary information, we believe we met the single-family refinance low-income goal and both multifamily goals, and believe we failed to meet the FHFA benchmark level for the single-family purchase-money goals and the subgoal for 2011. In such cases, FHFA regulations allow us to achieve a goal if our qualifying share matches that of the market, as measured by the Home Mortgage Disclosure Act. Because the Home Mortgage Disclosure Act data for 2011 will not be released until September 2012, FHFA will not be able to make a final determination on our performance until that time. If we fail to meet both the FHFA benchmark level and the market level, we may enter into discussions with FHFA concerning whether these goals were infeasible under the terms of the GSE Act, due to market and economic conditions and our financial condition. For more information, see "EXECUTIVE COMPENSATION — Compensation Discussion and Analysis — *Executive Management Compensation Program — Determination of the Performance-Based Portion of 2011 Deferred Base Salary.*"

We anticipate that the difficult market conditions and our financial condition will continue to affect our affordable housing activities in 2012. However, we view the purchase of mortgage loans that are eligible to count toward our affordable housing goals to be a principal part of our mission and business and we are committed to facilitating the financing of affordable housing for low- and moderate-income families. See also "RISK FACTORS — Legal and Regulatory Risks — *We may make certain changes to our business in an attempt to meet the housing goals and subgoals set for us by FHFA that may increase our losses.*"

Duty to Serve Underserved Markets

The GSE Act establishes a duty for Freddie Mac and Fannie Mae to serve three underserved markets (manufactured housing, affordable housing preservation and rural areas) by developing loan products and flexible underwriting guidelines to facilitate a secondary market for mortgages for very low-, low- and moderate-income families in those markets. Effective for 2010 and subsequent years, FHFA is required to establish a manner for annually: (a) evaluating whether and

to what extent Freddie Mac and Fannie Mae have complied with the duty to serve underserved markets; and (b) rating the extent of compliance.

On June 7, 2010, FHFA published in the Federal Register a proposed rule regarding the duty of Freddie Mac and Fannie Mae to serve the underserved markets. Comments were due on July 22, 2010. We provided comments on the proposed rule to FHFA, but we cannot predict the contents of any final rule that FHFA may release, or the impact that the final rule will have on our business or operations.

Affordable Housing Goals and Results for 2009

Prior to 2010, we were subject to affordable housing goals related to mortgages for low- and moderate-income families, low-income families living in low-income areas, very low-income families and families living in defined underserved areas. These goals were set as a percentage of the total number of dwelling units underlying our total mortgage purchases. The goal relating to low-income families living in low-income areas and very low-income families was referred to as the "special affordable" housing goal. This special affordable housing goal also included a multifamily annual minimum dollar volume target of qualifying multifamily mortgage purchases. In addition, from 2005 to 2009, we were subject to three subgoals that were expressed as percentages of the total number of mortgages we purchased that financed the purchase of single-family, owner-occupied properties located in metropolitan areas.

Our housing goals and results for 2009 are set forth in the table below.

Table 6 — Affordable Housing Goals and Results for 2009[1]

	Goal	Results
Housing goals and actual results		
Low- and moderate-income goal	43%	44.7%
Underserved areas goal[2]	32	26.8
Special affordable goal[3]	18	17.8
Multifamily special affordable volume target (in billions)[2]	$4.60	$3.69
Home purchase subgoals and actual results:		
Low- and moderate-income subgoal	40%	48.4%
Underserved areas subgoal[3]	30	27.9
Special affordable subgoal	14	20.6

(1) An individual mortgage may qualify for more than one of the goals or subgoals. Each of the goal and subgoal percentages and each of our percentage results is determined independently and cannot be aggregated to determine a percentage of total purchases that qualifies for these goals or subgoals.
(2) These goals were determined to be infeasible.
(3) FHFA concluded that achievement by us of these goals and subgoals was feasible, but decided not to require us to submit a housing plan.

Affordable Housing Allocations

The GSE Act requires us to set aside in each fiscal year an amount equal to 4.2 basis points for each dollar of the UPB of total new business purchases, and allocate or transfer such amount to: (a) HUD to fund a Housing Trust Fund established and managed by HUD; and (b) a Capital Magnet Fund established and managed by Treasury. FHFA has the authority to suspend our allocation upon finding that the payment would contribute to our financial instability, cause us to be classified as undercapitalized or prevent us from successfully completing a capital restoration plan. In November 2008, FHFA advised us that it has suspended the requirement to set aside or allocate funds for the Housing Trust Fund and the Capital Magnet Fund until further notice.

Prudential Management and Operations Standards

The GSE Act requires FHFA to establish prudential standards, by regulation or by guideline, for a broad range of operations of the enterprises. These standards must address internal controls, information systems, independence and adequacy of internal audit systems, management of interest rate risk exposure, management of market risk, liquidity and reserves, management of asset and investment portfolio growth, overall risk management processes, investments and asset acquisitions, management of credit and counterparty risk, and recordkeeping. FHFA may also establish any additional operational and management standards the Director of FHFA determines appropriate.

On June 20, 2011, FHFA published a proposed rule that would establish prudential standards, in the form of guidelines, relating to the management and operations of Freddie Mac, Fannie Mae, and the FHLBs. This proposed rule implements certain Reform Act amendments to the GSE Act. The proposed standards address a number of business, controls, and risk management areas. The standards specify the possible consequences for any entity that fails to meet any of the standards or otherwise fails to comply (including submission of a corrective plan, limits on asset growth, increases in capital, limits on dividends and stock redemptions or repurchases, a minimum level of retained earnings or any other action that the FHFA Director determines will contribute to bringing the entity into compliance with the standards). In

addition, a failure to meet any standard also may constitute an unsafe or unsound practice, which may form the basis for FHFA initiating an administrative enforcement action. Because FHFA proposes to adopt the standards as guidelines, as authorized by the Reform Act, FHFA may modify, revoke or add to the standards at any time by order.

Portfolio Activities

The GSE Act requires FHFA to establish, by regulation, criteria governing portfolio holdings to ensure the holdings are backed by sufficient capital and consistent with the enterprises' mission and safe and sound operations. In establishing these criteria, FHFA must consider the ability of the enterprises to provide a liquid secondary market through securitization activities, the portfolio holdings in relation to the mortgage market and the enterprises' compliance with the prudential management and operations standards prescribed by FHFA.

On December 28, 2010, FHFA issued a final rule adopting the portfolio holdings criteria established in the Purchase Agreement, as it may be amended from time to time, for so long as we remain subject to the Purchase Agreement.

See "Conservatorship and Related Matters — *Impact of Conservatorship and Related Activities on Our Business*" for additional information on restrictions to our portfolio activities.

Anti-Predatory Lending

Predatory lending practices are in direct opposition to our mission, our goals and our practices. We have instituted anti-predatory lending policies intended to prevent the purchase or assignment of mortgage loans with unacceptable terms or conditions or resulting from unacceptable practices. These policies include processes related to the delivery and validation of loans sold to us. In addition to the purchase policies we have instituted, we promote consumer education and financial literacy efforts to help borrowers avoid abusive lending practices and we provide competitive mortgage products to reputable mortgage originators so that borrowers have a greater choice of financing options.

Subordinated Debt

FHFA directed us to continue to make interest and principal payments on our subordinated debt, even if we fail to maintain required capital levels. As a result, the terms of any of our subordinated debt that provide for us to defer payments of interest under certain circumstances, including our failure to maintain specified capital levels, are no longer applicable. In addition, the requirements in the agreement we entered into with FHFA in September 2005 with respect to issuance, maintenance, and reporting and disclosure of Freddie Mac subordinated debt have been suspended during the term of conservatorship and thereafter until directed otherwise. See "NOTE 15: REGULATORY CAPITAL — Subordinated Debt Commitment" for more information regarding subordinated debt.

Department of Housing and Urban Development

HUD has regulatory authority over Freddie Mac with respect to fair lending. Our mortgage purchase activities are subject to federal anti-discrimination laws. In addition, the GSE Act prohibits discriminatory practices in our mortgage purchase activities, requires us to submit data to HUD to assist in its fair lending investigations of primary market lenders with which we do business and requires us to undertake remedial actions against such lenders found to have engaged in discriminatory lending practices. In addition, HUD periodically reviews and comments on our underwriting and appraisal guidelines for consistency with the Fair Housing Act and the anti-discrimination provisions of the GSE Act.

Department of the Treasury

Treasury has significant rights and powers with respect to our company as a result of the Purchase Agreement. In addition, under our charter, the Secretary of the Treasury has approval authority over our issuances of notes, debentures and substantially identical types of unsecured debt obligations (including the interest rates and maturities of these securities), as well as new types of mortgage-related securities issued subsequent to the enactment of the Financial Institutions Reform, Recovery and Enforcement Act of 1989. The Secretary of the Treasury has performed this debt securities approval function by coordinating GSE debt offerings with Treasury funding activities. In addition, our charter authorizes Treasury to purchase Freddie Mac debt obligations not exceeding $2.25 billion in aggregate principal amount at any time.

The Reform Act granted the Secretary of the Treasury authority to purchase any obligations and securities issued by us and Fannie Mae until December 31, 2009 on such terms and conditions and in such amounts as the Secretary may determine, provided that the Secretary determined the purchases were necessary to provide stability to the financial markets, prevent disruptions in the availability of mortgage finance, and protect taxpayers. See "Conservatorship and Related Matters — *Treasury Agreements*."

Securities and Exchange Commission

We are subject to the financial reporting requirements applicable to registrants under the Exchange Act, including the requirement to file with the SEC annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K. Although our common stock is required to be registered under the Exchange Act, we continue to be exempt from certain federal securities law requirements, including the following:

- Securities we issue or guarantee are "exempted securities" under the Securities Act and may be sold without registration under the Securities Act;
- We are excluded from the definitions of "government securities broker" and "government securities dealer" under the Exchange Act;
- The Trust Indenture Act of 1939 does not apply to securities issued by us; and
- We are exempt from the Investment Company Act of 1940 and the Investment Advisers Act of 1940, as we are an "agency, authority or instrumentality" of the U.S. for purposes of such Acts.

Legislative and Regulatory Developments

We discuss certain significant legislative and regulatory developments below. For more information regarding these and other legislative and regulatory developments that could impact our business, see "RISK FACTORS — Conservatorship and Related Matters" and "— Legal and Regulatory Risks."

Administration Report on Reforming the U.S. Housing Finance Market

On February 11, 2011, the Administration delivered a report to Congress that lays out the Administration's plan to reform the U.S. housing finance market, including options for structuring the government's long-term role in a housing finance system in which the private sector is the dominant provider of mortgage credit. The report recommends winding down Freddie Mac and Fannie Mae, stating that the Administration will work with FHFA to determine the best way to responsibly reduce the role of Freddie Mac and Fannie Mae in the market and ultimately wind down both institutions. The report states that these efforts must be undertaken at a deliberate pace, which takes into account the impact that these changes will have on borrowers and the housing market.

The report states that the government is committed to ensuring that Freddie Mac and Fannie Mae have sufficient capital to perform under any guarantees issued now or in the future and the ability to meet any of their debt obligations, and further states that the Administration will not pursue policies or reforms in a way that would impair the ability of Freddie Mac and Fannie Mae to honor their obligations. The report states the Administration's belief that under the companies' senior preferred stock purchase agreements with Treasury, there is sufficient funding to ensure the orderly and deliberate wind down of Freddie Mac and Fannie Mae, as described in the Administration's plan.

The report identifies a number of policy levers that could be used to wind down Freddie Mac and Fannie Mae, shrink the government's footprint in housing finance, and help bring private capital back to the mortgage market, including increasing guarantee fees, phasing in a 10% down payment requirement, reducing conforming loan limits, and winding down Freddie Mac and Fannie Mae's investment portfolios, consistent with the senior preferred stock purchase agreements. These recommendations, if implemented, would have a material impact on our business volumes, market share, results of operations and financial condition.

As discussed below in "*Legislated Increase to Guarantee Fees*," we have recently been directed by FHFA to raise our guarantee fees. We cannot currently predict the extent to which our business will be impacted by this increase in guarantee fees. In addition, as discussed below in "Conforming Loan Limits," the temporary high-cost area loan limits expired on September 30, 2011.

We cannot predict the extent to which the other recommendations in the report will be implemented or when any actions to implement them may be taken. However, we are not aware of any current plans of our Conservator to significantly change our business model or capital structure in the near-term.

FHFA's Strategic Plan for Freddie Mac and Fannie Mae Conservatorships

On February 21, 2012, FHFA sent to Congress a strategic plan for the next phase of the conservatorships of Freddie Mac and Fannie Mae. The plan sets forth objectives and steps FHFA is taking or will take to meet FHFA's obligations as Conservator. FHFA states that the steps envisioned in the plan are consistent with each of the housing finance reform frameworks set forth in the report delivered by the Administration to Congress in February 2011, as well as with the leading congressional proposals introduced to date. FHFA indicates that the plan leaves open all options for Congress and

the Administration regarding the resolution of the conservatorships and the degree of government involvement in supporting the secondary mortgage market in the future.

FHFA's plan provides lawmakers and the public with an outline of how FHFA as Conservator intends to guide Freddie Mac and Fannie Mae over the next few years, and identifies three strategic goals:

- **Build.** Build a new infrastructure for the secondary mortgage market;
- **Contract.** Gradually contract Freddie Mac and Fannie Mae's dominant presence in the marketplace while simplifying and shrinking their operations; and
- **Maintain.** Maintain foreclosure prevention activities and credit availability for new and refinanced mortgages.

The first of these goals establishes the steps FHFA, Freddie Mac, and Fannie Mae will take to create the necessary infrastructure, including a securitization platform and national standards for mortgage securitization, that Congress and market participants may use to develop the secondary mortgage market of the future. As part of this process, FHFA would determine how Freddie Mac and Fannie Mae can work together to build a single securitization platform that would replace their current separate proprietary systems.

The second goal describes steps that FHFA plans to take to gradually shift mortgage credit risk from Freddie Mac and Fannie Mae to private investors and eliminate the direct funding of mortgages by the enterprises. The plan states that the goal of gradually shifting mortgage credit risk from Freddie Mac and Fannie Mae to private investors could be accomplished, in the case of single-family credit guarantees, in several ways, including increasing guarantee fees, establishing loss-sharing arrangements and expanding reliance on mortgage insurance. To evaluate how to accomplish the goal of contracting enterprise operations in the multifamily business, the plan states that Freddie Mac and Fannie Mae will each undertake a market analysis of the viability of its respective multifamily operations without government guarantees.

For the third goal, the plan states that programs and strategies to ensure ongoing mortgage credit availability, assist troubled homeowners, and minimize taxpayer losses while restoring stability to housing markets continue to require energy, focus, and resources. The plan states that activities that must be continued and enhanced include: (a) successful implementation of HARP, including the significant program changes announced in October 2011; (b) continued implementation of the Servicing Alignment Initiative; (c) renewed focus on short sales, deeds-in-lieu, and deeds-for-lease options that enable households and Freddie Mac and Fannie Mae to avoid foreclosure; and (d) further development and implementation of the REO disposition initiative announced by FHFA in 2011.

Legislated Increase to Guarantee Fees

On December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. Among its provisions, this new law directs FHFA to require Freddie Mac and Fannie Mae to increase guarantee fees by no less than 10 basis points above the average guarantee fees charged in 2011 on single-family mortgage-backed securities. Under the law, the proceeds from this increase will be remitted to Treasury to fund the payroll tax cut, rather than retained by the companies.

FHFA has announced that, effective April 1, 2012, the guarantee fee on all single-family residential mortgages sold to Freddie Mac and Fannie Mae will increase by 10 basis points. In early 2012, FHFA will further analyze whether additional guarantee fee increases are necessary to ensure the new requirements are being met. If so, FHFA will announce plans for further guarantee fee increases or other fee adjustments that may then be implemented gradually over a two-year implementation window, taking into consideration risk levels and conditions in financial markets. FHFA will monitor closely the increased guarantee fees imposed as a result of the new law throughout its effective period.

Our business and financial condition will not benefit from the increases in guarantee fees under this law, as we must remit the proceeds from such increases to Treasury. It is currently unclear what effect this increase or any further guarantee fee increases or other fee adjustments associated with this law will have on the future profitability and operations of our single-family guarantee business, or on our ability to raise guarantee fees that may be retained by us. While we continue to assess the impact of this law, we currently believe that implementation of this law will present operational and accounting challenges for us.

Legislation Related to Reforming Freddie Mac and Fannie Mae

Our future structure and role will be determined by the Administration and Congress, and there are likely to be significant changes beyond the near-term. Congress continues to hold hearings and consider legislation on the future state of Freddie Mac and Fannie Mae. On February 2, 2012, the Administration announced that it expects to provide more

detail concerning approaches to reform the U.S. housing finance market in the spring, and that it plans to begin exploring options for legislation more intensively with Congress.

Several bills were introduced in Congress in 2011 that would comprehensively reform the secondary mortgage market and address the future state of Freddie Mac and Fannie Mae. None of the bills have been scheduled for further consideration in the Senate. In the House, several of these bills were approved by the House Financial Services Subcommittee on Capital Markets and Government-Sponsored Enterprises. Most recently, this subcommittee approved a bill in December 2011 that would reform the secondary mortgage market by facilitating continued standardization and uniformity in mortgage securitization. Under several of the bills, our charter would be revoked and we would be wound down or placed into receivership. Such legislation could impair our ability to issue securities in the capital markets and therefore our ability to conduct our business, absent an explicit guarantee of our existing and ongoing liabilities by the U.S. government.

The House Financial Services Subcommittee on Capital Markets and Government-Sponsored Enterprises approved a number of other bills in 2011 that would limit the companies' operations or alter FHFA or Treasury's authority over the companies, including bills that would require advance approval by the Secretary of the Treasury and notice to Congress for all debt issuances by the companies; require FHFA to direct the companies to increase guarantee fees; repeal our affordable housing goals; prohibit the companies from initially offering new products during conservatorship or receivership; accelerate reductions in our mortgage-related investments portfolio; require that Freddie Mac and Fannie Mae mortgages be treated the same as other mortgages for purposes of risk retention requirements in the Dodd-Frank Act; grant the FHFA Inspector General direct access to our records and employees; authorize FHFA, as receiver, to revoke the charters of Freddie Mac and Fannie Mae; prevent Treasury from lowering the dividend payment under the Purchase Agreement; abolish the Affordable Housing Trust Fund, the Capital Magnet Fund, and the HOPE Reserve Fund; require disposition of non-mission critical assets; apply the Freedom of Information Act to Freddie Mac and Fannie Mae; and set a cap on the funds received under the Purchase Agreement.

In 2011, the Financial Services Committee of the House of Representatives approved a bill that would generally put our employees on the federal government pay scale, and in 2012 both the House and the Senate approved legislation that would prohibit senior executives from receiving bonuses during conservatorship. In February 2012, legislative proposals were introduced in the Senate that would, among other items, cap the compensation and benefits of executive officers and employees of Freddie Mac and Fannie Mae so they cannot exceed the amounts paid to the highest compensated executive or employee at the federal financial institution regulatory agencies; and require executive officers, under certain circumstances, to return to Treasury any compensation earned that exceeds the regulatory agencies' rate of compensation. If this or similar legislation were to become law, many of our employees would experience a sudden and sharp decrease in compensation. The Acting Director of FHFA stated on November 15, 2011 that this "would certainly risk a substantial exodus of talent, the best leaving first in many instances. [Freddie Mac and Fannie Mae] likely would suffer a rapidly growing vacancy list and replacements with lesser skills and no experience in their specific jobs. A significant increase in safety and soundness risks and in costly operational failures would, in my opinion, be highly likely." The Acting Director noted that "[s]hould the risks I fear materialize, FHFA might well be forced to limit [Freddie Mac and Fannie Mae's] business activities. Some of the business [Freddie Mac and Fannie Mae] would be unable to undertake might simply not occur, with potential disruption in housing markets and the economy."

Some of the bills discussed above, if enacted, would materially affect the role of the company, our business model and our structure, and could have an adverse effect on our financial results and operations as well as our ability to retain and recruit management and other valuable employees. A number of the bills would adversely affect our ability to conduct business under our current business model, including by subjecting us to new requirements that could increase costs, reduce revenues and limit or prohibit current business activities.

We cannot predict whether or when any of the bills discussed above might be enacted. We also expect additional bills relating to Freddie Mac and Fannie Mae to be introduced and considered by Congress in 2012.

For more information on the potential impacts of legislative developments on compensation and employee retention, see "RISK FACTORS — Conservatorship and Related Matters — *The conservatorship and uncertainty concerning our future has had, and will likely continue to have, an adverse effect on the retention, recruitment and engagement of management and other employees, which could have a material adverse effect on our ability to operate our business*" and "MD&A — RISK MANAGEMENT — Operational Risks."

Dodd-Frank Act

The Dodd-Frank Act, which was signed into law on July 21, 2010, significantly changed the regulation of the financial services industry, including by creating new standards related to regulatory oversight of systemically important financial companies, derivatives, capital requirements, asset-backed securitization, mortgage underwriting, and consumer financial protection. The Dodd-Frank Act has directly affected and will continue to directly affect the business and operations of Freddie Mac by subjecting us to new and additional regulatory oversight and standards, including with respect to our activities and products. We may also be affected by provisions of the Dodd-Frank Act and implementing regulations that affect the activities of banks, savings institutions, insurance companies, securities dealers, and other regulated entities that are our customers and counterparties.

Implementation of the Dodd-Frank Act is being accomplished through numerous rulemakings, many of which are still in process. Accordingly, it is difficult to assess fully the impact of the Dodd-Frank Act on Freddie Mac and the financial services industry at this time. The final effects of the legislation will not be known with certainty until these rulemakings are complete. The Dodd-Frank Act also mandates the preparation of studies on a wide range of issues, which could lead to additional legislation or regulatory changes.

Recent developments with respect to Dodd-Frank rulemakings that may have a significant impact on Freddie Mac include the following:

- Designation as a systemically important nonbank financial company — The Financial Stability Oversight Council, or FSOC, is expected to announce during 2012 which nonbank financial companies are systemically important. The Federal Reserve has recently proposed rules to implement the enhanced supervisory and prudential requirements that would apply to designated nonbank financial companies. The proposal includes rules to implement Dodd-Frank requirements related to risk-based capital and leverage, liquidity, single-counterparty credit limits, overall risk management and risk committees, stress tests, and debt-to-equity limits for certain covered companies. The proposed rules also would implement Dodd-Frank requirements related to early remediation of financial distress of a designated nonbank financial company. In addition, a recently adopted final rule requires designated nonbank financial companies to submit annual resolution plans that describe the company's strategy for rapid and orderly resolution in bankruptcy during times of financial distress. If Freddie Mac is designated as a systemically important nonbank financial company, we could be subject to these and other additional oversight and prudential standards.
- Derivatives Rulemakings — The U.S. Commodity Futures Trading Commission, or CFTC, has promulgated a number of final rules implementing the Dodd-Frank Act's provisions relating to derivatives. However, the CFTC has yet to finalize many of the more significant derivative-related rules, including rules addressing the definition of "major swap participant" and margin requirements for uncleared swaps. The Dodd-Frank Act imposes certain new requirements on all swaps counterparties, including requirements addressing recordkeeping and reporting. If Freddie Mac qualifies as a major swap participant, it will be subject to increased and additional requirements, such as those relating to registration and business conduct. The eventual final rules on margin might increase the costs of our swaps transactions. According to the CFTC's tentative schedule, the CFTC expects to finalize the major swap participant definition rule in the first quarter of 2012, but it does not expect to consider final rules on margin (and numerous other topics) until later in 2012.

We continue to review and assess the impact of rulemakings and other activities under the Dodd-Frank Act. For more information, see "RISK FACTORS — Legal and Regulatory Risks — *The Dodd-Frank Act and related regulation may adversely affect our business activities and financial results.*"

Conforming Loan Limits

Beginning in 2008, pursuant to a series of laws, our loan limits in certain high-cost areas were increased temporarily above the limits that otherwise would be applicable (up to $729,750 for a one-family residence). On September 30, 2011, the latest of these increases was permitted to expire. Accordingly, our permanent high-cost area loan limits apply with respect to loans originated on or after October 1, 2011 in high-cost areas (currently, up to $625,500 for a one-family residence). A new law reinstated higher conforming loan limits for FHA-insured mortgages through 2013. However, these reinstated higher limits do not apply to Freddie Mac and Fannie Mae.

Developments Concerning Single-Family Servicing Practices

There have been a number of regulatory developments in recent periods impacting single-family mortgage servicing and foreclosure practices, including those discussed below. It is possible that these developments will result in significant changes to mortgage servicing and foreclosure practices that could adversely affect our business. New compliance

requirements placed on servicers as a result of these developments could expose Freddie Mac to financial risk as a result of further extensions of foreclosure timelines if home prices remain weak or decline. We may need to make additional significant changes to our practices, which could increase our operational risk. It is difficult to predict other impacts on our business of these changes, though such changes could adversely affect our credit losses and costs of servicing, and make it more difficult for us to transfer mortgage servicing rights to a successor servicer should we need to do so. The regulatory developments and changes include the following:

- On April 13, 2011, the OCC, the Federal Reserve, the FDIC, and the Office of Thrift Supervision entered into consent orders with 14 large servicers regarding their foreclosure and loss mitigation practices. These institutions service the majority of the single-family mortgages we own or guarantee. The consent orders required the servicers to submit comprehensive action plans relating to, among other items, use of foreclosure documentation, staffing of foreclosure and loss mitigation activities, oversight of third parties, use of the Mortgage Electronic Registration System, or the MERS System, and communications with borrowers. We will not be able to assess the impact of these actions on our business until the servicers' comprehensive action plans are publicly available.
- On April 28, 2011, FHFA announced a new set of aligned standards for servicing delinquent mortgages owned or guaranteed by Freddie Mac and Fannie Mae. We implemented most aspects of this initiative effective October 1, 2011. We have also implemented a new standard modification initiative that replaced our previous non-HAMP modification program beginning January 1, 2012. See "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*." FHFA has also directed us and Fannie Mae to work on a joint initiative to consider alternatives for future mortgage servicing structures and servicing compensation. The development of further alternatives could impact our ability to conduct current initiatives. For more information, see "RISK FACTORS — Legal and Regulatory Risks — *Legislative or regulatory actions could adversely affect our business activities and financial results*."
- On June 30, 2011, the OCC issued Supervisory Guidance regarding the OCC's expectations for the oversight and management of mortgage foreclosure activities by national banks. The Supervisory Guidance contains several elements from the consent orders with the 14 major servicers that will now be applied to all national banks. In the Supervisory Guidance, the OCC directed all national banks to conduct a self-assessment of foreclosure management practices by September 30, 2011. Additionally, the Guidance sets forth foreclosure management standards that mirror the broad categories of the servicing guidelines contained in the consent orders.
- On October 19, 2011, FHFA announced that it has directed Freddie Mac and Fannie Mae to transition away from current foreclosure attorney network programs and move to a system where mortgage servicers select qualified law firms that meet certain minimum, uniform criteria. The changes will be implemented after a transition period in which input will be taken from servicers, regulators, lawyers, and other market participants. We cannot predict the scope or timing of these changes, or the extent to which our business will be impacted by them.
- Several localities have adopted ordinances that would expand the responsibilities and liability for registering and maintaining vacant properties to servicers and assignees. These laws could significantly expand mortgage costs and liabilities in those areas. On December 8, 2011, FHFA directed Freddie Mac and Fannie Mae to take certain actions with respect to a municipal ordinance of the City of Chicago, and, on December 12, 2011, FHFA, on its own behalf and as conservator for Freddie Mac and Fannie Mae, filed a lawsuit against the City of Chicago to prevent enforcement of the ordinance.
- On February 9, 2012, a coalition of state attorneys general and federal agencies announced that it had entered into a settlement with five large seller/servicers concerning certain issues related to mortgage servicing practices. While the settlement includes changes to mortgage servicing practices, it is too early to determine if these changes will have a significant effect on us. The settlement does not involve loans owned or guaranteed by us.

For more information on operational risks related to these developments in mortgage servicing, see "MD&A — RISK MANAGEMENT — Operational Risks."

Administration Plan to Help Responsible Homeowners and Heal the Housing Market

In his January 24, 2012 State of the Union Address, President Obama called for action to help responsible borrowers and support a housing market recovery. The Administration subsequently put forth a "Plan to Help Responsible Homeowners and Heal the Housing Market." We have implemented, or are in the process of implementing, several aspects of the Administration's plan, such as the changes to HAMP discussed in "MD&A — RISK MANAGEMENT — Credit

Risk — *Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program — Home Affordable Modification Program*." A number of other aspects of the plan could affect Freddie Mac, including those discussed below.

The plan calls for Congress to pass legislation to establish a broad based mortgage refinancing plan. The broad based refinancing plan includes provisions to further streamline the refinancing process for borrowers with loans guaranteed by Freddie Mac and Fannie Mae. It would also provide underwater borrowers who participate in HARP with the choice of taking the benefit of the reduced interest rate in the form of lower monthly payments, or applying that savings to rebuilding equity in their homes. The plan would require us to change certain existing processes and could increase our costs. To date, no legislation has been introduced in Congress with respect to this plan.

The plan states that the mortgage servicing system would benefit from a single set of strong federal standards, and indicates that the Administration will work closely with regulators, Congress and stakeholders to create a more robust and comprehensive set of rules related to mortgage servicing. These rules would include standards for assisting at-risk homeowners.

Employees

At February 27, 2012, we had 4,859 full-time and 62 part-time employees. Our principal offices are located in McLean, Virginia.

Available Information

SEC Reports

We file reports and other information with the SEC. In view of the Conservator's succession to all of the voting power of our stockholders, we have not prepared or provided proxy statements for the solicitation of proxies from stockholders since we entered into conservatorship, and do not expect to do so while we remain in conservatorship. We make available free of charge through our website at www.freddiemac.com our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all other SEC reports and amendments to those reports as soon as reasonably practicable after we electronically file the material with, or furnish it to, the SEC. In addition, materials that we filed with the SEC are available for review and copying at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an internet site (www.sec.gov) that contains reports, proxy and information statements, and other information regarding companies that file electronically with the SEC.

We are providing our website addresses and the website address of the SEC here or elsewhere in this annual report on Form 10-K solely for your information. Information appearing on our website or on the SEC's website is not incorporated into this annual report on Form 10-K.

Information about Certain Securities Issuances by Freddie Mac

Pursuant to SEC regulations, public companies are required to disclose certain information when they incur a material direct financial obligation or become directly or contingently liable for a material obligation under an off-balance sheet arrangement. The disclosure must be made in a current report on Form 8-K under Item 2.03 or, if the obligation is incurred in connection with certain types of securities offerings, in prospectuses for that offering that are filed with the SEC.

Freddie Mac's securities offerings are exempted from SEC registration requirements. As a result, we are not required to and do not file registration statements or prospectuses with the SEC with respect to our securities offerings. To comply with the disclosure requirements of Form 8-K relating to the incurrence of material financial obligations, we report our incurrence of these types of obligations either in offering circulars (or supplements thereto) that we post on our website or in a current report on Form 8-K, in accordance with a "no-action" letter we received from the SEC staff. In cases where the information is disclosed in an offering circular posted on our website, the document will be posted on our website within the same time period that a prospectus for a non-exempt securities offering would be required to be filed with the SEC.

The website address for disclosure about our debt securities is www.freddiemac.com/debt. From this address, investors can access the offering circular and related supplements for debt securities offerings under Freddie Mac's global debt facility, including pricing supplements for individual issuances of debt securities.

Disclosure about the mortgage-related securities we issue, some of which are off-balance sheet obligations, can be found at www.freddiemac.com/mbs. From this address, investors can access information and documents about our mortgage-related securities, including offering circulars and related offering circular supplements.

Forward-Looking Statements

We regularly communicate information concerning our business activities to investors, the news media, securities analysts, and others as part of our normal operations. Some of these communications, including this Form 10-K, contain "forward-looking statements," including statements pertaining to the conservatorship, our current expectations and objectives for our efforts under the MHA Program, the servicing alignment initiative and other programs to assist the U.S. residential mortgage market, future business plans, liquidity, capital management, economic and market conditions and trends, market share, the effect of legislative and regulatory developments, implementation of new accounting guidance, credit losses, internal control remediation efforts, and results of operations and financial condition on a GAAP, Segment Earnings, and fair value basis. Forward-looking statements involve known and unknown risks and uncertainties, some of which are beyond our control. Forward-looking statements are often accompanied by, and identified with, terms such as "objective," "expect," "trend," "forecast," "anticipate," "believe," "intend," "could," "future," "may," "will," and similar phrases. These statements are not historical facts, but rather represent our expectations based on current information, plans, judgments, assumptions, estimates, and projections. Actual results may differ significantly from those described in or implied by such forward-looking statements due to various factors and uncertainties, including those described in the "RISK FACTORS" section of this Form 10-K and:

- the actions FHFA, Treasury, the Federal Reserve, the SEC, HUD, the Administration, Congress, and our management may take;
- the impact of the restrictions and other terms of the conservatorship, the Purchase Agreement, the senior preferred stock, and the warrant on our business, including our ability to pay: (a) the dividend on the senior preferred stock; and (b) any quarterly commitment fee that we are required to pay to Treasury under the Purchase Agreement;
- our ability to maintain adequate liquidity to fund our operations, including following any changes in the support provided to us by Treasury or FHFA, a change in the credit ratings of our debt securities or a change in the credit rating of the U.S. government;
- changes in our charter or applicable legislative or regulatory requirements, including any restructuring or reorganization in the form of our company, whether we will remain a stockholder-owned company or continue to exist and whether we will be wound down or placed under receivership, regulations under the GSE Act, the Reform Act, or the Dodd-Frank Act, regulatory or legislative actions taken to implement the Administration's plan to reform the housing finance system, regulatory or legislative actions that require us to support non-mortgage market initiatives, changes to affordable housing goals regulation, reinstatement of regulatory capital requirements, or the exercise or assertion of additional regulatory or administrative authority;
- changes in the regulation of the mortgage and financial services industries, including changes caused by the Dodd-Frank Act, or any other legislative, regulatory, or judicial action at the federal or state level;
- enforcement actions against mortgage servicers and other mortgage industry participants by federal or state authorities;
- the scope of various initiatives designed to help in the housing recovery (including the extent to which borrowers participate in the recently expanded HARP program, the MHA Program and new non-HAMP standard loan modification initiative), and the impact of such programs on our credit losses, expenses, and the size and composition of our mortgage-related investments portfolio;
- the impact of any deficiencies in foreclosure documentation practices and related delays in the foreclosure process;
- the ability of our financial, accounting, data processing, and other operating systems or infrastructure, and those of our vendors to process the complexity and volume of our transactions;
- changes in accounting or tax guidance or in our accounting policies or estimates, and our ability to effectively implement any such changes in guidance, policies, or estimates;
- changes in general regional, national, or international economic, business, or market conditions and competitive pressures, including changes in employment rates and interest rates, and changes in the federal government's fiscal and monetary policy;
- changes in the U.S. residential mortgage market, including changes in the rate of growth in total outstanding U.S. residential mortgage debt, the size of the U.S. residential mortgage market, and home prices;
- our ability to effectively implement our business strategies, including our efforts to improve the supply and liquidity of, and demand for, our products, and restrictions on our ability to offer new products or engage in new activities;

- our ability to recruit, retain, and engage executive officers and other key employees;
- our ability to effectively identify and manage credit, interest-rate, operational, and other risks in our business, including changes to the credit environment and the levels and volatilities of interest rates, as well as the shape and slope of the yield curves;
- the effects of internal control deficiencies and our ability to effectively identify, assess, evaluate, manage, mitigate, or remediate control deficiencies and risks, including material weaknesses and significant deficiencies, in our internal control over financial reporting and disclosure controls and procedures;
- incomplete or inaccurate information provided by customers and counterparties;
- consolidation among, or adverse changes in the financial condition of, our customers and counterparties;
- the failure of our customers and counterparties to fulfill their obligations to us, including the failure of seller/servicers to meet their obligations to repurchase loans sold to us in breach of their representations and warranties, and the potential cost and difficulty of legally enforcing those obligations;
- changes in our judgments, assumptions, forecasts, or estimates regarding the volume of our business and spreads we expect to earn;
- the availability of options, interest-rate and currency swaps, and other derivative financial instruments of the types and quantities, on acceptable terms, and with acceptable counterparties needed for investment funding and risk management purposes;
- changes in pricing, valuation or other methodologies, models, assumptions, judgments, estimates and/or other measurement techniques, or their respective reliability;
- changes in mortgage-to-debt OAS;
- the potential impact on the market for our securities resulting from any purchases or sales by the Federal Reserve or Treasury of Freddie Mac debt or mortgage-related securities;
- adverse judgments or settlements in connection with legal proceedings, governmental investigations, and IRS examinations;
- volatility of reported results due to changes in the fair value of certain instruments or assets;
- the development of different types of mortgage servicing structures and servicing compensation;
- preferences of originators in selling into the secondary mortgage market;
- changes to our underwriting or servicing requirements (including servicing alignment efforts under the servicing alignment initiative), our practices with respect to the disposition of REO properties, or investment standards for mortgage-related products;
- investor preferences for mortgage loans and mortgage-related and debt securities compared to other investments;
- borrower preferences for fixed-rate mortgages versus ARMs;
- the occurrence of a major natural or other disaster in geographic areas in which our offices or portions of our total mortgage portfolio are concentrated;
- other factors and assumptions described in this Form 10-K, including in the “MD&A” section;
- our assumptions and estimates regarding the foregoing and our ability to anticipate the foregoing factors and their impacts; and
- market reactions to the foregoing.

Forward-looking statements speak only as of the date they are made, and we undertake no obligation to update any forward-looking statements we make to reflect events or circumstances occurring after the date of this Form 10-K.

ITEM 1A. RISK FACTORS

Investing in our securities involves risks, including the risks described below and in “BUSINESS,” “MD&A,” and elsewhere in this Form 10-K. These risks and uncertainties could, directly or indirectly, adversely affect our business, financial condition, results of operations, cash flows, strategies and/or prospects.

Conservatorship and Related Matters

The future status and role of Freddie Mac is uncertain and could be materially adversely affected by legislative and regulatory action that alters the ownership, structure, and mission of the company.

The Acting Director of FHFA stated on November 15, 2011 that "the long-term outlook is that neither [Freddie Mac nor Fannie Mae] will continue to exist, at least in its current form, in the future." Future legislation will likely materially affect the role of the company, our business model, our structure, and future results of operations. Some or all of our functions could be transferred to other institutions, and we could cease to exist as a stockholder-owned company or at all. If any of these events were to occur, our shares could further diminish in value, or cease to have any value, and there can be no assurance that our stockholders would receive any compensation for such loss in value.

On February 11, 2011, the Administration delivered a report to Congress that lays out the Administration's plan to reform the U.S. housing finance market, including options for structuring the government's long-term role in a housing finance system in which the private sector is the dominant provider of mortgage credit. The report recommends winding down Freddie Mac and Fannie Mae, stating that the Administration will work with FHFA to determine the best way to responsibly reduce the role of Freddie Mac and Fannie Mae in the market and ultimately wind down both institutions. The report identifies a number of policy levers that could be used to wind down Freddie Mac and Fannie Mae, shrink the government's footprint in housing finance, and help bring private capital back to the mortgage market, including increasing guarantee fees, phasing in a 10% down payment requirement, reducing conforming loan limits, and winding down Freddie Mac and Fannie Mae's investment portfolios, consistent with the senior preferred stock purchase agreements.

A number of bills were introduced in the Senate and House in 2011 concerning the future state of Freddie Mac and Fannie Mae. Several of these bills take a comprehensive approach that would wind down Freddie Mac and Fannie Mae (or completely restructure the companies), while other bills would revise the companies' operations in a limited manner. Congress also held hearings related to the long-term future of housing finance, including the role of Freddie Mac and Fannie Mae. We expect additional legislation relating to Freddie Mac and Fannie Mae to be introduced and considered by Congress; however, we cannot predict whether or when any such legislation will be enacted. On February 2, 2012, the Administration announced that it expects to provide more detail concerning approaches to reform the U.S. housing finance market in the spring, and that it plans to begin exploring options for legislation more intensively with Congress. On February 21, 2012, FHFA sent to Congress a strategic plan for the next phase of the conservatorships of Freddie Mac and Fannie Mae.

For more information on the Administration's February 2011 report, GSE reform legislation, and FHFA's strategic plan, see "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments*."

In addition to legislative actions, FHFA has expansive regulatory authority over us, and the manner in which FHFA will use its authority in the future is unclear. FHFA could take a number of regulatory actions that could materially adversely affect our company, such as changing or reinstating our current capital requirements, which are not binding during conservatorship, or imposing additional restrictions on our portfolio activities or new initiatives.

The conservatorship is indefinite in duration and the timing, conditions, and likelihood of our emerging from conservatorship are uncertain. Even if the conservatorship is terminated, we would remain subject to the Purchase Agreement, senior preferred stock, and warrant.

FHFA has stated that there is no exact time frame as to when the conservatorship may end. Termination of the conservatorship (other than in connection with receivership) also requires Treasury's consent under the Purchase Agreement. There can be no assurance as to when, and under what circumstances, Treasury would give such consent. There is also significant uncertainty as to what changes may occur to our business structure during or following our conservatorship, including whether we will continue to exist. It is possible that the conservatorship will end with us being placed into receivership. The Acting Director of FHFA stated on September 19, 2011 that "it ought to be clear to everyone as this point, given [Freddie Mac and Fannie Mae's] losses since being placed into conservatorship and the terms of the Treasury's financial support agreements, that [Freddie Mac and Fannie Mae] will not be able to earn their way back to a condition that allows them to emerge from conservatorship."

In addition, Treasury has the ability to acquire almost 80% of our common stock for nominal consideration by exercising the warrant we issued to it pursuant to the Purchase Agreement. Consequently, the company could effectively remain under the control of the U.S. government even if the conservatorship was ended and the voting rights of common stockholders restored. The warrant held by Treasury, the restrictions on our business contained in the Purchase Agreement, and the senior status of the senior preferred stock issued to Treasury under the Purchase Agreement, if the senior

preferred stock has not been redeemed, also could adversely affect our ability to attract new private sector capital in the future should the company be in a position to seek such capital. Moreover, our draws under Treasury's funding commitment, the senior preferred stock dividend obligation, and commitment fees paid to Treasury (commitment fees have been waived through the first quarter of 2012) could permanently impair our ability to build independent sources of capital.

We expect to make additional draws under the Purchase Agreement in future periods, which will adversely affect our future results of operations and financial condition.

We expect to request additional draws under the Purchase Agreement in future periods. Over time, our dividend obligation to Treasury on the senior preferred stock will increasingly drive future draws. Although we may experience period-to-period variability in earnings and comprehensive income, it is unlikely that we will generate net income or comprehensive income in excess of our annual dividends payable to Treasury over the long term. Dividends to Treasury on the senior preferred stock are cumulative and accrue at an annual rate of 10% (or 12% in any quarter in which dividends are not paid in cash) until all accrued dividends are paid in cash.

The size and timing of our future draws will be determined by our dividend obligation on the senior preferred stock and a variety of other factors that could adversely affect our net worth. These other factors include the following:

- how long and to what extent the U.S. economy and housing market, including home prices, remain weak, which could increase credit expenses and cause additional other-than-temporary impairments of the non-agency mortgage-related securities we hold;
- foreclosure prevention efforts and foreclosure processing delays, which could increase our expenses;
- competitiveness with other mortgage market participants, including Fannie Mae;
- adverse changes in interest rates, the yield curve, implied volatility or mortgage-to-debt OAS, which could increase realized and unrealized mark-to-fair value losses recorded in earnings or AOCI;
- required reductions in the size of our mortgage-related investments portfolio and other limitations on our investment activities that reduce the earnings capacity of our investment activities;
- quarterly commitment fees payable to Treasury, the amount of which has not yet been established and could be substantial (Treasury has waived the fee for all quarters of 2011 and the first quarter of 2012). Treasury has indicated that it remains committed to protecting taxpayers and ensuring that our future positive earnings are returned to taxpayers as compensation for their investment;
- adverse changes in our funding costs or limitations in our access to public debt markets;
- establishment of additional valuation allowances for our remaining net deferred tax asset;
- changes in accounting practices or guidance;
- effects of the MHA Program and other government initiatives, including any future requirements to reduce the principal amount of loans;
- losses resulting from control failures, including any control failures because of our inability to retain staff;
- limitations on our ability to develop new products, enter into new lines of business, or increase guarantee and related fees;
- introduction of additional public mission-related initiatives that may adversely impact our financial results; or
- changes in business practices resulting from legislative and regulatory developments or direction from our Conservator.

Under the Purchase Agreement, the $200 billion cap on Treasury's funding commitment will increase as necessary to accommodate any cumulative reduction in our net worth during 2010, 2011, and 2012. Although additional draws under the Purchase Agreement will allow us to remain solvent and avoid mandatory receivership, they will also increase the liquidation preference of, and the dividends we owe on, the senior preferred stock. Based on the aggregate liquidation preference of the senior preferred stock of $72.3 billion (which amount includes the funds requested to address our net worth deficit as of December 31, 2011), Treasury is entitled to annual cash dividends of $7.23 billion, which exceeds our annual historical earnings in all but one period. Increases in the already substantial liquidation preference and senior preferred stock dividend obligation, along with limited flexibility to redeem the senior preferred stock, will adversely affect our results of operations and financial condition and add to the significant uncertainty regarding our long-term financial sustainability. This may also cause further negative publicity about our company.

Our business objectives and strategies have in some cases been significantly altered since we were placed into conservatorship, and may continue to change, in ways that negatively affect our future financial condition and results of operations.

FHFA, as Conservator, has directed the company to focus on managing to a positive stockholders' equity. At the direction of the Conservator, we have made changes to certain business practices that are designed to provide support for the mortgage market in a manner that serves our public mission and other non-financial objectives but may not contribute to our goal of managing to a positive stockholders' equity. Some of these changes have increased our expenses or caused us to forego revenue opportunities. For example, FHFA has directed that we implement various initiatives under the MHA Program. We expect to incur significant costs associated with the implementation of these initiatives and we cannot currently estimate whether, or the extent to which, costs incurred in the near term from these initiatives may be offset, if at all, by the prevention or reduction of potential future costs of serious delinquencies and foreclosures due to these initiatives. On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to attract more eligible borrowers whose monthly payments are current and who can benefit from refinancing their home mortgages. There can be no assurance that the revisions to HARP will be successful in achieving these objectives or that any benefits from the revised program will exceed our costs. The Conservator and Treasury have also not authorized us to engage in certain business activities and transactions, including the purchase or sale of certain assets, which we believe might have had a beneficial impact on our results of operations or financial condition, if executed. Our inability to execute such initiatives and transactions may adversely affect our profitability. Other agencies of the U.S. government, as well as Congress, also have an interest in the conduct of our business. We do not know what actions they may request us to take.

In view of the conservatorship and the reasons stated by FHFA for its establishment, it is likely that our business model and strategic objectives will continue to change, possibly significantly, including in pursuit of our public mission and other non-financial objectives. Among other things, we could experience significant changes in the size, growth, and characteristics of our guarantee activities, and we could further change our operational objectives, including our pricing strategy in our core mortgage guarantee business. The conservatorship has significantly impacted our investment activity, and we may face further restrictions on this activity. Accordingly, our strategic and operational focus may not always be consistent with the generation of net income. It is possible that we will make material changes to our capital strategy and to our accounting policies, methods, and estimates. In addition, we may be directed to engage in initiatives that are operationally difficult or costly to implement, or that adversely affect our financial results. For example, FHFA has directed us to take various actions in support of the objectives of a gradual transition to greater private capital participation in housing finance and greater distribution of risk to participants other than the government, such as developing security structures that allow for private sector risk sharing.

On December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. Among its provisions, this new law directs FHFA to require Freddie Mac and Fannie Mae to increase guarantee fees by no less than 10 basis points above the average guarantee fees charged in 2011 on single-family mortgage-backed securities. Under the law, the proceeds from this increase will be remitted to Treasury to fund the payroll tax cut, rather than retained by the companies. It is currently unclear what effect this increase or any further guarantee fee increases or other fee adjustments associated with this law will have on the future profitability and operations of our single-family guarantee business, or on our ability to raise guarantee fees that may be retained by us. While we continue to assess the impact of this law on us, we currently believe that implementation of this law will present operational and accounting challenges for us.

FHFA has stated that it has focused Freddie Mac and Fannie Mae on their existing core business, including minimizing credit losses, and taking actions necessary to advance the goals of the conservatorship, and is not permitting Freddie Mac and Fannie Mae to offer new products or enter into new lines of business. FHFA stated that the focus of the conservatorship is on conserving assets, minimizing corporate losses, ensuring Freddie Mac and Fannie Mae continue to serve their mission, overseeing remediation of identified weaknesses in corporate operations and risk management, and ensuring that sound corporate governance principles are followed. These and other restrictions imposed by FHFA could adversely affect our financial results in future periods.

As our Conservator, FHFA possesses all of the powers of our stockholders, officers, and directors. During the conservatorship, the Conservator has delegated certain authority to the Board of Directors to oversee, and to management to conduct, day-to-day operations so that the company can continue to operate in the ordinary course of business. FHFA has the ability to withdraw or revise its delegations of authority and override actions of our Board of Directors at any time. The directors serve on behalf of, and exercise authority as directed by, the Conservator. In addition, FHFA has the

power to take actions without our knowledge that could be material to investors and could significantly affect our financial performance.

These changes and other factors could have material adverse effects on, among other things, our portfolio growth, net worth, credit losses, net interest income, guarantee fee income, net deferred tax assets, and loan loss reserves, and could have a material adverse effect on our future results of operations and financial condition. In light of the significant uncertainty surrounding these changes, there can be no assurances regarding when, or if, we will return to profitability.

We have a variety of different, and potentially competing, objectives that may adversely affect our financial results and our ability to maintain positive net worth.

Based on our charter, other legislation, public statements from Treasury and FHFA officials and guidance and directives from our Conservator, we have a variety of different, and potentially competing, objectives. These objectives include: (a) minimizing our credit losses; (b) conserving assets; (c) providing liquidity, stability, and affordability in the mortgage market; (d) continuing to provide additional assistance to the struggling housing and mortgage markets; (e) managing to a positive stockholders' equity and reducing the need to draw funds from Treasury pursuant to the Purchase Agreement; and (f) protecting the interests of the taxpayers. These objectives create conflicts in strategic and day-to-day decision making that will likely lead to suboptimal outcomes for one or more, or possibly all, of these objectives. This could lead to negative publicity and damage our reputation. We may face increased operational risk from these competing objectives. Current portfolio investment and mortgage guarantee activities, liquidity support, loan modification and refinancing initiatives, and foreclosure forbearance initiatives, including our efforts under the MHA Program, are intended to provide support for the mortgage market in a manner that serves our public mission and other non-financial objectives under conservatorship, but may negatively impact our financial results and net worth.

FHFA directives that we and Fannie Mae adopt uniform approaches in some areas could have an adverse impact on our business or on our competitive position with respect to Fannie Mae.

FHFA is also Conservator of Fannie Mae, our primary competitor. On multiple occasions, FHFA has directed us and Fannie Mae to confer and suggest to FHFA possible uniform approaches to particular business and accounting issues and problems. It is likely that we will receive additional directives in the future. In most such cases, FHFA subsequently directed us and Fannie Mae to adopt a specific uniform approach. For example:

- In March 2009, FHFA directed Freddie Mac and Fannie Mae to adopt the HAMP program for modification of mortgages that they hold or guarantee, leading to a largely uniform approach to modifications for HAMP-eligible borrowers;
- In February 2010, FHFA directed Freddie Mac and Fannie Mae to work together to standardize definitions for mortgage delivery data;
- In January 2011, FHFA announced that it had directed Freddie Mac and Fannie Mae to work on a joint initiative, in coordination with HUD, to consider alternatives for future mortgage servicing structures and servicing compensation;
- In April 2011, FHFA announced a new set of aligned standards for servicing of non-performing loans owned or guaranteed by Freddie Mac and Fannie Mae, including a standard modification initiative for borrowers not eligible for HAMP modifications;
- In October 2011, through the revisions to the HARP initiative, FHFA directed us and Fannie Mae to align certain aspects of our and Fannie Mae's respective refinance initiatives; and
- In December 2011, FHFA announced that the guarantee fee on all single-family residential mortgages sold to Freddie Mac and Fannie Mae will increase by 10 basis points to fund the payroll tax cut, effective April 1, 2012. This increase is in connection with the implementation of the Temporary Payroll Tax Cut Continuation Act of 2011.

We cannot predict the impact on our business of these actions or any similar actions FHFA may require us and Fannie Mae to take in the future. It is possible that in some areas FHFA could require us and Fannie Mae to take a uniform approach that, because of differences in our respective businesses, could place Freddie Mac at a competitive disadvantage to Fannie Mae. We may be required to adopt approaches that are operationally difficult for us to implement. It also is possible that in some cases identifying, adopting and maintaining a uniform approach could entail higher costs than would a unilateral approach, and that when market conditions merit a change in a uniform approach, coordinating the change might entail additional cost and delay. If and when conservatorship ends, market acceptance of a uniform approach could make it difficult to depart from that approach even if doing so would be economically desirable.

We are subject to significant limitations on our business under the Purchase Agreement that could have a material adverse effect on our results of operations and financial condition.

The Purchase Agreement includes significant restrictions on our ability to manage our business, including limitations on the amount of indebtedness we may incur, the size of our mortgage-related investments portfolio, and the circumstances in which we may pay dividends, transfer certain assets, raise capital, and pay down the liquidation preference on the senior preferred stock. In addition, the Purchase Agreement provides that we may not enter into any new compensation arrangements or increase amounts or benefits payable under existing compensation arrangements of any executive officers without the consent of the Director of FHFA, in consultation with the Secretary of the Treasury. In deciding whether or not to consent to any request for approval it receives from us under the Purchase Agreement, Treasury has the right to withhold its consent for any reason and is not required by the agreement to consider any particular factors, including whether or not management believes that the transaction would benefit the company. The limitations under the Purchase Agreement could have a material adverse effect on our future results of operations and financial condition.

Our regulator may, and in some cases must, place us into receivership, which would result in the liquidation of our assets and terminate all rights and claims that our stockholders and creditors may have against our assets or under our charter; if we are liquidated, there may not be sufficient funds to pay the secured and unsecured claims of the company, repay the liquidation preference of any series of our preferred stock, or make any distribution to the holders of our common stock.

We could be put into receivership at the discretion of the Director of FHFA at any time for a number of reasons, including conditions that FHFA has already asserted existed at the time the then Director of FHFA placed us into conservatorship. These include: a substantial dissipation of assets or earnings due to unsafe or unsound practices; the existence of an unsafe or unsound condition to transact business; an inability to meet our obligations in the ordinary course of business; a weakening of our condition due to unsafe or unsound practices or conditions; critical undercapitalization; the likelihood of losses that will deplete substantially all of our capital; or by consent. In addition, FHFA could be required to place us in receivership if Treasury is unable to provide us with funding requested under the Purchase Agreement to address a deficit in our net worth. For more information, see "— *If Treasury is unable to provide us with funding requested under the Purchase Agreement to address a deficit in our net worth, FHFA could be required to place us into receivership*."

A receivership would terminate the conservatorship. The appointment of FHFA (or any other entity) as our receiver would terminate all rights and claims that our stockholders and creditors may have against our assets or under our charter arising as a result of their status as stockholders or creditors, other than the potential ability to be paid upon our liquidation. Unlike conservatorship, the purpose of which is to conserve our assets and return us to a sound and solvent condition, the purpose of receivership is to liquidate our assets and resolve claims against us.

In the event of a liquidation of our assets, there can be no assurance that there would be sufficient proceeds to pay the secured and unsecured claims of the company, repay the liquidation preference of any series of our preferred stock or make any distribution to the holders of our common stock. To the extent that we are placed into receivership and do not or cannot fulfill our guarantee to the holders of our mortgage-related securities, such holders could become unsecured creditors of ours with respect to claims made under our guarantee. Only after paying the secured and unsecured claims of the company, the administrative expenses of the receiver and the liquidation preference of the senior preferred stock, which ranks senior to our common stock and all other series of preferred stock upon liquidation, would any liquidation proceeds be available to repay the liquidation preference on any other series of preferred stock. Finally, only after the liquidation preference on all series of preferred stock is repaid would any liquidation proceeds be available for distribution to the holders of our common stock. The aggregate liquidation preference on the senior preferred stock owned by Treasury will increase to $72.3 billion upon funding of the draw request to address our net worth deficit as of December 31, 2011. The liquidation preference will increase further if, as we expect, we make additional draws under the Purchase Agreement. It will also increase if we do not pay dividends owed on the senior preferred stock in cash or if we do not pay the quarterly commitment fee to Treasury under the Purchase Agreement.

If we are placed into receivership or no longer operate as a going concern, we would no longer be able to assert that we will realize assets and satisfy liabilities in the normal course of business, and, therefore, our basis of accounting would change to liquidation-based accounting. Under the liquidation basis of accounting, assets are stated at their estimated net realizable value and liabilities are stated at their estimated settlement amounts, which could adversely affect our net worth. In addition, the amounts in AOCI would be reclassified to earnings, which could also adversely affect our net worth.

If Treasury is unable to provide us with funding requested under the Purchase Agreement to address a deficit in our net worth, FHFA could be required to place us into receivership.

Under the Purchase Agreement, Treasury made a commitment to provide funding, under certain conditions, to eliminate deficits in our net worth. Under the GSE Act, FHFA must place us into receivership if FHFA determines in writing that our assets are less than our obligations for a period of 60 calendar days. FHFA has notified us that the measurement period for any mandatory receivership determination with respect to our assets and obligations would commence no earlier than the SEC public filing deadline for our quarterly or annual financial statements and would continue for 60 calendar days after that date. FHFA has also advised us that, if, during that 60-day period, we receive funds from Treasury in an amount at least equal to the deficiency amount under the Purchase Agreement, the Director of FHFA will not make a mandatory receivership determination. If funding has been requested under the Purchase Agreement to address a deficit in our net worth, and Treasury is unable to provide us with such funding within the 60-day period specified by FHFA, FHFA would be required to place us into receivership if our assets remain less than our obligations during that 60-day period.

The conservatorship and uncertainty concerning our future has had, and will likely continue to have, an adverse effect on the retention, recruitment, and engagement of management and other employees, which could have a material adverse effect on our ability to operate our business.

Our ability to recruit, retain, and engage management and other employees with the necessary skills to conduct our business has been, and will likely continue to be, adversely affected by the conservatorship, the uncertainty regarding its duration, the potential for future legislative or regulatory actions that could significantly affect our existence and our role in the secondary mortgage market, and the negative publicity concerning the GSEs. Accordingly, we may not be able to retain or replace executives or other employees with the requisite institutional knowledge and the technical, operational, risk management, and other key skills needed to conduct our business effectively. We may also face increased operational risk if key employees leave the company.

The actions taken by Congress, Treasury, and the Conservator to date, or that may be taken by them or other government agencies in the future, may have an adverse effect on the retention and recruitment of senior executives, management, and other valuable employees. For example, we are subject to restrictions on the amount and type of compensation we may pay our executives under conservatorship. Also contributing to our concerns regarding executive retention risk is the aggregate level of compensation paid to our Section 16 executive officers, which for 2011 performance was significantly below the 25th percentile of market-based compensation. See “EXECUTIVE COMPENSATION” for more information. We cannot offer equity-based compensation, which is both common in our industry and provides a key incentive for employees to stay with the company. The Conservator directed us to maintain individual salaries and wage rates for all employees at 2010 levels for 2011 and 2012 (except in the case of promotions or significant changes in responsibilities). Given our current status, we cannot offer the prospects of even medium-term employment, much less long-term. Continued public condemnation of the company and its employees creates yet another obstacle to hiring and retaining the talent we need.

We are finding it difficult to retain and engage critical employees and attract people with the skills and experience we need. Voluntary attrition rates for high performing employees, those with specialized skill sets, and those responsible for controls over financial reporting have risen markedly since we were placed into conservatorship. This has led to concerns about staffing inadequacies, management depth, and employee engagement. Attracting qualified senior executives is particularly difficult. We operate in an environment in which virtually every business decision is closely scrutinized and subject to public criticism and review by various government authorities. Many executives are unwilling to work in such an environment for potentially significantly less than what they could earn elsewhere. A recovering economy is likely to put additional pressures on turnover in 2012, as other attractive opportunities may become available to people who we want to retain. The high and increasing level of scrutiny from FHFA and its Office of Inspector General and other regulators has also heightened stress levels throughout the organization and placed additional burdens on staff.

In 2011, the Financial Services Committee of the House of Representatives approved a bill that would generally put our employees on the federal government’s pay scale, and in 2012 the House and Senate each approved legislation containing a provision that would prohibit senior executives from receiving bonuses during conservatorship. If this or similar legislation were to become law, many of our employees would experience a sudden and sharp decrease in compensation. The Acting Director of FHFA stated on November 15, 2011 that this “would certainly risk a substantial exodus of talent, the best leaving first in many instances. [Freddie Mac and Fannie Mae] likely would suffer a rapidly growing vacancy list and replacements with lesser skills and no experience in their specific jobs. A significant increase in safety and soundness risks and in costly operational failures would, in my opinion, be highly likely.” The Acting Director

noted that ‘‘[s]hould the risks I fear materialize, FHFA might well be forced to limit [Freddie Mac and Fannie Mae's] business activities. Some of the business [Freddie Mac and Fannie Mae] would be unable to undertake might simply not occur, with potential disruption in housing markets and the economy.'' For more information on legislative developments affecting compensation, see ‘‘BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Legislation Related to Reforming Freddie Mac and Fannie Mae*.''

The conservatorship and investment by Treasury has had, and will continue to have, a material adverse effect on our common and preferred stockholders.

Prior to our entry into conservatorship, the market price for our common stock declined substantially. After our entry into conservatorship, the market price of our common stock continued to decline, and has been $1 or less per share since June 2010. As a result, the investments of our common and preferred stockholders lost substantial value, which they may never recover. There is significant uncertainty as to what changes may occur to our business structure during or following our conservatorship, including whether we will continue to exist. Therefore, it is likely that our shares could further diminish in value, or cease to have any value. The Acting Director of FHFA has stated that ‘‘[Freddie Mac and Fannie Mae's] equity holders retain an economic claim on the companies but that claim is subordinate to taxpayer claims. As a practical matter, taxpayers are not likely to be repaid in full, so [Freddie Mac and Fannie Mae] stock lower in priority is not likely to have any value.''

The conservatorship and investment by Treasury has had, and will continue to have, other material adverse effects on our common and preferred stockholders, including the following:

- *No voting rights during conservatorship.* The rights and powers of our stockholders are suspended during the conservatorship and our common stockholders do not have the ability to elect directors or to vote on other matters.
- *No longer managed to maximize stockholder returns.* Because we are in conservatorship, we are no longer managed with a strategy to maximize stockholder returns. FHFA has stated that it has focused Freddie Mac and Fannie Mae on their existing core business, including minimizing credit losses, and taking actions necessary to advance the goals of the conservatorship. FHFA stated that it is not permitting Freddie Mac and Fannie Mae to offer new products or enter into new lines of business. FHFA stated that the focus of the conservatorship is on conserving assets, minimizing corporate losses, ensuring Freddie Mac and Fannie Mae continue to serve their mission, overseeing remediation of identified weaknesses in corporate operations and risk management, and ensuring that sound corporate governance principles are followed.
- *Priority of Senior Preferred Stock.* The senior preferred stock ranks senior to the common stock and all other series of preferred stock as to both dividends and distributions upon dissolution, liquidation or winding up of the company.
- *Dividends have been eliminated.* The Conservator has eliminated dividends on Freddie Mac common and preferred stock (other than dividends on the senior preferred stock) during the conservatorship. In addition, under the terms of the Purchase Agreement, dividends may not be paid to common or preferred stockholders (other than on the senior preferred stock) without the consent of Treasury, regardless of whether or not we are in conservatorship.
- *Warrant may substantially dilute investment of current stockholders.* If Treasury exercises its warrant to purchase shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding on a fully diluted basis, the ownership interest in the company of our then existing common stockholders will be substantially diluted. It is possible that stockholders, other than Treasury, will not own more than 20.1% of our total common stock for the duration of our existence. Under our charter, bylaws and applicable law, 20.1% is insufficient to control the outcome of any vote that is presented to the common stockholders. Accordingly, existing common stockholders have no assurance that, as a group, they will be able to control the election of our directors or the outcome of any other vote after the time, if any, that the conservatorship ends.

Competitive and Market Risks

Our investment activity is significantly limited under the Purchase Agreement and by FHFA, which will likely reduce our earnings from investment activities over time and result in greater reliance on our guarantee activities to generate revenue.

We are subject to significant limitations on our investment activity, which will adversely affect the earnings capacity of our mortgage-related investments portfolio over time. These limitations include: (a) a requirement to reduce the size of

our mortgage-related investments portfolio; and (b) significant constraints on our ability to purchase or sell mortgage assets.

Under the terms of the Purchase Agreement and FHFA regulation, our mortgage-related investments portfolio is subject to a cap that decreases by 10% each year until the portfolio reaches $250 billion. As a result, the UPB of our mortgage-related investments portfolio could not exceed $729 billion as of December 31, 2011 and may not exceed $656.1 billion as of December 31, 2012. Our mortgage-related investments portfolio has contracted considerably since we entered into conservatorship, and we are working with FHFA to identify ways to prudently accelerate the rate of contraction of the portfolio. Our ability to take advantage of opportunities to purchase or sell mortgage assets at attractive prices has been, and likely will continue to be, limited. In addition, we can provide no assurance that the cap on our mortgage-related investments portfolio will not, over time, force us to sell mortgage assets at unattractive prices, particularly given the potential in coming periods for continued high volumes of loan modifications and removal of seriously delinquent loans, both of which result in the removal of mortgage loans from our PCs for our mortgage-related investments portfolio. We expect that our holdings of unsecuritized single-family loans will continue to increase in 2012 due to the recent revisions to HARP, which will result in our purchase of mortgage loans with LTV ratios greater than 125%, as we have not yet implemented a securitization process for such loans. For more information on the various restrictions and limitations on our investment activity and our mortgage-related investments portfolio, see "BUSINESS — Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business — Limits on Investment Activity and Our Mortgage-Related Investments Portfolio*."

These limitations will reduce the earnings capacity of our mortgage-related investments portfolio business and require us to place greater emphasis on our guarantee activities to generate revenue. However, under conservatorship, our ability to generate revenue through guarantee activities may be limited, as we may be required to adopt business practices that provide support for the mortgage market in a manner that serves our public mission and other non-financial objectives, but that may negatively impact our future financial results from guarantee activities. The combination of the restrictions on our business activities under the Purchase Agreement and FHFA regulation, combined with our potential inability to generate sufficient revenue through our guarantee activities to offset the effects of those restrictions, may have an adverse effect on our results of operations and financial condition. There can be no assurance that the current profitability levels on our new single-family business would be sufficient to attract new private sector capital in the future, should the company be in a position to seek such capital. We generally must obtain FHFA's approval in order to increase pricing in our guarantee business, and there can be no assurance FHFA will approve any such request. On December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. Our business and financial condition will not benefit from the increases in guarantee fees under this law, as we must remit the proceeds from such increases to Treasury. It is currently unclear what effect this will have on our ability to raise guarantee fees that may be retained by us. For more information, see "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Legislated Increase to Guarantee Fees.*"

We are subject to mortgage credit risks, including mortgage credit risk relating to off-balance sheet arrangements; increased credit costs related to these risks could adversely affect our financial condition and/or results of operations.

Mortgage credit risk is the risk that a borrower will fail to make timely payments on a mortgage we own or guarantee, exposing us to the risk of credit losses and credit-related expenses. We are primarily exposed to mortgage credit risk with respect to the single-family and multifamily loans that we own or guarantee and hold on our consolidated balance sheets. We are also exposed to mortgage credit risk with respect to securities and guarantee arrangements that are not reflected as assets on our consolidated balance sheets. These relate primarily to: (a) Freddie Mac mortgage-related securities backed by multifamily loans; (b) certain Other Guarantee Transactions; and (c) other guarantee commitments, including long-term standby commitments and liquidity guarantees.

Significant factors that affect the level of our single-family mortgage credit risk include the credit profile of the borrower (*e.g.*, credit score, credit history, and monthly income relative to debt payments), documentation level, the number of borrowers, the features of the mortgage loan, occupancy type, the type of property securing the mortgage, the LTV ratio of the loan, and local and regional economic conditions, including home prices and unemployment rates. Our credit losses will remain high for the foreseeable future due to the substantial number of mortgage loans in our single-family credit guarantee portfolio on which borrowers owe more than their home is currently worth, as well as the substantial inventory of seriously delinquent loans.

While mortgage interest rates remained low in 2011, many borrowers may not have been able to refinance into lower interest mortgages or reduce their monthly payments through mortgage modifications due to substantial declines in home values, market uncertainty, and continued high unemployment rates. Therefore, there can be no assurance that continued

low mortgage interest rates or efforts to modify and refinance mortgages pursuant to the MHA Program (including pursuant to the revisions to HARP announced in October 2011) and to modify mortgages under our other loss mitigation initiatives will reduce our overall mortgage credit risk.

We also continue to have significant amounts of mortgage loans in our single-family credit guarantee portfolio with certain characteristics, such as Alt-A, interest-only, option ARMs, loans with original LTV ratios greater than 90%, and loans where borrowers had FICO scores less than 620 at the time of origination, that expose us to greater credit risk than do other types of mortgage loans. As of December 31, 2011, loans with one or more of the above characteristics comprised approximately 20% of our single-family credit guarantee portfolio. See "Table 50 — Certain Higher-Risk Categories in the Single-Family Credit Guarantee Portfolio" for more information.

Beginning in 2008, the conforming loan limits were significantly increased for mortgages originated in certain "high cost" areas (the initial increases applied to loans originated after July 1, 2007). Due to our relative lack of experience with these "conforming jumbo" loans, purchases pursuant to the high cost conforming loan limits may also expose us to greater credit risks.

The level of our multifamily mortgage credit risk is affected by the mortgaged property's ability to generate rental income from which debt service can be paid. That ability in turn is affected by rental market conditions (*e.g.*, rental and vacancy rates), the physical condition of the property, the quality of the property's management, and the level of operating costs. For certain multifamily mortgage products, we utilize other forms of credit enhancement, such as subordination through Other Guarantee Transactions, which are intended to reduce our risk exposure.

A risk we continue to monitor is that multifamily borrowers will default if they are unable to refinance their loans at an affordable rate. This risk is particularly important with respect to multifamily loans because such loans generally have a balloon payment and typically have a shorter contractual term than single-family mortgages. Borrowers may be less able to refinance their obligations during periods of rising interest rates or weak economic conditions, which could lead to default if the borrower is unable to find affordable refinancing. However, of the $116.1 billion in UPB of loans in our multifamily mortgage portfolio as of December 31, 2011, only approximately 3% and 5% will reach their maturity during 2012 and 2013, respectively.

We are exposed to significant credit risk related to the subprime, Alt-A, and option ARM loans that back the non-agency mortgage-related securities we hold.

Our investments in non-agency mortgage-related securities include securities that are backed by subprime, Alt-A, and option ARM loans. As of December 31, 2011, such securities represented approximately 54% of our total investments in non-agency mortgage-related securities. Since 2007, mortgage loan delinquencies and credit losses in the U.S. mortgage market have substantially increased, particularly in the subprime, Alt-A, and option ARM sectors of the residential mortgage market. In addition, home prices have declined significantly, after extended periods during which home prices appreciated. As a result, the fair value of these investments has declined significantly since 2007, and we have recorded substantial other-than-temporary impairments, which has adversely impacted stockholders equity (deficit). In addition, most of these investments do not trade in a liquid secondary market and the size of our holdings relative to normal market activity is such that, if we were to attempt to sell a significant quantity of these securities, the pricing in such markets could be significantly disrupted and the price we ultimately realize may be materially lower than the value at which we carry these investments on our consolidated balance sheets.

We could experience additional GAAP losses due to other-than-temporary impairments on our investments in these non-agency mortgage-related securities if, among other things: (a) interest rates change; (b) delinquency and loss rates on subprime, Alt-A, and option ARM loans increase; (c) there is a further decline in actual or forecasted home prices; or (d) there is a deterioration in servicing performance. In addition, the fair value of these investments may decline further due to additional ratings downgrades or market events. Any credit enhancements covering these securities, including subordination and other structural enhancements, may not prevent us from incurring losses. During 2011, we continued to experience the erosion of structural credit enhancements on many securities backed by subprime first lien, option ARM, and Alt-A loans due to poor performance of the underlying mortgages. The financial condition of bond insurers also continued to deteriorate in 2011. See "MD&A — CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities" for information about the credit ratings for these securities and the extent to which these securities have been downgraded.

Certain strategies to mitigate our losses as an investor in non-agency mortgage-related securities may adversely affect our relationships with some of our largest seller/servicers.

On September 2, 2011, FHFA announced that, as Conservator for Freddie Mac and Fannie Mae, it had filed lawsuits against 17 financial institutions and related defendants alleging: (a) violations of federal securities laws; and (b) in certain lawsuits, common law fraud in the sale of residential non-agency mortgage-related securities to Freddie Mac and Fannie Mae. These institutions include some of our largest seller/servicers and counterparties. FHFA, as Conservator, filed a similar lawsuit against UBS Americas, Inc. and related defendants on July 27, 2011. FHFA seeks to recover losses and damages sustained by Freddie Mac and Fannie Mae as a result of their investments in certain residential non-agency mortgage-related securities issued by these financial institutions.

At the direction of our Conservator, we are working to enforce our rights as an investor with respect to the non-agency mortgage-related securities we hold, and are engaged in other efforts to mitigate losses on our investments in these securities, in some cases in conjunction with other investors. For example, FHFA, as Conservator of Freddie Mac and Fannie Mae, has issued subpoenas to various entities seeking loan files and other transaction documents related to non-agency mortgage-related securities in which the two enterprises invested. FHFA stated that the documents will enable it to determine whether issuers of these securities and others are liable to Freddie Mac and Fannie Mae for certain losses they have suffered on the securities. We are assisting FHFA in this effort.

These and other loss mitigation efforts may lead to further disputes with some of our largest seller/servicers and counterparties that may result in further litigation. This could adversely affect our relationship with any such company and could, for example, result in the loss of some or all of our business with a large seller/servicer. The effectiveness of these loss mitigation efforts is highly uncertain and any potential recoveries may take significant time to realize. For more information, see "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Non-Agency Mortgage-Related Security Issuers*."

The credit losses we experience in future periods as a result of the housing and economic downturn are likely to be larger, perhaps substantially larger, than our current loan loss reserves.

Our loan loss reserves, as reflected on our consolidated balance sheets, do not reflect the total of all future credit losses we will ultimately incur with respect to our single-family and multifamily mortgage loans, including those underlying our financial guarantees. Rather, pursuant to GAAP, our reserves only reflect probable losses we believe we have already incurred as of the balance sheet date. Accordingly, although we believe that our credit losses may exceed the amounts we have already reserved for loans currently identified as impaired, and that additional credit losses will be incurred in the future due to the housing and economic downturn, we are not permitted under GAAP to reflect the potential impact of these future trends in our loan loss reserves. As a result of the depth and extent of the housing and economic downturn, there is significant uncertainty regarding the full extent of future credit losses. Therefore, such credit losses are likely to be larger, perhaps substantially larger, than our current loan loss reserves. Additional credit losses we incur in future periods will adversely affect our business, results of operations, financial condition, liquidity, and net worth.

Further declines in U.S. home prices or other adverse changes in the U.S. housing market could negatively impact our business and increase our losses.

Throughout 2011, the U.S. housing market continued to experience adverse trends, including continued price depreciation, continued high serious delinquency and default rates, and extended foreclosure timelines. Low volumes of home sales and the continued large supply of unsold homes placed further downward pressure on home prices. These conditions, coupled with continued high unemployment, led to continued high loan delinquencies and provisioning for loan losses. Our credit losses remained high in 2011, in part because home prices have experienced significant cumulative declines in many geographic areas in recent years. We expect that national average home prices will continue to remain weak and will likely decline over the near term, which could result in a continued high rate of serious delinquencies or defaults and a level of credit-related losses higher than our expectations when our guarantees were issued.

We prepare internal forecasts of future home prices, which we use for certain business activities, including: (a) hedging prepayment risk; (b) setting fees for new guarantee business; and (c) portfolio activities. It is possible that home price declines could be significantly greater than we anticipate, or that a sustained recovery in home prices would not begin until much later than we anticipate, which could adversely affect our performance of these business activities. For example, this could cause the return we earn on new single-family guarantee business to be less than expected. This could also result in higher losses due to other-than-temporary impairments on our investments in non-agency mortgage-related securities than would otherwise be recognized in earnings. Government programs designed to strengthen the

U.S. housing market, such as the MHA Program, may fail to achieve expected results, and new programs could be instituted that cause our credit losses to increase. For more information, see "MD&A — RISK MANAGEMENT — Credit Risk."

Our business volumes are closely tied to the rate of growth in total outstanding U.S. residential mortgage debt and the size of the U.S. residential mortgage market. Total residential mortgage debt declined approximately 1.8% in the first nine months of 2011 (the most recent data available) compared to a decline of approximately 3.2% in 2010. If total outstanding U.S. residential mortgage debt were to continue to decline, there could be fewer mortgage loans available for us to purchase, and we could face more competition to purchase a smaller number of loans.

While multifamily market fundamentals (*i.e.*, vacancy rates and effective rents) improved during 2011, there can be no assurance that this trend will continue. Certain local multifamily markets exhibit relatively weak fundamentals, especially some of those hit hardest by residential home price declines. Any further softening of the broader economy could have negative impacts on multifamily markets, which could cause delinquencies and credit losses relating to our multifamily activities to increase beyond our current expectations.

Our refinance volumes could decline if interest rates rise, which could cause our overall new mortgage-related security issuance volumes to decline.

We continued to experience a high percentage of refinance mortgages in our purchase volume during 2011 due to continued low interest rates and the impact of our relief refinance mortgages. Interest rates have been at historically low levels for an extended period of time. Overall originations of refinance mortgages, and our purchases of them, will likely decrease if interest rates rise and home prices remain at depressed levels. Originations of refinance mortgages will also likely decline after the Home Affordable Refinance Program expires in December 2013. In addition, many eligible borrowers have already refinanced at least once during this period of low interest rates, and therefore may be unlikely to do so again in the near future. It is possible that our overall mortgage-related security issuance volumes could decline if our volumes of purchase money mortgages do not increase to offset any such decrease in refinance mortgages. This could adversely affect the amount of revenue we receive from our guarantee activities.

We could incur significant credit losses and credit-related expenses in the event of a major natural disaster or other catastrophic event in geographic areas in which portions of our total mortgage portfolio and REO holdings are concentrated.

We own or guarantee mortgage loans and own REO properties throughout the United States. The occurrence of a major natural or environmental disaster (such as an earthquake, hurricane, tsunami, or widespread damage caused to the environment by commercial entities), terrorist attack, pandemic, or similar catastrophic event in a regional geographic area of the United States could negatively impact our credit losses and credit-related expenses in the affected area.

The occurrence of a catastrophic event could negatively impact a geographic area in a number of different ways, depending on the nature of the event. A catastrophic event that either damaged or destroyed residential real estate underlying mortgage loans we own or guarantee or negatively impacted the ability of homeowners to continue to make principal and interest payments on mortgage loans we own or guarantee could increase our serious delinquency rates and average loan loss severity in the affected region or regions, which could have a material adverse effect on our business, results of operations, financial condition, liquidity and net worth. Such an event could also damage or destroy REO properties we own. While we attempt to maintain a geographically diverse portfolio, there can be no assurance that a catastrophic event, depending on its magnitude, scope and nature, will not generate significant credit losses and credit-related expenses. We may not have insurance coverage for some of these catastrophic events. In some cases, we may be prohibited by state law from requiring such insurance as a condition to our purchasing or guaranteeing loans.

We depend on our institutional counterparties to provide services that are critical to our business, and our results of operations or financial condition may be adversely affected if one or more of our institutional counterparties do not meet their obligations to us.

We face the risk that one or more of the institutional counterparties that has entered into a business contract or arrangement with us may fail to meet its obligations. We face similar risks with respect to contracts or arrangements we benefit from indirectly or that we enter into on behalf of our securitization trusts. Our primary exposures to institutional counterparty risk are with:

- mortgage seller/servicers;
- mortgage insurers;

- issuers, guarantors or third-party providers of other credit enhancements (including bond insurers);
- counterparties to short-term lending and other investment-related agreements and cash equivalent transactions, including such agreements and transactions we manage for our PC trusts;
- derivative counterparties;
- hazard and title insurers;
- mortgage investors and originators; and
- document custodians and funds custodians.

Many of our counterparties provide several types of services to us. In some cases, our business with institutional counterparties is concentrated. The concentration of our exposure to our counterparties increased in recent periods due to industry consolidation and counterparty failures, and we continue to face challenges in reducing our risk concentrations with counterparties. Efforts we take to reduce exposure to financially weakened counterparties could further increase our exposure to other individual counterparties. In the future, our mortgage insurance exposure will be concentrated among a smaller number of counterparties. A significant failure by a major institutional counterparty could harm our business and financial results in a variety of ways, including by adversely affecting our ability to conduct operations efficiently and at cost-effective rates, and have a material adverse effect on our investments in mortgage loans, investments in securities, our derivative portfolio or our credit guarantee activities. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for additional information.

Some of our counterparties may become subject to serious liquidity problems affecting their businesses, either temporarily or permanently, which may adversely affect their ability to meet their obligations to us. In recent periods, challenging market conditions have adversely affected the liquidity and financial condition of our counterparties. These trends may continue. In particular, we believe all of our derivative portfolio and cash and other investments portfolio counterparties are exposed to fiscally troubled European countries. It is possible that continued adverse developments in the Eurozone could significantly impact such counterparties. In turn, this could adversely affect their ability to meet their obligations to us.

In the past few years, some of our largest seller/servicers have experienced ratings downgrades and liquidity constraints, and certain large lenders have failed. These challenging market conditions could also increase the likelihood that we will have disputes with our counterparties concerning their obligations to us, especially with respect to counterparties that have experienced financial strain and/or have large exposures to us. See "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk*" for additional information regarding our credit risks to certain categories of counterparties and how we seek to manage them.

The servicing of mortgage loans backing our single-family non-agency mortgage-related securities investments is concentrated in a small number of institutions. We could experience losses on these investments from servicing performance deterioration should one of these institutions come under financial distress. Furthermore, Freddie Mac's rights as a non-agency mortgage-related securities investor to transfer servicing are limited.

Our financial condition or results of operations may be adversely affected if mortgage seller/servicers fail to repurchase loans sold to us in breach of representations and warranties or fail to honor any related indemnification or recourse obligations.

We require seller/servicers to make certain representations and warranties regarding the loans they sell to us. If loans are sold to us in breach of those representations and warranties, we have the contractual right to require the seller/servicer to repurchase those loans from us. In lieu of repurchase, we may agree to allow a seller/servicer to indemnify us against losses on such mortgages or otherwise compensate us for the risk of continuing to hold the mortgages. Sometimes a seller/servicer sells us mortgages with recourse, meaning that the seller/servicer agrees to repurchase any mortgage that is delinquent for more than a specified period (usually 120 days), regardless of whether there has been a breach of representations and warranties.

Some of our seller/servicers have failed to fully perform their repurchase obligations due to lack of financial capacity, while others, including many of our larger seller/servicers, have not fully performed their repurchase obligations in a timely manner. As of December 31, 2011 and 2010, the UPB of loans subject to repurchase requests based on breaches of representations and warranties issued to our single-family seller/servicers was approximately $2.7 billion and $3.8 billion, respectively. As of December 31, 2011, approximately $1.2 billion of such loans were subject to repurchase requests issued due to mortgage insurance rescission or mortgage insurance claim denial.

Our contracts require that a seller/servicer repurchase a mortgage within 30 days after we issue a repurchase request, unless the seller/servicer avails itself of an appeal process provided for in our contracts, in which case the deadline for repurchase is extended until we decide the appeal. As of December 31, 2011 and 2010, approximately 39% and 34%, respectively, of these repurchase requests were outstanding more than four months since issuance of our repurchase request (these figures included repurchase requests for which appeals were pending).

The amount we collect on these requests and others we may make in the future could be significantly less than the UPB of the loans subject to the repurchase requests primarily because we expect many of these requests will likely be satisfied by reimbursement of our realized credit losses by seller/servicers, instead of repurchase of loans at their UPB, or may be rescinded in the course of the contractual appeals process. Based on our historical loss experience and the fact that many of these loans are covered by credit enhancement, we expect the actual credit losses experienced by us should we fail to collect on these repurchase requests will also be less than the UPB of the loans. We may also enter into agreements with seller/servicers to resolve claims for repurchases. The amounts we receive under any such agreements may be less than the losses we ultimately incur.

Our credit losses may increase to the extent our seller/servicers do not fully perform their repurchase obligations. Enforcing repurchase obligations of seller/servicers who have the financial capacity to perform those obligations could also negatively impact our relationships with such customers and could result in the loss of some or all of our business with such customers, which could negatively impact our ability to retain market share. It may be difficult, expensive, and time-consuming to legally enforce a seller/servicer's repurchase obligations, in the event a seller/servicer continues to fail to perform such obligations.

On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP. We may face greater exposure to credit and other losses on these HARP loans because we are not requiring lenders to provide us with certain representations and warranties on these HARP loans. For more information, see "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program* — Home Affordable Refinance Program and Relief Refinance Mortgage Initiative."

We also have exposure to seller/servicers with respect to mortgage insurance. When a mortgage insurer rescinds coverage or denies or curtails a claim, we may require the seller/servicer to repurchase the mortgage or to indemnify us for additional loss. The volume of rescissions, claim denials, and curtailments by mortgage insurers remains high.

We face the risk that seller/servicers may fail to perform their obligations to service loans in our single-family and multifamily mortgage portfolios or that their servicing performance could decline.

Our seller/servicers have a significant role in servicing loans in our single-family credit guarantee portfolio, which includes an active role in our loss mitigation efforts. Therefore, a decline in their performance could impact our credit performance (including through missed opportunities for mortgage modifications), which could adversely affect our financial condition or results of operations and have a significant impact on our ability to mitigate credit losses. The risk of such a decline in performance remains high. The high levels of seriously delinquent loan volume, the ongoing weak conditions of the mortgage market, and the number and variety of additions and changes to HAMP and our other loan modification and loss mitigation initiatives have placed a strain on the loss mitigation resources of many of our seller/servicers. This has also increased the operational complexity of the servicing function, as well as the risk that errors will occur. A number of seller/servicers have had to address issues relating to the improper preparation and execution of certain documents used in foreclosure proceedings, which has further strained their resources. There have also been a number of regulatory developments that have increased, or could increase, the complexity of the servicing function. It is also possible that we could be directed to introduce additional changes to the servicing function that increase its complexity, such as new or revised loan modification or loss mitigation initiatives or new compensation arrangements. Our expected ability to partially mitigate losses through loan modifications and other alternatives to foreclosure is a factor we consider in determining our allowance for loan losses. Therefore, the inability to realize the anticipated benefits of our loss mitigation plans could cause our losses to be significantly higher than those currently estimated. Weak economic conditions continue to affect the liquidity and financial condition of many of our seller/servicers, including some of our largest seller/servicers. Any efforts we take to attempt to improve our servicers' performance could adversely affect our relationships with such servicers, many of which also sell loans to us.

If a servicer does not fulfill its servicing obligations (including its repurchase or other responsibilities), we may seek partial or full recovery of the amounts that such servicer owes us, such as by attempting to sell the applicable mortgage servicing rights to a different servicer and applying the proceeds to such owed amounts, or by contracting the servicing responsibilities to a different servicer and retaining the net servicing fee. The ongoing weakness in the housing market has negatively affected the market for mortgage servicing rights, which increases the risk that we might not receive a

sufficient price for such rights or that we may be unable to find buyers who: (a) have sufficient capacity to service the affected mortgages in compliance with our servicing standards; (b) are willing to assume the representations and warranties of the former servicer regarding the affected mortgages (which we typically require); and (c) have sufficient capacity to service all of the affected mortgages. Increased industry consolidation, bankruptcies of mortgage bankers or bank failures may also make it more difficult for us to sell such rights, because there may not be sufficient capacity in the market, particularly in the event of multiple failures. This option may be difficult to accomplish with respect to our larger seller/servicers due to operational and capacity challenges of transferring a large servicing portfolio. The financial stress on servicers and increased costs of servicing may lead to strategic defaults (*i.e.*, defaults done deliberately as a financial strategy, and not involuntarily) by servicers, which would also require us to seek a successor servicer.

Our seller/servicers also have a significant role in servicing loans in our multifamily mortgage portfolio. We are exposed to the risk that multifamily seller/servicers could come under financial pressure, which could potentially cause degradation in the quality of the servicing they provide us including their monitoring of each property's financial performance and physical condition. This could also, in certain cases, reduce the likelihood that we could recover losses through lender repurchases, recourse agreements, or other credit enhancements, where applicable.

See "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Single-family Mortgage Seller/ Servicers*" and "*— Multifamily Mortgage Seller/Servicers*" for additional information on our institutional credit risk related to our mortgage seller/servicers.

Our financial condition or results of operations may be adversely affected by the financial distress of our counterparties to derivatives, funding, and other transactions.

We use derivatives for several purposes, including to regularly adjust or rebalance our funding mix in response to changes in the interest-rate characteristics of our mortgage-related assets and to hedge forecasted issuances of debt. The relative concentration of our derivative exposure among our primary derivative counterparties remains high. This concentration increased in the last several years due to industry consolidation and the failure of certain counterparties, and could further increase. Three of our derivative counterparties each accounted for greater than 10% of our net uncollateralized exposure, excluding commitments, at December 31, 2011. For a further discussion of our exposure to derivative counterparties, see "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Derivative Counterparties*" and "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

Some of our derivative and other capital markets counterparties have experienced various degrees of financial distress in the past few years, including liquidity constraints, credit downgrades, and bankruptcy. Our financial condition and results of operations may be adversely affected by the financial distress of these derivative and other capital markets counterparties to the extent that they fail to meet their obligations to us. For example, our OTC derivative counterparties are required to post collateral in certain circumstances to cover our net exposure to them on derivative contracts. We may incur losses if the collateral held by us cannot be liquidated at prices that are sufficient to cover the amount of such exposure.

Our ability to engage in routine derivatives, funding, and other transactions could be adversely affected by the actions of other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, counterparty, or other relationships. As a result, defaults by, or even rumors or questions about, one or more financial services institutions, or the financial services industry generally, could lead to market-wide disruptions in which it may be difficult for us to find acceptable counterparties for such transactions.

We also use derivatives to synthetically create the substantive economic equivalent of various debt funding structures. Thus, if our access to the derivative markets were disrupted, it may become more difficult or expensive to fund our business activities and achieve the funding mix we desire, which could adversely affect our business and results of operations.

Our credit losses and other-than-temporary impairments recognized in earnings could increase if our mortgage or bond insurers become insolvent or fail to perform their obligations to us.

We are exposed to risk relating to the potential insolvency of or non-performance by mortgage insurers that insure single-family mortgages we purchase or guarantee and bond insurers that insure certain of the non-agency mortgage-related securities we hold. The weakened financial condition and liquidity position of these counterparties increases the risk that these entities will fail to fully reimburse us for claims under insurance policies. This risk could increase if home prices deteriorate further or if the economy worsens.

As a guarantor, we remain responsible for the payment of principal and interest if a mortgage insurer fails to meet its obligations to reimburse us for claims. Thus, if any of our mortgage insurers that provide credit enhancement fails to fulfill its obligation, we could experience increased credit losses. In addition, if a regulator determined that a mortgage insurer lacked sufficient capital to pay all claims when due, the regulator could take action that might impact the timing and amount of claim payments made to us. We independently assess the financial condition, including the claims-paying resources, of each of our mortgage insurers. Based on our analysis of the financial condition of a mortgage insurer and pursuant to our eligibility requirements for mortgage insurers, we could take action against a mortgage insurer intended to protect our interests that may impact the timing and amount of claims payments received from that insurer. We expect to receive substantially less than full payment of our claims from Triad Guaranty Insurance Corp., Republic Mortgage Insurance Company and PMI Mortgage Insurance Co. We also believe that certain other of our mortgage insurance counterparties may lack sufficient ability to meet all their expected lifetime claims paying obligations to us as such claims emerge.

In the event one or more of our bond insurers were to become insolvent, it is likely that we would not collect all of our claims from the affected insurer. This would impact our ability to recover certain unrealized losses on our investments in non-agency mortgage-related securities, and could contribute to net impairment of available-for-sale securities recognized in earnings. We evaluate the expected recovery from primary bond insurance policies as part of our impairment analysis for our investments in securities. If a bond insurer's performance with respect to its obligations on our investments in securities is worse than expected, this could contribute to additional net impairment of those securities. In addition, the fair values of our securities may further decline, which could also have a material adverse effect on our results and financial condition. We expect to receive substantially less than full payment from several of our bond insurers, including Ambac Assurance Corporation and Financial Guaranty Insurance Company, due to adverse developments concerning these companies. Ambac Assurance Corporation and Financial Guaranty Insurance Company are currently not paying any of their claims. We believe that some of our other bond insurers may also lack sufficient ability to fully meet all of their expected lifetime claims-paying obligations to us as such claims emerge.

For more information on developments concerning our mortgage insurers and bond insurers, see "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Mortgage Insurers" and "— Bond Insurers.*"

If mortgage insurers were to further tighten their standards or fall out of compliance with regulatory capital requirements, the volume of high LTV ratio mortgages available for us to purchase could be reduced, which could reduce our overall volume of new business. Mortgage insurance standards could constrain our future ability to purchase loans with LTV ratios over 80%.

Our charter requires that single-family mortgages with LTV ratios above 80% at the time of purchase be covered by specified credit enhancements or participation interests. Our purchases of mortgages with LTV ratios above 80% (other than relief refinance mortgages) have declined in recent years, in part because mortgage insurers tightened their eligibility requirements with respect to the issuance of insurance on new mortgages with such higher LTV ratios. If mortgage insurers further restrict their eligibility requirements for such loans, or if we are no longer willing or able to obtain mortgage insurance from these counterparties under terms we find reasonable, and we are not able to avail ourselves of suitable alternative methods of obtaining credit enhancement for these loans, we may be further restricted in our ability to purchase or securitize loans with LTV ratios over 80% at the time of purchase. This could further reduce our overall volume of new business. This could also negatively impact our ability to participate in a significant segment of the mortgage market (*i.e.*, loans with LTV ratios over 80%) should we seek, or be directed, to do so.

If a mortgage insurance company were to fall out of compliance with regulatory capital requirements and not obtain appropriate waivers, it could become subject to regulatory actions that restrict its ability to write new business in certain, or in some cases all, states. During the third quarter of 2011, Republic Mortgage Insurance Company and PMI Mortgage Insurance Co. were prohibited from writing new business by their primary state regulators and neither writes new business in any state any longer. Given the difficulties in the mortgage insurance industry, we believe it is likely that other companies may be unable to meet regulatory capital requirements.

A mortgage insurer may attempt a corporate restructuring designed to enable it to continue to write new business through a new entity in the event the insurer falls out of compliance with regulatory capital requirements. However, there can be no assurance that an insurer would be able to accomplish such a restructuring, as the restructured entity would be required to satisfy regulatory requirements as well as our own conditions. These restructuring plans generally involve contributing capital to a subsidiary or affiliate. This could result in less liquidity available to the existing mortgage insurer to pay claims on its existing book of business, and an increased risk that the mortgage insurer would not pay its claims in full in the future. We monitor the claim paying ability of our mortgage insurers. As these restructuring plans are presented

to us for review, we attempt to determine whether the insurers' plans make available sufficient resources to meet their obligations to policyholders of the insurance entities involved in the restructuring. However, there can be no assurance that any such restructuring will enable payment in full of all claims in the future. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Allowance for Loan Losses and Reserve for Guarantee Losses — *Single-Family Loans*" for more information.

We could incur increased credit losses if our seller/servicers enter into arrangements with mortgage insurers for settlement of future rescission activity and such agreements could potentially reduce the ability of mortgage insurers to pay claims to us.

Under our contracts with our seller/servicers, the rescission or denial of mortgage insurance on a loan is grounds for us to make a repurchase request to the seller/servicer. At least one of our largest servicers has entered into arrangements with two of our mortgage insurance counterparties under which the servicer pays and/or indemnifies the insurer in exchange for the mortgage insurer agreeing not to issue mortgage insurance rescissions or denials of coverage on Freddie Mac mortgages. When such an agreement is in place, we are unable to make repurchase requests based solely on a rescission of insurance or denial of coverage. Thus, there is a risk that we will experience higher credit losses if we do not independently identify other areas of noncompliance with our contractual requirements and require lenders to repurchase the loans we own. Additionally, there could be a negative financial impact on our mortgage insurers' ability to pay their other obligations to us if the payments they receive from the seller/servicers are insufficient to compensate them for the insurance claims paid that would have otherwise been denied. As guarantor of the insured loans, we remain responsible for the payment of principal and interest if a mortgage insurer fails to meet its obligation to reimburse us for claims, and this could increase our credit losses. In April 2011, we issued an industry letter to our servicers reminding them that they may not enter into these types of agreements without our consent. Several of our servicers have asked us to consent to these types of agreements. We are evaluating these requests on a case by case basis.

The loss of business volume from key lenders could result in a decline in our market share and revenues.

Our business depends on our ability to acquire a steady flow of mortgage loans. We purchase a significant percentage of our single-family mortgages from several large mortgage originators. During 2011 and 2010, approximately 82% and 78%, respectively, of our single-family mortgage purchase volume was associated with our ten largest customers. During 2011, two mortgage lenders (Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A.) each accounted for more than 10% of our single-family mortgage purchase volume and collectively accounted for approximately 40% of our single-family mortgage purchase volume. Similarly, we acquire a significant portion of our multifamily mortgage loans from several large lenders.

We enter into mortgage purchase volume commitments with many of our single-family customers that provide for the customers to deliver to us a certain volume of mortgages during a specified period of time. Some commitments may also provide for the lender to deliver to us a minimum percentage of their total sales of conforming loans. There is a risk that we will not be able to enter into new commitments with our key single-family customers that will maintain mortgage purchase volume following the expiration of our existing commitments with them. Since 2007, the mortgage industry has consolidated significantly and a smaller number of large lenders originate most single-family mortgages. The loss of business from any one of our major lenders could adversely affect our market share and our revenues. Many of our seller/servicers also have tightened their lending criteria in recent years, which has reduced their loan volume, thus reducing the volume of loans available for us to purchase.

Ongoing weak business and economic conditions in the U.S. and abroad may adversely affect our business and results of operations.

Our business and results of operations are significantly affected by general business and economic conditions, including conditions in the international markets for our investments or our mortgage-related and debt securities. These conditions include employment rates, fluctuations in both debt and equity capital markets, the value of the U.S. dollar as compared to foreign currencies, the strength of the U.S. financial markets and national economy and the local economies in which we conduct business, and the economies of other countries that purchase our mortgage-related and debt securities. Concerns about fiscal challenges in several Eurozone economies intensified during 2011, creating significant uncertainty in the financial markets and potential increased risk exposure for our counterparties and for us. There is also significant uncertainty regarding the strength of the U.S. economic recovery. If the U.S. economy remains weak, we could experience continued high serious delinquencies and credit losses, which will adversely affect our results of operations and financial condition.

The mortgage credit markets continue to be impacted by a decrease in availability of corporate credit and liquidity within the mortgage industry, causing disruptions to normal operations of major mortgage servicers and, at times, originators, including some of our largest customers. This has also contributed to significant volatility, wide credit spreads and a lack of price transparency, and the potential for further consolidation within the financial services industry.

Competition from banking and non-banking companies may harm our business.

Competition in the secondary mortgage market combined with a decline in the amount of residential mortgage debt outstanding may make it more difficult for us to purchase mortgages. Furthermore, competitive pricing pressures may make our products less attractive in the market and negatively impact our financial results. Increased competition from Fannie Mae, Ginnie Mae, and FHA/VA may alter our product mix, lower volumes, and reduce revenues on new business. FHFA is also Conservator of Fannie Mae, our primary competitor, and FHFA's actions as Conservator of both companies could affect competition between us and Fannie Mae. It is possible that FHFA could require us and Fannie Mae to take a common approach that, because of differences in our respective businesses, could place Freddie Mac at a competitive disadvantage to Fannie Mae. Efforts we may make or may be directed to make to increase the profitability of new single-family guarantee business, such as by tightening credit standards or raising guarantee fees, could cause our market share to decrease and the volume of our single-family guarantee business to decline. Historically, we also competed with other financial institutions that retain or securitize mortgages, such as commercial and investment banks, dealers, thrift institutions, and insurance companies. While many of these institutions have ceased or substantially reduced their activities in the secondary market for single-family mortgages since 2008, it is possible that these institutions will reenter the market.

Beginning in 2010, some market participants began to re-emerge in the multifamily market, and we have faced increased competition from other institutional investors.

We could be prevented from competing efficiently and effectively by competitors who use their patent portfolios to prevent us from using necessary business processes and products, or to require us to pay significant royalties to use those processes and products.

Our investment activities may be adversely affected by limited availability of financing and increased funding costs.

The amount, type and cost of our funding, including financing from other financial institutions and the capital markets, directly impacts our interest expense and results of operations. A number of factors could make such financing more difficult to obtain, more expensive or unavailable on any terms, both domestically and internationally, including:

- termination of, or future restrictions or other adverse changes with respect to, government support programs that may benefit us;
- reduced demand for our debt securities;
- competition for debt funding from other debt issuers; and
- downgrades in our credit ratings or the credit ratings of the U.S. government.

Our ability to obtain funding in the public debt markets or by pledging mortgage-related securities as collateral to other financial institutions could cease or change rapidly, and the cost of available funding could increase significantly due to changes in market confidence and other factors. For example, in the fall of 2008, we experienced significant deterioration in our access to the unsecured medium- and long-term debt markets, and were forced to rely on short-term debt to fund our purchases of mortgage assets and refinance maturing debt and to rely on derivatives to synthetically create the substantive economic equivalent of various debt funding structures.

We follow certain liquidity management practices and procedures. However, in the event we were unable to obtain funding from the public debt markets, there can be no assurance that such practices and procedures would provide us with sufficient liquidity to meet ongoing cash obligations for an extended period.

Since 2008, the ratings on the non-agency mortgage-related securities we hold backed by Alt-A, subprime, and option ARM loans have decreased, limiting their availability as a significant source of liquidity for us through sales or use as collateral in secured lending transactions. In addition, adverse market conditions have negatively impacted our ability to enter into secured lending transactions using agency securities as collateral. These trends are likely to continue in the future.

The composition of our mortgage-related investments portfolio has changed significantly since we entered into conservatorship, as our holdings of single-family whole loans have significantly increased and our holdings of agency

mortgage-related securities have significantly declined. This changing composition presents heightened liquidity risk, which influences management's decisions regarding funding and hedging.

Government Support

Changes or perceived changes in the government's support of us could have a severe negative effect on our access to the debt markets and our debt funding costs. Under the Purchase Agreement, the $200 billion cap on Treasury's funding commitment will increase as necessary to accommodate any cumulative reduction in our net worth during 2010, 2011, and 2012. While we believe that the support provided by Treasury pursuant to the Purchase Agreement currently enables us to maintain our access to the debt markets and to have adequate liquidity to conduct our normal business activities, the costs of our debt funding could vary due to the uncertainty about the future of the GSEs and potential investor concerns about the adequacy of funding available to us under the Purchase Agreement after 2012. The cost of our debt funding could increase if debt investors believe that the risk that we could be placed into receivership is increasing. In addition, under the Purchase Agreement, without the prior consent of Treasury, we may not increase our total indebtedness above a specified limit or become liable for any subordinated indebtedness. For more information, see "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Actions of Treasury and FHFA*."

We do not currently have a liquidity backstop available to us (other than draws from Treasury under the Purchase Agreement and Treasury's ability to purchase up to $2.25 billion of our obligations under its permanent statutory authority) if we are unable to obtain funding from issuances of debt or other conventional sources. At present, we are not able to predict the likelihood that a liquidity backstop will be needed, or to identify the alternative sources of liquidity that might be available to us if needed, other than from Treasury as referenced above.

Demand for Debt Funding

The willingness of domestic and foreign investors to purchase and hold our debt securities can be influenced by many factors, including changes in the world economy, changes in foreign-currency exchange rates, regulatory and political factors, as well as the availability of and preferences for other investments. If investors were to divest their holdings or reduce their purchases of our debt securities, our funding costs could increase and our business activities could be curtailed. The willingness of investors to purchase or hold our debt securities, and any changes to such willingness, may materially affect our liquidity, business and results of operations.

Competition for Debt Funding

We compete for low-cost debt funding with Fannie Mae, the FHLBs, and other institutions. Competition for debt funding from these entities can vary with changes in economic, financial market, and regulatory environments. Increased competition for low-cost debt funding may result in a higher cost to finance our business, which could negatively affect our financial results. An inability to issue debt securities at attractive rates in amounts sufficient to fund our business activities and meet our obligations could have an adverse effect on our business, liquidity, financial condition, and results of operations. See "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Other Debt Securities*" for a description of our debt issuance programs.

Our funding costs may also be affected by changes in the amount of, and demand for, debt issued by Treasury.

Line of Credit

We maintain a secured intraday line of credit to provide additional intraday liquidity to fund our activities through the Fedwire system. This line of credit requires us to post collateral to a third party. In certain circumstances, this secured counterparty may be able to repledge the collateral underlying our financing without our consent. In addition, because the secured intraday line of credit is uncommitted, we may not be able to continue to draw on it if and when needed.

Any downgrade in the credit ratings of the U.S. government would likely be followed by a downgrade in our credit ratings. A downgrade in the credit ratings of our debt could adversely affect our liquidity and other aspects of our business.

Nationally recognized statistical rating organizations play an important role in determining, by means of the ratings they assign to issuers and their debt, the availability and cost of funding. Our credit ratings are important to our liquidity. We currently receive ratings from three nationally recognized statistical rating organizations (S&P, Moody's, and Fitch) for our unsecured borrowings. These ratings are primarily based on the support we receive from Treasury, and therefore are affected by changes in the credit ratings of the U.S. government.

On August 2, 2011, President Obama signed the "Budget and Control Act of 2011" which raised the U.S. government's statutory debt limit. The raising of the statutory debt limit and details outlined in the legislation to reduce the deficit resulted in actions on the ratings of the U.S. government and our debt, including: (a) on August 5, 2011, S&P lowered the long-term credit rating of the United States to "AA+" from "AAA" and assigned a negative outlook to the rating; and (b) on August 8, 2011, S&P lowered our senior long-term debt credit rating to "AA+" from "AAA" and assigned a negative outlook to the rating. As a result of this downgrade, we posted additional collateral to certain derivative counterparties in accordance with the terms of the collateral agreements with such counterparties. For more information, see "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Credit Ratings*."

S&P, Moody's, and Fitch have indicated that additional actions on the U.S. government's ratings could occur if steps toward a credible deficit reduction plan are not taken or if the U.S. experiences a weaker than expected economic recovery. Any downgrade in the credit ratings of the U.S. government would be expected to be followed or accompanied by a downgrade in our credit ratings.

In addition to a downgrade in the credit ratings of or outlook on the U.S. government, a number of events could adversely affect our debt credit ratings, including actions by governmental entities or others, changes in government support for us, additional GAAP losses, and additional draws under the Purchase Agreement. Such actions could lead to major disruptions in the mortgage market and to our business due to lower liquidity, higher borrowing costs, lower asset values, and higher credit losses, and could cause us to experience much greater net losses and net worth deficits. The full range and extent of the adverse effects to our business that would result from any such ratings downgrades and market disruptions cannot be predicted with certainty. However, we expect that they could: (a) adversely affect our liquidity and cause us to limit or suspend new business activities that entail outlays of cash; (b) make new issuances of debt significantly more costly, or potentially prohibitively expensive, and adversely affect the supply of debt financing available to us; (c) reduce the value of our guarantee to investors and adversely affect our ability to issue our guaranteed mortgage-related securities; (d) reduce the value of Treasury and agency mortgage securities we hold; (e) increase the cost of mortgage financing for borrowers, thereby reducing the supply of mortgages available to us to purchase; (f) adversely affect home prices, reducing the value of our REO and likely leading to additional borrower defaults on mortgage loans we guarantee; and (g) trigger additional collateral requirements under our derivatives contracts.

Any decline in the price performance of or demand for our PCs could have an adverse effect on the volume and profitability of our new single-family guarantee business.

Our PCs are an integral part of our mortgage purchase program. We purchase many mortgages by issuing PCs in exchange for them in guarantor swap transactions. We also issue PCs backed by mortgage loans that we purchased for cash. Our competitiveness in purchasing single-family mortgages from our seller/servicers, and thus the volume and profitability of new single-family business, can be directly affected by the relative price performance of our PCs and comparable Fannie Mae securities. Increasing demand for our PCs helps support the price performance of our PCs, which in turn helps us compete with Fannie Mae and others in purchasing mortgages.

Our PCs have typically traded at a discount to comparable Fannie Mae securities, which creates an incentive for customers to conduct a disproportionate share of their guarantor business with Fannie Mae and negatively impacts the economics of our business. Various factors, including market conditions and the relative rates at which the underlying mortgages prepay, affect the price performance of our PCs. The changes to HARP (announced by FHFA on October 24, 2011) could adversely affect the price performance of our PCs, to the extent they cause the loans underlying our PCs to refinance at a faster rate than loans underlying comparable Fannie Mae securities (or cause the perception that loans underlying our PCs will refinance at a faster rate). While we employ a variety of strategies to support the price performance of our PCs and may consider further strategies, any such strategies may fail or adversely affect our business or we may cease such activities if deemed appropriate. We may incur costs to support the liquidity and price performance of our securities. In certain circumstances, we compensate customers for the difference in price between our PCs and comparable Fannie Mae securities. However, this could adversely affect the profitability and market share of our single-family guarantee business.

Beginning in 2012, under guidance from FHFA we expect to curtail mortgage-related investments portfolio purchase and retention activities that are undertaken for the primary purpose of supporting the price performance of our PCs, which may result in a significant decline in the market share of our single-family guarantee business, lower comprehensive income, and a more rapid decline in the size of our total mortgage portfolio. If these developments occur, it may be difficult and expensive for us to reverse or mitigate them through PC price support activities, should we desire or be directed to do so. For more information, see "BUSINESS — Our Business Segments — *Single-Family Guarantee Segment — Securitization Activities*" and "— *Investments Segment — PC Support Activities*."

We may be unable to maintain a liquid and deep market for our PCs, which could also adversely affect the price performance of PCs. A significant reduction in the volume of mortgage loans that we securitize could reduce the liquidity of our PCs.

Mortgage fraud could result in significant financial losses and harm to our reputation.

We rely on representations and warranties by seller/servicers about the characteristics of the single-family mortgage loans we purchase and securitize, and we do not independently verify most of the information that is provided to us before we purchase the loan. This exposes us to the risk that one or more of the parties involved in a transaction (such as the borrower, seller, broker, appraiser, title agent, loan officer, lender or servicer) will engage in fraud by misrepresenting facts about a mortgage loan or a borrower. While we subsequently review a sample of these loans to determine if such loans are in compliance with our contractual standards, there can be no assurance that this would detect or deter mortgage fraud, or otherwise reduce our exposure to the risk of fraud. We are also exposed to fraud by third parties in the mortgage servicing function, particularly with respect to sales of REO properties, single-family short sales, and other dispositions of non-performing assets. We may experience significant financial losses and reputational damage as a result of such fraud.

The value of mortgage-related securities guaranteed by us and held as investments may decline if we were unable to perform under our guarantee or if investor confidence in our ability to perform under our guarantee were to diminish.

A portion of our investments in mortgage-related securities are securities guaranteed by us. Our valuation of these securities is consistent with GAAP and the legal structure of the guarantee transaction. These securities include the Freddie Mac assets transferred to the securitization trusts that serve as collateral for the mortgage-related securities issued by the trusts (*i.e.*, (a) multifamily PCs; (b) REMICs and Other Structured Securities; and (c) certain Other Guarantee Transactions). The valuation of our guaranteed mortgage-related securities necessarily reflects investor confidence in our ability to perform under our guarantee and the liquidity that our guarantee provides. If we were unable to perform under our guarantee or if investor confidence in our ability to perform under our guarantee were to diminish, the value of our guaranteed securities may decline, thereby reducing the value of the securities reported on our consolidated balance sheets, which could have an adverse affect on our financial condition and results of operations. This could also adversely affect our ability to sell or otherwise use these securities for liquidity purposes.

Changes in interest rates could negatively impact our results of operations, stockholders' equity (deficit) and fair value of net assets.

Our investment activities and credit guarantee activities expose us to interest rate and other market risks. Changes in interest rates, up or down, could adversely affect our net interest yield. Although the yield we earn on our assets and our funding costs tend to move in the same direction in response to changes in interest rates, either can rise or fall faster than the other, causing our net interest yield to expand or compress. For example, due to the timing of maturities or rate reset dates on variable-rate instruments, when interest rates rise, our funding costs may rise faster than the yield we earn on our assets. This rate change could cause our net interest yield to compress until the effect of the increase is fully reflected in asset yields. Changes in the slope of the yield curve could also reduce our net interest yield.

Our GAAP results can be significantly affected by changes in interest rates, and adverse changes in interest rates could increase our GAAP net loss or deficit in total equity (deficit) materially. For example, changes in interest rates affect the fair value of our derivative portfolio. Since we generally record changes in fair values of our derivatives in current income, such changes could significantly impact our GAAP results. While derivatives are an important aspect of our management of interest-rate risk, they generally increase the volatility of reported net income (loss), because, while fair value changes in derivatives affect net income, fair value changes in several of the types of assets and liabilities being hedged do not affect net income. We could record substantial gains or losses from derivatives in any period, which could significantly contribute to our overall results for the period and affect our net equity (deficit) as of the end of such period. It is difficult for us to predict the amount or direction of derivative results. Additionally, increases in interest rates could increase other-than-temporary impairments on our investments in non-agency mortgage-related securities.

Changes in interest rates may also affect prepayment assumptions, thus potentially impacting the fair value of our assets, including our investments in mortgage-related assets. When interest rates fall, borrowers are more likely to prepay their mortgage loans by refinancing them at a lower rate. An increased likelihood of prepayment on the mortgages underlying our mortgage-related securities may adversely impact the value of these securities.

When interest rates increase, our credit losses from ARM and interest-only ARM loans may increase as borrower payments increase at their reset dates, which increases the borrower's risk of default. Rising interest rates may also reduce the opportunity for these borrowers to refinance into a fixed-rate loan.

Interest rates can fluctuate for a number of reasons, including changes in the fiscal and monetary policies of the federal government and its agencies, such as the Federal Reserve. Federal Reserve policies directly and indirectly influence the yield on our interest-earning assets and the cost of our interest-bearing liabilities. The availability of derivative financial instruments (such as options and interest rate and foreign currency swaps) from acceptable counterparties of the types and in the quantities needed could also affect our ability to effectively manage the risks related to our investment funding. Our strategies and efforts to manage our exposures to these risks may not be effective. In particular, in recent periods, a number of factors have made it more difficult for us to estimate future prepayments, including uncertainty regarding default rates, unemployment, loan modifications, the impact of FHFA-directed changes to HARP (announced in October 2011), and the volatility and impact of home price movements on mortgage durations. This could make it more difficult for us to manage prepayment risk, and could cause our hedging-related losses to increase. See "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK" for a description of the types of market risks to which we are exposed and how we seek to manage those risks.

Changes in OAS could materially impact our fair value of net assets and affect future results of operations and stockholders' equity (deficit).

OAS is an estimate of the incremental yield spread between a given security and an agency debt yield curve. This includes consideration of potential variability in the security's cash flows resulting from any options embedded in the security, such as prepayment options. The OAS between the mortgage and agency debt sectors can significantly affect the fair value of our net assets. The fair value impact of changes in OAS for a given period represents an estimate of the net unrealized increase or decrease in the fair value of net assets arising from net fluctuations in OAS during that period. We do not attempt to hedge or actively manage the impact of changes in mortgage-to-debt OAS.

Changes in market conditions, including changes in interest rates or liquidity, may cause fluctuations in OAS. A widening of the OAS on a given asset, which typically causes a decline in the current fair value of that asset, may cause significant mark-to-fair value losses, and may adversely affect our financial results and stockholders' equity (deficit), but may increase the number of attractive investment opportunities in mortgage loans and mortgage-related securities. Conversely, a narrowing or tightening of the OAS typically causes an increase in the current fair value of that asset, but may reduce the number of attractive investment opportunities in mortgage loans and mortgage-related securities. Consequently, a tightening of the OAS may adversely affect our future financial results and stockholders' equity (deficit). See "MD&A — FAIR VALUE MEASUREMENTS AND ANALYSIS — Consolidated Fair Value Balance Sheets Analysis — *Discussion of Fair Value Results*" for a more detailed description of the impacts of changes in mortgage-to-debt OAS.

While wider spreads might create favorable investment opportunities, we are limited in our ability to take advantage of any such opportunities due to various restrictions on our mortgage-related investments portfolio activities. See "BUSINESS — Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business — Limits on Investment Activity and Our Mortgage-Related Investments Portfolio*."

We could experience significant reputational harm, which could affect the future of our company, if our efforts under the MHA Program and other initiatives to support the U.S. residential mortgage market do not succeed.

We are focused on the servicing alignment initiative, the MHA Program and other initiatives to support the U.S. residential mortgage market. If these initiatives do not achieve their desired results, or are otherwise perceived to have failed to achieve their objectives, we may experience damage to our reputation, which may impact the extent of future government support for our business and government decisions with respect to the future status and role of Freddie Mac.

Negative publicity causing damage to our reputation could adversely affect our business prospects, financial results, or net worth.

Reputation risk, or the risk to our financial results and net worth from negative public opinion, is inherent in our business. Negative public opinion could adversely affect our ability to keep and attract customers or otherwise impair our customer relationships, adversely affect our ability to obtain financing, impede our ability to hire and retain qualified personnel, hinder our business prospects, or adversely impact the trading price of our securities. Perceptions regarding the practices of our competitors, our seller/servicers or the financial services and mortgage industries as a whole, particularly as they relate to the current housing and economic downturn, may also adversely impact our reputation. Adverse reputation impacts on third parties with whom we have important relationships may impair market confidence or investor confidence in our business operations as well. In addition, negative publicity could expose us to adverse legal and regulatory consequences, including greater regulatory scrutiny or adverse regulatory or legislative changes, and could

affect what changes may occur to our business structure during or following conservatorship, including whether we will continue to exist. These adverse consequences could result from perceptions concerning our activities and role in addressing the housing and economic downturn, concern about our compensation practices, concerns about deficiencies in foreclosure documentation practices or our actual or alleged action or failure to act in any number of areas, including corporate governance, regulatory compliance, financial reporting and disclosure, purchases of products perceived to be predatory, safeguarding or using nonpublic personal information, or from actions taken by government regulators in response to our actual or alleged conduct.

The servicing alignment initiative, MHA Program, and other efforts to reduce foreclosures, modify loan terms and refinance mortgages, including HARP, may fail to mitigate our credit losses and may adversely affect our results of operations or financial condition.

The servicing alignment initiative, MHA Program, and other loss mitigation activities are a key component of our strategy for managing and resolving troubled assets and lowering credit losses. However, there can be no assurance that any of our loss mitigation strategies will be successful and that credit losses will not continue to escalate. The costs we incur related to loan modifications and other activities have been, and will likely continue to be, significant because we bear the full cost of the monthly payment reductions related to modifications of loans we own or guarantee, and all applicable servicer and borrower incentives. We are not reimbursed for these costs by Treasury. For information on our loss mitigation activities, see "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*."

We could be required or elect to make changes to our implementation of our other loss mitigation activities that could make these activities more costly to us, both in terms of credit expenses and the cost of implementing and operating the activities. For example, we could be required to, or elect to, use principal reduction to achieve reduced payments for borrowers. This could further increase our losses, as we could bear the full costs of such reductions.

A significant number of loans are in the trial period of HAMP or the trial period of our new non-HAMP standard loan modification. For information on completion rates for HAMP and non-HAMP modifications, see "MD&A — RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*." A number of loans will fail to complete the applicable trial period or qualify for our other loss mitigation programs. For these loans, the trial period will have effectively delayed the foreclosure process and could increase our losses, to the extent the prices we ultimately receive for the foreclosed properties are less than the prices we could have received had we foreclosed upon the properties earlier, due to continued home price declines. These delays in foreclosure could also cause our REO operations expense to increase, perhaps substantially.

Mortgage modification initiatives, particularly any future focus on principal reductions (which at present we do not offer to borrowers), have the potential to change borrower behavior and mortgage underwriting. Principal reductions may create an incentive for borrowers that are current to become delinquent in order to receive a principal reduction. This, coupled with the phenomenon of widespread underwater mortgages, could significantly affect borrower attitudes towards homeownership, the commitment of borrowers to making their mortgage payments, the way the market values residential mortgage assets, the way in which we conduct business and, ultimately, our financial results.

Depending on the type of loss mitigation activities we pursue, those activities could result in accelerating or slowing prepayments on our PCs and REMICs and Other Structured Securities, either of which could affect the pricing of such securities.

On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to attract more eligible borrowers whose monthly payments are current and who can benefit from refinancing their home mortgages. The Acting Director of FHFA stated that the goal of pursuing these changes is to create refinancing opportunities for more borrowers whose mortgages are owned or guaranteed by Freddie Mac and Fannie Mae, while reducing risk for Freddie Mac and Fannie Mae and bringing a measure of stability to housing markets. However, there can be no assurance that the revisions to HARP will be successful in achieving these objectives or that any benefits from the revised program will exceed our costs. We may face greater exposure to credit and other losses on these HARP loans because we are not requiring lenders to provide us with certain representations and warranties on these HARP loans. In addition, changes in expectations of mortgage prepayments could result in declines in the fair value of our investments in certain agency securities and lower net interest yields over time on other mortgage-related investments. The ultimate impact of the HARP revisions on our financial results will be driven by the level of borrower participation and the volume of loans with high LTV ratios that we acquire under the program. Over time, relief refinance mortgages with LTV ratios above 80% may not perform as well as relief refinance mortgages with LTV ratios of 80% and below because of the continued high LTV ratios of these loans. There is an increase in borrower default risk as LTV ratios increase, particularly

for loans with LTV ratios above 80%. In addition, relief refinance mortgages may not be covered by mortgage insurance for the full excess of their UPB over 80%.

We are devoting significant internal resources to the implementation of the servicing alignment initiative and the MHA Program, which has, and will continue to, increase our expenses. The size and scope of these efforts may also limit our ability to pursue other business opportunities or corporate initiatives.

We may experience further write-downs and losses relating to our assets, including our investment securities, net deferred tax assets, REO properties or mortgage loans, that could materially adversely affect our business, results of operations, financial condition, liquidity and net worth.

We experienced significant losses and write-downs relating to certain of our assets during the past several years, including significant declines in market value, impairments of our investment securities, market-based write-downs of REO properties, losses on non-performing loans removed from PC pools, and impairments on other assets. The fair value of our assets may be further adversely affected by continued weakness in the economy, further deterioration in the housing and financial markets, additional ratings downgrades, or other events.

We increased our valuation allowance for our net deferred tax assets by $2.3 billion during 2011. The future status and role of Freddie Mac could be affected by actions of the Conservator, and legislative and regulatory action that alters the ownership, structure, and mission of the company. The uncertainty of these developments could materially affect our operations, which could in turn affect our ability or intent to hold investments until the recovery of any temporary unrealized losses. If future events significantly alter our current outlook, a valuation allowance may need to be established for the remaining deferred tax asset.

Due to the ongoing weaknesses in the economy and in the housing and financial markets, we may experience additional write-downs and losses relating to our assets, including those that are currently AAA-rated, and the fair values of our assets may continue to decline. This could adversely affect our results of operations, financial condition, liquidity, and net worth.

There may not be an active, liquid trading market for our equity securities. Our equity securities are not likely to have any value beyond the short-term.

Our common stock and classes of preferred stock that previously were listed and traded on the NYSE were delisted from the NYSE effective July 8, 2010, and now trade on the OTC market. The market price of our common stock declined significantly between June 16, 2010, the date we announced our intention to delist these securities, and July 8, 2010, the first day the common stock traded exclusively on the OTC market, and may decline further. Trading volumes on the OTC market have been, and will likely continue to be, less than those on the NYSE, which would make it more difficult for investors to execute transactions in our securities and could make the prices of our securities decline or be more volatile. The Acting Director of FHFA has stated that "[Freddie Mac and Fannie Mae's] equity holders retain an economic claim on the companies but that claim is subordinate to taxpayer claims. As a practical matter, taxpayers are not likely to be repaid in full, so [Freddie Mac and Fannie Mae] stock lower in priority is not likely to have any value."

Operational Risks

We have incurred, and will continue to incur, expenses and we may otherwise be adversely affected by delays and deficiencies in the foreclosure process.

We have been, and will likely continue to be, adversely affected by delays in the foreclosure process, which could increase our expenses.

The average length of time for foreclosure of a Freddie Mac loan significantly increased in recent years, and may continue to increase. A number of factors have contributed to this increase, including: (a) the increasingly lengthy foreclosure process in many states; and (b) concerns about deficiencies in seller/servicers' conduct of the foreclosure process. More recently, regulatory developments impacting mortgage servicing and foreclosure practices have also contributed to these delays. For more information on these developments, see "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Developments Concerning Single-Family Servicing Practices*."

Delays in the foreclosure process could cause our credit losses to increase for a number of reasons. For example, properties awaiting foreclosure could deteriorate until we acquire ownership of them through foreclosure. This would increase our expenses to repair and maintain the properties when we do acquire them. Such delays may also adversely affect the values of, and our losses on, the non-agency mortgage-related securities we hold. Delays in the foreclosure

process may also adversely affect trends in home prices regionally or nationally, which could also adversely affect our financial results.

It also is possible that mortgage insurance claims could be reduced if delays caused by servicers' deficient foreclosure practices prevent servicers from completing foreclosures within required timelines defined by mortgage insurers. Mortgage insurance companies establish foreclosure timelines that vary by state and range between 30 and 960 days.

Delays in the foreclosure process could create fluctuations in our single-family credit statistics. For example, our realization of credit losses, which consists of REO operations income (expense) plus charge-offs, net, could be delayed because we typically record charge-offs at the time we take ownership of a property through foreclosure. Delays could also temporarily increase the number of seriously delinquent loans that remain in our single-family mortgage portfolio, which could result in higher reported serious delinquency rates and a larger number of non-performing loans than would otherwise have been the case.

In the fall of 2010, several large seller/servicers announced issues relating to the improper preparation and execution of certain documents used in foreclosure proceedings. These announcements raised various concerns relating to foreclosure practices. A number of our seller/servicers, including several of our largest ones, temporarily suspended foreclosure proceedings in certain states while they evaluated and addressed these issues. While the larger servicers generally resumed foreclosure proceedings in early 2011, single-family mortgages in our portfolio have continued to experience significant delays in the foreclosure process in 2011, as compared to periods before these issues arose, particularly in states that require a judicial foreclosure process. These and other factors could also delay sales of our REO properties. In addition, a group consisting of state attorneys general and state bank and mortgage regulators is reviewing foreclosure practices. We have terminated the eligibility of several law firms to serve as counsel in foreclosures of Freddie Mac mortgages, due to issues with respect to the firms' foreclosure practices. It is possible that additional deficiencies in foreclosure practices will be identified.

We have incurred, and will continue to incur, expenses related to deficiencies in foreclosure documentation practices and the costs of remediating them, which may be significant. These expenses include costs related to terminating the eligibility of certain law firms and other incremental costs. We may also incur costs if we become involved in litigation or investigations relating to these issues. It will take time for seller/servicers to complete their evaluations of these issues and implement remedial actions. The integrity of the foreclosure process is critical to our business, and our financial results could be adversely affected by deficiencies in the conduct of that process.

Issues related to mortgages recorded through the MERS System could delay or disrupt foreclosure activities and have an adverse effect on our business.

The Mortgage Electronic Registration System, or the MERS® System, is an electronic registry that is widely used by seller/servicers, Freddie Mac, and other participants in the mortgage finance industry, to maintain records of beneficial ownership of mortgages. The MERS System is maintained by MERSCORP, Inc., a privately held company, the shareholders of which include a number of organizations in the mortgage industry, including Freddie Mac, Fannie Mae, and certain seller/servicers, mortgage insurance companies, and title insurance companies.

Mortgage Electronic Registration Systems, Inc., or MERS, a wholly-owned subsidiary of MERSCORP, Inc., has the ability to serve as a nominee for the owner of a mortgage loan and in that role become the mortgagee of record for the loan in local land records. Freddie Mac seller/servicers may choose to use MERS as a nominee. Approximately 42% of the loans Freddie Mac owns or guarantees were registered in MERS' name as of December 31, 2011; the beneficial ownership and the ownership of the servicing rights related to those loans are tracked in the MERS System.

In the past, Freddie Mac servicers had the option of initiating foreclosure in MERS' name. On March 23, 2011, we informed our servicers that they no longer may initiate foreclosures in MERS' name for those mortgages owned or guaranteed by us and registered with MERS that are referred to foreclosure on or after April 1, 2011. As of April 1, 2011, foreclosure of mortgages owned or guaranteed by us for which MERS serves as nominee is accomplished by MERS assigning the record ownership of the mortgage to the servicer, and the servicer initiating foreclosure in its own name. Many of our servicers were following this procedure before the March 23 announcement.

MERS has also been the subject of numerous lawsuits challenging foreclosures on mortgages for which MERS is mortgagee of record as nominee for the beneficial owner. For example, on February 3, 2012, the Attorney General of the State of New York filed a lawsuit against MERSCORP, Inc., MERS and several large banks alleging, among other items, that the creation and use of the MERS System has resulted in a wide range of deceptive and fraudulent foreclosure filings in New York state and federal courts. It is possible that adverse judicial decisions, regulatory proceedings or action, or

legislative action related to MERS, could delay or disrupt foreclosure of mortgages that are registered on the MERS System. Publicity concerning regulatory or judicial decisions, even if such decisions were not adverse, or MERS-related concerns about the integrity of the assignment process, could adversely affect the mortgage industry and negatively impact public confidence in the foreclosure process, which could lead to legislative or regulatory action. Because MERS often executes legal documents in connection with foreclosure proceedings, it is possible that investigations by governmental authorities and others into deficiencies in foreclosure practices may negatively impact MERS and the MERS System.

Federal or state legislation or regulatory action could prevent us from using the MERS System for mortgages that we currently own, guarantee, and securitize and for mortgages acquired in the future, or could create additional requirements for the transfer of mortgages that could affect the process for and costs of acquiring, transferring, servicing, and foreclosing mortgages. Such legislation or regulatory action could increase our costs or otherwise adversely affect our business. For example, we could be required to transfer mortgages out of the MERS System. There is also uncertainty regarding the extent to which seller/servicers will choose to use the MERS System in the future.

Failures by MERS to apply prudent and effective process controls and to comply with legal and other requirements in the foreclosure process could pose legal and operational risks for us. We may also face significant reputational risk due to our ties to MERS, as we are a shareholder of MERSCORP, Inc., and a Freddie Mac officer serves on the board of directors of both entities.

We cannot predict the impact that such events or actions may have on our business. On April 13, 2011, the Office of the Comptroller of the Currency, the Federal Reserve, the FDIC, the Office of Thrift Supervision, and FHFA entered into a consent order with MERS and MERSCORP, Inc., which stated that such federal regulators had identified certain deficiencies and unsafe or unsound practices by MERS and MERSCORP, Inc. that present financial, operational, compliance, legal, and reputational risks to MERSCORP, Inc. and MERS, and to its participating members, including Freddie Mac. The consent order requires MERS and MERSCORP, Inc. to, among other things, create and submit plans to ensure that MERS and MERSCORP, Inc. (a): are operated in a safe and sound manner and have adequate financial strength and staff; (b) improve communications with MERSCORP, Inc. shareholders and members; (c) intensify the monitoring of and response to litigation; and (d) establish processes to ensure data quality and strengthen certain aspects of corporate governance. The federal banking regulators have also indicated that MERSCORP, Inc. should take action to simplify its governance structure, which could involve us giving up certain governance rights. It is unclear what changes will ultimately be made and whether there will be any consequent impact on Freddie Mac's relationship with and rights with respect to the two entities.

Weaknesses in internal control over financial reporting and in disclosure controls could result in errors and inadequate disclosures, affect operating results, and cause investors to lose confidence in our reported results.

We face continuing challenges because of deficiencies in our controls. Control deficiencies could result in errors, and lead to inadequate or untimely disclosures, and affect operating results. Control deficiencies could also cause investors to lose confidence in our reported financial results, which may have an adverse effect on the trading price of our securities. For information about our ineffective disclosure controls and two material weaknesses in internal control over financial reporting, see "CONTROLS AND PROCEDURES."

There are a number of factors that may impede our efforts to establish and maintain effective disclosure controls and internal control over financial reporting, including: (a) the nature of the conservatorship and our relationship with FHFA; (b) the complexity of, and significant changes in, our business activities and related GAAP requirements; (c) significant employee and management turnover; (d) internal reorganizations; (e) uncertainty regarding the sustainability of newly established controls; (f) data quality or servicing-related issues; and (g) the uncertain impacts of the ongoing housing and economic downturn on the results of our models, which are used for financial accounting and reporting purposes. Disruptive levels of employee turnover could negatively impact our internal control environment, including internal control over financial reporting, and ability to issue timely financial statements. During 2011, we experienced significant changes to our internal control environment as a result of resignations, terminations, or changes in responsibility. We cannot be certain that our efforts to improve and maintain our internal control over financial reporting will ultimately be successful.

Effectively designed and operated internal control over financial reporting provides only reasonable assurance that material errors in our financial statements will be prevented or detected on a timely basis. A failure to maintain effective internal control over financial reporting increases the risk of a material error in our reported financial results and delay in our financial reporting timeline. Depending on the nature of a control failure and any required remediation, ineffective controls could have a material adverse effect on our business.

We face risks and uncertainties associated with the internal models that we use for financial accounting and reporting purposes, to make business decisions, and to manage risks. Market conditions have raised these risks and uncertainties.

We make significant use of business and financial models for financial accounting and reporting purposes and to manage risk. We face risk associated with our use of models. First, there is inherent uncertainty associated with model results. Second, we could fail to properly implement, operate, or use our models. Either of these situations could adversely affect our financial statements and our ability to manage risks.

We use market-based information as inputs to our models. However, it can take time for data providers to prepare information, and thus the most recent information may not be available for the preparation of our financial statements. When market conditions change quickly and in unforeseen ways, there is an increased risk that the inputs reflected in our models are not representative of current market conditions.

The severe deterioration of the housing and credit markets beginning several years ago and, more recently, the extended period of economic weakness and uncertainty has increased the risks associated with our use of models. For example, certain economic events or the implementation of government policies could create increased model uncertainty as models may not fully capture these events, which makes it more difficult to assess model performance and requires a higher degree of management judgment. Our models may not perform as well in situations for which there are few or no recent historical precedents. We have adjusted our models in response to recent events, but there remains considerable uncertainty about model results.

Models are inherently imperfect predictors of actual results. Our models rely on various assumptions that may be incorrect, including that historical experience can be used to predict future results. It has been more difficult to predict the behaviors of the housing and credit capital markets and market participants over the past several years, due to, among other factors: (a) the uncertainty concerning trends in home prices; (b) the lack of historical evidence about the behavior of deeply underwater borrowers, the effect of an extended period of extremely low interest rates on prepayments, and the impact of widespread loan refinancing and modification programs (such as HARP and HAMP), including the potential for the extensive use of principal reductions; and (c) the impact of the concerns about deficiencies in foreclosure documentation practices and related delays in the foreclosure process.

We face the risk that we could fail to implement, operate, or adjust or use our models properly. This risk may be increasing due to our difficulty in attracting and retaining employees with the necessary experience and skills. For example, the assumptions underlying a model could be invalid, or we could apply a model to events or products outside the model's intended use. We may fail to code a model correctly or we could use incorrect data. The complexity and interconnectivity of our models create additional risk regarding the accuracy of model output. While we have processes and controls in place designed to mitigate these risks, there can be no assurances that such processes and controls will be successful.

Management often needs to exercise judgment to interpret or adjust modeled results to take into account new information or changes in conditions. The dramatic changes in the housing and credit capital markets in recent years have required frequent adjustments to our models and the application of greater management judgment in the interpretation and adjustment of the results produced by our models. This further increases both the uncertainty about model results and the risk of errors in the implementation, operation, or use of the models.

We face the risk that the valuations, risk metrics, amortization results, loan loss reserve estimations, and security impairment charges produced by our internal models may be different from actual results, which could adversely affect our business results, cash flows, fair value of net assets, business prospects, and future financial results. For example, our models may under-predict the losses we will suffer in various aspects of our business. Changes in, or replacements of, any of our models or in any of the assumptions, judgments, or estimates used in the models may cause the results generated by the model to be materially different from those generated by the prior model. The different results could cause a revision of previously reported financial condition or results of operations, depending on when the change to the model, assumption, judgment, or estimate is implemented. Any such changes may also cause difficulties in comparisons of the financial condition or results of operations of prior or future periods.

Due to increased uncertainty about model results, we also face increased risk that we could make poor business decisions in areas where model results are an important factor, including loan purchases, management and guarantee fee pricing, asset and liability management, market risk management, and quality-control sampling strategies for loans in our single-family credit guarantee portfolio. Furthermore, any strategies we employ to attempt to manage the risks associated with our use of models may not be effective. See "MD&A — CRITICAL ACCOUNTING POLICIES AND ESTIMATES" and "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK — Interest-Rate Risk and Other Market Risks" for more information on our use of models.

Changes in our accounting policies, as well as estimates we make, could materially affect how we report our financial condition or results of operations.

Our accounting policies are fundamental to understanding our financial condition and results of operations. Certain of our accounting policies, as well as estimates we make, are "critical," as they are both important to the presentation of our financial condition and results of operations and they require management to make particularly difficult, complex or subjective judgments and estimates, often regarding matters that are inherently uncertain. Actual results could differ from our estimates and the use of different judgments and assumptions related to these policies and estimates could have a material impact on our consolidated financial statements. For a description of our critical accounting policies, see "MD&A — CRITICAL ACCOUNTING POLICIES AND ESTIMATES."

From time to time, the FASB and the SEC change the financial accounting and reporting guidance that govern the preparation of our financial statements. These changes are beyond our control, can be difficult to predict and could materially impact how we report our financial condition and results of operations. We could be required to apply new or revised guidance retrospectively, which may result in the revision of prior period financial statements by material amounts. The implementation of new or revised accounting guidance could result in material adverse effects to our stockholders' equity (deficit) and result in or contribute to the need for additional draws under the Purchase Agreement.

FHFA may require us to change our accounting policies to align more closely with those of Fannie Mae. FHFA may also require us and Fannie Mae to have the same independent public accounting firm. Either of these events could significantly increase our expenses and require a substantial time commitment of management.

See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for more information.

A failure in our operational systems or infrastructure, or those of third parties, could impair our liquidity, disrupt our business, damage our reputation, and cause losses.

Shortcomings or failures in our internal processes, people, or systems could lead to impairment of our liquidity, financial loss, errors in our financial statements, disruption of our business, liability to customers, further legislative or regulatory intervention, or reputational damage. Servicing and loss mitigation processes are currently under considerable stress, which increases the risk that we may experience further operational problems in the future. Our core systems and technical architecture include many legacy systems and applications that lack scalability and flexibility, which increases the risk of system failure. While we are working to enhance the quality of our infrastructure, we have had difficulty in the past conducting large-scale infrastructure improvement projects.

Our business is highly dependent on our ability to process a large number of transactions on a daily basis and manage and analyze significant amounts of information, much of which is provided by third parties. The transactions we process are complex and are subject to various legal, accounting, and regulatory standards. The types of transactions we process and the standards relating to those transactions can change rapidly in response to external events, such as the implementation of government-mandated programs and changes in market conditions. Our financial, accounting, data processing, or other operating systems and facilities may fail to operate properly or become disabled, adversely affecting our ability to process these transactions. The information provided by third parties may be incorrect, or we may fail to properly manage or analyze it. The inability of our systems to accommodate an increasing volume of transactions or new types of transactions or products could constrain our ability to pursue new business initiatives or change or improve existing business activities.

Our employees could act improperly for their own gain and cause unexpected losses or reputational damage. While we have processes and systems in place designed to prevent and detect fraud, there can be no assurance that such processes and systems will be successful.

We also face the risk of operational failure or termination of any of the clearing agents, exchanges, clearinghouses, or other financial intermediaries we use to facilitate our securities and derivatives transactions. Any such failure or termination could adversely affect our ability to effect transactions, service our customers, and manage our exposure to risk.

Most of our key business activities are conducted in our principal offices located in McLean, Virginia and represent a concentrated risk of people, technology, and facilities. Despite the contingency plans and local recovery facilities we have in place, our ability to conduct business would be adversely impacted by a disruption in the infrastructure that supports our business and the geographical area in which we are located. Potential disruptions may include outages or disruptions to electrical, communications, transportation, or other services we use or that are provided to us. If a disruption occurs and our employees are unable to occupy our offices or communicate with or travel to other locations, our ability to

service and interact with our customers or counterparties may deteriorate and we may not be able to successfully implement contingency plans that allow us to carry out critical business functions at an acceptable level.

Due to the concentrated risk and inadequate distribution of resources nationally, we are also exposed to the risk that a catastrophic event, such as a terrorist event or natural disaster, could result in a significant business disruption and an inability to process transactions through normal business processes. Any measures we take to mitigate this risk may not be sufficient to respond to the full range of catastrophic events that may occur.

Freddie Mac management has determined that current business recovery capabilities would not be effective in the event of a catastrophic regional business event and could result in a significant business disruption and inability to process transactions through normal business processes. While management has developed a remediation plan to address the current capability gaps, any measures we take to mitigate this risk may not be sufficient to respond to the full range of catastrophic events that may occur.

We have experienced significant management changes, internal reorganizations, and turnover of key staff, which could increase our operational and control risks and have a material adverse effect on our ability to do business and our results of operations.

Internal reorganizations, inability to retain key executives and staff members, and our efforts to reduce administrative expenses may increase the stress on existing processes, leading to operational or control failures and harm to our financial performance and results of operations. A number of senior officers left the company in 2011, including our Chief Operating Officer, our Executive Vice President — Single-Family Credit Guarantee, our Executive Vice President — Investments and Capital Markets and Treasurer, our Executive Vice President — Multifamily, our Senior Vice President — Operations & Technology, our Executive Vice President — General Counsel & Corporate Secretary, our Executive Vice President — Chief Credit Officer, and our Senior Vice President — Interim General Counsel & Corporate Secretary. On October 26, 2011, FHFA announced that our Chief Executive Officer has expressed his desire to step down in 2012. We also experienced several significant internal reorganizations in 2011 and significant employee turnover.

The magnitude of these changes and the short time interval in which they have occurred, particularly during the ongoing housing and economic downturn, add to the risks of operational or control failures, including a failure in the effective operation of our internal control over financial reporting or our disclosure controls and procedures. Control failures could result in material adverse effects on our financial condition and results of operations. Disruptive levels of turnover among both executives and other employees could lead to breakdowns in any of our operations, affect our ability to execute ongoing business activities, cause delays and disruptions in the implementation of FHFA-directed and other important business initiatives, delay or disrupt critical technology and other projects, and erode our business, modeling, internal audit, risk management, information security, financial reporting, legal, compliance, and other capabilities. For more information, see "MD&A — RISK MANAGEMENT — Operational Risks" and "CONTROLS AND PROCEDURES."

In addition, management attention may be diverted from regular business concerns by these and future reorganizations and the continuing need to operate under the framework of conservatorship.

We may not be able to protect the security of our systems or the confidentiality of our information from cyber attack and other unauthorized access, disclosure, and disruption.

Our operations rely on the secure receipt, processing, storage, and transmission of confidential and other information in our computer systems and networks and with our business partners. Like many corporations and government entities, from time to time we have been, and likely will continue to be, the target of cyber attacks. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, and because some techniques involve social engineering attempts addressed to employees who may have insufficient knowledge to recognize them, we may be unable to anticipate these techniques or to implement adequate preventative measures. While we have invested significant resources in our information security program, there is a risk that it could prove to be inadequate to protect our computer systems, software, and networks.

Our computer systems, software, and networks may be vulnerable to internal or external cyber attack, unauthorized access, computer viruses or other malicious code, computer denial of service attacks, or other attempts to harm our systems or misuse our confidential information. Our employees may be vulnerable to social engineering efforts that cause a breach in our security that otherwise would not exist as a technical matter. If one or more of such events occur, this potentially could jeopardize or result in the unauthorized disclosure, misuse or corruption of confidential and other information, including nonpublic personal information and other sensitive business data, processed, stored in, or transmitted through, our computer systems and networks, or otherwise cause interruptions or malfunctions in our

operations or the operations of our customers or counterparties. This could result in significant losses or reputational damage, adversely affect our relationships with our customers and counterparties, and adversely affect our ability to purchase loans, issue securities or enter into and execute other business transactions. We could also face regulatory action. Internal or external attackers may seek to steal, corrupt or disclose confidential financial assets, intellectual property, and other sensitive information. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures, and we may be subject to litigation and financial losses that are not fully insured.

We rely on third parties for certain important functions, including some that are critical to financial reporting, our mortgage-related investment activity, and mortgage loan underwriting. Any failures by those vendors could disrupt our business operations.

We outsource certain key functions to external parties, including: (a) processing functions for trade capture, market risk management analytics, and financial instrument valuation; (b) custody and recordkeeping for our mortgage-related investments; (c) processing functions for mortgage loan underwriting and servicing; (d) certain services we provide to Treasury in our role as program compliance agent under HAMP; and (e) certain technology infrastructure and operations. We may enter into other key outsourcing relationships in the future. If one or more of these key external parties were not able to perform their functions for a period of time, at an acceptable service level, or for increased volumes, our business operations could be constrained, disrupted, or otherwise negatively impacted. Our use of vendors also exposes us to the risk of a loss of intellectual property or of confidential information or other harm. We may also be exposed to reputational harm, to the extent vendors do not conduct their activities under appropriate ethical standards. Financial or operational difficulties of an outside vendor could also hurt our operations if those difficulties interfere with the vendor's ability to provide services to us.

Our risk management efforts may not effectively mitigate the risks we seek to manage.

We could incur substantial losses and our business operations could be disrupted if we are unable to effectively identify, manage, monitor and mitigate operational risks, interest rate and other market risks and credit risks related to our business. Our risk management policies, procedures and techniques may not be sufficient to mitigate the risks we have identified or to appropriately identify additional risks to which we are subject. See "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK" and "MD&A — RISK MANAGEMENT" for a discussion of our approach to managing certain of the risks we face.

Legal and Regulatory Risks

The Dodd-Frank Act and related regulation may adversely affect our business activities and financial results.

The Dodd-Frank Act, which was signed into law on July 21, 2010, significantly changed the regulation of the financial services industry and could affect us in substantial and unforeseeable ways and have an adverse effect on our business, results of operations, financial condition, liquidity, and net worth. For example, the Dodd-Frank Act and related future regulatory changes could impact the value of assets that we hold, require us to change certain of our business practices, impose significant additional costs on us, limit the products we offer, require us to increase our regulatory capital, or make it more difficult for us to retain and recruit management and other employees. We will also face a more complicated regulatory environment due to the Dodd-Frank Act and related future regulatory changes, which will increase compliance costs and could divert management attention or other resources. The Dodd-Frank Act and related future regulatory changes will also significantly affect many aspects of the financial services industry and potentially change the business practices of our customers and counterparties; it is possible that any such changes could adversely affect our business and financial results.

Implementation of the Dodd-Frank Act is being accomplished through numerous rulemakings, many of which are still in process. The final effects of the legislation will not be known with certainty until these rulemakings are complete. The Dodd-Frank Act also mandates the preparation of studies of a wide range of issues, which could lead to additional legislative or regulatory changes. It could be difficult for us to comply with any future regulatory changes in a timely manner, due to the potential scope and number of such changes, which could limit our operations and expose us to liability.

The long-term impact of the Dodd-Frank Act and related future regulatory changes on our business and the financial services industry will depend on a number of factors that are difficult to predict, including our ability to successfully implement any changes to our business, changes in consumer behavior, and our competitors' and customers' responses to the Dodd-Frank Act and related future regulatory changes.

Examples of aspects of the Dodd-Frank Act that may significantly affect us include the following:

- The new Financial Stability Oversight Council could designate Freddie Mac as a non-bank financial company to be subject to supervision and regulation by the Federal Reserve. If this occurs, the Federal Reserve will have authority to examine Freddie Mac and we may be required to meet more stringent prudential standards than those applicable to other non-bank financial companies. New prudential standards could include requirements related to risk-based capital and leverage, liquidity, single-counterparty credit limits, overall risk management and risk committees, stress tests, and debt-to-equity limits, among other requirements.
- The Dodd-Frank Act will have a significant impact on the derivatives market. Large derivatives users, which may include Freddie Mac, will be subject to extensive new oversight and regulation. These new regulatory standards could impose significant additional costs on us related to derivatives transactions and it may become more difficult for us to enter into desired hedging transactions with acceptable counterparties on favorable terms.
- The Dodd-Frank Act will create new standards and requirements related to asset-backed securities, including requiring securitizers and potentially originators to retain a portion of the underlying loans' credit risk. Any such new standards and requirements could weaken or remove incentives for financial institutions to sell mortgage loans to us.
- The Dodd-Frank Act and related future regulatory changes could negatively impact the volume of mortgage originations, and thus adversely affect the number of mortgages available for us to purchase or guarantee.
- Under the Dodd-Frank Act, new minimum mortgage underwriting standards will be required for residential mortgages, including a requirement that lenders make a reasonable and good faith determination based on "verified and documented information" that the consumer has a "reasonable ability to repay" the mortgage. The Act requires regulators to establish a class of qualified loans that will receive certain protections from legal liability, such as the borrower's right to rescind the loan and seek damages. Mortgage originators and assignees, including Freddie Mac, may be subject to increased legal risk for loans that do not meet these requirements.
- Under the Dodd-Frank Act, federal regulators, including FHFA, are directed to promulgate regulations, to be applicable to financial institutions, including Freddie Mac, that will prohibit incentive-based compensation structures that the regulators determine encourage inappropriate risks by providing excessive compensation or benefits or that could lead to material financial loss. It is possible that any such regulations will have an adverse effect on our ability to retain and recruit management and other employees, as we may be at a competitive disadvantage as compared to other potential employers not subject to these or similar regulations.

For more information on the Dodd-Frank Act, see "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments*."

Legislative or regulatory actions could adversely affect our business activities and financial results.

In addition to the Dodd-Frank Act discussed in the immediately preceding risk factor, and possible GSE reform discussed in "Conservatorship and Related Matters — *The future status and role of Freddie Mac is uncertain and could be materially adversely affected by legislative and regulatory action that alters the ownership, structure, and mission of the company,*" our business initiatives may be directly adversely affected by other legislative and regulatory actions at the federal, state, and local levels. We could be negatively affected by legislation or regulatory action that changes the foreclosure process of any individual state. For example, various states and local jurisdictions have implemented mediation programs designed to bring servicers and borrowers together to negotiate workout options. These actions could delay the foreclosure process and increase our expenses, including by potentially delaying the final resolution of seriously delinquent mortgage loans and the disposition of non-performing assets. We could also be affected by any legislative or regulatory changes that would expand the responsibilities and liability of servicers and assignees for maintaining vacant properties prior to foreclosure. These laws and regulatory changes could significantly expand mortgage costs and liabilities. We could be affected by any legislative or regulatory changes to existing bankruptcy laws or proceedings or foreclosure processes, including any changes that would allow bankruptcy judges to unilaterally change the terms of mortgage loans. We could be affected by legislative or regulatory changes that permit or require principal reductions, including through the bankruptcy process. Our business could also be adversely affected by any modification, reduction, or repeal of the federal income tax deductibility of mortgage interest payments.

Pursuant to the Temporary Payroll Tax Cut Continuation Act of 2011, FHFA has been directed to require Freddie Mac and Fannie Mae to increase guarantee fees by no less than 10 basis points above the average guarantee fees charged in 2011 on single-family mortgage-backed securities to fund the payroll tax cut. If we are found to be out of compliance

with this requirement of the Act for two consecutive years, we will be precluded from providing any guarantee for a period to be determined by FHFA, but in no case less than one year.

Legislation or regulatory actions could indirectly adversely affect us to the extent such legislation or actions affect the activities of banks, savings institutions, insurance companies, securities dealers, and other regulated entities that constitute a significant part of our customer base or counterparties, or could indirectly affect us to the extent that they modify industry practices. Legislative or regulatory provisions that create or remove incentives for these entities to sell mortgage loans to us, purchase our securities or enter into derivatives, or other transactions with us could have a material adverse effect on our business results and financial condition.

The Basel Committee on Banking Supervision is in the process of substantially revising capital guidelines for financial institutions and has finalized portions of the so-called "Basel III" guidelines, which would set new capital and liquidity requirements for banks. Phase-in of Basel III is expected to take several years and there is significant uncertainty about how regulators might implement these guidelines or how the resulting regulations might impact us. For example, it is possible that any new regulations on the capital treatment of mortgage servicing rights, risk-based capital requirements for credit risk, and liquidity treatment of our debt and guarantee obligations could adversely affect our business results and financial condition.

We may make certain changes to our business in an attempt to meet the housing goals and subgoals set for us by FHFA that may increase our losses.

We may make adjustments to our mortgage loan sourcing and purchase strategies in an effort to meet our housing goals and subgoals, including changes to our underwriting standards and the expanded use of targeted initiatives to reach underserved populations. For example, we may purchase loans that offer lower expected returns on our investment and increase our exposure to credit losses. Doing so could cause us to forgo other purchase opportunities that we would expect to be more profitable. If our current efforts to meet the goals and subgoals prove to be insufficient, we may need to take additional steps that could further increase our losses. FHFA has not yet published a final rule with respect to our duty to serve underserved markets. However, it is possible that we could also make changes to our business in the future in response to this duty. If we do not meet our housing goals or duty to serve requirements, and FHFA finds that the goals or requirements were feasible, we may become subject to a housing plan that could require us to take additional steps that could have an adverse effect on our results of operations and financial condition.

We are involved in legal proceedings, governmental investigations, and IRS examinations that could result in the payment of substantial damages or otherwise harm our business.

We are a party to various legal actions, including litigation in the U.S. Tax Court as result of a dispute of certain tax matters with the IRS related to our 1998 through 2005 federal income tax returns. In addition, certain of our current and former directors, officers, and employees are involved in legal proceedings for which they may be entitled to reimbursement by us for costs and expenses of the proceedings. The defense of these or any future claims or proceedings could divert management's attention and resources from the needs of the business. We may be required to establish reserves and to make substantial payments in the event of adverse judgments or settlements of any such claims, investigations, proceedings, or examinations. Any legal proceeding, governmental investigation, or examination issue, even if resolved in our favor, could result in negative publicity or cause us to incur significant legal and other expenses. Furthermore, developments in, outcomes of, impacts of, and costs, expenses, settlements, and judgments related to these legal proceedings and governmental investigations and examinations may differ from our expectations and exceed any amounts for which we have reserved or require adjustments to such reserves. We are also cooperating with other investigations, such as the review being conducted by state attorneys general and state bank and mortgage regulators into foreclosure practices. These proceedings could divert management's attention or other resources. See "LEGAL PROCEEDINGS" and "NOTE 18: LEGAL CONTINGENCIES" for information about our pending legal proceedings and "NOTE 13: INCOME TAXES" for information about our litigation with the IRS relating to potential additional income taxes and penalties for the 1998 to 2005 tax years and other tax-related matters.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal offices consist of five office buildings in McLean, Virginia. We own four of the office buildings, comprising approximately 1.3 million square feet. We occupy the fifth building, comprising approximately 200,000 square feet, under a lease from a third party.

ITEM 3. LEGAL PROCEEDINGS

We are involved as a party to a variety of legal proceedings arising from time to time in the ordinary course of business. See "NOTE 18: LEGAL CONTINGENCIES" for more information regarding our involvement as a party to various legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock, par value $0.00 per share, trades in the OTC market and is quoted on the OTC Bulletin Board under the ticker symbol "FMCC." As of February 27, 2012, there were 649,733,472 shares of our common stock outstanding.

On July 8, 2010, our common stock and 20 previously-listed classes of preferred securities were delisted from the NYSE. We delisted such securities pursuant to a directive by the Conservator. The classes of preferred stock that were previously listed on the NYSE also now trade in the OTC market.

The table below sets forth the high and low prices of our common stock on the NYSE and the high and low bid information for our common stock on the OTC Bulletin Board for the indicated periods. The OTC Bulletin Board quotations reflect inter-dealer prices, without retail mark-up, mark-down, or commission, and may not necessarily represent actual transactions.

Table 7 — Quarterly Common Stock Information

	High	Low
2011 Quarter Ended(1)		
December 31	$0.27	$0.18
September 30	0.41	0.24
June 30	0.54	0.34
March 31	1.00	0.13
2010 Quarter Ended		
December 31(1)	$0.50	$0.29
September 30(2)	0.44	0.24
June 30(3)	1.68	0.40
March 31(3)	1.52	1.12

(1) Based on bid information for our common stock on the OTC Bulletin Board.
(2) Based on the prices of our common stock on the NYSE prior to July 8, 2010 and bid information for our common stock on the OTC Bulletin Board on and after July 8, 2010.
(3) Based on the prices of our common stock on the NYSE.

Holders

As of February 27, 2012, we had 2,104 common stockholders of record.

Dividends and Dividend Restrictions

We did not pay any cash dividends on our common stock during 2011 or 2010.

Our payment of dividends is subject to the following restrictions:

Restrictions Relating to the Conservatorship

As Conservator, FHFA announced on September 7, 2008 that we would not pay any dividends on Freddie Mac's common stock or on any series of Freddie Mac's preferred stock (other than the senior preferred stock). FHFA has instructed our Board of Directors that it should consult with and obtain the approval of FHFA before taking actions involving dividends.

Restrictions Under the Purchase Agreement

The Purchase Agreement prohibits us and any of our subsidiaries from declaring or paying any dividends on Freddie Mac equity securities (other than with respect to the senior preferred stock or warrant) without the prior written consent of Treasury.

Restrictions Under the GSE Act

Under the GSE Act, FHFA has authority to prohibit capital distributions, including payment of dividends, if we fail to meet applicable capital requirements. Under the GSE Act, we are not permitted to make a capital distribution if, after making the distribution, we would be undercapitalized, except the Director of FHFA may permit us to repurchase shares if the repurchase is made in connection with the issuance of additional shares or obligations in at least an equivalent amount and will reduce our financial obligations or otherwise improve our financial condition. If FHFA classifies us as undercapitalized, we are not permitted to make a capital distribution that would result in our being reclassified as

significantly undercapitalized or critically undercapitalized. If FHFA classifies us as significantly undercapitalized, approval of the Director of FHFA is required for any dividend payment; the Director may approve a capital distribution only if the Director determines that the distribution will enhance the ability of the company to meet required capital levels promptly, will contribute to the long-term financial safety-and-soundness of the company, or is otherwise in the public interest. Our capital requirements have been suspended during conservatorship.

Restrictions Under our Charter

Without regard to our capital classification, we must obtain prior written approval of FHFA to make any capital distribution that would decrease total capital to an amount less than the risk-based capital level or that would decrease core capital to an amount less than the minimum capital level. As noted above, our capital requirements have been suspended during conservatorship.

Restrictions Relating to Subordinated Debt

During any period in which we defer payment of interest on qualifying subordinated debt, we may not declare or pay dividends on, or redeem, purchase or acquire, our common stock or preferred stock. Our qualifying subordinated debt provides for the deferral of the payment of interest for up to five years if either: (a) our core capital is below 125% of our critical capital requirement; or (b) our core capital is below our statutory minimum capital requirement, and the Secretary of the Treasury, acting on our request, exercises his or her discretionary authority pursuant to Section 306(c) of our charter to purchase our debt obligations. FHFA has directed us to make interest and principal payments on our subordinated debt, even if we fail to maintain required capital levels. As a result, the terms of any of our subordinated debt that provide for us to defer payments of interest under certain circumstances, including our failure to maintain specified capital levels, are no longer applicable. As noted above, our capital requirements have been suspended during conservatorship.

Restrictions Relating to Preferred Stock

Payment of dividends on our common stock is also subject to the prior payment of dividends on our 24 series of preferred stock and one series of senior preferred stock, representing an aggregate of 464,170,000 shares and 1,000,000 shares, respectively, outstanding as of December 31, 2011. Payment of dividends on all outstanding preferred stock, other than the senior preferred stock, is subject to the prior payment of dividends on the senior preferred stock. We paid dividends on the senior preferred stock during 2011 at the direction of the Conservator, as discussed in "MD&A — LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Dividend Obligation on the Senior Preferred Stock*" and "NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT) — Dividends Declared During 2011." We did not declare or pay dividends on any other series of preferred stock outstanding in 2011.

Recent Sales of Unregistered Securities

The securities we issue are "exempted securities" under the Securities Act of 1933, as amended. As a result, we do not file registration statements with the SEC with respect to offerings of our securities.

Following our entry into conservatorship, we suspended the operation of, and ceased making grants under, equity compensation plans. Previously, we had provided equity compensation under these plans to employees and members of our Board of Directors. Under the Purchase Agreement, we cannot issue any new options, rights to purchase, participations, or other equity interests without Treasury's prior approval. However, grants outstanding as of the date of the Purchase Agreement remain in effect in accordance with their terms.

No stock options were exercised during the three months ended December 31, 2011. However, restrictions lapsed on 10,729 restricted stock units.

See "NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT)" for more information.

Issuer Purchases of Equity Securities

We did not repurchase any of our common or preferred stock during the three months ended December 31, 2011. Additionally, we do not currently have any outstanding authorizations to repurchase common or preferred stock. Under the Purchase Agreement, we cannot repurchase our common or preferred stock without Treasury's prior consent, and we may only purchase or redeem the senior preferred stock in certain limited circumstances set forth in the Certificate of Creation,

Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Liquidation Preference Senior Preferred Stock.

Transfer Agent and Registrar

Computershare Trust Company, N.A.
P.O. Box 43078
Providence, RI 02940-3078
Telephone: 781-575-2879
http://www.computershare.com/investors

ITEM 6. SELECTED FINANCIAL DATA[1]

The selected financial data presented below should be reviewed in conjunction with MD&A and our consolidated financial statements and related notes for the year ended December 31, 2011.

	At or For The Year Ended December 31,				
	2011	2010	2009	2008	2007
	(dollars in millions, except share-related amounts)				
Statements of Income and Comprehensive Income Data					
Net interest income	$ 18,397	$ 16,856	$ 17,073	$ 6,796	$ 3,099
Provision for credit losses	(10,702)	(17,218)	(29,530)	(16,432)	(2,854)
Non-interest income (loss)	(10,878)	(11,588)	(2,732)	(29,175)	(275)
Non-interest expense	(2,483)	(2,932)	(7,195)	(5,753)	(5,959)
Net loss attributable to Freddie Mac	(5,266)	(14,025)	(21,553)	(50,119)	(3,094)
Total comprehensive income (loss) attributable to Freddie Mac	(1,230)	282	(2,913)	(70,483)	(5,786)
Net loss attributable to common stockholders	(11,764)	(19,774)	(25,658)	(50,795)	(3,503)
Net loss per common share:					
Basic	(3.63)	(6.09)	(7.89)	(34.60)	(5.37)
Diluted	(3.63)	(6.09)	(7.89)	(34.60)	(5.37)
Cash dividends per common share	—	—	—	0.50	1.75
Weighted average common shares outstanding (in thousands):[2]					
Basic	3,244,896	3,249,369	3,253,836	1,468,062	651,881
Diluted	3,244,896	3,249,369	3,253,836	1,468,062	651,881
Balance Sheets Data					
Mortgage loans held-for-investment, at amortized cost by consolidated trusts (net of allowances for loan losses)	$1,564,131	$1,646,172	$ —	$ —	$ —
Total assets	2,147,216	2,261,780	841,784	850,963	794,368
Debt securities of consolidated trusts held by third parties	1,471,437	1,528,648	—	—	—
Other debt	660,546	713,940	780,604	843,021	738,557
All other liabilities	15,379	19,593	56,808	38,576	28,906
Total Freddie Mac stockholders' equity (deficit)	(146)	(401)	4,278	(30,731)	26,724
Portfolio Balances[3]					
Mortgage-related investments portfolio	$ 653,313	$ 696,874	$ 755,272	$ 804,762	$ 720,813
Total Freddie Mac mortgage-related securities[4]	1,624,684	1,712,918	1,854,813	1,807,553	1,701,207
Total mortgage portfolio[5]	2,075,394	2,164,859	2,250,539	2,207,476	2,102,676
Non-performing assets[6]	129,152	125,405	104,984	46,620	16,119
Ratios[7]					
Return on average assets[8][12]	(0.2)%	(0.6)%	(2.5)%	(6.1)%	(0.4)%
Non-performing assets ratio[9]	6.8	6.4	5.2	2.4	0.9
Return on common equity[10][12]	N/A	N/A	N/A	N/A	(21.0)
Equity to assets ratio[11][12]	—	(0.2)	(1.6)	(0.2)	3.4

(1) See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for information regarding our accounting policies and the impact of new accounting policies on our consolidated financial statements. Effective January 1, 2010, we adopted amendments to the accounting guidance for transfers of financial assets and the consolidation of VIEs. This had a significant impact on our consolidated financial statements. Consequently, our results for 2010 and 2011 are not comparable with the results for prior years. For more information, see "NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS."

(2) Includes the weighted average number of shares that are associated with the warrant for our common stock issued to Treasury as part of the Purchase Agreement for periods after 2007. This warrant is included in basic loss per share, because it is unconditionally exercisable by the holder at a cost of $0.00001 per share.

(3) Represents the UPB and excludes mortgage loans and mortgage-related securities traded, but not yet settled.

(4) See "Table 35 — Freddie Mac Mortgage-Related Securities" for the composition of this line item.

(5) See "Table 16 — Composition of Segment Mortgage Portfolios and Credit Risk Portfolios" for the composition of our total mortgage portfolio.

(6) See "Table 60 — Non-Performing Assets" for a description of our non-performing assets.

(7) The dividend payout ratio on common stock is not presented because we are reporting a net loss attributable to common stockholders for all periods presented.

(8) Ratio computed as net income (loss) attributable to Freddie Mac divided by the simple average of the beginning and ending balances of total assets.

(9) Ratio computed as non-performing assets divided by the ending UPB of our total mortgage portfolio, excluding non-Freddie Mac mortgage-related securities.

(10) Ratio computed as net income (loss) attributable to common stockholders divided by the simple average of the beginning and ending balances of total Freddie Mac stockholders' equity (deficit), net of preferred stock (at redemption value). Ratio is not presented for periods in which the simple average of the beginning and ending balances of total Freddie Mac stockholders' equity (deficit) is less than zero.

(11) Ratio computed as the simple average of the beginning and ending balances of total Freddie Mac stockholders' equity (deficit) divided by the simple average of the beginning and ending balances of total assets.

(12) To calculate the simple averages for 2010, the beginning balances of total assets and total Freddie Mac stockholders' equity are based on the January 1, 2010 balances, so that both the beginning and ending balances reflect the January 1, 2010 changes in accounting principles related to VIEs.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read this MD&A in conjunction with "BUSINESS — Executive Summary" and our consolidated financial statements and related notes for the year ended December 31, 2011.

MORTGAGE MARKET AND ECONOMIC CONDITIONS, AND OUTLOOK

Mortgage Market and Economic Conditions

Overview

Despite some improvements in the national unemployment rate, the housing market continued to experience challenges during 2011 due primarily to continued weakness in the employment market and a significant inventory of seriously delinquent loans and REO properties in the market. The U.S. real gross domestic product rose by 1.6% during 2011, compared to 3.1% during 2010, according to the Bureau of Economic Analysis estimates released on January 27, 2012. The national unemployment rate was 8.5% in December 2011, compared to 9.4% in December 2010, based on data from the U.S. Bureau of Labor Statistics. In the data underlying the unemployment rate, there was employment growth (net new jobs added to the economy) in each month during 2011, which shows evidence of a slow, but steady positive trend for the economy and the housing market.

The table below provides important indicators for the U.S. residential mortgage market.

Table 8 — Mortgage Market Indicators

	Year Ended December 31,		
	2011	2010	2009
Home sale units (in thousands)(1)	4,564	4,513	4,715
Home price change(2)	(3.0)%	(5.9)%	(2.3)%
Single-family originations (in billions)(3)	$ 1,350	$ 1,630	$ 1,840
ARM share(4)	12%	10%	7%
Refinance share(5)	79%	80%	73%
U.S. single-family mortgage debt outstanding (in billions)(6)	$10,336	$10,522	$10,866
U.S. multifamily mortgage debt outstanding (in billions)(6)	$ 841	$ 838	$ 847

(1) Includes sales of new and existing homes in the U.S. Source: National Association of Realtors news release dated February 22, 2012 (sales of existing homes) and U.S. Census Bureau news release dated February 24, 2012 (sales of new homes).
(2) Calculated internally using estimates of changes in single-family home prices by state, which are weighted using the property values underlying our single-family credit guarantee portfolio to obtain a national index. The depreciation rate for each year presented incorporates property value information on loans purchased by both Freddie Mac and Fannie Mae through December 31, 2011 and the percentage change will be subject to revision based on more recent purchase information. Other indices of home prices may have different results, as they are determined using different pools of mortgage loans and calculated under different conventions than our own.
(3) Source: Inside Mortgage Finance estimates of originations of single-family first-and second liens dated January 27, 2012.
(4) ARM share of the dollar amount of total mortgage applications. Source: Mortgage Bankers Association Mortgage Applications Survey. Data reflect annual average of weekly figures.
(5) Refinance share of the number of conventional mortgage applications. Source: Mortgage Bankers Association's Mortgage Applications Survey. Data reflect annual average of weekly figures.
(6) Source: Federal Flow of Funds Accounts of the United States dated December 8, 2011. The outstanding amounts for 2011 presented above reflect balances as of September 30, 2011.

Single-Family Housing Market

We believe the number of potential home buyers in the market, combined with the volume of homes offered for sale, will determine the direction of home prices. Within the industry, existing home sales are important for assessing the rate at which the mortgage market might absorb the inventory of listed, but unsold, homes in the U.S. (including listed REO properties). Additionally, we believe new home sales can be an indicator of certain economic trends, such as the potential for growth in gross domestic product and total U.S. mortgage debt outstanding. Based on data from the National Association of Realtors, sales of existing homes in 2011 were 4.26 million, increasing from 4.19 million during 2010. The National Association of Realtors report states that distressed and all-cash sales comprised a historically high volume of existing home sales in 2011. Investors typically represent the bulk of all-cash transactions. Based on data from the U.S. Census Bureau and HUD, new home sales in 2011 were approximately 304,000 homes, decreasing approximately 6% from 323,000 homes in 2010. The relative level of mortgage interest rates is also a factor that impacts home sale demand because lower interest rates result in more affordable housing for borrowers. During 2011, the Federal Reserve took several actions designed to support an economic recovery and maintain historically low interest rates, which impacted and will likely continue to impact single-family mortgage market activity, including the volume of mortgage refinancing.

The recently expanded and streamlined HARP initiative, together with interest rates that we expect to remain at historically low levels through much of 2012, may result in a high level of refinancing, particularly for borrowers that are underwater on their current loans. These changes in HARP allow eligible borrowers whose monthly payments are current to refinance and obtain substantially lower interest rates and monthly payments, which may reduce future defaults and help lower the volume of distressed sales in some markets. For information on this initiative, and its potential impact on our business and results, see "RISK FACTORS — Competitive and Market Risks — *The servicing alignment initiative, MHA Program and other efforts to reduce foreclosures, modify loan terms and refinance mortgages, including HARP, may fail to mitigate our credit losses and may adversely affect our results of operations or financial condition*," and "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*."

We estimate that home prices decreased approximately 3.0% nationwide during 2011. This estimate is based on our own index of mortgage loans in our single-family credit guarantee portfolio. Other indices of home prices may have different results, as they are determined using different pools of mortgage loans and calculated under different conventions than our own.

The serious delinquency rate of our single-family loans declined during 2011, but remained near historically high levels. The Mortgage Bankers Association reported in its National Delinquency Survey that delinquency rates on all single-family loans in the survey declined to 7.7% as of December 31, 2011, down from 8.6% at year-end 2010. Residential loan performance has been generally worse in areas with higher unemployment rates and where declines in property values have been more significant during the last five years. In its survey, the Mortgage Bankers Association presents delinquency rates both for mortgages it classifies as subprime and for mortgages it classifies as prime conventional. The delinquency rates of subprime mortgages are markedly higher than those of prime conventional loan products in the Mortgage Bankers Association survey; however, the delinquency experience in prime conventional mortgage loans during the last four years has been significantly worse than in any year since the 1930s.

Based on data from the Federal Reserve's Flow of Funds Accounts, there was a sustained and significant increase in single-family mortgage debt outstanding from 2001 to 2006. This increase in mortgage debt was driven by increasing sales of new and existing single-family homes during this same period. As reported by FHFA in its Conservator's Report on the Enterprises' Financial Condition, dated June 13, 2011, the market share of mortgage-backed securities issued by the GSEs and Ginnie Mae declined significantly from 2001 to 2006 while the market share of non-GSE securities peaked. Non-traditional mortgage types, such as interest-only, Alt-A, and option ARMs, also increased in market share during these years, which we believe introduced greater risk into the market. We believe these shifts in market activity, in part, help explain the significant differentiation in delinquency performance of securitized non-GSE and GSE mortgage loans as discussed below.

Based on the National Delinquency Survey's data, we estimate that we owned or guaranteed approximately 24% of the outstanding single-family mortgages in the U.S. at December 31, 2011, based on number of loans. At December 31, 2011, we held or guaranteed approximately 414,000 seriously delinquent single-family loans, representing approximately 11% of the seriously delinquent single-family mortgages in the market as of that date. We estimate that loans backing non-GSE securities comprised approximately 9% of the single-family mortgages in the U.S. and represented approximately 29% of the seriously delinquent single-family mortgages at September 30, 2011 (based on the latest information available). As of December 31, 2011, we held non-GSE single-family mortgage-related securities with a UPB of $79.8 billion as investments.

The foreclosure process continues to experience delays, due to a number of factors. This has caused the average length of time for foreclosure of a Freddie Mac loan to increase significantly in recent years. Delays in the foreclosure process may also adversely affect trends in home prices regionally or nationally. For more information, see "RISK FACTORS — Operational Risks — *We have incurred, and will continue to incur, expenses and we may otherwise be adversely affected by delays and deficiencies in the foreclosure process*" and "BUSINESS — Regulation and Supervision — Legislative and Regulatory Developments — *Developments Concerning Single-Family Servicing Practices*."

Multifamily Housing Market

Multifamily market fundamentals continued to improve on a national level during 2011. This improvement continues a trend of favorable movements in key indicators such as vacancy rates and effective rents that generally began in early 2010. Vacancy rates and effective rents are important to loan performance because multifamily loans are generally repaid from the cash flows generated by the underlying property and these factors significantly influence those cash flows. These improving fundamentals and perceived optimism about demand for multifamily housing has contributed to lower capitalization rates which has improved property values in most markets. However, the broader economy continues to be

challenged by persistently high unemployment, which has prevented a more comprehensive recovery of the multifamily housing market.

Outlook

Forward-looking statements involve known and unknown risks and uncertainties, some of which are beyond our control. These statements are not historical facts, but rather represent our expectations based on current information, plans, judgments, assumptions, estimates, and projections. Actual results may differ significantly from those described in or implied by such forward-looking statements due to various factors and uncertainties. For example, a number of factors could cause the actual performance of the housing and mortgage markets and the U.S. economy during 2012 to be significantly worse than we expect, including adverse changes in consumer confidence, national or international economic conditions and changes in the federal government's fiscal policies. See "FORWARD-LOOKING STATEMENTS" for additional information.

Overview

We continue to expect key macroeconomic drivers of the economy — such as interest rates, income growth, employment, and inflation — to affect the performance of the housing and mortgage markets in 2012. Consumer confidence measures, while up from recession lows, remain below long-term averages and suggest that households will likely continue to be cautious in home buying. As a result of the continued high unemployment rate and relative low levels of consumer confidence, we expect that the single-family housing market will likely continue to remain weak in 2012. We also expect rates on fixed-rate single-family mortgages to remain historically low in 2012, which, combined with the changes to HARP, may help to extend the recent high level of refinancing activity (relative to new purchase lending activity). Lastly, many large financial institutions continued to experience delays in the foreclosure process for single-family loans throughout 2011. To the extent a large volume of loans complete the foreclosure process in a short period of time, the resulting REO inventory could have a negative impact on the housing market.

We expect that home sales volume in 2012 will be only modestly higher than in 2011. While home prices remain at significantly lower levels from their peak in most areas, estimates of the inventory of unsold homes, including those held by financial institutions and distressed borrowers, remain high. Due to these and other factors, our expectation for home prices, based on our own index, is that national average home prices will continue to remain weak and will likely decline over the near term before a long-term recovery in housing begins.

Single-Family

We expect our provision for credit losses and charge-offs will likely remain elevated in 2012. This is due in part to the substantial number of underwater mortgage loans in our single-family credit guarantee portfolio, as well as the substantial inventory of seriously delinquent loans. For the near term, we also expect:

- loss severity of REO dispositions and short sales to remain relatively high, as market conditions, such as home prices and the rate of home sales, continue to remain weak;
- non-performing assets, which include loans classified as TDRs, to continue to remain high;
- the volume of loan workouts to remain high; and
- continued high volume of loans in the foreclosure process as well as prolonged foreclosure timelines.

Multifamily

The most recent market data available continues to reflect improving national apartment fundamentals, including decreasing vacancy rates and increasing effective rents. However, some geographic areas in which we have investments in multifamily loans, including the states of Arizona, Georgia, and Nevada, continue to exhibit weaker than average fundamentals that increase our risk of future losses. We own or guarantee loans in these states that we believe are at risk of default. We expect our multifamily delinquency rate to remain relatively stable in 2012.

Recent market data shows a significant increase in multifamily loan activity, compared to 2010 and 2009, and reflects that the multifamily sector has experienced greater stability and improvement in market fundamentals and investor demand than other real estate sectors. We remained a constant source of liquidity in the multifamily market. Excluding CMBS and non-Freddie Mac mortgage-related securities, we estimate that we owned or guaranteed approximately 12.2% of outstanding mortgage loans in the market as of September 30, 2011, compared to 11.8% as of December 31, 2010. Our purchase and guarantee of multifamily loans increased approximately 32% to $20.3 billion in 2011, compared to $15.4 billion in 2010. We expect our purchase and guarantee activity to continue to increase, but at a more moderate pace, in 2012.

CONSOLIDATED RESULTS OF OPERATIONS

The following discussion of our consolidated results of operations should be read in conjunction with our consolidated financial statements, including the accompanying notes. Also see "CRITICAL ACCOUNTING POLICIES AND ESTIMATES" for information concerning certain significant accounting policies and estimates applied in determining our reported results of operations.

Change in Accounting Principles

Our adoption of amendments to the accounting guidance applicable to the accounting for transfers of financial assets and the consolidation of VIEs had a significant impact on our consolidated financial statements and other financial disclosures beginning in the first quarter of 2010.

The cumulative effect of these changes in accounting principles was a net decrease of $11.7 billion to total equity (deficit) as of January 1, 2010, which included changes to the opening balances of retained earnings (accumulated deficit) and AOCI. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," "NOTE 3: VARIABLE INTEREST ENTITIES," and "NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS" for additional information regarding these changes.

As these changes in accounting principles were applied prospectively, our results of operations for the years ended December 31, 2011 and 2010 (on both a GAAP and Segment Earnings basis), which reflect the consolidation of trusts that issue our single-family PCs and certain Other Guarantee Transactions, are not directly comparable with the results of operations for the year ended December 31, 2009, which reflect the accounting policies in effect during that time (*i.e.*, when the majority of the securitization entities were accounted for off-balance sheet).

Table 9 — Summary Consolidated Statements of Income and Comprehensive Income

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Net interest income	$ 18,397	$ 16,856	$ 17,073
Provision for credit losses	(10,702)	(17,218)	(29,530)
Net interest income (loss) after provision for credit losses	7,695	(362)	(12,457)
Non-interest income (loss):			
Gains (losses) on extinguishment of debt securities of consolidated trusts	(219)	(164)	—
Gains (losses) on retirement of other debt	44	(219)	(568)
Gains (losses) on debt recorded at fair value	91	580	(404)
Derivative gains (losses)	(9,752)	(8,085)	(1,900)
Impairment of available-for-sale securities:			
Total other-than-temporary impairment of available-for-sale securities	(2,101)	(1,778)	(23,125)
Portion of other-than-temporary impairment recognized in AOCI	(200)	(2,530)	11,928
Net impairment of available-for-sale securities recognized in earnings	(2,301)	(4,308)	(11,197)
Other gains (losses) on investment securities recognized in earnings	(896)	(1,252)	5,965
Other income	2,155	1,860	5,372
Total non-interest income (loss)	(10,878)	(11,588)	(2,732)
Non-interest expense:			
Administrative expenses	(1,506)	(1,597)	(1,685)
REO operations expense	(585)	(673)	(307)
Other expenses	(392)	(662)	(5,203)
Total non-interest expense	(2,483)	(2,932)	(7,195)
Loss before income tax benefit	(5,666)	(14,882)	(22,384)
Income tax benefit	400	856	830
Net loss	(5,266)	(14,026)	(21,554)
Other comprehensive income, net of taxes and reclassification adjustments:			
Changes in unrealized gains (losses) related to available-for-sale securities	3,465	13,621	17,825
Changes in unrealized gains (losses) related to cash flow hedge relationships	509	673	773
Changes in defined benefit plans	62	13	42
Total other comprehensive income, net of taxes and reclassification adjustments	4,036	14,307	18,640
Comprehensive income (loss)	(1,230)	281	(2,914)
Less: Comprehensive loss attributable to noncontrolling interest	—	1	1
Total comprehensive income (loss) attributable to Freddie Mac	$ (1,230)	$ 282	$ (2,913)

Net Interest Income

The table below summarizes our net interest income and net interest yield and provides an attribution of changes in annual results to changes in interest rates or changes in volumes of our interest-earning assets and interest-bearing liabilities. Average balance sheet information is presented because we believe end-of-period balances are not

representative of activity throughout the periods presented. For most components of the average balances, a daily weighted average balance was calculated for the period. When daily weighted average balance information was not available, a simple monthly average balance was calculated.

Table 10 — Average Balance, Net Interest Income, and Rate/Volume Analysis

	Year Ended December 31,								
	2011			2010			2009		
	Average Balance[1][2]	Interest Income (Expense)[1]	Average Rate	Average Balance[1][2]	Interest Income (Expense)[1]	Average Rate	Average Balance[1][2]	Interest Income (Expense)[1]	Average Rate
	(dollars in millions)								
Interest-earning assets:									
Cash and cash equivalents	$ 45,381	$ 34	0.07%	$ 48,803	$ 77	0.16%	$ 55,764	$ 193	0.35%
Federal funds sold and securities purchased under agreements to resell	27,557	33	0.12	46,739	79	0.17	28,524	48	0.17
Mortgage-related securities:									
Mortgage-related securities[3]	442,284	20,357	4.60	526,748	25,366	4.82	675,167	32,563	4.82
Extinguishment of PCs held by Freddie Mac	(162,600)	(7,665)	(4.71)	(213,411)	(11,182)	(5.24)	—	—	—
Total mortgage-related securities, net	279,684	12,692	4.54	313,337	14,184	4.53	675,167	32,563	4.82
Non-mortgage-related securities[3]	24,587	99	0.40	27,995	191	0.68	16,471	727	4.42
Mortgage loans held by consolidated trusts[4][5]	1,627,956	77,158	4.74	1,722,387	86,698	5.03	—	—	—
Unsecuritized mortgage loans[4][6]	244,134	9,124	3.74	206,116	8,727	4.23	127,429	6,815	5.35
Total interest-earning assets	$2,249,299	$ 99,140	4.41	$2,365,377	$109,956	4.65	$903,355	$ 40,346	4.47
Interest-bearing liabilities:									
Debt securities of consolidated trusts including PCs held by Freddie Mac	$1,643,939	$(74,784)	(4.55)	$1,738,330	$ (86,398)	(4.97)	$ —	$ —	—
Extinguishment of PCs held by Freddie Mac	(162,600)	7,665	4.71	(213,411)	11,182	5.24	—	—	—
Total debt securities of consolidated trusts held by third parties	1,481,339	(67,119)	(4.53)	1,524,919	(75,216)	(4.93)	—	—	—
Other debt:									
Short-term debt	186,304	(331)	(0.18)	219,654	(552)	(0.25)	287,259	(2,234)	(0.78)
Long-term debt[7]	503,842	(12,538)	(2.49)	543,306	(16,363)	(3.01)	557,184	(19,916)	(3.57)
Total other debt	690,146	(12,869)	(1.86)	762,960	(16,915)	(2.22)	844,443	(22,150)	(2.62)
Total interest-bearing liabilities	2,171,485	(79,988)	(3.68)	2,287,879	(92,131)	(4.03)	844,443	(22,150)	(2.62)
Expense related to derivatives[8]	—	(755)	(0.04)	—	(969)	(0.04)	—	(1,123)	(0.13)
Impact of net non-interest-bearing funding	77,814	—	0.13	77,498	—	0.13	58,912	—	0.17
Total funding of interest-earning assets	$2,249,299	$(80,743)	(3.59)	$2,365,377	$ (93,100)	(3.94)	$903,355	$(23,273)	(2.58)
Net interest income/yield		$ 18,397	0.82		$ 16,856	0.71		$ 17,073	1.89

	2011 vs. 2010 Variance Due to			2010 vs. 2009 Variance Due to		
	Rate[9]	Volume[9]	Total Change	Rate[9]	Volume[9]	Total Change
	(in millions)					
Interest-earning assets:						
Cash and cash equivalents	$ (33)	$ (10)	$ (43)	$ (83)	$ (33)	$ (116)
Federal funds sold and securities purchased under agreements to resell	(19)	(27)	(46)	(1)	32	31
Mortgage-related securities:						
Mortgage-related securities[3]	(1,082)	(3,927)	(5,009)	(50)	(7,147)	(7,197)
Extinguishment of PCs held by Freddie Mac	1,042	2,475	3,517	—	(11,182)	(11,182)
Total mortgage-related securities, net	(40)	(1,452)	(1,492)	(50)	(18,329)	(18,379)
Non-mortgage-related securities[3]	(71)	(21)	(92)	(850)	314	(536)
Mortgage loans held by consolidated trusts[4][5]	(4,921)	(4,619)	(9,540)	—	86,698	86,698
Unsecuritized mortgage loans[4][6]	(1,097)	1,494	397	(1,641)	3,553	1,912
Total interest-earning assets	$(6,181)	$(4,635)	$(10,816)	$(2,625)	$ 72,235	$ 69,610
Interest-bearing liabilities:						
Debt securities of consolidated trusts including PCs held by Freddie Mac	$ 7,077	$ 4,537	$ 11,614	$ —	$(86,398)	$(86,398)
Extinguishment of PCs held by Freddie Mac	(1,042)	(2,475)	(3,517)	—	11,182	11,182
Total debt securities of consolidated trusts held by third parties	6,035	2,062	8,097	—	(75,216)	(75,216)
Other debt:						
Short-term debt	145	76	221	1,248	434	1,682
Long-term debt[7]	2,697	1,128	3,825	3,068	485	3,553
Total other debt	2,842	1,204	4,046	4,316	919	5,235
Total interest-bearing liabilities	8,877	3,266	12,143	4,316	(74,297)	(69,981)
Expense related to derivatives[8]	214	—	214	154	—	154
Total funding of interest-earning assets	$ 9,091	$ 3,266	$ 12,357	$ 4,470	$(74,297)	$(69,827)
Net interest income	$ 2,910	$(1,369)	$ 1,541	$ 1,845	$ (2,062)	$ (217)

(1) Excludes mortgage loans and mortgage-related securities traded, but not yet settled.
(2) We calculate average balances based on amortized cost.
(3) Interest income (expense) includes accretion of the portion of impairment charges recognized in earnings where we expect a significant improvement in cash flows.
(4) Non-performing loans, where interest income is generally recognized when collected, are included in average balances.
(5) Loan fees, primarily consisting of delivery fees, included in interest income for mortgage loans held by consolidated trusts were $405 million, $127 million, and $0 million for 2011, 2010, and 2009, respectively.
(6) Loan fees, primarily consisting of delivery fees and multifamily prepayment fees, included in unsecuritized mortgage loan interest income were $223 million, $130 million, and $78 million for 2011, 2010, and 2009, respectively.
(7) Includes current portion of long-term debt.
(8) Represents changes in fair value of derivatives in closed cash flow hedge relationships that were previously deferred in AOCI and have been reclassified to earnings as the associated hedged forecasted issuance of debt affects earnings.
(9) Rate and volume changes are calculated on the individual financial statement line item level. Combined rate/volume changes were allocated to the individual rate and volume change based on their relative size.

The table below summarizes components of our net interest income.

Table 11 — Net Interest Income

	Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Contractual amounts of net interest income[1]	$18,448	$17,743	$18,937
Amortization income (expense), net:[2]			
Accretion of impairments on available-for-sale securities[3]	115	392	1,180
Asset-related amortization income (expense), net:			
Mortgage loans held by consolidated trusts	(1,942)	(712)	—
Unsecuritized mortgage loans	182	311	233
Mortgage-related securities	(239)	(272)	(1,345)
Other assets	(122)	(23)	—
Asset-related amortization expense, net	(2,121)	(696)	(1,112)
Debt-related amortization income (expense), net:			
Debt securities of consolidated trusts	3,383	1,152	—
Other long-term debt securities	(673)	(766)	(809)
Debt-related amortization income (expense), net	2,710	386	(809)
Total amortization income (expense), net	704	82	(741)
Expense related to derivatives[4]	(755)	(969)	(1,123)
Net interest income	$18,397	$16,856	$17,073

(1) Includes the reversal of interest income accrued, net of interest received on a cash basis, related to mortgage loans that are on non-accrual status.
(2) Represents amortization related to premiums, discounts, deferred fees and other adjustments to the carrying value of our financial instruments, and the reclassification of previously deferred balances from AOCI for certain derivatives in closed cash flow hedge relationships related to individual debt issuances and mortgage purchase transactions.
(3) The portion of the impairment charges recognized in earnings where we expect a significant improvement in cash flows is recognized as net interest income. Upon our adoption of an amendment to the accounting guidance for investments in debt and equity securities on April 1, 2009, previously recognized non-credit-related other-than-temporary impairments are no longer accreted into net interest income.
(4) Represents changes in fair value of derivatives in closed cash flow hedge relationships that were previously deferred in AOCI and have been reclassified to earnings as the associated hedged forecasted issuance of debt affects earnings.

Net interest income and net interest yield increased $1.5 billion and 11 basis points, respectively, during the year ended December 31, 2011, compared to the year ended December 31, 2010. The primary driver underlying the increases was lower funding costs from the replacement of debt at lower rates. This factor was partially offset by the reduction in the average balance of higher-yielding mortgage-related assets due to continued liquidations and limited purchase activity.

Net interest income decreased by $217 million during the year ended December 31, 2010, compared to the year ended December 31, 2009, primarily due to: (a) the reduction in the average balance of higher-yielding mortgage-related assets due to liquidations and limited purchase activity; and (b) higher interest expense on seriously delinquent mortgage loans. These factors were partially offset by: (a) lower funding costs from the replacement of debt at lower rates and favorable rate resets on floating-rate debt; and (b) the inclusion of amounts previously classified as management and guarantee income. Net interest yield declined substantially during the year ended December 31, 2010, compared to the year ended December 31, 2009, because the net interest yield of the assets held in our consolidated single-family trusts was lower than the net interest yield of PCs previously included in net interest income and our balance of non-performing mortgage loans increased.

We do not recognize interest income on non-performing loans that have been placed on non-accrual status, except when cash payments are received. We refer to this interest income that we do not recognize as foregone interest income. Foregone interest income and reversals of previously recognized interest income, net of cash received, related to non-performing loans was $4.0 billion, $4.7 billion, and $349 million during the years ended December 31, 2011, 2010, and 2009, respectively. The reduction during the year ended December 31, 2011 compared to the year ended December 31, 2010, was primarily due to the decreased volume of non-performing loans on non-accrual status.

The increase during the year ended December 31, 2010 compared to the year ended December 31, 2009 was primarily due to our adoption of amendments to the accounting guidance related to the accounting for transfers of financial assets and consolidation of VIEs. Prior to adoption of these amendments and subsequent consolidation of certain trusts, we did not reverse interest income on non-performing loans for loans held by the trusts, and the forgone interest income on non-performing loans of the trusts did not reduce net interest income or net interest yield, since it was accounted for through a charge to provision for credit losses.

During the year ended December 31, 2011, spreads on our debt and our access to the debt markets remained favorable relative to historical levels. For more information, see "LIQUIDITY AND CAPITAL RESOURCES — Liquidity."

The objectives set for us under our charter and conservatorship, restrictions in the Purchase Agreement and restrictions imposed by FHFA have negatively impacted, and will continue to negatively impact, our net interest income. For example, our mortgage-related investments portfolio is subject to a cap that decreases by 10% each year until the portfolio reaches $250 billion. This decline in asset balances will likely cause a corresponding reduction in our interest income over time. For more information on the various restrictions and limitations on our investment activity and our mortgage-related investments portfolio, see "BUSINESS — Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business — Limits on Investment Activity and Our Mortgage-Related Investments Portfolio.*"

Provision for Credit Losses

We maintain loan loss reserves at levels we believe appropriate to absorb probable incurred losses on mortgage loans held-for-investment and loans underlying our financial guarantees. Increases in our loan loss reserves are generally reflected in earnings through the provision for credit losses.

Since the beginning of 2008, on an aggregate basis, we have recorded provision for credit losses associated with single-family loans of approximately $73.2 billion, and have recorded an additional $4.3 billion in losses on loans purchased from our PCs, net of recoveries. The majority of these losses are associated with loans originated in 2005 through 2008. While loans originated in 2005 through 2008 will give rise to additional credit losses that have not yet been incurred, and thus have not been provisioned for, we believe that, as of December 31, 2011, we have reserved for or charged-off the majority of the total expected credit losses for these loans. Nevertheless, various factors, such as continued high unemployment rates or further declines in home prices, could require us to provide for losses on these loans beyond our current expectations. See "Table 3 — Credit Statistics, Single-Family Credit Guarantee Portfolio" for certain quarterly credit statistics for our single-family credit guarantee portfolio.

Our provision for credit losses was $10.7 billion in 2011 compared to $17.2 billion in 2010. The provision for credit losses in 2011 reflects a decline in the rate at which single-family loans transition into serious delinquency or are modified, but was partially offset by our lowered expectations for mortgage insurance recoveries, which is due to the

continued deterioration in the financial condition of the mortgage insurance industry in 2011. The provision for credit losses declined to $17.2 billion in 2010 compared to $29.5 billion in 2009, and reflected a decline in the rate at which delinquent loans transitioned into serious delinquency, partially offset by a higher volume of loan modifications that were classified as TDRs in 2010, compared to 2009. See "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk*" for further information on our mortgage insurance counterparties. We identified a prior period error in the second quarter of 2010 that impacted our provision for credit losses and allowance for loan losses. The cumulative effect, net of taxes, of this error corrected in 2010 was $1.2 billion, of which $0.9 billion related to the year ended December 31, 2009.

During 2011, our charge-offs, net of recoveries for single-family loans, exceeded the amount of our provision for credit losses. Our charge-offs in 2011 remained elevated, but reflect suppression of activity due to delays in the foreclosure process and continuing weak market conditions, such as home prices and the rate of home sales. We believe the level of our charge-offs will continue to remain high and may increase in 2012.

We continued to experience a high volume of completed loan modifications classified as TDRs during 2011, but the volume of such modifications was less than the volume during 2010. See "Table 54 — Reperformance Rates of Modified Single-Family Loans" for information on the performance of our modified loans. As of December 31, 2011 and December 31, 2010, the UPB of our single-family non-performing loans was $120.5 billion and $115.5 billion, respectively. These amounts include $44.4 billion and $26.6 billion, respectively, of single-family TDRs that are reperforming (*i.e.*, less than three months past due). TDRs remain categorized as non-performing throughout the remaining life of the loan regardless of whether the borrower makes payments which return the loan to a current payment status after modification. See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk*" for further information on our single-family credit guarantee portfolio, including credit performance, charge-offs, our loan loss reserves balance, and our non-performing assets.

We adopted an amendment to the accounting guidance related to the classification of loans as TDRs in the third quarter of 2011, which significantly increases the population of problem loans subject to our workout activities that we account for and disclose as TDRs. The impact of this change in guidance on our financial results for 2011 was not significant. We expect that the number of loans that newly qualify as TDRs in 2012 will remain high, primarily because we anticipate that the majority of our modifications, both completed and those still in trial periods, will be considered TDRs. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," and "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for additional information on our TDR loans, including our implementation of changes to the accounting guidance related to the classification of loans as TDRs.

While the total number of seriously delinquent loans declined approximately 10% and 7% during 2011 and 2010, respectively, in part due to a significant volume of loan modifications (upon completion of a modification, a delinquent single-family loan is given a current payment status), our serious delinquency rate remains high compared to historical levels due to the continued weakness in home prices, persistently high unemployment, extended foreclosure timelines and foreclosure suspensions in many states, and continued challenges faced by servicers processing large volumes of problem loans. Our seller/servicers have an active role in our loan workout activities, including under the servicing alignment initiative and the MHA Program, and a decline in their performance could result in a failure to realize the anticipated benefits of our loss mitigation plans. The decline in size of our single-family credit guarantee portfolio in 2011 caused our serious delinquency rate to be higher than it otherwise would have been because this rate is calculated on a smaller base of loans at year end.

Our provision for credit losses and amount of charge-offs in the future will be affected by a number of factors, including: (a) the actual level of mortgage defaults; (b) the impact of the MHA Program and other loss mitigation efforts; (c) any government actions or programs that impact the ability of troubled borrowers to obtain modifications, including legislative changes to bankruptcy laws; (d) changes in property values; (e) regional economic conditions, including unemployment rates; (f) delays in the foreclosure process, including those related to the concerns about deficiencies in foreclosure documentation practices; (g) third-party mortgage insurance coverage and recoveries; and (h) the realized rate of seller/servicer repurchases. See "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk*" for additional information on seller/servicer repurchase obligations.

Our provision (benefit) for credit losses associated with our multifamily mortgage portfolio was $(196) million and $99 million for 2011 and 2010, respectively. Our loan loss reserves associated with our multifamily mortgage portfolio were $545 million and $828 million as of December 31, 2011 and December 31, 2010, respectively. The decline in loan loss reserves for multifamily loans in 2011 was driven primarily by positive market trends in vacancy rates and effective rents, as well as stabilizing or improved property values. However, some states in which we have investments in

multifamily mortgage loans, including Nevada, Arizona, and Georgia, continue to exhibit weaker than average apartment fundamentals.

Non-Interest Income (Loss)

Gains (Losses) on Extinguishment of Debt Securities of Consolidated Trusts

When we purchase PCs that have been issued by consolidated PC trusts, we extinguish a pro rata portion of the outstanding debt securities of the related consolidated trusts. We recognize a gain (loss) on extinguishment of the debt securities to the extent the amount paid to extinguish the debt security differs from its carrying value. For the years ended December 31, 2011 and 2010, we extinguished debt securities of consolidated trusts with a UPB of $75.4 billion and $17.8 billion, respectively (representing our purchase of single-family PCs with a corresponding UPB amount). The increase in purchases of single-family PCs was due to an increased volume of dollar roll transactions to support the market and pricing of our single-family PCs. Losses on extinguishment of these debt securities of consolidated trusts were $219 million and $164 million for the years ended December 31, 2011 and 2010, respectively. The losses during 2011 and 2010 were primarily due to the repurchase of our debt securities at higher net purchase premiums driven by a decrease in interest rates during the periods. See "Table 25 — Total Mortgage-Related Securities Purchase Activity" for additional information regarding purchases of mortgage-related securities, including those issued by consolidated PC trusts.

Gains (Losses) on Retirement of Other Debt

We repurchase or call our outstanding other debt securities from time to time when we believe it is economically beneficial and to manage the mix of liabilities funding our assets. When we repurchase or call outstanding debt securities, or holders put outstanding debt securities to us, we recognize a gain or loss to the extent the amount paid to redeem the debt security differs from its carrying value. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for more information regarding our accounting policies related to debt retirements.

Gains (losses) on retirement of other debt were $44 million, $(219) million, and $(568) million during the years ended December 31, 2011, 2010, and 2009, respectively. We recognized gains on debt retirements during 2011, compared to losses during 2010, because we purchased debt with lower associated discounts in 2011 relative to the comparable periods in 2010. We recognized fewer losses on debt retirement during 2010 compared to 2009 primarily due to decreased losses on calls and puts in 2010 compared to 2009. For more information, see "LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Other Debt Securities — Other Debt Retirement Activities*."

Gains (Losses) on Debt Recorded at Fair Value

Gains (losses) on debt recorded at fair value primarily relate to changes in the fair value of our foreign-currency denominated debt. During 2011 and 2010, we recognized gains on debt recorded at fair value of $91 million and $580 million, respectively, primarily due to a combination of the U.S. dollar strengthening relative to the Euro and changes in interest rates. During 2009, we recognized losses on debt recorded at fair value of $404 million primarily due to the U.S. dollar weakening relative to the Euro. We mitigate changes in the fair value of our foreign-currency denominated debt by using foreign currency swaps and foreign-currency denominated interest-rate swaps.

Derivative Gains (Losses)

The table below presents derivative gains (losses) reported in our consolidated statements of income and comprehensive income. See "NOTE 11: DERIVATIVES — Table 11.2 — Gains and Losses on Derivatives" for information about gains and losses related to specific categories of derivatives. Changes in fair value and interest accruals on derivatives not in hedge accounting relationships are recorded as derivative gains (losses) in our consolidated statements of income and comprehensive income. At December 31, 2011, 2010, and 2009, we did not have any derivatives in hedge accounting relationships; however, there are amounts recorded in AOCI related to discontinued cash flow hedges. Amounts recorded in AOCI associated with these closed cash flow hedges are reclassified to earnings when the forecasted transactions affect earnings. If it is probable that the forecasted transaction will not occur, then the deferred gain or loss associated with the forecasted transaction is reclassified into earnings immediately.

While derivatives are an important aspect of our strategy to manage interest-rate risk, they generally increase the volatility of reported net income (loss) because, while fair value changes in derivatives affect net income (loss), fair value changes in several of the types of assets and liabilities being hedged do not affect net income (loss).

Table 12 — Derivative Gains (Losses)

	Derivative Gains (Losses)		
	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Interest-rate swaps	$(10,367)	$(7,679)	$ 13,611
Option-based derivatives[1]	7,176	4,843	(10,686)
Other derivatives[2]	(1,529)	(755)	(882)
Accrual of periodic settlements[3]	(5,032)	(4,494)	(3,943)
Total	$ (9,752)	$(8,085)	$ (1,900)

(1) Primarily includes purchased call and put swaptions and purchased interest-rate caps and floors.
(2) Includes futures, foreign-currency swaps, commitments, swap guarantee derivatives, and credit derivatives. Foreign-currency swaps are defined as swaps in which net settlement is based on one leg calculated in a foreign-currency and the other leg calculated in U.S. dollars. Commitments include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts.
(3) Includes imputed interest on zero-coupon swaps.

Gains (losses) on derivatives not accounted for in hedge accounting relationships are principally driven by changes in: (a) interest rates and implied volatility; and (b) the mix and volume of derivatives in our derivative portfolio.

Our mix and volume of derivatives change from period to period as we respond to changing interest rate environments. We use receive- and pay-fixed interest-rate swaps to adjust the interest-rate characteristics of our debt funding in order to more closely match changes in the interest-rate characteristics of our mortgage-related assets. A receive-fixed swap results in our receipt of a fixed interest-rate payment from our counterparty in exchange for a variable-rate payment. Conversely, a pay-fixed swap requires us to make a fixed interest-rate payment to our counterparty in exchange for a variable-rate payment. Receive-fixed swaps increase in value and pay-fixed swaps decrease in value when interest rates decrease (with the opposite being true when interest rates increase).

We use swaptions and other option-based derivatives to adjust the interest-rate characteristics of our debt in response to changes in the expected lives of our investments in mortgage-related assets. Purchased call and put swaptions, where we make premium payments, are options for us to enter into receive- and pay-fixed swaps, respectively. Conversely, written call and put swaptions, where we receive premium payments, are options for our counterparty to enter into receive and pay-fixed swaps, respectively. The fair values of both purchased and written call and put swaptions are sensitive to changes in interest rates and are also driven by the market's expectation of potential changes in future interest rates (referred to as "implied volatility"). Purchased swaptions generally become more valuable as implied volatility increases and less valuable as implied volatility decreases. Recognized losses on purchased options in any given period are limited to the premium paid to purchase the option plus any unrealized gains previously recorded. Potential losses on written options are unlimited.

We also use derivatives to synthetically create the substantive economic equivalent of various debt funding structures. For example, the combination of a series of short-term debt issuances over a defined period and a pay-fixed interest-rate swap with the same maturity as the last debt issuance is the substantive economic equivalent of a long-term fixed-rate debt instrument of comparable maturity. Similarly, the combination of non-callable debt and a call swaption with the same maturity as the noncallable debt is the substantive economic equivalent of callable debt. For a discussion regarding our ability to issue debt, see "LIQUIDITY AND CAPITAL RESOURCES — Liquidity — *Other Debt Securities*."

During 2011, we recognized losses on derivatives of $9.8 billion, primarily due to declines in long-term swap interest rates. Specifically, during 2011, we recognized fair value losses on our pay-fixed swap positions of $23.0 billion, partially offset by fair value gains on our receive-fixed swaps of $12.6 billion. We also recognized fair value gains of $7.2 billion during 2011 on our option-based derivatives, resulting from gains on our purchased call swaptions as interest rates decreased. Additionally, we recognized losses of $5.0 billion related to the accrual of periodic settlements during 2011 due to our net pay-fixed swap position and a declining interest rate environment during the year.

During 2010, declining long-term swap interest rates resulted in a loss on derivatives of $8.1 billion. Specifically, the decrease in long-term swap interest rates resulted in fair value losses on our pay-fixed swaps of $17.5 billion, partially offset by fair value gains on our receive-fixed swaps of $9.7 billion. We recognized fair value gains of $4.8 billion on our option-based derivatives, resulting from gains on our purchased call swaptions primarily due to the declines in interest rates during 2010. Additionally, we recognized losses of $4.5 billion related to the accrual of periodic settlements during 2010 due to our net pay-fixed swap position and a declining interest rate environment during the year.

During 2009, the mix and volume of our derivative portfolio were impacted by fluctuations in swap interest rates, resulting in a loss on derivatives of $1.9 billion. Long-term swap interest rates and implied volatility both increased during

2009. As a result of these factors, we recorded gains on our pay-fixed swap positions, partially offset by losses on our receive-fixed swaps, resulting in a $13.6 billion net gain. We also recorded losses of $10.7 billion on option-based derivatives, primarily on our purchased call swaptions, as the impact of the increasing swap interest rates more than offset the impact of higher implied volatility.

Investment Securities-Related Activities

Since January 1, 2010, as a result of our adoption of amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs, we no longer account for the single-family PCs and certain Other Guarantee Transactions we hold as investments in securities. Instead, we now recognize the underlying mortgage loans on our consolidated balance sheets through consolidation of the related trusts. Our adoption of these amendments resulted in a decrease in our investments in securities of $286.5 billion on January 1, 2010. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for additional information.

Impairments of Available-For-Sale Securities

We recorded net impairments of available-for-sale securities recognized in earnings, which were related to non-agency mortgage-related securities, of $2.3 billion, $4.3 billion, and $11.2 billion during the years ended December 31, 2011, 2010, and 2009. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities — *Mortgage-Related Securities — Other-Than-Temporary Impairments on Available-For-Sale Mortgage-Related Securities*" and "NOTE 7: INVESTMENTS IN SECURITIES" for information regarding the accounting principles for investments in debt and equity securities and the other-than-temporary impairments recorded during the years ended December 31, 2011, 2010, and 2009.

Other Gains (Losses) on Investment Securities Recognized in Earnings

Other gains (losses) on investment securities recognized in earnings primarily consists of gains (losses) on trading securities. We recognized $(1.0) billion, $(1.3) billion, and $4.9 billion related to gains (losses) on trading securities during the years ended December 31, 2011, 2010, and 2009.

Trading securities mainly include Treasury securities, agency fixed-rate and variable-rate pass-through mortgage-related securities, and agency REMICs, including inverse floating-rate, interest-only and principal-only securities. With the exception of principal-only securities, our agency securities, classified as trading, were at a net premium (*i.e.* have higher net fair value than UPB) as of December 31, 2011. Gains (losses) on trading securities do not include the interest earned on these assets, which is recorded as part of net interest income. Additionally, our securities classified as trading are managed in the overall context of our interest-rate risk management strategy and framework. However, the impacts of changes in fair value of related derivatives and other debt are not recognized in other gains (losses) on investment securities recognized in earnings on our consolidated statements of income and comprehensive income.

During the years ended December 31, 2011 and 2010, the losses on trading securities were primarily due to the movement of securities with unrealized gains towards maturity. The decreased losses during the year ended December 31, 2011, compared to the year ended December 31, 2010, was primarily due to higher fair value gains at the end of 2011 as a result of a decline in longer-term interest rates.

At December 31, 2009, the fair value of our investments in trading securities was $222.3 billion, compared to $58.8 billion and $60.3 billion at December 31, 2011 and 2010, respectively. The significant reduction in the fair value of our investments in trading securities was primarily due to our adoption of amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs, as noted above. The larger balance in our investments in trading securities during 2009, combined with tightening OAS levels, contributed to the gains on these trading securities. In addition, during the year ended December 31, 2009, we sold agency securities classified as trading with an aggregate UPB of approximately $148.7 billion, which generated realized gains of $1.7 billion.

For a further discussion of our interest-rate risk management strategy and framework, see "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS."

Other Income

Other income includes items associated with our guarantee activities on non-consolidated trusts, including management and guarantee income, gains (losses) on guarantee asset, income on guarantee obligation, gains (losses) on sale of mortgage loans, and trust management income (expense). Upon consolidation of our single-family PC trusts and certain Other Guarantee Transactions commencing January 1, 2010, guarantee-related items no longer have a material impact on our results and are therefore included in other income on our consolidated statements of income and

comprehensive income. The management and guarantee income recognized during 2011 and 2010 was earned from our non-consolidated securitization trusts and other mortgage credit guarantees which had an aggregate UPB of $56.9 billion and $44.0 billion as of December 31, 2011 and 2010, respectively, compared to $1.87 trillion as of December 31, 2009. For additional information on the impact of consolidation of our single-family PC trusts and certain Other Guarantee Transactions, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" and "NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS."

The table below summarizes the significant components of other income.

Table 13 — Other Income

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Other income:			
Management and guarantee income[1]	$ 170	$ 143	$ 3,033
Gains (losses) on guarantee asset	(78)	(61)	3,299
Income on guarantee obligation	153	135	3,479
Gains (losses) on sale of mortgage loans	411	267	745
Lower-of-cost-or-fair-value adjustments on held-for-sale mortgage loans[2]	—	—	(679)
Gains (losses) on mortgage loans recorded at fair value	418	(249)	(190)
Recoveries on loans impaired upon purchase	473	806	379
Low-income-housing tax credit partnerships[3]	—	—	(4,155)
Trust management income (expense)[2]	—	—	(761)
All other	608	819	222
Total other income	$2,155	$1,860	$ 5,372

(1) Most of our guarantee related income in 2011 and 2010 relates to securitized multifamily mortgage loans where we have not consolidated the securitization trusts on our consolidated balance sheets.
(2) Upon consolidation of our single-family PC trusts and certain Other Guarantee Transactions on January 1, 2010, we no longer incur trust management income and expenses and no longer incur lower-of-cost-or-fair-value adjustments on single-family mortgage loans since all of our single-family mortgage loans are classified as held-for-investment rather than held-for-sale.
(3) We wrote down the carrying value of our LIHTC investments to zero as of December 31, 2009, as we will not be able to realize any value for these assets either through reductions to our taxable income and related tax liabilities or through a sale to a third party. See "NOTE 3: VARIABLE INTEREST ENTITIES" for further information.

Other income increased to $2.2 billion for the year ended December 31, 2011, compared to $1.9 billion for the year ended December 31, 2010, primarily due to gains on mortgage loans recorded at fair value in 2011, compared to losses on mortgage loans recorded at fair value in 2010, which was partially offset by lower recoveries on loans impaired upon purchase and a decline in all other income in 2011. We recognized gains on mortgage loans recorded at fair value during 2011, compared to losses in 2010, as a result of declines in interest rates and higher balances of loans recorded at fair value during 2011.

Gains (Losses) on Sale of Mortgage Loans

In 2011 and 2010, we recognized $411 million and $267 million, respectively, in gains (losses) on sale of mortgage loans with associated UPB of $13.7 billion and $6.6 billion, respectively. All gains (losses) on sales of mortgage loans in 2011 and 2010 relate to multifamily mortgage loans.

Gains (losses) on sale of mortgage loans declined to $267 million in 2010 from $745 million in 2009, primarily due to our adoption of amendments to the accounting guidance applicable to the accounting for transfers of financial assets and the consolidation of VIEs, as all single-family loans are consolidated on our balance sheets and are no longer recognized as sales when we issue our PCs.

Lower-of-Cost-or-Fair-Value Adjustments on Held-for-Sale Mortgage Loans

We recognized lower-of-cost-or-fair-value adjustments of $(679) million in 2009. Due to our adoption of amendments to the accounting guidance applicable to the accounting for transfers of financial assets and the consolidation of VIEs, all single-family mortgage loans on our consolidated balance sheet were reclassified as held-for-investment on January 1, 2010. Consequently, beginning in 2010, we no longer record lower-of-cost-or-fair-value adjustments on single-family mortgage loans. During 2009, we transferred $10.6 billion of single-family mortgage loans from held-for-sale to held-for-investment. Upon transfer, we evaluated the lower of cost or fair value for each individual loan. We recognized approximately $438 million of losses associated with these transfers during 2009, representing the unrealized losses of certain loans on the dates of transfer; however, we were not permitted to similarly recognize any unrealized gains on individual loans at the time of transfer.

Recoveries on Loans Impaired upon Purchase

Recoveries on loans impaired upon purchase represent the recapture into income of previously recognized losses associated with purchases of delinquent loans from our PCs in conjunction with our guarantee activities. Recoveries occur when a non-performing loan is repaid in full or when at the time of foreclosure the estimated fair value of the acquired property, less costs to sell, exceeds the carrying value of the loan. For impaired loans where the borrower has made required payments that return the loan to less than three months past due, the recovery amounts are instead recognized as interest income over time as periodic payments are received.

During 2011, 2010, and 2009, we recognized recoveries on loans impaired upon purchase of $473 million, $806 million and $379 million, respectively. Our recoveries on loans impaired upon purchase declined in 2011, compared to 2010, due to a lower volume of foreclosure transfers and payoffs associated with loans impaired upon purchase. Recoveries on impaired loans increased in 2010, compared to 2009, due to a higher volume of short sales and foreclosure transfers, combined with improvements in home prices in certain geographical areas during 2010.

Commencing January 1, 2010, we no longer recognize losses on loans purchased from PC pools related to our single-family PC trusts and certain Other Guarantee Transactions due to adoption of the amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs. Our recoveries in 2011 and 2010 principally relate to impaired loans purchased prior to January 1, 2010, due to the change in accounting guidance effective on that date. Consequently, our recoveries on loans impaired upon purchase will generally continue to decline over time. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for further information about the impact of adoption of these accounting changes.

All Other

All other income declined to $608 million during the year ended December 31, 2011, compared to $819 million during the year ended December 31, 2010, primarily due to: (a) gains recognized in 2010 due to the recognition of income related to mortgage-servicing rights associated with TBW, one of our former seller/servicers; and (b) the correction in 2011 of certain prior period accounting errors not material to our financial statements.

All other income increased to $819 million in 2010 from $222 million in 2009, primarily due to the recognition of income related to mortgage-servicing rights associated with TBW, and penalties and other fees on single-family seller servicers, including penalties arising from failures to complete foreclosures within required time periods, and to a lesser extent, recognition of expected loss recoveries from certain legal claims.

Non-Interest Expense

The table below summarizes the components of non-interest expense.

Table 14 — Non-Interest Expense

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Administrative expenses:[1]			
Salaries and employee benefits	$ 832	$ 895	$ 912
Professional services	270	297	344
Occupancy expense	62	64	68
Other administrative expense	342	341	361
Total administrative expenses	1,506	1,597	1,685
REO operations expense	585	673	307
Other expenses	392	662	5,203
Total non-interest expense	$2,483	$2,932	$7,195

(1) Commencing in the first quarter of 2011, we reclassified certain expenses from other expenses to professional services expense. Prior period amounts have been reclassified to conform to the current presentation.

Administrative Expenses

Administrative expenses decreased in 2011 compared to 2010, largely due to a reduction in the number of employees as part of our ongoing focus on cost reduction measures. Administrative expenses decreased in 2010 compared to 2009, in part due to our focus on cost reduction measures in 2010, particularly on professional services costs. We do not expect that our general and administrative expenses for 2012 will continue to decline, in part due to the continually changing mortgage market, an environment in which we are subject to increased regulatory oversight and mandates and strategic

arrangements that we may enter into with outside firms to provide operational capability and staffing for key functions, if needed.

REO Operations Expense

The table below presents the components of our REO operations expense, and REO inventory and disposition information.

Table 15 — REO Operations Expense, REO Inventory, and REO Dispositions

	Year Ended December 31,		
	2011	2010	2009
	(dollars in millions)		
REO operations expense:			
Single-family:			
REO property expenses[1]	$ 1,205	$ 1,163	$ 708
Disposition (gains) losses, net[2]	179	102	749
Change in holding period allowance, dispositions	(456)	(286)	(427)
Change in holding period allowance, inventory[3]	302	497	(185)
Recoveries[4]	(634)	(800)	(558)
Total single-family REO operations expense	596	676	287
Multifamily REO operations expense (income)	(11)	(3)	20
Total REO operations expense	$ 585	$ 673	$ 307
REO inventory (in properties), at December 31:			
Single-family	60,535	72,079	45,047
Multifamily	20	14	5
Total	60,555	72,093	45,052
REO property dispositions (in properties):			
Single-family	110,175	101,206	69,400
Multifamily	19	9	6
Total	110,194	101,215	69,406

(1) Consists of costs incurred to acquire, maintain or protect a property after it is acquired in a foreclosure transfer, such as legal fees, insurance, taxes, and cleaning and other maintenance charges.
(2) Represents the difference between the disposition proceeds, net of selling expenses, and the fair value of the property on the date of the foreclosure transfer.
(3) Represents the (increase) decrease in the estimated fair value of properties that were in inventory during the period.
(4) Includes recoveries from primary mortgage insurance, pool insurance and seller/servicer repurchases.

REO operations expense was $585 million in 2011, as compared to $673 million in 2010 and $307 million in 2009. The decline in REO operations expense in 2011, compared to 2010, was primarily due to the impact of a less significant decline in home prices in certain geographical areas with significant REO activity resulting in lower write-downs of single-family REO inventory during 2011, partially offset by lower recoveries on REO properties during 2011. Lower recoveries on REO properties in 2011, compared to 2010, were primarily due to reduced recoveries from mortgage insurers, in part due to the continued deterioration in the financial condition of the mortgage insurance industry, and a decline in reimbursements of losses from seller/servicers associated with repurchase requests on loans on which we have foreclosed. The increase in REO operations expense in 2010, compared to 2009, is a result of higher REO property expenses and holding period write-downs that were partially offset by lower disposition losses and increased recoveries. We expect REO property expenses to continue to remain high in 2012 due to expected continued high levels of single-family REO acquisitions and inventory.

In 2011, we believe the volume of our single-family REO acquisitions was less than it otherwise would have been due to delays in the foreclosure process, particularly in states that require a judicial foreclosure process. The acquisition slowdown, coupled with high disposition levels, led to an approximate 16% reduction in REO property inventory during 2011. While we expect the delays to ease in 2012, we also expect the length of the foreclosure process will remain above historical levels. For more information on how delays in the foreclosure process could adversely affect our REO operations expense, see "RISK FACTORS — Operational Risks — *We have incurred, and will continue to incur, expenses and we may otherwise be adversely affected by delays and deficiencies in the foreclosure process.*" See "RISK MANAGEMENT— Credit Risk — *Mortgage Credit Risk — Non-Performing Assets*" for additional information about our REO activity.

Other Expenses

Other expenses were $0.4 billion, $0.7 billion, and $5.2 billion in 2011, 2010, and 2009, respectively. Other expenses in 2011 and 2010 consist primarily of HAMP servicer incentive fees, costs related to terminations and transfers of mortgage servicing, and other miscellaneous expenses. Other expenses were lower in 2011 compared to 2010, primarily

due to lower expenses associated with transfers and terminations of mortgage servicing, primarily related to TBW, partially offset by higher servicer incentive fees associated with HAMP during 2011. Other expenses declined significantly from 2009 to 2010 due to reduction of losses on loans purchased, which was due to the change in accounting guidance for consolidation of VIEs we implemented on January 1, 2010. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Recently Adopted Accounting Guidance" and "NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS" for additional information.

Income Tax Benefit

For 2011, 2010, and 2009, we reported income tax benefit of $0.4 billion, $0.9 billion, and $0.8 billion, respectively, resulting in effective tax rates of 7%, 6%, and 4%, respectively. Our effective tax rate differed from the federal statutory tax rate of 35% primarily due to the establishment of a valuation allowance against a portion of our net deferred tax assets. Our income tax benefits represent amounts related to the amortization of net deferred losses on pre-2008 closed cash flow hedges, as well as the current tax benefits associated with our ability to carry back net operating tax losses generated in 2008 and 2009. See "NOTE 13: INCOME TAXES" for additional information.

Total Comprehensive Income (Loss)

Our total comprehensive income (loss) was $(1.2) billion, $0.3 billion, and $(2.9) billion for the years ended December 31, 2011, 2010, and 2009, respectively, consisting of: (a) $(5.3) billion, $(14.0) billion, and $(21.6) billion of net income (loss), respectively; and (b) $4.0 billion, $14.3 billion, and $18.6 billion of total other comprehensive income, respectively. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Total Equity (Deficit)" for additional information regarding total other comprehensive income (loss).

Segment Earnings

Our operations consist of three reportable segments, which are based on the type of business activities each performs — Investments, Single-family Guarantee, and Multifamily. Certain activities that are not part of a reportable segment are included in the All Other category.

The Investments segment reflects results from our investment, funding and hedging activities. In our Investments segment, we invest principally in mortgage-related securities and single-family performing mortgage loans, which are funded by other debt issuances and hedged using derivatives. In our Investments segment, we also provide funding and hedging management services to the Single-family Guarantee and Multifamily segments. The Investments segment reflects changes in the fair value of the Multifamily segment assets that are associated with changes in interest rates. Segment Earnings for this segment consist primarily of the returns on these investments, less the related funding, hedging, and administrative expenses.

The Single-family Guarantee segment reflects results from our single-family credit guarantee activities. In our Single-family Guarantee segment, we purchase single-family mortgage loans originated by our seller/servicers in the primary mortgage market. In most instances, we use the mortgage securitization process to package the purchased mortgage loans into guaranteed mortgage-related securities. We guarantee the payment of principal and interest on the mortgage-related securities in exchange for management and guarantee fees. Segment Earnings for this segment consist primarily of management and guarantee fee revenues, including amortization of upfront fees, less credit-related expenses, administrative expenses, allocated funding costs, and amounts related to net float benefits or expenses.

The Multifamily segment reflects results from our investment (both purchases and sales), securitization, and guarantee activities in multifamily mortgage loans and securities. Although we hold multifamily mortgage loans and non-agency CMBS that we purchased for investment, our purchases of such multifamily mortgage loans for investment have declined significantly since 2010, and our purchases of CMBS have declined significantly since 2008. The only CMBS that we have purchased since 2008 have been senior, mezzanine, and interest-only tranches related to certain of our securitization transactions, and these purchases have not been significant. Currently, our primary business strategy is to purchase multifamily mortgage loans for aggregation and then securitization. We guarantee the senior tranches of these securitizations in Other Guarantee Transactions. Our Multifamily segment also issues Other Structured Securities, but does not issue REMIC securities. Our Multifamily segment also enters into other guarantee commitments for multifamily HFA bonds and housing revenue bonds held by third parties. Historically, we issued multifamily PCs, but this activity has been insignificant in recent years. Segment Earnings for this segment consist primarily of the interest earned on assets related to multifamily investment activities and management and guarantee fee income, less credit-related expenses, administrative expenses, and allocated funding costs. In addition, the Multifamily segment reflects gains on sale of

mortgages and the impact of changes in fair value of CMBS and held-for-sale loans associated only with factors other than changes in interest rates, such as liquidity and credit.

We evaluate segment performance and allocate resources based on a Segment Earnings approach, subject to the conduct of our business under the direction of the Conservator. The financial performance of our Single-family Guarantee segment and Multifamily segment are measured based on each segment's contribution to GAAP net income (loss). Our Investments segment is measured on its contribution to GAAP total comprehensive income (loss), which consists of the sum of its contribution to: (a) GAAP net income (loss); and (b) GAAP total other comprehensive income, net of taxes. The sum of Segment Earnings for each segment and the All Other category equals GAAP net income (loss) attributable to Freddie Mac. Likewise, the sum of total comprehensive income (loss) for each segment and the All Other category equals GAAP total comprehensive income (loss) attributable to Freddie Mac.

The All Other category consists of material corporate level expenses that are: (a) infrequent in nature; and (b) based on management decisions outside the control of the management of our reportable segments. By recording these types of activities to the All Other category, we believe the financial results of our three reportable segments reflect the decisions and strategies that are executed within the reportable segments and provide greater comparability across time periods. The All Other category also includes the deferred tax asset valuation allowance associated with previously recognized income tax credits carried forward and, in 2009, the write-down of our LIHTC investments.

In presenting Segment Earnings, we make significant reclassifications to certain financial statement line items in order to reflect a measure of net interest income on investments and a measure of management and guarantee income on guarantees that is in line with how we manage our business. We present Segment Earnings by: (a) reclassifying certain investment-related activities and credit guarantee-related activities between various line items on our GAAP consolidated statements of income and comprehensive income; and (b) allocating certain revenues and expenses, including certain returns on assets and funding costs, and all administrative expenses to our three reportable segments.

As a result of these reclassifications and allocations, Segment Earnings for our reportable segments differs significantly from, and should not be used as a substitute for, net income (loss) as determined in accordance with GAAP. Our definition of Segment Earnings may differ from similar measures used by other companies. However, we believe that Segment Earnings provides us with meaningful metrics to assess the financial performance of each segment and our company as a whole.

Beginning January 1, 2010, we revised our method for presenting Segment Earnings to reflect changes in how management measures and assesses the performance of each segment and the company as a whole. This change in method, in conjunction with our implementation of the amendments to the accounting guidance relating to transfers of financial assets and the consolidation of VIEs, resulted in significant changes to our presentation of Segment Earnings. Segment Earnings for 2009 do not include changes to the guarantee asset, guarantee obligation, or other items that were eliminated or changed as a result of our implementation of the aforementioned amendments to the accounting guidance, as these amendments were applied prospectively consistent with our GAAP results. As a result, our Segment Earnings results for 2011 and 2010 are not directly comparable with the results for 2009. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for further information regarding the consolidation of certain of our securitization trusts.

See "NOTE 14: SEGMENT REPORTING" for further information regarding our segments, including the descriptions and activities of the segments and the reclassifications and allocations used to present Segment Earnings.

The table below provides information about our various segment mortgage portfolios at December 31, 2011, 2010, and 2009. For a discussion of each segment's portfolios, see "*Segment Earnings — Results*."

Table 16 — Composition of Segment Mortgage Portfolios and Credit Risk Portfolios[1]

	December 31, 2011	December 31, 2010
	(in millions)	
Segment mortgage portfolios:		
Investments — Mortgage investments portfolio:		
Single-family unsecuritized mortgage loans[2]	$ 109,190	$ 79,097
Freddie Mac mortgage-related securities	220,659	263,152
Non-agency mortgage-related securities	86,526	99,639
Non-Freddie Mac agency securities	32,898	39,789
Total Investments — Mortgage investments portfolio	449,273	481,677
Single -family Guarantee — Managed loan portfolio:[3]		
Single-family unsecuritized mortgage loans[4]	62,469	69,766
Single-family Freddie Mac mortgage-related securities held by us	220,659	261,508
Single-family Freddie Mac mortgage-related securities held by third parties	1,378,881	1,437,399
Single-family other guarantee commitments[5]	11,120	8,632
Total Single-family Guarantee — Managed loan portfolio	1,673,129	1,777,305
Multifamily — Guarantee portfolio:[3]		
Multifamily Freddie Mac mortgage related securities held by us	3,008	2,095
Multifamily Freddie Mac mortgage related securities held by third parties	22,136	11,916
Multifamily other guarantee commitments[5]	9,944	10,038
Total Multifamily — Guarantee portfolio	35,088	24,049
Multifamily — Mortgage investments portfolio[3]		
Multifamily investment securities portfolio	59,260	59,548
Multifamily loan portfolio	82,311	85,883
Total Multifamily — Mortgage investments portfolio	141,571	145,431
Total Multifamily portfolio	176,659	169,480
Less : Freddie Mac single-family and certain multifamily securities[6]	(223,667)	(263,603)
Total mortgage portfolio	$2,075,394	$2,164,859
Credit risk portfolios:[7]		
Single-family credit guarantee portfolio:		
Single-family mortgage loans, on-balance sheet	$1,733,215	$1,799,256
Non-consolidated Freddie Mac mortgage-related securities	10,735	11,268
Other guarantee commitments	11,120	8,632
Less: HFA-related guarantees[8]	(8,637)	(9,322)
Less: Freddie Mac mortgage-related securities backed by Ginnie Mae certificates[8]	(779)	(857)
Total single-family credit guarantee portfolio	$1,745,654	$1,808,977
Multifamily mortgage portfolio:		
Multifamily mortgage loans, on-balance sheet	$ 82,311	$ 85,883
Non-consolidated Freddie Mac mortgage-related securities	25,144	14,011
Other guarantee commitments	9,944	10,038
Less: HFA-related guarantees[8]	(1,331)	(1,551)
Total multifamily mortgage portfolio	$ 116,068	$ 108,381

(1) Based on UPB and excludes mortgage loans and mortgage-related securities traded, but not yet settled.
(2) Excludes unsecuritized seriously delinquent single-family loans managed by the Single-family Guarantee segment. However, the Single-family Guarantee segment continues to earn management and guarantee fees associated with unsecuritized single-family loans in the Investments segment's mortgage investments portfolio.
(3) The balances of the mortgage-related securities in these portfolios are based on the UPB of the security, whereas the balances of our single-family credit guarantee and multifamily mortgage portfolios presented in this report are based on the UPB of the mortgage loans underlying the related security. The differences in the loan and security balances result from the timing of remittances to security holders, which is typically 45 or 75 days after the mortgage payment cycle of fixed-rate and ARM PCs, respectively.
(4) Represents unsecuritized seriously delinquent single-family loans managed by the Single-family Guarantee segment.
(5) Represents the UPB of mortgage-related assets held by third parties for which we provide our guarantee without our securitization of the related assets.
(6) Freddie Mac single-family mortgage-related securities held by us are included in both our Investments segment's mortgage investments portfolio and our Single-family Guarantee segment's managed loan portfolio, and Freddie Mac multifamily mortgage-related securities held by us are included in both the multifamily investment securities portfolio and the multifamily guarantee portfolio. Therefore, these amounts are deducted in order to reconcile to our total mortgage portfolio.
(7) Represents the UPB of loans for which we present characteristics, delinquency data, and certain other statistics in this report. See "GLOSSARY" for further description.
(8) We exclude HFA-related guarantees and our resecuritizations of Ginnie Mae certificates from our credit risk portfolios and most related statistics because these guarantees do not expose us to meaningful amounts of credit risk due to the credit enhancement provided on them by the U.S. government.

Segment Earnings — Results

Investments

The table below presents the Segment Earnings of our Investments segment.

Table 17 — Segment Earnings and Key Metrics — Investments[1]

	Year Ended December 31,		
	2011	2010	2009
	(dollars in millions)		
Segment Earnings:			
Net interest income	$ 7,339	$ 6,192	$ 8,090
Non-interest income (loss):			
Net impairment of available-for-sale securities	(1,833)	(3,819)	(9,870)
Derivative gains (losses)	(3,597)	(1,859)	4,695
Gains (losses) on trading securities	(993)	(1,386)	4,885
Gains (losses) on sale of mortgage loans	28	(76)	617
Gains (losses) on mortgage loans recorded at fair value	501	34	(46)
Other non-interest income (loss)	1,266	1,023	(774)
Total non-interest income (loss)	(4,628)	(6,083)	(493)
Non-interest expense:			
Administrative expenses	(398)	(455)	(515)
Other non-interest expense	(2)	(18)	(33)
Total non-interest expense	(400)	(473)	(548)
Segment adjustments[2]	661	1,358	—
Segment Earnings before income tax benefit (expense)	2,972	994	7,049
Income tax benefit (expense)	394	259	(572)
Segment Earnings, net of taxes, including noncontrolling interest	3,366	1,253	6,477
Less: Net income — noncontrolling interest	—	(2)	(1)
Segment Earnings, net of taxes	3,366	1,251	6,476
Total other comprehensive income, net of taxes	3,107	10,226	11,329
Total comprehensive income	$ 6,473	$ 11,477	$ 17,805
Key metrics — Investments:			
Portfolio balances:			
Average balances of interest-earning assets:[3][4][5]			
Mortgage-related securities[6]	$386,115	$465,048	$600,562
Non-mortgage-related investments[7]	97,519	123,537	100,759
Unsecuritized single-family loans	94,894	59,028	49,013
Total average balances of interest-earning assets	$578,528	$647,613	$750,334
Return:			
Net interest yield — Segment Earnings basis	1.27%	0.96%	1.08%

(1) For reconciliations of the Segment Earnings line items to the comparable line items in our consolidated financial statements prepared in accordance with GAAP, see "NOTE 14: SEGMENT REPORTING — Table 14.2 — Segment Earnings and Reconciliation to GAAP Results."
(2) For a description of our segment adjustments, see "NOTE 14: SEGMENT REPORTING — Segment Earnings."
(3) Excludes mortgage loans and mortgage-related securities traded, but not yet settled.
(4) Excludes non-performing single-family mortgage loans.
(5) We calculate average balances based on amortized cost.
(6) Includes our investments in single-family PCs and certain Other Guarantee Transactions, which have been consolidated under GAAP on our consolidated balance sheet since January 1, 2010.
(7) Includes the average balances of interest-earning cash and cash equivalents, non-mortgage-related securities, and federal funds sold and securities purchased under agreements to resell.

Segment Earnings for our Investments segment increased by $2.1 billion to $3.4 billion in 2011, compared to $1.3 billion in 2010. Comprehensive income for our Investments segment decreased by $5.0 billion to $6.5 billion in 2011, compared to $11.5 billion in 2010.

During 2011, the UPB of the Investments segment mortgage investments portfolio decreased by 6.7%. We held $253.6 billion of agency securities and $86.5 billion of non-agency mortgage-related securities as of December 31, 2011, compared to $302.9 billion of agency securities and $99.6 billion of non-agency mortgage-related securities as of December 31, 2010. The decline in UPB of agency securities is due mainly to liquidations, including prepayments and selected sales. The decline in UPB of non-agency mortgage-related securities is due mainly to the receipt of monthly remittances of principal repayments from both the recoveries of liquidated loans and, to a lesser extent, voluntary repayments of the underlying collateral, representing a partial return of our investments in these securities. Since the beginning of 2007, we have incurred actual principal cash shortfalls of $1.5 billion on impaired non-agency mortgage-related securities in the Investments segment. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities" for additional information regarding our mortgage-related securities.

Segment Earnings net interest income increased $1.1 billion, and Segment Earnings net interest yield increased 31 basis points during 2011, compared to 2010. The primary driver was lower funding costs, primarily due to the replacement of debt at lower rates. These lower funding costs were partially offset by the reduction in the average balance of higher-yielding mortgage-related assets due to continued liquidations and limited purchase activity.

Segment Earnings non-interest income (loss) was $(4.6) billion in 2011, compared to $(6.1) billion in 2010. This improvement in non-interest loss was mainly due to decreased net impairment of available-for-sale securities and decreased losses on trading securities, partially offset by increased derivative losses.

Impairments recorded in our Investments segment decreased by $2.0 billion during 2011, compared to 2010, primarily due to the impact of lower interest rates in 2011 resulting in a benefit from expected structural credit enhancements on the securities. The impact of lower interest rates was partially offset by the impact of declines in forecasted home prices. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities — *Mortgage-Related Securities — Other-Than-Temporary Impairments on Available-For-Sale Mortgage-Related Securities*" for additional information on our impairments.

We recorded losses on trading securities of $(1.0) billion during 2011, compared to $(1.4) billion during 2010. Losses in both periods are primarily due to the movement of securities with unrealized gains towards maturity. These losses were partially offset by larger fair value gains in 2011, due to a more significant decline in long-term interest rates, compared to 2010.

We recorded derivative gains (losses) for this segment of $(3.6) billion during 2011, compared to $(1.9) billion during 2010. While derivatives are an important aspect of our strategy to manage interest-rate risk, they generally increase the volatility of reported Segment Earnings, because while fair value changes in derivatives affect Segment Earnings, fair value changes in several of the types of assets and liabilities being hedged do not affect Segment Earnings. During 2011 and 2010, swap interest rates decreased, resulting in fair value losses on our pay-fixed swaps, partially offset by fair value gains on our receive-fixed swaps and purchased call swaptions. See "Non-Interest Income (Loss) — *Derivative Gains (Losses)*" for additional information on our derivatives.

Our Investments segment's total other comprehensive income was $3.1 billion in 2011. Net unrealized losses in AOCI on our available-for-sale securities decreased by $2.6 billion during 2011, primarily attributable to the impact of declining interest rates, resulting in fair value gains on our agency securities, and the recognition in earnings of other-than-temporary impairments on our non-agency mortgage-related securities, partially offset by the impact of widening OAS levels on our single-family non-agency mortgage-related securities. The changes in fair value of CMBS, excluding impacts from the changes in interest rates, are reflected in the Multifamily segment.

Segment Earnings for our Investments segment decreased by $5.2 billion to $1.3 billion in 2010, compared to $6.5 billion in 2009. Comprehensive income for our Investments segment decreased by $6.3 billion to $11.5 billion in 2010, compared to $17.8 billion in 2009.

Segment Earnings net interest income and net interest yield decreased $1.9 billion and 12 basis points, respectively, during 2010, compared to 2009. The primary driver underlying these decreases was a decrease in the average balance of mortgage-related securities, partially offset by a decrease in funding costs as a result of the replacement of higher-cost long-term debt at lower rates.

Segment Earnings non-interest loss increased $5.6 billion in 2010, compared to 2009. Included in other non-interest income (loss) are gains (losses) on trading securities of $(1.4) billion in 2010, compared to $4.9 billion in 2009. In 2010, the losses on trading securities was primarily due to the movement of securities with unrealized gains towards maturity, particularly interest-only securities, partially offset by fair value gains on our non-interest-only securities classified as trading primarily due to decreased interest rates. The net gains on trading securities during 2009 related primarily to tightening OAS levels.

We recorded derivative gains (losses) for this segment of $(1.9) billion during 2010, compared to $4.7 billion during 2009. During 2010, swap interest rates decreased, resulting in fair value losses on our pay-fixed swaps, partially offset by fair value gains on our receive-fixed swaps and purchased call swaptions. During 2009, longer-term swap interest rates increased, resulting in fair value gains on our pay-fixed swaps, partially offset by fair value losses on our receive-fixed swaps.

Impairments recorded in our Investments segment decreased by $6.1 billion during 2010, compared to 2009. Impairments for 2010 and 2009 are not comparable because the adoption of the amendment to the accounting guidance for investments in debt and equity securities on April 1, 2009 significantly impacted both the identification and measurement of other-than-temporary impairments.

Our Investments segment's total other comprehensive income was $10.2 billion during 2010. Net unrealized losses in AOCI on our available-for-sale securities decreased by $9.5 billion during 2010, primarily attributable to the impact of declining interest rates, resulting in fair value gains on our agency, single-family non-agency, and CMBS mortgage-related securities. In addition, the impact of widening OAS levels on our single-family non-agency mortgage-related securities during these periods was offset by fair value gains related to the movement of securities with unrealized losses towards maturity and the recognition in earnings of other-than-temporary impairments on our non-agency mortgage-related securities.

For a discussion of items that may impact our Investments segment net interest income over time, see "BUSINESS — Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business — Limits on Investment Activity and Our Mortgage-Related Investments Portfolio*" and "Net Interest Income."

Single-Family Guarantee

The table below presents the Segment Earnings of our Single-family Guarantee segment.

Table 18 — Segment Earnings and Key Metrics — Single-Family Guarantee[1]

	Year Ended December 31,		
	2011	2010	2009
	(dollars in millions)		
Segment Earnings:			
Net interest income (expense)	$ (23)	$ 72	$ 307
Provision for credit losses	(12,294)	(18,785)	(29,102)
Non-interest income:			
Management and guarantee income	3,647	3,635	3,448
Other non-interest income	1,216	1,351	721
Total non-interest income	4,863	4,986	4,169
Non-interest expense:			
Administrative expenses	(888)	(930)	(949)
REO operations expense	(596)	(676)	(287)
Other non-interest expense	(321)	(578)	(4,854)
Total non-interest expense	(1,805)	(2,184)	(6,090)
Segment adjustments[2]	(699)	(953)	—
Segment Earnings (loss) before income tax (expense) benefit	(9,958)	(16,864)	(30,716)
Income tax (expense) benefit	(42)	608	3,573
Segment Earnings (loss), net of taxes	(10,000)	(16,256)	(27,143)
Total other comprehensive income (loss), net of taxes	30	6	19
Total comprehensive income (loss)	$ (9,970)	$(16,250)	$(27,124)
Reconciliation to GAAP net income (loss):			
Segment Earnings (loss), net of taxes	$(10,000)	$(16,256)	$(27,143)
Credit guarantee-related adjustments	—	—	5,941
Tax-related adjustments	—	—	(2,080)
Total reconciling items, net of taxes	—	—	3,861
Net income (loss) attributable to Freddie Mac	$(10,000)	$(16,256)	$(23,282)
Key metrics — Single-family Guarantee:			
Balances and Volume (in billions, except rate):			
Average balance of single-family credit guarantee portfolio and HFA guarantees	$ 1,801	$ 1,861	$ 1,848
Issuance — Single-family credit guarantees[3]	$ 305	$ 385	$ 472
Fixed-rate products — Percentage of purchases[4]	92%	95%	99%
Liquidation rate — Single-family credit guarantees[5]	24%	29%	24%
Management and Guarantee Fee Rate (in bps):			
Contractual management and guarantee fees	13.7	13.5	13.9
Amortization of delivery fees	6.5	6.0	4.8
Segment Earnings management and guarantee income	20.2	19.5	18.7
Credit:			
Serious delinquency rate, at end of period	3.58%	3.84%	3.98%
REO inventory, at end of period (number of properties)	60,535	72,079	45,047
Single-family credit losses, in bps[6]	72.0	75.8	42.7
Market:			
Single-family mortgage debt outstanding (total U.S. market, in billions)[7]	$ 10,336	$ 10,522	$ 10,866
30-year fixed mortgage rate[8]	4.0%	4.9%	5.1%

(1) For reconciliations of the Segment Earnings line items to the comparable line items in our consolidated financial statements prepared in accordance with GAAP, see "NOTE 14: SEGMENT REPORTING — Table 14.2 — Segment Earnings and Reconciliation to GAAP Results."
(2) For a description of our segment adjustments, see "NOTE 14: SEGMENT REPORTING — Segment Earnings."
(3) Based on UPB.
(4) Excludes Other Guarantee Transactions.
(5) Represents principal repayments relating to loans underlying Freddie Mac mortgage-related securities and other guarantee commitments including those related to our removal of seriously delinquent and modified mortgage loans and balloon/reset mortgage loans out of PC pools.
(6) Calculated as the amount of single-family credit losses divided by the sum of the average carrying value of our single-family credit guarantee portfolio and the average balance of our single-family HFA initiative guarantees.
(7) Source: Federal Reserve Flow of Funds Accounts of the United States of America dated December 8, 2011. The outstanding amount for December 31, 2011 reflects the balance as of September 30, 2011.
(8) Based on Freddie Mac's Primary Mortgage Market Survey rate for the last week in the period, which represents the national average mortgage commitment rate to a qualified borrower exclusive of any fees and points required by the lender. This commitment rate applies only to financing on conforming mortgages with LTV ratios of 80%.

Segment Earnings (loss) for our Single-family Guarantee segment improved to $(10.0) billion in 2011 compared to $(16.3) billion in 2010, primarily due to a decline in Segment Earnings provision for credit losses.

Segment Earnings (loss) for our Single-family Guarantee segment improved to $(16.3) billion in 2010 compared to $(27.1) billion in 2009, primarily due to a decline in our Segment Earnings provision for credit losses.

The table below provides summary information about the composition of Segment Earnings (loss) for this segment for the years ended December 31, 2011 and 2010.

Table 19 — Segment Earnings Composition — Single-Family Guarantee Segment

	Year Ended December 31, 2011				
	Segment Earnings Management and Guarantee Income[1]		Credit Expenses[2]		
	Amount	Average Rate[3]	Amount	Average Rate[3]	Net Amount[4]
	(dollars in millions, rates in bps)				
Year of origination:[5]					
2011	$ 362	21.2	$ (56)	3.9	$ 306
2010	763	22.4	(197)	5.6	566
2009	713	20.6	(207)	5.8	506
2008	382	23.4	(771)	56.9	(389)
2007	368	18.6	(4,365)	239.1	(3,997)
2006	227	17.7	(3,439)	252.6	(3,212)
2005	257	17.5	(2,125)	136.4	(1,868)
2004 and prior	575	18.7	(1,730)	50.9	(1,155)
Total	$3,647	20.2	$(12,890)	95.4	$ (9,243)
Administrative expenses					(888)
Net interest income (expense)					(23)
Other non-interest income and expenses, net					154
Segment Earnings (loss), net of taxes					$(10,000)

	Year Ended December 31, 2010				
	Segment Earnings Management and Guarantee Income[1]		Credit Expenses[2]		
	Amount	Average Rate[3]	Amount	Average Rate[3]	Net Amount[4]
	(dollars in millions, rates in bps)				
Year of origination:[5]					
2010	$ 418	23.8	$ (109)	6.2	$ 309
2009	837	19.3	(367)	8.4	470
2008	554	29.5	(2,151)	114.3	(1,597)
2007	493	21.2	(7,170)	307.2	(6,677)
2006	289	16.5	(5,847)	332.6	(5,558)
2005	313	15.8	(2,644)	132.8	(2,331)
2004 and prior	731	16.3	(1,173)	26.1	(442)
Total	$3,635	19.6	$(19,461)	104.7	$(15,826)
Administrative expenses					(930)
Net interest income (expense)					72
Other non-interest income and expenses, net					428
Segment Earnings (loss), net of taxes					$(16,256)

(1) Includes amortization of delivery fees of $1.2 billion and $1.1 billion for 2011 and 2010, respectively.
(2) Consists of the aggregate of the Segment Earnings provision for credit losses and Segment Earnings REO operations expense. Historical rates of average credit expenses may not be representative of future results.
(3) Calculated as the amount of Segment Earnings management and guarantee income or credit expenses, respectively, divided by the sum of the average carrying values of the single-family credit guarantee portfolio and the average balance of our single-family HFA initiative guarantees.
(4) Calculated as Segment Earnings management and guarantee income less credit expenses.
(5) Segment Earnings management and guarantee income is presented by year of guarantee origination, whereas credit expenses are presented based on year of loan origination.

For the years ended December 31, 2011 and 2010, the guarantee-related revenue from mortgage guarantees we issued after 2008 exceeded the credit-related and administrative expenses associated with these guarantees. We currently believe our management and guarantee fee rates for guarantee issuances after 2008, when coupled with the higher credit quality of the mortgages within our new guarantee issuances, will provide management and guarantee fee income, over the long term, that exceeds our expected credit-related and administrative expenses associated with the underlying loans. Nevertheless, various factors, such as continued high unemployment rates, further declines in home prices, or negative impacts of HARP loans originated in recent years (which may not perform as well as other refinance mortgages, due in part to the high LTV ratios of the loans), could require us to incur expenses on these loans beyond our current expectations. Our management and guarantee fee income associated with guarantee issuances in 2005 through 2008 has not been adequate to cover the credit and administrative expenses associated with such loans, primarily due to the high rate of defaults on the loans originated in those years coupled with a high volume of refinancing since 2008. High levels of refinancing and delinquency since 2008 have significantly reduced the balance of performing loans from those years

that remain in our portfolio and consequently reduced management and guarantee income associated with loans originated in 2005 through 2008 (we do not recognize Segment Earnings management and guarantee income on non-accrual mortgage loans). We also believe that the management and guarantee fees associated with originations after 2008 will not be sufficient to offset the future expenses associated with our 2005 to 2008 guarantee issuances for the foreseeable future. Consequently, we expect to continue reporting net losses for the Single-family Guarantee segment in 2012.

Segment Earnings management and guarantee income increased slightly in 2011, as compared to 2010, primarily due to an increase in amortization of delivery fees, partially offset by a lower average balance of the single-family credit guarantee portfolio during 2011. Segment Earnings management and guarantee income increased slightly in 2010 compared to 2009, primarily due to an increase in amortization of delivery fees. The increase in amortization of delivery fees in 2011 and 2010 was due to the effect of declining interest rates during these years, which increased both actual refinance activity and our expectation of future refinancing activity.

The UPB of the Single-family Guarantee managed loan portfolio was $1.7 trillion at December 31, 2011, compared to $1.8 trillion and $1.9 trillion at December 31, 2010 and 2009, respectively. The declines in 2011 and 2010 reflect that the amount of single-family loan liquidations has exceeded new loan purchase and guarantee activity, which we believe is due, in part, to declines in the amount of single-family mortgage debt outstanding in the market and increased competition from Ginnie Mae and FHA/VA. Our loan purchase and guarantee activity in 2011 was at the lowest level we have experienced in the last several years. The liquidation rate on our securitized single-family credit guarantees was approximately 24%, 29%, and 24% for 2011, 2010, and 2009, respectively. We expect the size of our Single-family Guarantee managed loan portfolio will decline slightly during 2012.

Refinance volumes continued to be high during 2011 due to continued low interest rates, and, based on UPB, represented 78% of our single-family mortgage purchase volume during 2011 compared to 80% of our single-family mortgage purchase volume during 2010. Relief refinance mortgages comprised approximately 33% and 35% of our total refinance volume during 2011 and 2010, respectively. Over time, relief refinance mortgages with LTV ratios above 80% may not perform as well as relief refinance mortgages with LTV ratios of 80% and below because of the continued high LTV ratios of these loans. There is an increase in borrower default risk as LTV ratios increase, particularly for loans with LTV ratios above 80%. In addition, relief refinance mortgages may not be covered by mortgage insurance for the full excess of their UPB over 80%. Approximately 12% of our single-family purchase volume in both 2011 and 2010 was relief refinance mortgages with LTV ratios above 80%. Relief refinance mortgages of all LTV ratios comprised approximately 11% and 7% of the UPB in our total single-family credit guarantee portfolio at December 31, 2011 and 2010, respectively.

On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to attract more eligible borrowers whose monthly payments are current and who can benefit from refinancing their home mortgages. For more information about our relief refinance mortgage initiative, see "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program.*"

Similar to our purchases in 2009 and 2010, the credit quality of the single-family loans we acquired in 2011 (excluding relief refinance mortgages) is significantly better than that of loans we acquired from 2005 through 2008, as measured by early delinquency rate trends, original LTV ratios, FICO scores, and the proportion of loans underwritten with fully documented income. Mortgages originated after 2008, including relief refinance mortgages, represent a growing proportion of our single-family credit guarantee portfolio. The UPB of loans originated in 2005 to 2008 within our single-family credit guarantee portfolio continues to decline due to liquidations, which include prepayments, refinancing activity, foreclosure alternatives, and foreclosure transfers. We currently expect that, over time, the replacement (other than through relief refinance activity) of the 2005 to 2008 vintages, which have a higher composition of loans with higher-risk characteristics, should positively impact the serious delinquency rates and credit-related expenses of our single-family credit guarantee portfolio. However, the rate at which this replacement is occurring slowed beginning in 2010, due primarily to a decline in the volume of home purchase mortgage originations and delays in the foreclosure process.

Provision for credit losses for the Single-family Guarantee segment was $12.3 billion, $18.8 billion, and $29.1 billion in 2011, 2010, and 2009, respectively. The provision for credit losses in 2011 reflects a decline in the rate at which single-family loans transition into serious delinquency or are modified, but was partially offset by our lowered expectations for mortgage insurance recoveries, which is due to the continued deterioration in the financial condition of the mortgage insurance industry in 2011. See "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk*" for further information on our mortgage insurance counterparties. Segment Earnings provision for credit losses declined in

2010, compared to 2009, primarily due to a decline in the rate at which delinquent loans transitioned into serious delinquency, partially offset by a higher volume of loan modifications that were classified as TDRs in 2010.

We adopted an amendment to the accounting guidance on the classification of loans as TDRs in 2011, which significantly increases the population of loans we account for and disclose as TDRs. The impact of this change in guidance on our financial results for 2011 was not significant. We expect that the number of loans that newly qualify as TDRs in 2012 will remain high, primarily because we anticipate that the majority of our modifications, both completed and those still in trial periods, will be considered TDRs. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," and "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for additional information on our TDR loans, including our implementation of changes to the accounting guidance on the classification of loans as TDRs.

Single-family credit losses as a percentage of the average balance of the single-family credit guarantee portfolio and HFA-related guarantees were 72.0 basis points, 75.8 basis points, and 42.7 basis points for 2011, 2010, and 2009, respectively. Charge-offs, net of recoveries, associated with single-family loans were $12.4 billion, $13.4 billion, and $7.6 billion in 2011, 2010, and 2009, respectively. See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk*" for further information on our single-family credit guarantee portfolio, including credit performance, charge-offs, and our non-performing assets.

The serious delinquency rate on our single-family credit guarantee portfolio was 3.58%, 3.84%, and 3.98% as of December 31, 2011, 2010, and 2009, respectively, and declined during 2011 due to a high volume of loan modifications and foreclosure transfers, as well as a slowdown in new serious delinquencies. Our serious delinquency rate remains high compared to historical levels, reflecting continued stress in the housing and labor markets and extended foreclosure timelines. The decline in size of our single-family credit guarantee portfolio in 2011 caused our serious delinquency rate to be higher than it otherwise would have been because this rate is calculated on a smaller base of loans at year end.

Segment Earnings other non-interest income was $1.2 billion, $1.4 billion, and $0.7 billion in 2011, 2010, and 2009, respectively. The decline in 2011, compared to 2010, was primarily due to lower recoveries on loans impaired upon purchase due to a lower volume of foreclosure transfers and loan payoffs associated with these loans. The increase in Segment Earnings other non-interest income in 2010 compared to 2009 was primarily due to higher recoveries on loans impaired upon purchase driven by a higher volume of short sales and foreclosure transfers associated with these loans.

Segment Earnings REO operations expense was $0.6 billion, $0.7 billion, and $0.3 billion in 2011, 2010, and 2009, respectively. The decrease in 2011, compared to 2010, was primarily due to the impact of a less significant decline in home prices in certain geographical areas with significant REO activity resulting in lower write-downs of single-family REO inventory during 2011, partially offset by lower recoveries on REO properties during 2011. Lower recoveries on REO properties in 2011, compared to 2010, are primarily due to reduced recoveries from mortgage insurers, in part due to the continued deterioration in the financial condition of the mortgage insurance industry, and a decline in reimbursements of losses from seller/servicers associated with repurchase requests on loans on which we have foreclosed. The increase in Segment Earnings REO operations expense in 2010, compared to 2009, is primarily a result of higher REO property expenses and holding period write-downs that were partially offset by lower disposition losses and increased recoveries.

Our REO inventory (measured in number of properties) declined 16% during 2011 due to an increase in the volume of REO dispositions and slowdowns in REO acquisition volume associated with delays in the foreclosure process. Dispositions of REO increased 9% in 2011 compared to 2010, based on the number of properties sold. We continued to experience high REO disposition severity ratios on sales of our REO inventory during 2011. We believe our single-family REO acquisition volume and single-family credit losses in 2011 have been less than they otherwise would have been due to delays in the single-family foreclosure process, particularly in states that require a judicial foreclosure process. See "RISK FACTORS — Operational Risks — *We have incurred, and will continue to incur, expenses and we may otherwise be adversely affected by delays and deficiencies in the foreclosure process*" for further information.

Segment Earnings other non-interest expense was $0.3 billion, $0.6 billion, and $4.9 billion in 2011, 2010, and 2009, respectively. The decline in 2011, compared to 2010, was primarily due to lower expenses associated with transfers and terminations of mortgage servicing. The decline in 2010, compared to 2009, was primarily due to a decline in losses on loans purchased that resulted from changes in accounting guidance for consolidation of VIEs we implemented on January 1, 2010.

Multifamily

The table below presents the Segment Earnings of our Multifamily segment.

Table 20 — Segment Earnings and Key Metrics — Multifamily[1]

	Year Ended December 31,		
	2011	2010	2009
	(dollars in millions)		
Segment Earnings:			
Net interest income	$ 1,200	$ 1,114	$ 856
(Provision) benefit for credit losses	196	(99)	(574)
Non-interest income (loss):			
Management and guarantee income	127	101	90
Net impairment of available-for-sale securities	(353)	(96)	(137)
Derivative gains (losses)	3	6	(27)
Gains (losses) on sale of mortgage loans	383	343	156
Gains (losses) on mortgage loans recorded at fair value	(83)	(283)	(144)
Other non-interest income (loss)	125	177	(474)
Total non-interest income (loss)	202	248	(536)
Non-interest expense:			
Administrative expenses	(220)	(212)	(221)
REO operations income (expense)	11	3	(20)
Other non-interest expense	(69)	(66)	(18)
Total non-interest expense	(278)	(275)	(259)
Segment Earnings (loss) before income tax benefit (expense)	1,320	988	(513)
Income tax benefit (expense)	(1)	(26)	—
Segment Earnings (loss), net of taxes, including noncontrolling interest	1,319	962	(513)
Less: Net (income) loss — noncontrolling interest	—	3	2
Segment Earnings (loss), net of taxes	1,319	965	(511)
Total other comprehensive income, net of taxes	899	4,075	7,292
Total comprehensive income	$ 2,218	$ 5,040	$ 6,781
Reconciliation to GAAP net income (loss):			
Segment Earnings (loss), net of taxes	$ 1,319	$ 965	$ (511)
Credit guarantee-related adjustments[2]	—	—	7
Fair value-related adjustments[3]	—	—	(3,761)
Tax-related adjustments[3]	—	—	1,313
Total reconciling items, net of taxes	—	—	(2,441)
Net income (loss) attributable to Freddie Mac	$ 1,319	$ 965	$ (2,952)
Key metrics — Multifamily:			
Balances and Volume:			
Average balance of Multifamily loan portfolio	$ 83,593	$ 83,163	$ 78,371
Average balance of Multifamily guarantee portfolio	$ 29,861	$ 21,787	$ 16,203
Average balance of Multifamily investment securities portfolio	$ 61,296	$ 61,332	$ 63,797
Multifamily new loan purchase and other guarantee commitment volume[4]	$ 20,325	$ 14,800	$ 16,556
Multifamily units financed from new volume activity[4]	320,753	233,952	258,072
Multifamily Other Guarantee Transaction issuance[4]	$ 11,722	$ 5,694	$ 1,979
Yield and Rate:			
Net interest yield — Segment Earnings basis	0.83%	0.77%	0.55%
Average Management and guarantee fee rate, in bps[5]	42.4	50.1	53.3
Credit:			
Delinquency rate:			
Credit-enhanced loans, at period end	0.52%	0.85%	1.03%
Non-credit-enhanced loans, at period end	0.11%	0.12%	0.07%
Total delinquency rate, at period end[6]	0.22%	0.26%	0.20%
Allowance for loan losses and reserve for guarantee losses, at period end	$ 545	$ 828	$ 831
Allowance for loan losses and reserve for guarantee losses, in bps	46.4	75.3	82.1
Credit losses, in bps[7]	6.3	9.6	4.4
REO inventory, at net carrying value	$ 133	$ 107	$ 31
REO inventory, at period end (number of properties)	20	14	5

(1) For reconciliations of Segment Earnings line items to the comparable line items in our consolidated financial statements prepared in accordance with GAAP, see "NOTE 14: SEGMENT REPORTING — Table 14.2 — Segment Earnings and Reconciliation to GAAP Results."
(2) Consists primarily of amortization and valuation adjustments pertaining to the guarantee assets and guarantee obligation, which were excluded from segment earnings in 2009.
(3) Fair value-related adjustments in 2009 consist principally of the write-down of our investment in LIHTC partnerships in 2009. Tax-related adjustments in 2009 consist of the establishment of a partial valuation allowance against our deferred tax assets that are not included in Multifamily Segment Earnings.
(4) Excludes our guarantees issued under the HFA initiative.
(5) Represents Multifamily Segment Earnings — management and guarantee income, excluding prepayment and certain other fees, divided by the sum of the average balance of the multifamily guarantee portfolio and the average balance of guarantees associated with the HFA initiative, excluding certain bonds under the NIBP.
(6) See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Multifamily Mortgage Credit Risk*" for information on our reported multifamily delinquency rate.
(7) Calculated as the amount of multifamily credit losses divided by the sum of the average carrying value of our multifamily loan portfolio and the average balance of the multifamily guarantee portfolio, including multifamily HFA initiative guarantees.

Our purchase and guarantee of multifamily loans, excluding HFA-related guarantees, increased approximately 37% to $20.3 billion for 2011, compared to $14.8 billion and $16.6 billion during 2010 and 2009, respectively. We completed Other Guarantee Transactions, excluding HFA-related guarantees, of $11.7 billion, $5.7 billion, and $2.0 billion in UPB of multifamily loans in 2011, 2010, and 2009, respectively. The UPB of the total multifamily portfolio increased to $176.7 billion at December 31, 2011 from $169.5 billion at December 31, 2010, primarily due to increased issuance of Other Guarantee Transactions, partially offset by maturities and other repayments of multifamily held-for-investment mortgage loans. We expect our purchase and guarantee activity to continue to increase, but at a more moderate pace, in 2012.

Segment Earnings for our Multifamily segment increased to $1.3 billion in 2011, compared to $965 million in 2010, primarily due to improvement in provision (benefit) for credit losses and lower losses on mortgage loans recorded at fair value, partially offset by higher security impairments on the CMBS portfolio. Our total comprehensive income for our Multifamily segment was $2.2 billion in 2011, consisting of: (a) Segment Earnings of $1.3 billion; and (b) $0.9 billion of total other comprehensive income, which was mainly attributable to changes in fair value of available-for-sale CMBS in 2011.

Segment Earnings (loss) for our Multifamily segment increased to $965 million for 2010 compared to $(511) million for 2009, primarily due to increased net interest income and lower provision for credit losses in 2010. Our total comprehensive income for our Multifamily segment was $5.0 billion in 2010, consisting of: (a) Segment Earnings of $965 million; and (b) $4.1 billion of total other comprehensive income, primarily resulting from improved fair values on available-for-sale CMBS. Our total comprehensive income for our Multifamily segment was $6.8 billion in 2009, consisting of: (a) Segment Earnings (loss) of $(0.5) billion; and (b) $7.3 billion of total other comprehensive income.

Segment Earnings net interest income increased to $1.2 billion in 2011 from $1.1 billion in 2010, primarily due to lower funding costs on allocated debt in 2011. Net interest yield was 83 and 77 basis points in 2011 and 2010, respectively. Segment Earnings net interest income increased $258 million, or 30%, for 2010 compared to 2009, due to lower funding costs on allocated debt in 2010, which declined principally due to the removal of the LIHTC investments from the Multifamily segment in the fourth quarter of 2009. See "NOTE 3: VARIABLE INTEREST ENTITIES" for further information on our LIHTC investments. Net interest income was also positively impacted in 2010 by an increase in prepayment fees driven by an increase in refinancing in 2010, as compared to 2009. As a result, net interest yield was 77 basis points in 2010, an improvement of 22 basis points from 2009.

Segment Earnings non-interest income (loss) was $202 million, $248 million, and $(536) million in 2011, 2010, and 2009, respectively. The decline in 2011 was primarily driven by higher security impairments on CMBS, partially offset by lower losses recognized on mortgage loans recorded at fair value primarily reflecting improving market factors, such as credit and liquidity. Segment Earnings gains (losses) on mortgage loans recorded at fair value are presented net of changes in fair value due to changes in interest rates. The improvement in Segment Earnings non-interest income (loss) in 2010, compared to 2009, was primarily due to the absence of LIHTC partnership losses and higher gains recognized on the sale of loans through securitization in 2010.

While our Multifamily Segment Earnings management and guarantee income increased 26% in 2011, compared to 2010, the average rate realized on our guarantee portfolio declined to 42 basis points in 2011 from 50 basis points in 2010. The decline in our average rate in 2011 reflects the impact from our increased volume of Other Guarantee Transactions, which have lower credit risk associated with our guarantee (and thus we charge a lower rate) relative to other issued guarantees because these transactions contain significant levels of credit enhancement through subordination.

Multifamily credit losses as a percentage of the combined average balance of our multifamily loan and guarantee portfolios were 6.3, 9.6, and 4.4 basis points in 2011, 2010, and 2009, respectively. Our Multifamily segment recognized a provision (benefit) for credit losses of $(196) million, $99 million, and $574 million in 2011, 2010, and 2009, respectively. Our loan loss reserves associated with our multifamily mortgage portfolio were $545 million, $828 million, and $831 million as of December 31, 2011, 2010, and 2009, respectively. The decline in our loan loss reserves in 2011 was driven by positive trends in vacancy rates and effective rents, as well as stabilizing or improved property values.

The credit quality of the multifamily mortgage portfolio remains strong, as evidenced by low delinquency rates and credit losses, and we believe reflects prudent underwriting practices. The delinquency rate for loans in the multifamily mortgage portfolio was 0.22%, 0.26%, and 0.20% as of December 31, 2011, 2010, and 2009, respectively. As of December 31, 2011, more than half of the multifamily loans that were two or more monthly payments past due, measured both in terms of number of loans and on a UPB basis, had credit enhancements that we currently believe will mitigate our expected losses on those loans. We expect our multifamily delinquency rate to remain relatively stable in 2012. See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Multifamily Mortgage Credit Risk*" for further

information about our reported multifamily delinquency rates and credit enhancements on multifamily loans. For further information on delinquencies, including geographical and other concentrations, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

CONSOLIDATED BALANCE SHEETS ANALYSIS

The following discussion of our consolidated balance sheets should be read in conjunction with our consolidated financial statements, including the accompanying notes. Also, see "CRITICAL ACCOUNTING POLICIES AND ESTIMATES" for information concerning certain significant accounting policies and estimates applied in determining our reported financial position.

Cash and Cash Equivalents, Federal Funds Sold and Securities Purchased Under Agreements to Resell

Cash and cash equivalents, federal funds sold and securities purchased under agreements to resell, and other liquid assets discussed in "Investments in Securities — *Non-Mortgage-Related Securities*," are important to our cash flow and asset and liability management, and our ability to provide liquidity and stability to the mortgage market. We use these assets to help manage recurring cash flows and meet our other cash management needs. We consider federal funds sold to be overnight unsecured trades executed with commercial banks that are members of the Federal Reserve System. Securities purchased under agreements to resell principally consist of short-term contractual agreements such as reverse repurchase agreements involving Treasury and agency securities.

The short-term assets on our consolidated balance sheets also include those related to our consolidated VIEs, which are comprised primarily of restricted cash and cash equivalents at December 31, 2011. These short-term assets, related to our consolidated VIEs, decreased by $9.2 billion from December 31, 2010 to December 31, 2011, primarily due to a relative decline in the level of refinancing activity.

Excluding amounts related to our consolidated VIEs, we held $28.4 billion and $37.0 billion of cash and cash equivalents, $0 billion and $1.4 billion of federal funds sold, and $12.0 billion and $15.8 billion of securities purchased under agreements to resell at December 31, 2011 and 2010, respectively. The aggregate decrease in these assets was primarily driven by a decline in funding needs for debt redemptions. In addition, excluding amounts related to our consolidated VIEs, we held on average $32.4 billion and $33.0 billion of cash and cash equivalents and $13.2 billion and $19.1 billion of federal funds sold and securities purchased under agreements to resell during the three months and year ended December 31, 2011, respectively.

Beginning in the third quarter of 2011, we changed the composition of our portfolio of liquid assets to hold more cash and overnight investments given the market's concerns about the potential for a downgrade in the credit ratings of the U.S. government and the potential that the U.S. would exhaust its borrowing authority under the statutory debt limit. For more information regarding liquidity management and credit ratings, see "LIQUIDITY AND CAPITAL RESOURCES — Liquidity."

Investments in Securities

The two tables below provide detail regarding our investments in securities as of December 31, 2011, 2010 and 2009. The tables do not include our holdings of single-family PCs and certain Other Guarantee Transactions as of December 31, 2011 and 2010. For information on our holdings of such securities, see "Table 16 — Composition of Segment Mortgage Portfolios and Credit Risk Portfolios."

Table 21 — Investments in Available-For-Sale Securities

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in millions)		
December 31, 2011				
Available-for-sale mortgage-related securities:				
Freddie Mac	$ 74,711	$ 6,429	$ (48)	$ 81,092
Subprime	41,347	60	(13,408)	27,999
CMBS	53,637	2,574	(548)	55,663
Option ARM	9,019	15	(3,169)	5,865
Alt-A and other	13,659	32	(2,812)	10,879
Fannie Mae	19,023	1,303	(4)	20,322
Obligations of states and political subdivisions	7,782	108	(66)	7,824
Manufactured housing	820	6	(60)	766
Ginnie Mae	219	30	—	249
Total investments in available-for-sale mortgage-related securities	$220,217	$10,557	$(20,115)	$210,659
December 31, 2010				
Available-for-sale mortgage-related securities:				
Freddie Mac	$ 80,742	$ 5,142	$ (195)	$ 85,689
Subprime	47,916	1	(14,056)	33,861
CMBS	58,455	1,551	(1,919)	58,087
Option ARM	10,726	16	(3,853)	6,889
Alt-A and other	15,561	58	(2,451)	13,168
Fannie Mae	23,025	1,348	(3)	24,370
Obligations of states and political subdivisions	9,885	31	(539)	9,377
Manufactured housing	945	13	(61)	897
Ginnie Mae	268	28	—	296
Total investments in available-for-sale mortgage-related securities	$247,523	$ 8,188	$(23,077)	$232,634
December 31, 2009				
Available-for-sale mortgage-related securities:				
Freddie Mac	$215,198	$ 9,410	$ (1,141)	$223,467
Subprime	56,821	2	(21,102)	35,721
CMBS	61,792	15	(7,788)	54,019
Option ARM	13,686	25	(6,475)	7,236
Alt-A and other	18,945	9	(5,547)	13,407
Fannie Mae	34,242	1,312	(8)	35,546
Obligations of states and political subdivisions	11,868	49	(440)	11,477
Manufactured housing	1,084	1	(174)	911
Ginnie Mae	320	27	—	347
Total available-for-sale mortgage-related securities	413,956	10,850	(42,675)	382,131
Available-for-sale non-mortgage-related securities:				
Asset-backed securities	2,444	109	—	2,553
Total available-for-sale non-mortgage-related securities	2,444	109	—	2,553
Total investments in available-for-sale securities	$416,400	$10,959	$(42,675)	$384,684

Table 22 — Investments in Trading Securities

	December 31,		
	2011	2010	2009
	(in millions)		
Mortgage-related securities:			
Freddie Mac	$16,047	$13,437	$170,955
Fannie Mae	15,165	18,726	34,364
Ginnie Mae	156	172	185
Other	164	31	28
Total mortgage-related securities	31,532	32,366	205,532
Non-mortgage-related securities:			
Asset-backed securities	302	44	1,492
Treasury bills	100	17,289	14,787
Treasury notes	24,712	10,122	—
FDIC-guaranteed corporate medium-term notes	2,184	441	439
Total non-mortgage-related securities	27,298	27,896	16,718
Total fair value of investments in trading securities	$58,830	$60,262	$222,250

Non-Mortgage-Related Securities

Our investments in non-mortgage-related securities provide an additional source of liquidity. We held investments in non-mortgage-related securities classified as trading of $27.3 billion and $27.9 billion as of December 31, 2011 and 2010,

respectively. While balances may fluctuate from period to period, we continue to meet required liquidity and contingency levels.

Mortgage-Related Securities

We are primarily a buy-and-hold investor in mortgage-related securities, which consist of securities issued by Fannie Mae, Ginnie Mae, and other financial institutions. We also invest in our own mortgage-related securities. However, the single-family PCs and certain Other Guarantee Transactions we purchase as investments are not accounted for as investments in securities because we recognize the underlying mortgage loans on our consolidated balance sheets through consolidation of the related trusts.

The table below provides the UPB of our investments in mortgage-related securities classified as available-for-sale or trading on our consolidated balance sheets. The table below does not include our holdings of our own single-family PCs and certain Other Guarantee Transactions. For further information on our holdings of such securities, see "Table 16 — Composition of Segment Mortgage Portfolios and Credit Risk Portfolios."

Table 23 — Characteristics of Mortgage-Related Securities on Our Consolidated Balance Sheets

	December 31, 2011			December 31, 2010		
	Fixed Rate	Variable Rate[1]	Total	Fixed Rate	Variable Rate[1]	Total
			(in millions)			
Freddie Mac mortgage-related securities:[2]						
Single-family	$ 72,795	$ 9,753	$ 82,548	$ 79,955	$ 8,118	$ 88,073
Multifamily	1,216	1,792	3,008	339	1,756	2,095
Total Freddie Mac mortgage-related securities	74,011	11,545	85,556	80,294	9,874	90,168
Non-Freddie Mac mortgage-related securities:						
Agency securities:[3]						
Fannie Mae:						
Single-family	16,543	15,998	32,541	21,238	18,139	39,377
Multifamily	52	76	128	228	88	316
Ginnie Mae:						
Single-family	253	104	357	296	117	413
Multifamily	16	—	16	27	—	27
Total Non-Freddie Mac agency securities	16,864	16,178	33,042	21,789	18,344	40,133
Non-agency mortgage-related securities:						
Single-family:[4]						
Subprime	336	48,696	49,032	363	53,855	54,218
Option ARM	—	13,949	13,949	—	15,646	15,646
Alt-A and other	2,128	14,662	16,790	2,405	16,438	18,843
CMBS	19,735	34,375	54,110	21,401	37,327	58,728
Obligations of states and political subdivisions[5]	7,771	22	7,793	9,851	26	9,877
Manufactured housing	831	129	960	930	150	1,080
Total non-agency mortgage-related securities[6]	30,801	111,833	142,634	34,950	123,442	158,392
Total UPB of mortgage-related securities	$121,676	$139,556	261,232	$137,033	$151,660	288,693
Premiums, discounts, deferred fees, impairments of UPB and other basis adjustments			(12,363)			(11,839)
Net unrealized (losses) on mortgage-related securities, pre-tax			(6,678)			(11,854)
Total carrying value of mortgage-related securities			$242,191			$265,000

(1) Variable-rate mortgage-related securities include those with a contractual coupon rate that, prior to contractual maturity, is either scheduled to change or is subject to change based on changes in the composition of the underlying collateral.
(2) When we purchase REMICs and Other Structured Securities and certain Other Guarantee Transactions that we have issued, we account for these securities as investments in debt securities as we are investing in the debt securities of a non-consolidated entity. We do not consolidate our resecuritization trusts since we are not deemed to be the primary beneficiary of such trusts. We are subject to the credit risk associated with the mortgage loans underlying our Freddie Mac mortgage-related securities. Mortgage loans underlying our issued single-family PCs and certain Other Guarantee Transactions are recognized on our consolidated balance sheets as held-for-investment mortgage loans, at amortized cost. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Investments in Securities" for further information.
(3) Agency securities are generally not separately rated by nationally recognized statistical rating organizations, but have historically been viewed as having a level of credit quality at least equivalent to non-agency mortgage-related securities AAA-rated or equivalent.
(4) For information about how these securities are rated, see "Table 29 — Ratings of Non-Agency Mortgage-Related Securities Backed by Subprime, Option ARM, Alt-A and Other Loans, and CMBS."
(5) Consists of housing revenue bonds. Approximately 37% and 50% of these securities held at December 31, 2011 and 2010, respectively, were AAA-rated as of those dates, based on the lowest rating available.
(6) Credit ratings for most non-agency mortgage-related securities are designated by no fewer than two nationally recognized statistical rating organizations. Approximately 21% and 23% of total non-agency mortgage-related securities held at December 31, 2011 and 2010, respectively, were AAA-rated as of those dates, based on the UPB and the lowest rating available.

The table below provides the UPB and fair value of our investments in mortgage-related securities classified as available-for-sale or trading on our consolidated balance sheets.

Table 24 — Additional Characteristics of Mortgage-Related Securities on Our Consolidated Balance Sheets

	December 31, 2011		December 31, 2010	
	UPB	Fair Value	UPB	Fair Value
	(in millions)			
Agency pass-through securities[1]	$ 24,283	$ 26,193	$ 31,184	$ 33,459
Agency REMICs and Other Structured Securities:				
Interest-only securities[2]	—	2,863	—	3,800
Principal-only securities[3]	3,569	3,344	4,631	4,067
Inverse floating-rate securities[4]	4,839	6,826	3,512	4,478
Other Structured Securities	85,907	93,805	90,974	96,886
Total agency securities	118,598	133,031	130,301	142,690
Non-agency securities[5]	142,634	109,160	158,392	122,310
Total mortgage-related securities	$261,232	$242,191	$288,693	$265,000

(1) Represents an undivided beneficial interest in trusts that hold pools of mortgages.
(2) Represents securities where the holder receives only the interest cash flows.
(3) Represents securities where the holder receives only the principal cash flows.
(4) Represents securities where the holder receives interest cash flows that change inversely with the reference rate (*i.e.* higher cash flows when interest rates are low and lower cash flows when interest rates are high). Additionally, these securities receive a portion of principal cash flows associated with the underlying collateral.
(5) Includes fair values of $2 million and $5 million of interest-only securities at December 31, 2011 and December 31, 2010, respectively.

The total UPB of our investments in mortgage-related securities on our consolidated balance sheets decreased from $288.7 billion at December 31, 2010 to $261.2 billion at December 31, 2011, while the fair value of these investments decreased from $265.0 billion at December 31, 2010 to $242.2 billion at December 31, 2011. The reduction resulted from our purchase activity remaining less than liquidations, consistent with our efforts to reduce our mortgage-related investments portfolio, as described in "BUSINESS — Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business — Limits on Investment Activity and Our Mortgage-Related Investments Portfolio*." The UPB and fair value of inverse floating-rate securities increased as we created new inverse floating-rate securities from existing mortgage-related securities that were on our consolidated balance sheets. We create inverse floating-rate securities and other REMICs and sell tranches that are in demand by investors to reduce our asset balance, while conserving value for the taxpayer. These securities are managed in the overall context of our interest-rate risk management strategy and framework.

The table below summarizes our mortgage-related securities purchase activity for 2011, 2010 and 2009. The purchase activity includes single-family PCs and certain Other Guarantee Transactions issued by trusts that we consolidated. Effective January 1, 2010, purchases of single-family PCs and certain Other Guarantee Transactions issued by trusts that we consolidated are recorded as an extinguishment of debt securities of consolidated trusts held by third parties on our consolidated balance sheets.

Table 25 — Total Mortgage-Related Securities Purchase Activity[1]

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Non-Freddie Mac mortgage-related securities purchased for resecuritization:			
Ginnie Mae Certificates	$ 77	$ 69	$ 56
Non-agency mortgage-related securities purchased for Other Guarantee Transactions[2]	11,527	9,579	10,189
Total non-Freddie Mac mortgage-related securities purchased for resecuritization	11,604	9,648	10,245
Non-Freddie Mac mortgage-related securities purchased as investments in securities:			
Agency securities:			
Fannie Mae:			
Fixed-rate	5,835	—	43,298
Variable-rate	2,297	373	2,697
Total Fannie Mae	8,132	373	45,995
Ginnie Mae fixed-rate	—	—	27
Total agency securities	8,132	373	46,022
Non-agency mortgage-related securities:			
CMBS:			
Fixed-rate	14	—	—
Variable-rate	179	40	—
Total CMBS	193	40	—
Obligations of states and political subdivisions fixed-rated		—	180
Total non-agency mortgage-related securities	193	40	180
Total non-Freddie Mac mortgage-related securities purchased as investments in securities	8,325	413	46,202
Total non-Freddie Mac mortgage-related securities purchased	$ 19,929	$10,061	$ 56,447
Freddie Mac mortgage-related securities purchased:			
Single-family:			
Fixed-rate	$ 94,543	$40,462	$176,974
Variable-rate	5,057	923	5,414
Multifamily:			
Fixed-rate	355	271	—
Variable-rate	117	111	—
Total Freddie Mac mortgage-related securities purchased	$100,072	$41,767	$182,388

(1) Based on UPB. Excludes mortgage-related securities traded but not yet settled.
(2) Purchases in 2011 and 2010 include HFA bonds we acquired and resecuritized under the NIBP. See "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS" for further information on this component of the HFA Initiative.

During the year ended December 31, 2011, we increased our participation in dollar roll transactions, primarily to support the market and pricing of our PCs. When these transactions involve our consolidated PC trusts, the purchase and sale represents an extinguishment and issuance of debt securities, respectively, and impacts our net interest income and recognition of gain or loss on the extinguishment of debt on our consolidated statements of income and comprehensive income. These transactions can cause short-term fluctuations in the balance of our mortgage-related investments portfolio. The increase in our purchases of agency securities in 2011, reflected in "Table 25 — Total Mortgage-Related Securities Purchase Activity" is attributed primarily to these transactions. For more information, see "RISK FACTORS — Competitive and Market Risks — *Any decline in the price performance of or demand for our PCs could have an adverse effect on the volume and profitability of our new single-family guarantee business*."

Unrealized Losses on Available-For-Sale Mortgage-Related Securities

At December 31, 2011, our gross unrealized losses, pre-tax, on available-for-sale mortgage-related securities were $20.1 billion, compared to $23.1 billion at December 31, 2010. The decrease was primarily due to gains on our agency securities and CMBS as a result of the impact of declining rates and the recognition in earnings of other-than-temporary impairments on our non-agency mortgage-related securities, partially offset by losses on our single-family non-agency mortgage-related securities primarily due to widening OAS levels. We believe the unrealized losses related to these securities at December 31, 2011 were mainly attributable to poor underlying collateral performance, limited liquidity and large risk premiums in the market for residential non-agency mortgage-related securities. All available-for-sale securities in an unrealized loss position are evaluated to determine if the impairment is other-than-temporary. See "Total Equity (Deficit)" and "NOTE 7: INVESTMENTS IN SECURITIES" for additional information regarding unrealized losses on our available-for-sale securities.

Higher-Risk Components of Our Investments in Mortgage-Related Securities

As discussed below, we have exposure to subprime, option ARM, interest-only, and Alt-A and other loans as part of our investments in mortgage-related securities as follows:

- *Single-family non-agency mortgage-related securities:* We hold non-agency mortgage-related securities backed by subprime, option ARM, and Alt-A and other loans.
- *Single-family Freddie Mac mortgage-related securities:* We hold certain Other Guarantee Transactions as part of our investments in securities. There are subprime and option ARM loans underlying some of these Other Guarantee Transactions. For more information on single-family loans with certain higher-risk characteristics underlying our issued securities, see "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk*."

Non-Agency Mortgage-Related Securities Backed by Subprime, Option ARM, and Alt-A Loans

We categorize our investments in non-agency mortgage-related securities as subprime, option ARM, or Alt-A if the securities were identified as such based on information provided to us when we entered into these transactions. We have not identified option ARM, CMBS, obligations of states and political subdivisions, and manufactured housing securities as either subprime or Alt-A securities. Since the first quarter of 2008, we have not purchased any non-agency mortgage-related securities backed by subprime, option ARM, or Alt-A loans. The two tables below present information about our holdings of our available-for-sale non-agency mortgage-related securities backed by subprime, option ARM and Alt-A loans.

Table 26 — Non-Agency Mortgage-Related Securities Backed by Subprime First Lien, Option ARM, and Alt-A Loans and Certain Related Credit Statistics[1]

	As of				
	12/31/2011	9/30/2011	6/30/2011	3/31/2011	12/31/2010
	(dollars in millions)				
UPB:					
Subprime first lien[2]	$48,644	$49,794	$51,070	$52,403	$53,756
Option ARM	13,949	14,351	14,778	15,232	15,646
Alt-A[3]	14,260	14,643	15,059	15,487	15,917
Gross unrealized losses, pre-tax:[4]					
Subprime first lien[2]	$13,401	$14,132	$13,764	$12,481	$14,026
Option ARM	3,169	3,216	3,099	3,170	3,853
Alt-A[3]	2,612	2,468	2,171	1,941	2,096
Present value of expected future credit losses:[5]					
Subprime first lien[2]	$ 6,746	$ 5,414	$ 6,487	$ 6,612	$ 5,937
Option ARM	4,251	4,434	4,767	4,993	4,850
Alt-A[3]	2,235	2,204	2,310	2,401	2,469
Collateral delinquency rate:[6]					
Subprime first lien[2]	42%	42%	42%	44%	45%
Option ARM	44	44	44	44	44
Alt-A[3]	25	25	26	26	27
Average credit enhancement:[7]					
Subprime first lien[2]	21%	22%	23%	24%	25%
Option ARM	7	8	10	11	12
Alt-A[3]	7	7	8	8	9
Cumulative collateral loss:[8]					
Subprime first lien[2]	22%	21%	20%	19%	18%
Option ARM	17	16	15	14	13
Alt-A[3]	8	8	7	7	6

(1) See "*Ratings of Non-Agency Mortgage-Related Securities*" for additional information about these securities.
(2) Excludes non-agency mortgage-related securities backed exclusively by subprime second liens. Certain securities identified as subprime first lien may be backed in part by subprime second lien loans, as the underlying loans of these securities were permitted to include a small percentage of subprime second lien loans.
(3) Excludes non-agency mortgage-related securities backed by other loans, which are primarily comprised of securities backed by home equity lines of credit.
(4) Represents the aggregate of the amount by which amortized cost, after other-than-temporary impairments, exceeds fair value measured at the individual lot level.
(5) Represents our estimate of future contractual cash flows that we do not expect to collect, discounted at the effective interest rate implicit in the security at the date of acquisition. This discount rate is only utilized to analyze the cumulative credit deterioration for securities since acquisition and may be lower than the discount rate used to measure ongoing other-than-temporary impairment to be recognized in earnings for securities that have experienced a significant improvement in expected cash flows since the last recognition of other-than-temporary impairment recognized in earnings.
(6) Determined based on the number of loans that are two monthly payments or more past due that underlie the securities using information obtained from a third-party data provider.
(7) Reflects the ratio of the current principal amount of the securities issued by a trust that will absorb losses in the trust before any losses are allocated to securities that we own. Percentage generally calculated based on: (a) the total UPB of securities subordinate to the securities we own, divided by (b) the total UPB of all of the securities issued by the trust (excluding notional balances). Only includes credit enhancement provided by subordinated securities; excludes credit enhancement provided by bond insurance, overcollateralization and other forms of credit enhancement.
(8) Based on the actual losses incurred on the collateral underlying these securities. Actual losses incurred on the securities that we hold are significantly less than the losses on the underlying collateral as presented in this table, as non-agency mortgage-related securities backed by subprime, option ARM, and Alt-A loans were structured to include credit enhancements, particularly through subordination and other structural enhancements.

For purposes of our cumulative credit deterioration analysis, our estimate of the present value of expected future credit losses on our total portfolio of non-agency mortgage-related securities (which are set forth in "Table 23 — Characteristics of Mortgage-Related Securities on Our Consolidated Balance Sheets") decreased to $14.0 billion at December 31, 2011 from $14.3 billion at December 31, 2010. All of these amounts have been reflected in our net impairment of available-for-sale securities recognized in earnings in this period or prior periods. The decrease in the present value of expected future credit losses was primarily due to the impact of lower interest rates in 2011 resulting in a benefit from expected structural credit enhancements on the securities. The impact of lower interest rates was partially offset by the impact of declines in forecasted home prices.

Table 27 — Non-Agency Mortgage-Related Securities Backed by Subprime, Option ARM, Alt-A and Other Loans[1]

	Three Months Ended				
	12/31/2011	9/30/2011	6/30/2011	3/31/2011	12/31/2010
			(in millions)		
Principal repayments and cash shortfalls:[2]					
Subprime:					
Principal repayments	$1,159	$1,287	$1,341	$1,361	$1,512
Principal cash shortfalls	7	6	10	14	6
Option ARM:					
Principal repayments	$ 298	$ 318	$ 331	$ 315	$ 347
Principal cash shortfalls	103	109	123	100	111
Alt-A and other:					
Principal repayments	$ 385	$ 425	$ 464	$ 452	$ 537
Principal cash shortfalls	80	81	84	81	62

(1) See "*Ratings of Non-Agency Mortgage-Related Securities*" for additional information about these securities.
(2) In addition to the contractual interest payments, we receive monthly remittances of principal repayments from both the recoveries of liquidated loans and, to a lesser extent, voluntary repayments of the underlying collateral of these securities representing a partial return of our investment in these securities.

At the direction of our Conservator, we are working to enforce our rights as an investor with respect to the non-agency mortgage-related securities we hold, and are engaged in efforts to mitigate losses on our investments in these securities, in some cases in conjunction with other investors. The effectiveness of our efforts is highly uncertain and any potential recoveries may take significant time to realize.

In June 2011, Bank of America Corporation announced that it, BAC Home Loans Servicing, LP, Countrywide Financial Corporation and Countrywide Home Loans, Inc. entered into a settlement agreement with The Bank of New York Mellon, as trustee, to resolve certain claims with respect to a number of Countrywide first-lien and second-lien residential mortgage-related securitization trusts. Bank of America indicated that the settlement is subject to final court approval and certain other conditions. There can be no assurance that final court approval of the settlement will be obtained or that all conditions will be satisfied. Bank of America noted that, given the number of investors and the complexity of the settlement, it is not possible to predict the timing or ultimate outcome of the court approval process, which could take a substantial period of time. We have investments in certain of these Countrywide securitization trusts and would expect to benefit from this settlement, if final court approval is obtained. For more information, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

On September 2, 2011, FHFA announced that, as Conservator for Freddie Mac and Fannie Mae, it had filed lawsuits against 17 financial institutions and related defendants alleging: (a) violations of federal securities laws; and (b) in certain lawsuits, common law fraud in the sale of residential non-agency mortgage-related securities to Freddie Mac and Fannie Mae. FHFA, as Conservator, filed a similar lawsuit against UBS Americas, Inc. and related defendants on July 27, 2011. FHFA seeks to recover losses and damages sustained by Freddie Mac and Fannie Mae as a result of their investments in certain residential non-agency mortgage-related securities issued by these financial institutions.

Since the beginning of 2007, we have incurred actual principal cash shortfalls of $1.5 billion on impaired non-agency mortgage-related securities, of which $193 million and $823 million related to the three months and year ended December 31, 2011, respectively. Many of the trusts that issued non-agency mortgage-related securities we hold were structured so that realized collateral losses in excess of structural credit enhancements are not passed on to investors until the investment matures. We currently estimate that the future expected principal and interest shortfalls on non-agency mortgage-related securities we hold will be significantly less than the fair value declines experienced on these securities.

The investments in non-agency mortgage-related securities we hold backed by subprime, option ARM, and Alt-A loans were structured to include credit enhancements, particularly through subordination and other structural enhancements. Bond insurance is an additional credit enhancement covering some of the non-agency mortgage-related securities. These credit enhancements are the primary reason we expect our actual losses, through principal or interest shortfalls, to be less than the underlying collateral losses in the aggregate. It is difficult to estimate the point at which structural credit enhancements will be exhausted and we will incur actual losses. During the year ended December 31, 2011, we continued to experience the erosion of structural credit enhancements on many securities backed by subprime, option ARM, and Alt-A loans due to poor performance of the underlying collateral. For more information, see "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Bond Insurers*."

Other-Than-Temporary Impairments on Available-For-Sale Mortgage-Related Securities

The table below provides information about the mortgage-related securities for which we recognized other-than-temporary impairments in earnings.

Table 28 — Net Impairment of Available-For-Sale Mortgage-Related Securities Recognized in Earnings

	Net Impairment of Available-For-Sale Securities Recognized in Earnings				
	Three Months Ended				
	12/31/2011	9/30/2011	6/30/2011	3/31/2011	12/31/2010
	(in millions)				
Subprime:[1]					
2006 & 2007	$472	$ 29	$ 67	$ 717	$1,192
Other years	8	2	3	17	15
Total subprime	480	31	70	734	1,207
Option ARM:					
2006 & 2007	40	15	43	232	585
Other years	19	4	22	49	83
Total option ARM	59	19	65	281	668
Alt-A:					
2006 & 2007	22	29	16	15	204
Other years	21	10	15	23	161
Total Alt-A	43	39	31	38	365
Other loans	3	41	1	2	7
Total subprime, option ARM, Alt-A and other loans	585	130	167	1,055	2,247
CMBS	8	27	183	135	19
Manufactured housing	2	4	2	3	4
Total available-for-sale mortgage-related securities	$595	$161	$352	$1,193	$2,270

(1) Includes all first and second liens.

We recorded net impairment of available-for-sale mortgage-related securities recognized in earnings of $595 million and $2.3 billion during the three months and year ended December 31, 2011, respectively, compared to $2.3 billion and $4.3 billion during the three months and year ended December 31, 2010, respectively. We recorded these impairments because our estimate of the present value of expected future credit losses on certain individual securities increased during the periods. These impairments include $585 million and $1.9 billion of impairments related to securities backed by subprime, option ARM, and Alt-A and other loans during the three months and year ended December 31, 2011, respectively, compared to $2.2 billion and $4.2 billion during the three months and year ended December 31, 2010, respectively. In addition, during the year ended December 31, 2011, these impairments include recognition of the fair value declines related to certain investments in CMBS of $181 million as an impairment charge in earnings, as we have the intent to sell these securities. For more information, see "NOTE 7: INVESTMENTS IN SECURITIES — Other-Than-Temporary Impairments on Available-for-Sale Securities."

While it is reasonably possible that collateral losses on our available-for-sale mortgage-related securities where we have not recorded an impairment charge in earnings could exceed our credit enhancement levels, we do not believe that those conditions were likely at December 31, 2011. Based on our conclusion that we do not intend to sell our remaining available-for-sale mortgage-related securities in an unrealized loss position and it is not more likely than not that we will be required to sell these securities before a sufficient time to recover all unrealized losses and our consideration of other available information, we have concluded that the reduction in fair value of these securities was temporary at December 31, 2011 and have recorded these fair value losses in AOCI.

The credit performance of loans underlying our holdings of non-agency mortgage-related securities has declined since 2007. This decline has been particularly severe for subprime, option ARM, and Alt-A and other loans. Economic factors negatively impacting the performance of our investments in non-agency mortgage-related securities include high unemployment, a large inventory of seriously delinquent mortgage loans and unsold homes, tight credit conditions, and weak consumer confidence during recent years. In addition, subprime, option ARM, and Alt-A and other loans backing the securities we hold have significantly greater concentrations in the states that are undergoing the greatest economic stress, such as California and Florida. Loans in these states undergoing economic stress are more likely to become seriously delinquent and the credit losses associated with such loans are likely to be higher than in other states.

We rely on bond insurance, including secondary coverage, to provide credit protection on some of our investments in non-agency mortgage-related securities. We have determined that there is substantial uncertainty surrounding certain bond insurers' ability to pay our future claims on expected credit losses related to our non-agency mortgage-related security investments. This uncertainty contributed to the impairments recognized in earnings during the years ended December 31,

2011 and 2010. See “RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Bond Insurers*” and “NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Bond Insurers” for additional information.

Our assessments concerning other-than-temporary impairment require significant judgment and the use of models, and are subject to potentially significant change. In addition, changes in the performance of the individual securities and in mortgage market conditions may also affect our impairment assessments. Depending on the structure of the individual mortgage-related security and our estimate of collateral losses relative to the amount of credit support available for the tranches we own, a change in collateral loss estimates can have a disproportionate impact on the loss estimate for the security. Additionally, servicer performance, loan modification programs and backlogs, bankruptcy reform and other forms of government intervention in the housing market can significantly affect the performance of these securities, including the timing of loss recognition of the underlying loans and thus the timing of losses we recognize on our securities. Impacts related to changes in interest rates may also affect our losses due to the structural credit enhancements on our investments in non-agency mortgage-related securities. Foreclosure processing suspensions can also affect our losses. For example, while defaulted loans remain in the trusts prior to completion of the foreclosure process, the subordinate classes of securities issued by the securitization trusts may continue to receive interest payments, rather than absorbing default losses. This may reduce the amount of funds available for the tranches we own. Given the extent of the housing and economic downturn, it is difficult to estimate the future performance of mortgage loans and mortgage-related securities with high assurance, and actual results could differ materially from our expectations. Furthermore, various market participants could arrive at materially different conclusions regarding estimates of future cash shortfalls.

For more information on risks associated with the use of models, see “RISK FACTORS — Operational Risks — *We face risks and uncertainties associated with the internal models that we use for financial accounting and reporting purposes, to make business decisions, and to manage risks. Market conditions have raised these risks and uncertainties*.” For more information on how delays in the foreclosure process, including delays related to concerns about deficiencies in foreclosure documentation practices, could adversely affect the values of, and the losses on, the non-agency mortgage-related securities we hold, see “RISK FACTORS — Operational Risks — *We have incurred, and will continue to incur, expenses and we may otherwise be adversely affected by delays and deficiencies in the foreclosure process.*”

For information regarding our efforts to mitigate losses on our investments in non-agency mortgage-related securities, see “RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk*.”

Ratings of Non-Agency Mortgage-Related Securities

The table below shows the ratings of non-agency mortgage-related securities backed by subprime, option ARM, Alt-A and other loans, and CMBS held at December 31, 2011 based on their ratings as of December 31, 2011, as well as those held at December 31, 2010 based on their ratings as of December 31, 2010 using the lowest rating available for each security.

Table 29 — Ratings of Non-Agency Mortgage-Related Securities Backed by Subprime, Option ARM, Alt-A and Other Loans, and CMBS

Credit Ratings as of December 31, 2011	UPB	Percentage of UPB	Amortized Cost	Gross Unrealized Losses	Bond Insurance Coverage[1]
			(dollars in millions)		
Subprime loans:					
AAA-rated	$ 1,000	2%	$ 1,000	$ (115)	$ 23
Other investment grade	2,643	5	2,643	(399)	383
Below investment grade[2]	45,389	93	37,704	(12,894)	1,641
Total	$ 49,032	100%	$ 41,347	$(13,408)	$2,047
Option ARM loans:					
AAA-rated	$ —	—%	$ —	$ —	$ —
Other investment grade	76	1	76	(8)	76
Below investment grade[2]	13,873	99	8,943	(3,161)	39
Total	$ 13,949	100%	$ 9,019	$ (3,169)	$ 115
Alt-A and other loans:					
AAA-rated	$ 350	2%	$ 348	$ (20)	$ 6
Other investment grade	2,237	13	2,260	(371)	310
Below investment grade[2]	14,203	85	11,053	(2,421)	2,139
Total	$ 16,790	100%	$ 13,661	$ (2,812)	$2,455
CMBS:					
AAA-rated	$ 25,499	47%	$ 25,540	$ (22)	$ 42
Other investment grade	25,421	47	25,394	(346)	1,585
Below investment grade[2]	3,190	6	2,851	(180)	1,697
Total	$ 54,110	100%	$ 53,785	$ (548)	$3,324
Total subprime, option ARM, Alt-A and other loans, and CMBS:					
AAA-rated	$ 26,849	20%	$ 26,888	$ (157)	$ 71
Other investment grade	30,377	23	30,373	(1,124)	2,354
Below investment grade[2]	76,655	57	60,551	(18,656)	5,516
Total	$133,881	100%	$117,812	$(19,937)	$7,941
Total investments in mortgage-related securities	$261,232				
Percentage of subprime, option ARM, Alt-A and other loans, and CMBS of total investments in mortgage-related securities	51%				
Credit Ratings as of December 31, 2010					
Subprime loans:					
AAA-rated	$ 2,085	4%	$ 2,085	$ (199)	$ 31
Other investment grade	3,407	6	3,408	(436)	449
Below investment grade[2]	48,726	90	42,423	(13,421)	1,789
Total	$ 54,218	100%	$ 47,916	$(14,056)	$2,269
Option ARM loans:					
AAA-rated	$ —	—%	$ —	$ —	$ —
Other investment grade	139	1	140	(18)	129
Below investment grade[2]	15,507	99	10,586	(3,835)	50
Total	$ 15,646	100%	$ 10,726	$ (3,853)	$ 179
Alt-A and other loans:					
AAA-rated	$ 1,293	7%	$ 1,301	$ (87)	$ 7
Other investment grade	2,761	15	2,765	(362)	368
Below investment grade[2]	14,789	78	11,498	(2,002)	2,443
Total	$ 18,843	100%	$ 15,564	$ (2,451)	$2,818
CMBS:					
AAA-rated	$ 28,007	48%	$ 28,071	$ (52)	$ 42
Other investment grade	26,777	45	26,740	(676)	1,655
Below investment grade[2]	3,944	7	3,653	(1,191)	1,704
Total	$ 58,728	100%	$ 58,464	$ (1,919)	$3,401
Total subprime, option ARM, Alt-A and other loans, and CMBS:					
AAA-rated	$ 31,385	21%	$ 31,457	$ (338)	$ 80
Other investment grade	33,084	23	33,053	(1,492)	2,601
Below investment grade[2]	82,966	56	68,160	(20,449)	5,986
Total	$147,435	100%	$132,670	$(22,279)	$8,667
Total investments in mortgage-related securities	$288,693				
Percentage of subprime, option ARM, Alt-A and other loans, and CMBS of total investments in mortgage-related securities	51%				

(1) Represents the amount of UPB covered by bond insurance. This amount does not represent the maximum amount of losses we could recover, as the bond insurance also covers interest.
(2) Includes securities with S&P credit ratings below BBB– and certain securities that are no longer rated.

Mortgage Loans

The UPB of mortgage loans on our consolidated balance sheet declined to $1.8 trillion as of December 31, 2011 from $1.9 trillion as of December 31, 2010. This decline reflects that the amount of single-family loan liquidations has exceeded new loan purchase and guarantee activity in 2011, which we believe is due, in part, to declines in the amount of single-family mortgage debt outstanding in the market and increased competition from Ginnie Mae and FHA/VA. Our single-family loan purchase and guarantee activity in 2011 was at the lowest level we have experienced in the last several years. See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for further detail about the mortgage loans on our consolidated balance sheets.

The UPB of unsecuritized single-family mortgage loans increased by $22.8 billion to $171.7 billion at December 31, 2011 from $148.9 billion at December 31, 2010, primarily due to our continued removal of seriously delinquent and modified loans from the mortgage pools underlying our PCs. Based on the amount of the recorded investment of these loans, approximately $72.4 billion, or 4.2%, of the single-family mortgage loans on our consolidated balance sheet as of December 31, 2011 were seriously delinquent, as compared to $84.2 billion, or 4.7%, as of December 31, 2010. This decline was primarily due to modifications, foreclosure transfers, and short sale activity. The majority of these seriously delinquent loans are unsecuritized, and were removed by us from our PC trusts. As guarantor, we have the right to remove mortgages that back our PCs from the underlying loan pools under certain circumstances. See "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for more information on our removal of single-family loans from PC trusts. We expect that our holdings of unsecuritized single-family loans will continue to increase in 2012 due to the recent revisions to HARP, which will result in our purchase of mortgages with LTV ratios greater than 125%, as we have not yet implemented a securitization process for such loans. See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*" for additional information on HARP.

The UPB of unsecuritized multifamily mortgage loans was $82.3 billion at December 31, 2011 and $85.9 billion at December 31, 2010. Our multifamily loan activity in 2011 primarily consisted of purchases of loans intended for securitization and subsequently sold through Other Guarantee Transactions. We expect to continue to purchase and subsequently securitize multifamily loans, which supports liquidity for the multifamily market and affordability for multifamily rental housing, as our primary multifamily business strategy.

We maintain an allowance for loan losses on mortgage loans that we classify as held-for-investment on our consolidated balance sheets. Our reserve for guarantee losses is associated with Freddie Mac mortgage-related securities backed by multifamily loans, certain single-family Other Guarantee Transactions, and other guarantee commitments, for which we have incremental credit risk. Collectively, we refer to our allowance for loan losses and our reserve for guarantee losses as our loan loss reserves. Our loan loss reserves were $39.5 billion and $39.9 billion at December 31, 2011 and 2010, respectively, including $38.9 billion and $39.1 billion, respectively, related to single-family loans. At December 31, 2011 and 2010, our loan loss reserves, as a percentage of our total mortgage portfolio, excluding non-Freddie Mac securities, was 2.1% and 2.0%, respectively, and as a percentage of the UPB associated with our non-performing loans was 32.0% and 33.7%, respectively. See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Loan Loss Reserves"* for more information about our loan loss reserves.

The table below summarizes our purchase and guarantee activity in mortgage loans. This activity consists of: (a) mortgage loans underlying consolidated single-family PCs issued in the period (regardless of whether such securities are held by us or third parties); (b) single-family and multifamily mortgage loans purchased, but not securitized, in the period; and (c) mortgage loans underlying our mortgage-related financial guarantees issued in the period, which are not consolidated on our balance sheets.

Table 30 — Mortgage Loan Purchase and Other Guarantee Commitment Activity[1]

	Year Ended December 31,					
	2011		2010		2009	
	UPB Amount	% of Total	UPB Amount	% of Total	UPB Amount	% of Total
	(dollars in millions)					
Mortgage loan purchases and guarantee issuances:						
Single-family:						
30-year or more amortizing fixed-rate	$194,746	57%	$258,621	64%	$392,291	80%
20-year amortizing fixed-rate	21,378	6	23,852	6	11,895	2
15-year amortizing fixed-rate	78,543	23	83,025	21	64,590	13
Adjustable-rate[2]	25,685	8	16,534	4	2,809	1
Interest-only[3]	—	—	909	<1	845	<1
HFA bonds	—	—	2,469	1	802	<1
FHA/VA and other governmental	441	<1	968	<1	2,118	1
Total single-family[4]	320,793	94	386,378	96	475,350	97
Multifamily[5]	20,325	6	15,372	4	16,571	3
Total mortgage loan purchases and other guarantee commitment activity[5]	$341,118	100%	$401,750	100%	$491,921	100%
Percentage of mortgage purchases and other guarantee commitment activity with credit enhancements[6]	8%		9%		8%	

(1) Based on UPB. Excludes mortgage loans traded but not yet settled. Excludes the removal of seriously delinquent loans and balloon/reset mortgages out of PC trusts. Includes other guarantee commitments associated with mortgage loans. See endnote (5) for further information.
(2) Includes amortizing ARMs with 1-, 3-, 5-, 7-, and 10-year initial fixed-rate periods. We did not purchase any option ARM loans during the years ended December 31, 2011, 2010, or 2009.
(3) Represents loans where the borrower pays interest only for a period of time before the borrower begins making principal payments. Includes both fixed-rate and variable-rate interest-only loans.
(4) Includes $27.7 billion, $23.9 billion, and $26.3 billion of mortgage loans in excess of $417,000, which we refer to as conforming jumbo mortgages, for the years ended December 31, 2011, 2010, and 2009 respectively.
(5) Includes issuances of other guarantee commitments on single-family loans of $4.4 billion, $5.7 billion, and $2.4 billion and issuances of other guarantee commitments on multifamily loans of $1.0 billion, $1.7 billion, and $0.5 billion during the years ended December 31, 2011, 2010, and 2009, respectively, which include our unsecuritized guarantees of HFA bonds under the TCLFP in 2010 and 2009.
(6) See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES — Credit Protection and Other Forms of Credit Enhancement" for further details on credit enhancement of mortgage loans in our multifamily mortgage and single-family credit guarantee portfolios.

See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk*" and "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Table 16.2 — Certain Higher-Risk Categories in the Single-Family Credit Guarantee Portfolio" for information about mortgage loans in our single-family credit guarantee portfolio that we believe have higher-risk characteristics.

Derivative Assets and Liabilities, Net

The composition of our derivative portfolio changes from period to period as a result of derivative purchases, terminations, or assignments prior to contractual maturity, and expiration of the derivatives at their contractual maturity. We classify net derivative interest receivable or payable, trade/settle receivable or payable, and cash collateral held or posted on our consolidated balance sheets in derivative assets, net and derivative liabilities, net. See "NOTE 11: DERIVATIVES" for additional information regarding our derivatives.

The table below shows the fair value for each derivative type, the weighted average fixed rate of our pay-fixed and receive-fixed swaps, and the maturity profile of our derivative positions reconciled to the amounts presented on our consolidated balance sheets as of December 31, 2011. A positive fair value in the table below for each derivative type is the estimated amount, prior to netting by counterparty, that we would be entitled to receive if the derivatives of that type were terminated. A negative fair value for a derivative type is the estimated amount, prior to netting by counterparty, that we would owe if the derivatives of that type were terminated.

Table 31 — Derivative Fair Values and Maturities

	December 31, 2011					
			Fair Value(1)			
	Notional or Contractual Amount(2)	Total Fair Value(3)	Less than 1 Year	1 to 3 Years	Greater than 3 and up to 5 Years	In Excess of 5 Years
			(dollars in millions)			
Interest-rate swaps:						
Receive-fixed:						
Swaps	$195,716	$ 10,651	$ 22	$ 390	$ 2,054	$ 8,185
Weighted average fixed rate(4)			1.17%	1.03%	2.26%	3.35%
Forward-starting swaps(5)	16,092	2,239	—	—	—	2,239
Weighted average fixed rate(4)			—%	—%	—%	3.96%
Total receive-fixed	211,808	12,890	22	390	2,054	10,424
Basis (floating to floating)	2,750	(2)	—	(6)	4	—
Pay-fixed:						
Swaps	276,564	(31,565)	(62)	(1,319)	(6,108)	(24,076)
Weighted average fixed rate(4)			1.59%	2.20%	3.13%	3.84%
Forward-starting swaps(5)	12,771	(2,923)	—	—	—	(2,923)
Weighted average fixed rate(4)			—%	—%	—%	5.16%
Total pay-fixed	289,335	(34,488)	(62)	(1,319)	(6,108)	(26,999)
Total interest-rate swaps	503,893	(21,600)	(40)	(935)	(4,050)	(16,575)
Option-based:						
Call swaptions						
Purchased	76,275	12,975	5,348	3,895	816	2,916
Written	27,525	(2,932)	(118)	(2,556)	(258)	—
Put swaptions						
Purchased	70,375	638	24	49	166	399
Written	500	(2)	(2)	—	—	—
Other option-based derivatives(6)	38,549	2,254	—	—	—	2,254
Total option-based	213,224	12,933	5,252	1,388	724	5,569
Futures	41,281	5	5	—	—	—
Foreign-currency swaps	1,722	97	34	63	—	—
Commitments(7)	14,318	(56)	(56)	—	—	—
Swap guarantee derivatives	3,621	(37)	—	(1)	(1)	(35)
Subtotal	778,059	(8,658)	$5,195	$ 515	$(3,327)	$(11,041)
Credit derivatives	10,190	(4)				
Subtotal	788,249	(8,662)				
Derivative interest receivable (payable), net		(1,069)				
Trade/settle receivable (payable), net		1				
Derivative cash collateral (held) posted, net		9,413				
Total	$788,249	$ (317)				

(1) Fair value is categorized based on the period from December 31, 2011 until the contractual maturity of the derivative.
(2) Notional or contractual amounts are used to calculate the periodic settlement amounts to be received or paid and generally do not represent actual amounts to be exchanged. Notional or contractual amounts are not recorded as assets or liabilities on our consolidated balance sheets.
(3) The value of derivatives on our consolidated balance sheets is reported as derivative assets, net and derivative liabilities, net, and includes derivative interest receivable or (payable), net, trade/settle receivable or (payable), net and derivative cash collateral (held) or posted, net.
(4) Represents the notional weighted average rate for the fixed leg of the swaps.
(5) Represents interest-rate swap agreements that are scheduled to begin on future dates ranging from less than one year to thirteen years as of December 31, 2011.
(6) Primarily includes purchased interest-rate caps and floors.
(7) Commitments include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts.

At December 31, 2011, the net fair value of our total derivative portfolio was $(317) million, as compared to $(1.1) billion at December 31, 2010. During the year ended December 31, 2011, the fair value of our total derivative portfolio increased primarily due to additional cash collateral we posted to our counterparties during this period, partially offset by the impact of declines in interest rates. See “NOTE 11: DERIVATIVES” for the notional or contractual amounts and related fair values of our total derivative portfolio by product type at December 31, 2011 and 2010, as well as derivative collateral posted and held.

The table below summarizes the changes in derivative fair values.

Table 32 — Changes in Derivative Fair Values

	2011[1]	2010[2]
	(in millions)	
Beginning balance, at January 1 — Net asset (liability)	$(6,560)	$(2,267)
Net change in:		
Commitments[3]	(36)	(31)
Credit derivatives	(11)	(8)
Swap guarantee derivatives	(1)	(2)
Other derivatives:[4]		
Changes in fair value	(3,383)	(3,508)
Fair value of new contracts entered into during the period[5]	594	444
Contracts realized or otherwise settled during the period	735	(1,188)
Ending balance, at December 31 — Net asset (liability)	$(8,662)	$(6,560)

(1) Refer to "Table 31 — Derivative Fair Values and Maturities" for a reconciliation of net fair value to the amounts presented on our consolidated balance sheets as of December 31, 2011.
(2) At December 31, 2010, fair value in this table excludes derivative interest receivable or (payable), net of $(820) million, trade/settle receivable or (payable), net of $1 million, and derivative cash collateral posted, net of $6.3 billion.
(3) Commitments include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts.
(4) Includes fair value changes for interest-rate swaps, option-based derivatives, futures, and foreign-currency swaps.
(5) Consists primarily of cash premiums paid or received on options.

See "CONSOLIDATED RESULTS OF OPERATIONS — Non-Interest Income (Loss) — *Derivative Gains (Losses)*" for a description of gains (losses) on our derivative positions.

REO, Net

We acquire properties, which are recorded as REO assets on our consolidated balance sheets, typically as a result of borrower default on mortgage loans that we own, or for which we have issued our financial guarantee. The balance of our REO, net, declined to $5.7 billion at December 31, 2011 from $7.1 billion at December 31, 2010. We believe the volume of our single-family REO acquisitions in 2011 was less than it otherwise would have been due to delays in the foreclosure process, particularly in states that require a judicial foreclosure process. While we expect the delays to ease in 2012, we also expect these delays will remain above historical levels. We also expect our REO inventory to remain at elevated levels, as we have a large inventory of seriously delinquent loans in our single-family credit guarantee portfolio, many of which will likely complete the foreclosure process and transition to REO during 2012 as our servicers work through their foreclosure-related issues. To the extent a large volume of loans completes the foreclosure process in a short period of time, the resulting REO inventory could have a negative impact on the housing market. See "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Non-Performing Assets*" for additional information about our REO activity.

Deferred Tax Assets, Net

We recognize deferred tax assets and liabilities based upon the expected future tax consequences of existing temporary differences between the financial reporting and the tax reporting basis of assets and liabilities using enacted statutory tax rates. We record valuation allowances to reduce our net deferred tax assets when it is more likely than not that a tax benefit will not be realized. The realization of our net deferred tax assets is dependent upon the generation of sufficient taxable income or, with respect to the portion of our deferred tax assets related to our available-for-sale securities, our intent and ability to hold such securities to the recovery of any temporary unrealized losses. On a quarterly basis, we consider all evidence currently available, both positive and negative, in determining whether, based on the weight of that evidence, the net deferred tax assets will be realized or whether a valuation allowance is necessary.

After evaluating all available evidence, including our losses, the events and developments related to our conservatorship, volatility in the economy, and related difficulty in forecasting future profit levels, we continue to record a valuation allowance on a portion of our net deferred tax assets as of December 31, 2011 and 2010. Our valuation allowance increased by $2.3 billion during 2011 to $35.7 billion, primarily attributable to an increase in temporary differences during the period. As of December 31, 2011, after consideration of the valuation allowance, we had a net deferred tax asset of $3.5 billion, primarily representing the tax effect of unrealized losses on our available-for-sale securities. We believe the deferred tax asset related to these unrealized losses is more likely than not to be realized because of our assertion that we have the intent and ability to hold our available-for-sale securities until any temporary unrealized losses are recovered.

IRS Examinations

Prior to 2011, the IRS completed its examinations of tax years 1998 to 2007. We received Statutory Notices from the IRS assessing $3.0 billion of additional income taxes and penalties for the 1998 to 2007 tax years, principally related to questions of timing and potential penalties regarding our tax accounting method for certain hedging transactions. We filed a petition with the U.S. Tax Court on October 22, 2010 in response to the 1998 to 2005 Statutory Notices. We paid the tax assessed in the Statutory Notice received for the years 2006 to 2007 of $36 million and will seek a refund through the administrative process, which could include filing suit in Federal District Court. We believe appropriate reserves have been provided for settlement on reasonable terms. For additional information, see "NOTE 13: INCOME TAXES."

Other Assets

Other assets consist of the guarantee asset related to non-consolidated trusts and other guarantee commitments, accounts and other receivables, and other miscellaneous assets. Other assets decreased to $10.5 billion as of December 31, 2011 from $10.9 billion as of December 31, 2010 primarily because of a decrease in other receivables related to mortgage insurers and credit enhancements due to a decline in default volume. See "NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS" for additional information.

Total Debt, Net

PCs and Other Guarantee Transactions issued by our consolidated trusts and held by third parties are recognized as debt securities of consolidated trusts held by third parties on our consolidated balance sheets. Debt securities of consolidated trusts held by third parties represents our liability to third parties that hold beneficial interests in our consolidated trusts. The debt securities of our consolidated trusts may be prepaid without penalty at any time.

Other debt consists of unsecured short-term and long-term debt securities we issue to third parties to fund our business activities. It is classified as either short-term or long-term based on the contractual maturity of the debt instrument. See "LIQUIDITY AND CAPITAL RESOURCES" for a discussion of our management activities related to other debt.

The table below reconciles the par value of other debt and the UPB of debt securities of consolidated trusts held by third parties to the amounts shown on our consolidated balance sheets.

Table 33 — Reconciliation of the Par Value and UPB to Total Debt, Net

	December 31,	
	2011	2010
	(in millions)	
Total debt:		
Other debt:		
Par value	$ 674,314	$ 728,217
Unamortized balance of discounts and premiums[1]	(13,891)	(14,529)
Hedging-related and other basis adjustments[2]	123	252
Subtotal	660,546	713,940
Debt securities of consolidated trusts held by third parties:		
UPB	1,452,476	1,517,001
Unamortized balance of discounts and premiums	18,961	11,647
Subtotal	1,471,437	1,528,648
Total debt, net	$2,131,983	$2,242,588

(1) Primarily represents unamortized discounts on zero-coupon debt.
(2) Primarily represents deferrals related to debt instruments that were in hedge accounting relationships, and changes in the fair value attributable to instrument-specific interest-rate and credit risk related to foreign-currency denominated debt.

The table below summarizes our other short-term debt.

Table 34 — Other Short-Term Debt

	2011				
	December 31,		Average Outstanding During the Year		Maximum Balance, Net Outstanding at Any Month End
	Balance, Net(1)	Weighted Average Effective Rate(2)	Balance, Net(3)	Weighted Average Effective Rate(4)	
	(dollars in millions)				
Reference Bills® securities and discount notes	$161,149	0.11%	$181,209	0.17%	$196,126
Medium-term notes	250	0.24	826	0.23	2,564
Federal funds purchased and securities sold under agreements to repurchase	—	—	13	0.16	—
Other short-term debt	$161,399	0.11			

	2010				
	December 31,		Average Outstanding During the Year		Maximum Balance, Net Outstanding at Any Month End
	Balance, Net(1)	Weighted Average Effective Rate(2)	Balance, Net(3)	Weighted Average Effective Rate(4)	
	(dollars in millions)				
Reference Bills® securities and discount notes	$194,742	0.24%	$213,465	0.25%	$240,037
Medium-term notes	2,364	0.31	1,955	0.34	3,661
Federal funds purchased and securities sold under agreements to repurchase	—	—	72	0.30	—
Other short-term debt	$197,106	0.25			

	2009				
	December 31,		Average Outstanding During the Year		Maximum Balance, Net Outstanding at Any Month End
	Balance, Net(1)	Weighted Average Effective Rate(2)	Balance, Net(3)	Weighted Average Effective Rate(4)	
	(dollars in millions)				
Reference Bills® securities and discount notes	$227,611	0.26%	$261,020	0.70%	$340,307
Medium-term notes	10,560	0.69	19,372	1.10	34,737
Federal funds purchased and securities sold under agreements to repurchase	—	—	33	0.29	—
Other short-term debt	$238,171	0.28			

(1) Represents par value, net of associated discounts and premiums, of which $0.2 billion, $0.9 billion, and $0.5 billion of short-term debt represents the fair value of debt securities with the fair value option elected at December 31, 2011, 2010, and 2009, respectively.
(2) Represents the approximate weighted average effective rate for each instrument outstanding at the end of the period, which includes the amortization of discounts or premiums and issuance costs.
(3) Represents par value, net of associated discounts, premiums, and issuance costs. Issuance costs are reported in the other assets caption on our consolidated balance sheets.
(4) Represents the approximate weighted average effective rate during the period, which includes the amortization of discounts or premiums and issuance costs.

The table below presents the UPB for Freddie Mac issued mortgage-related securities by the underlying mortgage product type.

Table 35 — Freddie Mac Mortgage-Related Securities[1]

	December 31, 2011			December 31, 2010			December 31, 2009
	Issued by Consolidated Trusts	Issued by Non-Consolidated Trusts	Total	Issued by Consolidated Trusts	Issued by Non-Consolidated Trusts	Total	Total
				(in millions)			
Single-family:							
30-year or more amortizing fixed-rate	$1,123,105	$ —	$1,123,105	$1,213,448	$ —	$1,213,448	$1,318,053
20-year amortizing fixed-rate	68,584	—	68,584	65,210	—	65,210	57,705
15-year amortizing fixed-rate	252,563	—	252,563	248,702	—	248,702	241,721
Adjustable-rate[2]	69,402	—	69,402	61,269	—	61,269	68,428
Interest-only[3]	59,007	—	59,007	79,835	—	79,835	131,529
FHA/VA and other governmental	3,267	—	3,267	3,369	—	3,369	1,343
Total single-family	1,575,928	—	1,575,928	1,671,833	—	1,671,833	1,818,779
Multifamily	—	4,496	4,496	—	4,603	4,603	5,085
Total single-family and multifamily	1,575,928	4,496	1,580,424	1,671,833	4,603	1,676,436	1,823,864
Other Guarantee Transactions:							
HFA bonds:[4]							
Single-family	—	6,118	6,118	—	6,168	6,168	3,113
Multifamily	—	966	966	—	1,173	1,173	391
Total HFA bonds	—	7,084	7,084	—	7,341	7,341	3,504
Other:							
Single-family[5]	12,877	3,838	16,715	15,806	4,243	20,049	23,841
Multifamily	—	19,682	19,682	—	8,235	8,235	2,655
Total Other Guarantee Transactions	12,877	23,520	36,397	15,806	12,478	28,284	26,496
REMICs and Other Structured Securities backed by Ginnie Mae Certificates[6]	—	779	779	—	857	857	949
Total Freddie Mac Mortgage-Related Securities	$1,588,805	$35,879	$1,624,684	$1,687,639	$25,279	$1,712,918	$1,854,813
Less: Repurchased Freddie Mac Mortgage-Related Securities[7]	(136,329)			(170,638)			
Total UPB of debt securities of consolidated trusts held by third parties	$1,452,476			$1,517,001			

(1) 2011 and 2010 amounts are based on UPB of the securities and excludes mortgage-related debt traded, but not yet settled. 2009 amounts are based on UPB of the mortgage loans underlying our mortgage-related financial guarantees.
(2) Includes $1.2 billion, $1.3 billion, and $1.4 billion in UPB of option ARM mortgage loans as of December 31, 2011, 2010, and 2009, respectively. See endnote (5) for additional information on option ARM loans that back our Other Guarantee Transactions.
(3) Represents loans where the borrower pays interest only for a period of time before the borrower begins making principal payments. Includes both fixed- and variable-rate interest-only loans.
(4) Consists of bonds we acquired and resecuritized under the NIBP.
(5) Backed by non-agency mortgage-related securities that include prime, FHA/VA, and subprime mortgage loans and also include $7.3 billion, $8.4 billion, and $9.6 billion in UPB of securities backed by option ARM mortgage loans at December 31, 2011, 2010, and 2009, respectively.
(6) Backed by FHA/VA loans.
(7) Represents the UPB of repurchased Freddie Mac mortgage-related securities that are consolidated on our balance sheets and includes certain remittance amounts associated with our security trust administration that are payable to third-party mortgage-related security holders. Our holdings of non-consolidated Freddie Mac mortgage-related securities are presented in "Table 23 — Characteristics of Mortgage-Related Securities on Our Consolidated Balance Sheets."

Excluding Other Guarantee Transactions, the percentage of amortizing fixed-rate single-family loans underlying our consolidated trust debt securities, based on UPB, was approximately 92% at both December 31, 2011 and 2010. The majority of newly issued Freddie Mac single-family mortgage-related securities during 2011 were backed by refinance mortgages. During 2011, the UPB of Freddie Mac mortgage-related securities issued by consolidated trusts declined approximately 5.9%, as the volume of our new issuances has been less than the volume of liquidations of these securities. The UPB of multifamily Other Guarantee Transactions, excluding HFA-related securities, increased to $19.7 billion as of December 31, 2011 from $8.2 billion as of December 31, 2010, due to increased multifamily loan securitization activity.

The table below presents additional details regarding our issued and guaranteed mortgage-related securities.

Table 36 — Freddie Mac Mortgage-Related Securities by Class Type[1]

	December 31,		
	2011	2010	2009
		(in millions)	
Held by Freddie Mac:			
Single-class	$ 125,271	$ 157,752	$ 255,171
Multiclass	98,396	105,851	119,444
Total held by Freddie Mac[2]	223,667	263,603	374,615
Held by third parties:			
Single-class	949,301	1,020,200	1,031,869
Multiclass	451,716	429,115	448,329
Total held by third parties	1,401,017	1,449,315	1,480,198
Total Freddie Mac mortgage-related securities[2]	$1,624,684	$1,712,918	$1,854,813

(1) Based on UPB of the securities and excludes mortgage-related securities traded, but not yet settled.
(2) Beginning January 1, 2010, includes single-family single-class and certain multiclass securities held by us, which are recorded as extinguishments of debt securities of consolidated trusts on our consolidated balance sheets. Prior to 2010, all Freddie Mac mortgage-related securities held by us were accounted for as investments in securities on our consolidated balance sheets. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for a discussion of our significant accounting policies related to our investments in securities and debt securities of consolidated trusts.

The table below presents issuances and extinguishments of the debt securities of our consolidated trusts during 2011 and 2010, as well as the UPB of consolidated trusts held by third parties.

Table 37 — Issuances and Extinguishments of Debt Securities of Consolidated Trusts[1]

	Year Ended December 31,	
	2011	2010
	(in millions)	
Beginning balance of debt securities of consolidated trusts held by third parties	$1,517,001	$1,564,093
Issuances to third parties of debt securities of consolidated trusts:		
Issuances based on underlying mortgage product type:		
30-year or more amortizing fixed-rate	177,951	255,101
20-year amortizing fixed-rate	19,250	24,293
15-year amortizing fixed-rate	76,917	78,316
Adjustable-rate	25,675	15,869
Interest-only	152	845
FHA/VA	160	1,429
Debt securities of consolidated trusts retained by us at issuance	(10,910)	(15,725)
Net issuances of debt securities of consolidated trusts	289,195	360,128
Reissuances of debt securities of consolidated trusts previously held by us[2]	80,485	51,209
Total issuances to third parties of debt securities of consolidated trusts	369,680	411,337
Extinguishments, net[3]	(434,205)	(458,429)
Ending balance of debt securities of consolidated trusts held by third parties	$1,452,476	$1,517,001

(1) Based on UPB.
(2) Represents our sales of PCs and certain Other Guarantee Transactions previously held by us.
(3) Represents: (a) UPB of our purchases from third parties of PCs and Other Guarantee Transactions issued by our consolidated trusts; (b) principal repayments related to PCs and Other Guarantee Transactions issued by our consolidated trusts; and (c) certain remittance amounts associated with our trust security administration that are payable to third-party mortgage-related security holders as of December 31, 2011 and 2010.

Other Liabilities

Other liabilities consist of the guarantee obligation, the reserve for guarantee losses on non-consolidated trusts and other mortgage-related financial guarantees, servicer liabilities, accounts payable and accrued expenses, and other miscellaneous liabilities. Other liabilities decreased to $6.0 billion as of December 31, 2011 from $8.1 billion as of December 31, 2010 primarily because of a decrease in: (a) credit loss-related liabilities, largely due to short sale adjustments related to accrued estimated losses on unsettled transactions; and (b) servicer advanced interest liabilities, due to a decrease in seriously delinquent loans during the year ended December 31, 2011. See "NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS" for additional information.

Total Equity (Deficit)

The table below presents the changes in total equity (deficit) and certain capital-related disclosures.

Table 38 — Changes in Total Equity (Deficit)

	Three Months Ended					Twelve Months Ended
	12/31/2011	9/30/2011	6/30/2011	3/31/2011	12/31/2010	12/31/2011
	(in millions)					
Beginning balance	$ (5,991)	$ (1,478)	$ 1,237	$ (401)	$ (58)	$ (401)
Net income (loss)	619	(4,422)	(2,139)	676	(113)	(5,266)
Other comprehensive income (loss), net of taxes:						
Changes in unrealized gains (losses) related to available-for-sale securities	701	(80)	903	1,941	1,097	3,465
Changes in unrealized gains (losses) related to cash flow hedge relationships	118	124	135	132	153	509
Changes in defined benefit plans	68	2	1	(9)	19	62
Total comprehensive income (loss)	1,506	(4,376)	(1,100)	2,740	1,156	(1,230)
Capital draw funded by Treasury	5,992	1,479	—	500	100	7,971
Senior preferred stock dividends declared	(1,655)	(1,618)	(1,617)	(1,605)	(1,603)	(6,495)
Other	2	2	2	3	4	9
Total equity (deficit)/Net worth	$ (146)	$ (5,991)	$ (1,478)	$ 1,237	$ (401)	$ (146)
Aggregate draws under the Purchase Agreement (as of period end)[1]	$71,171	$65,179	$63,700	$63,700	$63,200	$71,171
Aggregate senior preferred stock dividends paid to Treasury in cash (as of period end)	$16,521	$14,866	$13,248	$11,631	$10,026	$16,521
Percentage of dividends paid to Treasury in cash to aggregate draws (as of period end)	23%	23%	21%	18%	16%	23%

(1) Does not include the initial $1.0 billion liquidation preference of senior preferred stock that we issued to Treasury in September 2008 as an initial commitment fee and for which no cash was received.

We requested a total of $7.6 billion and $13.0 billion in draws from Treasury under the Purchase Agreement to eliminate quarterly equity deficits for 2011 and 2010, respectively. In addition, we paid cash dividends to Treasury of $6.5 billion and $5.7 billion during 2011 and 2010, respectively.

Net unrealized losses on our available-for-sale securities in AOCI decreased by $701 million and $3.5 billion during the three months and year ended December 31, 2011, respectively. The decrease for the three months ended December 31, 2011 was primarily due to the impact of tightening OAS levels on our CMBS. The decrease for the year ended December 31, 2011 was primarily due to gains on our agency securities and CMBS as a result of the impact of declining rates and the recognition in earnings of other-than-temporary impairments on our non-agency mortgage-related securities, partially offset by losses on our single-family non-agency mortgage-related securities due to widening OAS levels. Net unrealized losses on our closed cash flow hedge relationships in AOCI decreased by $118 million and $509 million during the three months and year ended December 31, 2011, respectively, primarily attributable to the reclassification of losses into earnings related to our closed cash flow hedges as the originally forecasted transactions affected earnings.

RISK MANAGEMENT

Our investment and credit guarantee activities expose us to three broad categories of risk: (a) credit risk; (b) interest-rate risk and other market risk; and (c) operational risk. See "RISK FACTORS" for additional information regarding these and other risks.

Risk management is a critical aspect of our business. We manage risk through a framework whereby our executive management is responsible for independent risk evaluation. Within this framework, executive management monitors performance against our risk management strategies and established risk limits and reporting thresholds, identifies and assesses potential issues and provides oversight regarding changes in business processes and activities.

Overall, the legal, political and regulatory influences on the financial services industry and the capital markets have increased and created significant challenges and, as a result, we believe that our risk profile increased in 2011. Drivers of this increase are: (a) mandated participation in government-sponsored assistance programs; (b) continued deterioration of the mortgage insurer sector, resulting in further concentration issues; and (c) weakened global macro-economic conditions and increased market volatility.

Internally, our environment has also contributed to a higher risk profile. We have observed: (a) a significant increase in people risk due to the uncertainty of the future of our company; (b) an increase in operational risk due to employee turnover, key person dependencies, and the level and pace of organizational change within our company; and (c) an

inadequacy of our business continuity and disaster recovery plans that may inhibit our ability to return to normal business operations in the event of a disaster event.

We expect legal, political and regulatory influences to continue to increase in 2012, which could increase uncertainty in the mortgage industry, increase our operational and people risks, and increase the uncertainty associated with the use of our models.

Credit Risk

We are subject primarily to two types of credit risk: institutional credit risk and mortgage credit risk. Institutional credit risk is the risk that a counterparty that has entered into a business contract or arrangement with us will fail to meet its obligations. Mortgage credit risk is the risk that a borrower will fail to make timely payments on a mortgage we own or guarantee. We are exposed to mortgage credit risk on our total mortgage portfolio because we either hold the mortgage assets or have guaranteed mortgages in connection with the issuance of a Freddie Mac mortgage-related security, or other guarantee commitment.

Institutional Credit Risk

Since 2008, challenging market conditions have adversely affected the liquidity and financial condition of our counterparties. The concentration of our exposure to our counterparties increased beginning in 2008 due to industry consolidation and counterparty failures.

Our exposure to single-family mortgage seller/servicers remained high during 2011 with respect to their repurchase obligations arising from breaches of representations and warranties made to us for loans they underwrote and sold to us. We rely on our single-family seller/servicers to perform loan workout activities as well as foreclosures on loans that they service for us. Our credit losses could increase to the extent that our seller/servicers do not fully perform these obligations in a timely manner. The financial condition of the mortgage insurance industry continued to deteriorate during 2011, and the substantial majority of our mortgage insurance exposure is concentrated with four counterparties all of which are under significant financial stress. In addition, our exposure to derivatives counterparties remains highly concentrated as compared to historical levels.

We continue to face challenges in reducing our risk concentrations with counterparties. Efforts we make to reduce exposure to financially weakened counterparties could further increase our exposure to other individual counterparties or increase concentration risk overall. The failure of any of our significant counterparties to meet their obligations to us could have a material adverse effect on our results of operations, financial condition, and our ability to conduct future business. For more information, see "RISK FACTORS — Competitive and Market Risks — *We depend on our institutional counterparties to provide services that are critical to our business, and our results of operations or financial condition may be adversely affected if one or more of our institutional counterparties do not meet their obligations to us.*"

Non-Agency Mortgage-Related Security Issuers

Our investments in securities expose us to institutional credit risk to the extent that servicers, issuers, guarantors, or third parties providing credit enhancements become insolvent or do not perform their obligations. Our investments in non-Freddie Mac mortgage-related securities include both agency and non-agency securities. However, agency securities have historically presented minimal institutional credit risk due to the guarantee provided by those institutions, and the U.S. government's support of those institutions.

At the direction of our Conservator, we are working to enforce our rights as an investor with respect to the non-agency mortgage-related securities we hold, and are engaged in efforts to mitigate losses on our investments in these securities, in some cases in conjunction with other investors. The effectiveness of our efforts is highly uncertain and any potential recoveries may take significant time to realize.

In June 2011, Bank of America Corporation announced that it, BAC Home Loans Servicing, LP, Countrywide Financial Corporation and Countrywide Home Loans, Inc. entered into a settlement agreement with The Bank of New York Mellon, as trustee, to resolve certain claims with respect to a number of Countrywide first-lien and second-lien residential mortgage-related securitization trusts. Bank of America indicated that the settlement is subject to final court approval and certain other conditions. There can be no assurance that final court approval of the settlement will be obtained or that all conditions will be satisfied. Bank of America noted that, given the number of investors and the complexity of the settlement, it is not possible to predict the timing or ultimate outcome of the court approval process, which could take a substantial period of time. We have investments in certain of these Countrywide securitization trusts and would expect to benefit from this settlement, if final court approval is obtained. For more information, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

On September 2, 2011, FHFA announced that, as Conservator for Freddie Mac and Fannie Mae, it had filed lawsuits against 17 financial institutions and related defendants alleging: (a) violations of federal securities laws; and (b) in certain lawsuits, common law fraud in the sale of residential non-agency mortgage-related securities to Freddie Mac and Fannie Mae. FHFA, as Conservator, filed a similar lawsuit against UBS Americas, Inc. and related defendants on July 27, 2011. FHFA seeks to recover losses and damages sustained by Freddie Mac and Fannie Mae as a result of their investments in certain residential non-agency mortgage-related securities issued by these financial institutions.

See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities" for additional information on credit risk associated with our investments in mortgage-related securities, including higher-risk components and impairment charges we recognized in the years ended December 31, 2011, 2010, and 2009 related to these investments. For information about institutional credit risk associated with our investments in non-mortgage-related securities, see "NOTE 7: INVESTMENTS IN SECURITIES — Table 7.9 — Trading Securities" as well as "Cash and Other Investments Counterparties" below.

Single-family Mortgage Seller/Servicers

We acquire a significant portion of our single-family mortgage purchase volume from several large lenders, or seller/servicers. Our top 10 single-family seller/servicers provided approximately 82% of our single-family purchase volume during 2011. Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A. accounted for 28% and 13%, respectively, of our single-family mortgage purchase volume and were the only single-family seller/servicers that comprised 10% or more of our purchase volume in 2011.

We have contractual arrangements with our seller/servicers under which they agree to sell us mortgage loans, and represent and warrant that those loans have been originated under specified underwriting standards. If we subsequently discover that the representations and warranties were breached (*i.e.*, that contractual standards were not followed), we can exercise certain contractual remedies to mitigate our actual or potential credit losses. These contractual remedies include the ability to require the seller/servicer to repurchase the loan at its current UPB or make us whole for any credit losses realized with respect to the loan. As part of our expansion of HARP, we have agreed not to require lenders to provide us with certain representations and warranties that they would ordinarily be required to commit to in selling loans to us. As a result, we may face greater exposure to credit and other losses on these HARP loans. For more information, see "*Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program — Home Affordable Refinance Program*."

We are exposed to institutional credit risk arising from the potential insolvency or non-performance by our mortgage seller/servicers, including non-performance of their repurchase obligations arising from breaches of the representations and warranties made to us for loans they underwrote and sold to us or failure to honor their recourse and indemnification obligations to us. Pursuant to their repurchase obligations, our seller/servicers are obligated to repurchase mortgages sold to us when there has been a breach of the representations and warranties made to us with respect to the mortgages. In lieu of repurchase, we may choose to allow a seller/servicer to indemnify us against losses realized on such mortgages or otherwise compensate us for the risk of continuing to hold the mortgages. In some cases, the ultimate amounts of recovery payments we have received from seller/servicers may be significantly less than the amount of our estimates of potential exposure to losses related to their obligations. If a seller/servicer does not satisfy its repurchase or indemnification obligations with respect to a loan, we will be subject to the full range of credit risks posed by the loan if the loan fails to perform, including the risk that a mortgage insurer may deny or rescind coverage on the loan (if the loan is insured) and the risk that we will incur credit losses on the loan through the workout or foreclosure process.

Our contracts require that a seller/servicer repurchase a mortgage after we issue a repurchase request, unless the seller/servicer avails itself of an appeals process provided for in our contracts, in which case the deadline for repurchase is extended until we decide the appeal. Some of our seller/servicers have failed to fully perform their repurchase obligations due to lack of financial capacity, while others, including many of our larger seller/servicers, have not fully performed their repurchase obligations in a timely manner. The table below provides a summary of our repurchase request activity for 2011, 2010, and 2009.

Table 39 — Repurchase Request Activity[1]

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Beginning balance	$ 3,807	$ 4,201	$ 3,608
New requests issued	9,172	16,498	12,364
Requests collected[2]	(4,490)	(7,467)	(5,326)
Requests cancelled[3]	(5,707)	(9,298)	(4,776)
Other[4]	(66)	(127)	(1,669)
Ending Balance	$ 2,716	$ 3,807	$ 4,201

(1) Beginning and ending balances represent the UPB of the loans associated with the repurchase requests. New requests issued and requests cancelled represent the amount of the request, while requests collected represent cash payment received.
(2) Requests collected include payments received upon fulfillment of the repurchase request, reimbursement of losses for requests associated with foreclosed mortgage loans, negotiated settlements, and other alternative remedies.
(3) Consists primarily of those requests that were resolved by the servicer providing missing documentation or a successful appeal of the request.
(4) Other includes items that affect the UPB of the loan while the repurchase request is outstanding, such as changes in UPB due to payments made on the loan. Also includes requests deemed uncollectible due to counterparty failures.

As shown in the table above, the amount of new repurchase requests declined from $16.5 billion in 2010 to $9.2 billion in 2011. This decline reflects: (a) a lower volume of loan reviews performed in 2011 relating to loans originated in 2008 and prior years; (b) the reduction in the number of loans originated in 2005 to 2008, including those with higher risk characteristics, within our single-family credit guarantee portfolio; and (c) the increase in the number of loans covered by negotiated agreements (as discussed below) or originated by counterparties that defaulted in recent years.

The UPB of loans subject to open repurchase requests declined to approximately $2.7 billion as of December 31, 2011 from $3.8 billion as of December 31, 2010 because the combined volume of requests collected and cancelled exceeded the volume of new request issuances. As measured by UPB, approximately 39% and 34% of the repurchase requests outstanding at December 31, 2011 and December 31, 2010, respectively, were outstanding for four months or more since issuance of the initial request (these figures include repurchase requests for which appeals were pending). As of December 31, 2011, two of our largest seller/servicers had aggregate repurchase requests outstanding, based on UPB, of $1.4 billion, and approximately 48% of these requests were outstanding for four months or more since issuance of the initial request. The amount we expect to collect on the outstanding requests is significantly less than the UPB of the loans subject to repurchase requests primarily because many of these requests will likely be satisfied by reimbursement of our realized credit losses by seller/servicers, instead of repurchase of loans at their UPB. Some of these requests also may be rescinded in the course of the contractual appeal process. Based on our historical loss experience and the fact that many of these loans are covered by credit enhancements, we expect the actual credit losses experienced by us should we fail to collect on these repurchase requests will also be less than the UPB of the loans.

Mortgage insurance rescission repurchase requests tend to be outstanding longer than other repurchase requests for a number of reasons, including: (a) lenders do not agree with the basis used by the mortgage insurers to rescind coverage; (b) the mortgage insurers' appeals process for rescissions can be lengthy (as long as one year or more); (c) lenders expect us to suspend repurchase enforcement until after the appeal decision by the mortgage insurer is made (although this is not our practice); and (d) in certain cases, we have agreed to consider a repurchase alternative that would allow certain of our seller/servicers to provide us a commitment for the amount of lost mortgage insurance coverage in lieu of a full repurchase. Until a decision on such a repurchase alternative is made, we temporarily suspend the collection efforts for outstanding repurchases associated with mortgage insurance rescission for these seller/servicers. Of the total amount of repurchase requests outstanding at December 31, 2011, approximately $1.2 billion were issued due to mortgage insurance rescission or mortgage insurance claim denial. Our actual credit losses could increase should the mortgage insurance coverage not be reinstated and we fail to collect on these repurchase requests.

During 2010 and 2009, we entered into agreements with certain of our seller/servicers to release specified loans from certain repurchase obligations in exchange for one-time cash payments. In a memorandum to the FHFA Office of Inspector General dated September 19, 2011, FHFA stated that in 2011 it had "suspended certain future repurchase agreements with seller/servicers concerning their repurchase obligations pending the outcome" of a review by Freddie Mac of its loan sampling methodology. We are in discussions with FHFA concerning our review of our sampling methodology. We cannot predict when this process will be completed or whether or when FHFA will terminate or revise its suspension. It is possible that our loan sampling methodology could change in ways that increase our repurchase request volumes with our seller/servicers. During 2011, we expanded our reviews of defaulted loans to include certain loans that were previously excluded from our review process.

In order to resolve outstanding repurchase requests on a more timely basis with our single-family seller/servicers in the future, we have begun to require certain of our larger seller/servicers to commit to plans for completing repurchases,

with financial consequences or with stated remedies for non-compliance, as part of the annual renewals of our contracts with them. As of December 31, 2011, our 13 largest seller/servicers, which hold more than 81% of all outstanding repurchase requests, are subject to the revised contract terms. We continue to review loans and pursue our rights to issue repurchase requests to our counterparties, as appropriate.

Our estimate of recoveries from seller/servicer repurchase obligations is considered in our allowance for loan losses as of December 31, 2011 and December 31, 2010; however, our actual recoveries may be different than our estimates. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Allowance for Loan Losses and Reserve for Guarantee Losses" for further information. We believe we have appropriately provided for these exposures, based upon our estimates of incurred losses, in our loan loss reserves at December 31, 2011 and December 31, 2010; however, our actual losses may exceed our estimates.

The table below summarizes the percentage of our single-family credit guarantee portfolio by year of loan origination that is subject to agreements releasing loans from certain repurchase obligations, including TBW and other defaulted counterparties. Since January 1, 2009, we have entered into three negotiated agreements (including the agreements with GMAC and Bank of America discussed below) and have released repurchase obligations with 27 other seller/servicers who were either no longer in operation or no longer approved as our seller/servicers, at December 31, 2011.

Table 40 — Loans Released from Repurchase Obligations[1]

	As of December 31, 2011	
Year of origination:	UPB	Percentage of Single-family Credit Guarantee Portfolio
	(in billions)	
Negotiated agreements:		
2008	$ 21.8	1.2%
2007	48.2	2.8
2006	38.0	2.2
2005	34.5	2.0
2004 and prior	23.4	1.3
Subtotal	165.9	9.5
Other released loans:[2]		
2011 and 2010	0.3	<0.1
2009	11.5	0.7
2008	10.4	0.6
2007	16.3	0.9
2006	8.8	0.5
2005	6.3	0.4
2004 and prior	3.3	0.2
Total	$222.8	12.8%

(1) Consists of all loans released from certain repurchase obligations since January 1, 2009.
(2) Consists of loans associated with seller/servicers who were either no longer in business or no longer approved as our seller/servicers at, December 31, 2011. We received or, in some cases, expect to receive cash totaling approximately $0.1 billion from the FDIC or other third parties for the release of related loans from servicing obligations for defaulted seller/servicers.

GMAC Mortgage, LLC and Residential Funding Company, LLC (collectively GMAC), indirect subsidiaries of Ally Financial Inc. (formerly, GMAC Inc.), are seller/servicers that together serviced and subserviced for an affiliated entity approximately 4% of the single-family loans in our single-family credit guarantee portfolio as of December 31, 2011. In March 2010, we entered into an agreement with GMAC, under which they made a one-time payment to us for the partial release of repurchase obligations relating to loans sold to us prior to January 1, 2009. The partial release does not affect any of GMAC's potential repurchase obligations for loans sold to us by GMAC after January 1, 2009, nor does it affect the ability to recover amounts associated with failure to comply with our servicing requirements. This agreement did not have a material impact on our 2011 or 2010 consolidated statements of income and comprehensive income. Ally Financial Inc. recently stated that the protracted period of adverse developments in the mortgage finance and credit markets has adversely affected Residential Capital LLC's business, liquidity, and its capital position and has raised substantial doubt about Residential Capital LLC's ability to continue as a going concern. Residential Capital LLC is the parent company of Residential Funding Company, LLC, one of our mortgage servicers. For information on our exposure to institutional counterparties, see "RISK FACTORS — Competitive and Market Risks — *We depend on our institutional counterparties to provide services that are critical to our business, and our results of operations or financial condition may be adversely affected if one or more of our institutional counterparties do not meet their obligations to us.*"

On December 31, 2010, we entered into an agreement with Bank of America, N.A., and two of its affiliates, BAC Home Loans Servicing, LP and Countrywide Home Loans, Inc., to resolve our currently outstanding and future claims for repurchases arising from the breach of representations and warranties on certain loans purchased by us from Countrywide

Home Loans, Inc. and Countrywide Bank FSB. Under the terms of the agreement, we received a $1.28 billion cash payment in consideration for releasing Bank of America and its two affiliates from current and future repurchase requests arising from loans sold to us by the Countrywide entities for which the first regularly scheduled monthly payments were due on or before December 31, 2008. The UPB of the loans in this portfolio as of December 31, 2010, was approximately $114 billion. The agreement applies only to certain claims for repurchase based on breaches of representations and warranties and the agreement contains specified limitations and does not cover loans sold to us or serviced for us by other Bank of America entities. This agreement did not have a material impact on our 2011 or 2010 consolidated statements of income and comprehensive income.

On August 24, 2009, TBW filed for bankruptcy. Prior to that date, we had terminated TBW's status as a seller/servicer of our loans. We had exposure to TBW with respect to its loan repurchase obligations. We also had exposure with respect to certain borrower funds that TBW held for the benefit of Freddie Mac. TBW received and processed such funds in its capacity as a servicer of loans owned or guaranteed by Freddie Mac. TBW maintained certain bank accounts, primarily at Colonial Bank, to deposit such borrower funds and to provide remittance to Freddie Mac. Colonial Bank was placed into receivership by the FDIC in August 2009.

On or about June 14, 2010, we filed a proof of claim in the TBW bankruptcy aggregating $1.78 billion. Of this amount, approximately $1.15 billion related to current and projected repurchase obligations and approximately $440 million related to funds deposited with Colonial Bank, or with the FDIC as its receiver, which were attributable to mortgage loans owned or guaranteed by us and previously serviced by TBW. The remaining $190 million represented miscellaneous costs and expenses incurred in connection with the termination of TBW's status as a seller/servicer of our loans.

In June 2011, with the approval of FHFA, as Conservator, we entered into a settlement with TBW and the creditors' committee appointed in the TBW bankruptcy proceeding to represent the interests of the unsecured trade creditors of TBW. At the time of settlement, we estimated our uncompensated loss exposure to TBW to be approximately $0.7 billion. This estimated exposure largely relates to outstanding repurchase claims that have already been substantially provided for in our financial statements through our provision for loan losses. Our ultimate losses could exceed our recorded estimate. Potential changes in our estimate of uncompensated loss exposure or the potential for additional claims as discussed below could cause us to record additional losses in the future.

We understand that Ocala Funding, LLC, which is a wholly owned subsidiary of TBW, or its creditors, may file an action to recover certain funds paid to us prior to the TBW bankruptcy. However, no actions against Freddie Mac related to Ocala have been initiated in bankruptcy court or elsewhere to recover assets. We are also involved in an adversary proceeding in bankruptcy court brought by certain underwriters at Lloyds, London and London Market Insurance Companies against TBW, Freddie Mac, and other parties. For more information on these matters, including terms of the TBW settlement, see "NOTE 18: LEGAL CONTINGENCIES — Taylor, Bean & Whitaker Bankruptcy."

A significant portion of our single-family mortgage loans are serviced by several large seller/servicers. Our top three single-family loan servicers, Wells Fargo Bank N.A., JPMorgan Chase Bank, N.A., and Bank of America N.A., together serviced approximately 49% of our single-family mortgage loans as of December 31, 2011. Wells Fargo Bank N.A., JPMorgan Chase Bank, N.A., and Bank of America N.A. serviced approximately 26%, 12%, and 11%, respectively, of our single-family mortgage loans, as of December 31, 2011. Because we do not have our own servicing operation, if our servicers lack appropriate process controls, experience a failure in their controls, or experience an operating disruption in their ability to service mortgage loans, our business and financial results could be adversely affected.

During the second half of 2010, a number of our single-family servicers, including several of our largest, announced that they were evaluating the potential extent of issues relating to the possible improper execution of documents associated with foreclosures of loans they service, including those they service for us. Some of these companies temporarily suspended foreclosure proceedings in certain states in which they do business. While these servicers generally resumed foreclosure proceedings in the first quarter of 2011, the rate at which they are effecting foreclosures has been slower than prior to the suspensions. See "RISK FACTORS — Operational Risks — *We have incurred, and will continue to incur, expenses and we may otherwise be adversely affected by delays and deficiencies in the foreclosure process*" for further information.

We also are exposed to the risk that seller/servicers might fail to service mortgages in accordance with our contractual requirements, resulting in increased credit losses. For example, our seller/servicers have an active role in our loan workout efforts, including under the MHA Program and the recent servicing alignment initiative, and therefore, we also have exposure to them to the extent a decline in their performance results in a failure to realize the anticipated benefits of our loss mitigation plans. In addition, during 2011, there have been several regulatory developments that have

affected and will continue to significantly impact our single-family mortgage servicers. For more information on regulatory and other developments in mortgage servicing, and how these developments may impact our business, see "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Developments Concerning Single-Family Servicing Practices*."

While we have legal remedies against seller/servicers who fail to comply with our contractual servicing requirements, we are exposed to institutional credit risk in the event of their insolvency or if, for other causes, seller/servicers fail to perform their obligations to repurchase affected mortgages, or (at our option) indemnify us for losses resulting from any breach, or pay damages for any breach. In the event a seller/servicer does not fulfill its repurchase or other responsibilities, we may seek partial recovery of amounts owed by the seller/servicer by transferring the applicable mortgage servicing rights of the seller/servicer to a different servicer. However, this option may be difficult to accomplish with respect to our largest seller/servicers due to the operational and capacity challenges of transferring a large servicing portfolio. In 2011, we changed most of our servicing standards to permit full or partial termination of loan servicing in order to transfer portions of the servicing portfolios to new servicers.

Multifamily Mortgage Seller/Servicers

As of December 31, 2011, our top three multifamily servicers, Berkadia Commercial Mortgage LLC, CBRE Capital Markets, Inc., and Wells Fargo Bank, N.A., each serviced more than 10% of our multifamily mortgage portfolio, and together serviced approximately 40% of our multifamily mortgage portfolio. For 2011, our top two multifamily sellers, CBRE Capital Markets, Inc. and NorthMarq Capital, LLC, accounted for 20% and 12%, respectively, of our multifamily purchase volume. Our top 10 multifamily lenders represented an aggregate of approximately 81% of our multifamily purchase volume for 2011.

In our multifamily business, we are exposed to the risk that multifamily seller/servicers could come under financial pressure, which could potentially cause degradation in the quality of the servicing they provide us, including their monitoring of each property's financial performance and physical condition. This could also, in certain cases, reduce the likelihood that we could recover losses through lender repurchases, recourse agreements or other credit enhancements, where applicable. This risk primarily relates to multifamily loans that we hold on our consolidated balance sheets where we retain all of the related credit risk. We monitor the status of all our multifamily seller/servicers in accordance with our counterparty credit risk management framework.

Mortgage Insurers

We have institutional credit risk relating to the potential insolvency of, or non-performance by, mortgage insurers that insure single-family mortgages we purchase or guarantee. As a guarantor, we remain responsible for the payment of principal and interest if a mortgage insurer fails to meet its obligations to reimburse us for claims. If any of our mortgage insurers that provide credit enhancement fail to fulfill their obligation, we could experience increased credit losses.

We attempt to manage this risk by establishing eligibility standards for mortgage insurers and by monitoring our exposure to individual mortgage insurers. Our monitoring includes performing regular analysis of the estimated financial capacity of mortgage insurers under different adverse economic conditions. In addition, state insurance authorities regulate mortgage insurers and we periodically meet with certain state authorities to discuss their views. We also monitor the mortgage insurers' credit ratings, as provided by nationally recognized statistical rating organizations, and we periodically review the methods used by such organizations. None of our mortgage insurers had a rating higher than BBB as of February 27, 2012. In evaluating the likelihood that an insurer will have the ability to pay our expected claims, we consider our own analysis of the insurer's financial capacity, any downgrades in the insurer's credit rating, and various other factors.

As part of the estimate of our loan loss reserves, we evaluate the recovery and collectability related to mortgage insurance policies for mortgage loans that we hold on our consolidated balance sheets as well as loans underlying our non-consolidated Freddie Mac mortgage-related securities or covered by other guarantee commitments. We believe that many of our mortgage insurers are not sufficiently capitalized to withstand the stress of the current weak economic environment. Additionally, a number of our mortgage insurers have exceeded risk to capital ratios required by their state insurance regulators. In many cases, such states have issued waivers to allow the companies to continue writing new business in their states. Most waivers are temporary in duration or contain other conditions that the companies may be unable to continue to meet due to their weakened condition or other factors. As a result of these and other factors, we reduced our expectations of recovery from several of these insurers in determining our allowance for loan losses associated with our single-family loans on our consolidated balance sheet as of December 31, 2011.

The table below summarizes our exposure to mortgage insurers as of December 31, 2011. In the event that a mortgage insurer fails to perform, the coverage outstanding represents our maximum exposure to credit losses resulting from such failure. As of December 31, 2011, most of the coverage outstanding from mortgage insurance shown in the table below is attributed to primary policies rather than pool insurance policies.

Table 41 — Mortgage Insurance by Counterparty

			As of December 31, 2011		
Counterparty Name	Credit Rating[1]	Credit Rating Outlook[1]	Primary Insurance[2]	Pool Insurance[2]	Coverage Outstanding[3]
				(in billions)	
Mortgage Guaranty Insurance Corporation (MGIC)	B	Negative	$ 48.0	$28.3	$12.2
Radian Guaranty Inc.	B	Negative	36.2	7.0	10.0
Genworth Mortgage Insurance Corporation	B	Negative	29.9	0.8	7.5
United Guaranty Residential Insurance Co.	BBB	Stable	28.4	0.2	7.0
PMI Mortgage Insurance Co. (PMI)[4]	CCC–	Negative	24.0	1.3	6.1
Republic Mortgage Insurance Company (RMIC)[5]	Not Rated	N/A	19.5	1.9	4.9
Triad Guaranty Insurance Corp[6]	Not Rated	N/A	8.2	0.7	2.1
CMG Mortgage Insurance Co.	BBB	Negative	3.0	0.1	0.7
Essent Guaranty, Inc.	Not Rated	N/A	0.8	—	0.1
Total			$198.0	$40.3	$50.6

(1) Latest rating available as of February 27, 2012. Represents the lower of S&P and Moody's credit ratings and outlooks. In this table, the rating and outlook of the legal entity is stated in terms of the S&P equivalent.
(2) Represents the amount of UPB at the end of the period for our single-family credit guarantee portfolio covered by the respective insurance type. These amounts are based on our gross coverage without regard to netting of coverage that may exist to the extent an affected mortgage is covered under both types of insurance. See "Table 4.5 — Recourse and Other Forms of Credit Protection" in "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for further information.
(3) Represents the remaining aggregate contractual limit for reimbursement of losses under policies of both primary and pool insurance. These amounts are based on our gross coverage without regard to netting of coverage that may exist to the extent an affected mortgage is covered under both types of insurance.
(4) Beginning in October 2011, PMI began paying valid claims 50% in cash and 50% in deferred payment obligations under order of its state regulator.
(5) In January 2012, RMIC began paying valid claims 50% in cash and 50% in deferred payment obligations under order of its state regulator.
(6) Beginning in June 2009, Triad began paying valid claims 60% in cash and 40% in deferred payment obligations under order of its state regulator.

We received proceeds of $2.5 billion and $1.8 billion during the years ended December 31, 2011 and 2010, respectively, from our primary and pool mortgage insurance policies for recovery of losses on our single-family loans. We had outstanding receivables from mortgage insurers, net of associated reserves, of $1.0 billion and $1.5 billion as of December 31, 2011 and December 31, 2010, respectively.

The UPB of single-family loans covered by pool insurance declined approximately 29% during 2011, primarily due to prepayments and other liquidation events. We did not purchase pool insurance on single-family loans in 2011. Our pool insurance policies generally have coverage periods that range from 10 to 12 years. In many cases, we entered into these agreements to cover higher-risk mortgage product types delivered to us through bulk transactions. As of December 31, 2011, pool insurance policies that will expire: (a) during 2012 covered approximately $2.4 billion in UPB of loans, and the remaining contractual limit for reimbursement of losses on such loans was approximately $0.2 billion; and (b) between 2013 and 2018 covered approximately $35.0 billion in UPB of loans, and the remaining contractual limit for reimbursement of losses on such loans was approximately $0.8 billion. The remaining pool insurance policies, for which the remaining contractual limit for reimbursement of losses was approximately $0.9 billion, expire after 2018. Any losses in excess of the contractual limit will be borne by us. These figures include coverage under our pool insurance policies based on the stated coverage amounts under such policies. As noted below, we do not expect to receive full payment of our claims from several of these counterparties.

Based on information we received from MGIC, we understand that MGIC may challenge our future claims under certain of their pool insurance policies. We believe that our pool insurance policies with MGIC provide us with the right to obtain recoveries for losses up to the aggregate limit indicated in the table above. However, MGIC's interpretation of these policies would result in claims coverage approximately $0.6 billion lower than the amount of coverage outstanding set forth in the table above. We expect this difference to increase but not to exceed approximately $0.7 billion.

In August 2011, we suspended PMI and its affiliates and RMIC and its affiliates as approved mortgage insurers, making loans insured by either company (except relief refinance loans with pre-existing insurance) ineligible for sale to Freddie Mac. Both of these companies ceased writing new business during the third quarter of 2011, and have been put under state supervision. PMI instituted a partial claim payment plan in October 2011, under which claim payments will be made 50% in cash, with the remaining amount deferred as a policyholder claim. RMIC instituted a partial claim payment plan in January 2012, under which claim payments will be made 50% in cash and 50% in deferred payment obligations for an initial period not to exceed one year. We and FHFA are in discussions with the state regulators of PMI and RMIC

concerning future payments of our claims. It is not yet clear how the state regulators of PMI and RMIC will administer their respective deferred payment plans.

Triad is continuing to pay claims 60% in cash and 40% in deferred payment obligations under orders of its state regulator. To date, the state regulator has not allowed Triad to begin paying its deferred payment obligations, and it is uncertain when or if Triad will be permitted to do so. If Triad, PMI, and RMIC do not pay their deferred payment obligations, we would lose a significant portion of the coverage from these counterparties shown in the table above.

Given the difficulties in the mortgage insurance industry, we believe it is likely that other companies may also exceed their regulatory capital limit in the future. In addition to Triad, RMIC, and PMI, we believe that certain other of our mortgage insurance counterparties may lack sufficient ability to meet all their expected lifetime claims paying obligations to us as those claims emerge. In the future, we believe our mortgage insurance exposure will likely be concentrated among a smaller number of counterparties.

At least one of our largest servicers entered into arrangements with two of our mortgage insurance counterparties for settlement of future rescission activity for certain mortgage loans. Under such agreements, servicers pay and/or indemnify mortgage insurers in exchange for the mortgage insurers agreeing not to issue mortgage insurance rescissions and /or denials of coverage related to origination defects on Freddie Mac-owned mortgages. For loans covered by these agreements, we may be at risk of additional loss to the extent we do not independently uncover loan defects and require lender repurchase for loans that otherwise would have resulted in mortgage insurance rescission. Additionally, this type of activity could adversely affect our mortgage insurers' ability to pay in some economic scenarios. In April 2011, we issued an industry letter to our servicers reminding them that they may not enter into these types of agreements without our consent. Several of our servicers have asked us to consent to these types of agreements. We are evaluating these requests on a case-by-case basis. For more information, see "RISK FACTORS — Competitive and Market Risks — *We could incur increased credit losses if our seller/servicers enter into arrangements with mortgage insurers for settlement of future rescission activity and such agreements could potentially reduce the ability of mortgage insurers to pay claims to us*."

Bond Insurers

Bond insurance, which may be either primary or secondary policies, is a credit enhancement covering certain of the non-agency mortgage-related securities we hold. Primary policies are acquired by the securitization trust issuing the securities we purchase, while secondary policies are acquired by us. Bond insurance exposes us to the risk that the bond insurer will be unable to satisfy claims.

The table below presents our coverage amounts of bond insurance, including secondary coverage, for the non-agency mortgage-related securities we hold. In the event a bond insurer fails to perform, the coverage outstanding represents our maximum exposure to credit losses related to such a failure.

Table 42 — Bond Insurance by Counterparty

			As of December 31, 2011	
Counterparty Name	**Credit Rating[1]**	**Credit Rating Outlook[1]**	**Coverage Outstanding[2]**	**Percent of Total[2]**
			(dollars in billions)	
Ambac Assurance Corporation (Ambac)[3]	Not rated	N/A	$ 4.3	44%
Financial Guaranty Insurance Company (FGIC)[3]	Not rated	N/A	1.8	19
MBIA Insurance Corp.	B–	Under Review	1.3	14
Assured Guaranty Municipal Corp.	AA–	Stable	1.1	11
National Public Finance Guarantee Corp.	BBB	Developing	1.1	11
Syncora Guarantee Inc.[3]	CC	Developing	0.1	1
Radian Guaranty Inc. (Radian)	B	Negative	<0.1	—
Total			$ 9.7	100%

(1) Latest ratings available as of February 27, 2012. Represents the lower of S&P and Moody's credit ratings. In this table, the rating and outlook of the legal entity is stated in terms of the S&P equivalent.
(2) Represents the remaining contractual limit for reimbursement of losses, including lost interest and other expenses, on non-agency mortgage-related securities.
(3) Ambac, FGIC, and Syncora Guarantee Inc. are currently operating under regulatory supervision.

We monitor the financial strength of our bond insurers in accordance with our risk management policies. Some of our larger bond insurers are in runoff mode where no new business is being issued. We expect to receive substantially less than full payment of our claims from several of our bond insurers, including Ambac and FGIC, due to adverse developments concerning these companies. Ambac and FGIC are currently not paying any of their claims. We believe that we will likely receive substantially less than full payment of our claims from some of our other bond insurers, because we believe they also lack sufficient ability to fully meet all of their expected lifetime claims-paying obligations to us as such

claims emerge. In the event one or more of our other bond insurers were to become subject to a regulatory order or insolvency proceeding, our ability to recover certain unrealized losses on our mortgage-related securities would be negatively impacted. We considered our expectations regarding our bond insurers' ability to meet their obligations in making our impairment determinations at December 31, 2011 and December 31, 2010. See "NOTE 7: INVESTMENTS IN SECURITIES — Other-Than-Temporary Impairments on Available-For-Sale Securities" for additional information regarding impairment losses on securities covered by bond insurers.

The table below shows the non-agency mortgage-related securities we hold that were covered by primary bond insurance at December 31, 2011 and December 31, 2010.

Table 43 — Non-Agency Mortgage-Related Securities Covered by Primary Bond Insurance

	Ambac		FGIC		MBIA Insurance Corp		AGMC[1]		Other[2]		Total	
	UPB[3]	Gross Unrealized Losses[4]	UPB[3]	Gross Unrealized Losses[4]	UPB[3]	Gross Unrealized Losses[4]	UPB[3]	Gross Unrealized Losses[4]	UPB[3]	Gross Unrealized Losses[4]	UPB[3]	Gross Unrealized Losses[4]
	(in millions)											
At December 31, 2011												
First lien subprime	$ 619	$(169)	$ 831	$(230)	$ 8	$ (1)	$ 404	$ (91)	$ —	$ —	$1,862	$ (491)
Second lien subprime	—	—	185	—	—	—	—	—	—	—	185	—
Option ARM	39	—	—	—	—	—	76	(8)	—	—	115	(8)
Alt-A and other[5]	993	(87)	743	(56)	366	(3)	289	(81)	64	(3)	2,455	(230)
Manufactured housing	87	(14)	—	—	139	(6)	—	—	—	—	226	(20)
CMBS	2,195	(86)	—	—	—	—	—	—	1,129	(38)	3,324	(124)
Obligations of states and political subdivisions	363	(11)	38	(1)	197	(5)	319	(3)	17	(2)	934	(22)
Total	$4,296	$(367)	$1,797	$(287)	$710	$(15)	$1,088	$(183)	$1,210	$ (43)	$9,101	$ (895)
At December 31, 2010												
First lien subprime	$ 676	$(207)	$ 924	$(322)	$ 12	$ (1)	$ 427	$ (99)	$ 3	$ —	$2,042	$ (629)
Second lien subprime	—	—	227	(12)	—	—	—	—	—	—	227	(12)
Option ARM	50	—	—	—	—	—	129	(16)	—	—	179	(16)
Alt-A and other[5]	1,150	(186)	832	(93)	425	(29)	340	(82)	71	(1)	2,818	(391)
Manufactured housing	97	(11)	—	—	154	(15)	—	—	—	—	251	(26)
CMBS	2,206	(277)	—	—	—	—	—	—	1,195	(159)	3,401	(436)
Obligations of states and political subdivisions	419	(44)	38	(2)	234	(19)	366	(18)	17	(3)	1,074	(86)
Total	$4,598	$(725)	$2,021	$(429)	$825	$(64)	$1,262	$(215)	$1,286	$(163)	$9,992	$(1,596)

(1) Assured Guaranty Municipal Corp. was formerly known as Financial Security Assurance.
(2) Represents insurance provided by Syncora Guarantee Inc., Radian Group, Inc., and CIFG Holdings Ltd, and includes certain exposures to bonds insured by NPFGC, formerly known as MBIA Insurance Corp. of Illinois, which is a subsidiary of MBIA Inc., the parent company of MBIA Insurance Corp.
(3) Represents the amount of UPB covered by insurance coverage. This amount does not represent the maximum amount of losses we could recover, as the insurance also covers unpaid interest.
(4) Represents the amount of gross unrealized losses at the respective reporting date on the securities with insurance.
(5) The majority of the Alt-A and other loans covered by bond insurance are securities backed by home equity lines of credit.

Cash and Other Investments Counterparties

We are exposed to institutional credit risk arising from the potential insolvency or non-performance of counterparties of non-mortgage-related investment agreements and cash equivalent transactions, including those entered into on behalf of our securitization trusts. These financial instruments are investment grade at the time of purchase and primarily short-term in nature, which mitigates institutional credit risk for these instruments.

Our cash and other investment counterparties are primarily financial institutions and the Federal Reserve Bank. As of December 31, 2011 and December 31, 2010, there were $68.5 billion and $91.6 billion, respectively, of cash and other non- mortgage assets invested in financial instruments with institutional counterparties or deposited with the Federal Reserve Bank. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for further information on counterparty credit ratings and concentrations within our cash and other investments.

Document Custodians

We use third-party document custodians to provide loan document certification and custody services for the loans that we purchase and securitize. In many cases, our seller/servicer customers or their affiliates also serve as document custodians for us. Our ownership rights to the mortgage loans that we own or that back our PCs and REMICs and Other Structured Securities could be challenged if a seller/servicer intentionally or negligently pledges or sells the loans that we purchased or fails to obtain a release of prior liens on the loans that we purchased, which could result in financial losses to us. When a seller/servicer or one of its affiliates acts as a document custodian for us, the risk that our ownership interest in the loans may be adversely affected is increased, particularly in the event the seller/servicer were to become insolvent. We seek to mitigate these risks through legal and contractual arrangements with these custodians that identify

our ownership interest, as well as by establishing qualifying standards for document custodians and requiring transfer of the documents to our possession or to an independent third-party document custodian if we have concerns about the solvency or competency of the document custodian.

Derivative Counterparties

We execute OTC derivatives and exchange-traded derivatives and are exposed to institutional credit risk with respect to both types of derivative transactions. We are an active user of exchange-traded derivatives, such as Treasury and Eurodollar futures, and are required to post initial and maintenance margin with our clearing firm in connection with such transactions. The posting of this margin exposes us to institutional credit risk in the event that our clearing firm or the exchange's clearinghouse fail to meet their obligations. However, the use of exchange-traded derivatives lessens our institutional credit risk exposure to individual counterparties because a central counterparty is substituted for individual counterparties, and changes in the value of open exchange-traded contracts are settled daily via payments made through the financial clearinghouse established by each exchange. OTC derivatives, however, expose us to institutional credit risk to individual counterparties because transactions are executed and settled directly between us and each counterparty, exposing us to potential losses if a counterparty fails to meet its contractual obligations. When our net position with a counterparty in OTC derivatives subject to a master netting agreement has a market value above zero (*i.e.*, it is an asset reported as derivative assets, net on our consolidated balance sheets), the counterparty is obligated to deliver collateral in the form of cash, securities, or a combination of both, in an amount equal to that market value (less a small unsecured "threshold" amount) as necessary to satisfy its net obligation to us under the master agreement.

The Dodd-Frank Act will require central clearing and trading on exchanges or comparable trading facilities of many types of derivatives. Pursuant to the Dodd-Frank Act, the U.S. Commodity Futures Trading Commission, or CFTC, is in the process of determining the types of derivatives that must be subject to this requirement. See "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Dodd-Frank Act*" for more information. We continue to work with the Chicago Mercantile Exchange and others to implement a central clearing platform for interest rate derivatives. We will be exposed to institutional credit risk with respect to the Chicago Mercantile Exchange or other comparable exchanges or trading facilities in the future, to the extent we use them to clear and trade derivatives, and to the members of such clearing organizations that execute and submit our transactions for clearing.

We seek to manage our exposure to institutional credit risk related to our OTC derivative counterparties using several tools, including:

- review of external rating analyses;
- strict standards for approving new derivative counterparties;
- ongoing monitoring and internal analysis of our positions with, and credit rating of, each counterparty;
- managing diversification mix among counterparties;
- master netting agreements and collateral agreements; and
- stress-testing to evaluate potential exposure under possible adverse market scenarios.

On an ongoing basis, we review the credit fundamentals of all of our OTC derivative counterparties to confirm that they continue to meet our internal standards. We assign internal ratings, credit capital, and exposure limits to each counterparty based on quantitative and qualitative analysis, which we update and monitor on a regular basis. We conduct additional reviews when market conditions dictate or certain events affecting an individual counterparty occur.

All of our OTC derivative counterparties are major financial institutions and are experienced participants in the OTC derivatives market. However, a large number of OTC derivative counterparties had credit ratings of A+ or below as of February 27, 2012. We require counterparties with credit ratings of A+ or below to post collateral if our net exposure to them on derivative contracts exceeds $1 million. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for additional information.

The relative concentration of our derivative exposure among our primary derivative counterparties remains high. This concentration has increased significantly since 2008 due to industry consolidation and the failure of certain counterparties, and could further increase. The table below summarizes our exposure to our derivative counterparties, which represents the net positive fair value of derivative contracts, related accrued interest and collateral held by us from our counterparties, after netting by counterparty as applicable (*i.e.*, net amounts due to us under derivative contracts which are recorded as derivative assets). In addition, we have derivative liabilities where we post collateral to counterparties. Pursuant to certain collateral agreements we have with derivative counterparties, the amount of collateral that we are required to post is based on the credit rating of our long-term senior unsecured debt securities from S&P or Moody's. The

lowering or withdrawal of our credit rating by S&P or Moody's may increase our obligation to post collateral, depending on the amount of the counterparty's exposure to Freddie Mac with respect to the derivative transactions. At December 31, 2011, our collateral posted exceeded our collateral held. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Derivative Assets and Liabilities, Net" and "Table 31 — Derivative Fair Values and Maturities" for a reconciliation of fair value to the amounts presented on our consolidated balance sheets as of December 31, 2011, which includes both cash collateral held and posted by us, net.

Table 44 — Derivative Counterparty Credit Exposure

Rating[1]	Number of Counterparties[2]	Notional or Contractual Amount[3]	Total Exposure at Fair Value[4]	Exposure, Net of Collateral[5]	Weighted Average Contractual Maturity (in years)	Collateral Posting Threshold[6]
	As of December 31, 2011					
		(dollars in millions)				
AA–	5	$ 73,277	$ 536	$ 19	5.0	$10 million or less
A+	6	337,013	2,538	1	5.8	$1 million or less
A	5	208,416	12	51	6.2	$1 million or less
A-	2	89,284	—	—	5.5	$1 million or less
Subtotal[7]	18	707,990	3,086	71	5.8	
Futures and clearinghouse-settled derivatives		43,831	8	8		
Commitments[8]		14,318	38	38		
Swap guarantee derivatives		3,621	—	—		
Other derivatives[9]		18,489	1	1		
Total derivatives		$788,249	$3,133	$118		

Rating[1]	Number of Counterparties[2]	Notional or Contractual Amount[3]	Total Exposure at Fair Value[4]	Exposure, Net of Collateral[5]	Weighted Average Contractual Maturity (in years)	Collateral Posting Threshold[6]
	As of December 31, 2010					
		(dollars in millions)				
AA	3	$ 53,975	$ —	$ —	6.8	$10 million or less
AA–	4	270,694	1,668	29	6.4	$10 million or less
A+	7	441,004	460	1	6.2	$1 million or less
A	3	177,277	16	2	5.2	$1 million or less
Subtotal[7]	17	942,950	2,144	32	6.1	
Futures and clearinghouse-settled derivatives		215,983	6	6		
Commitments[8]		14,292	103	103		
Swap guarantee derivatives		3,614	—	—		
Other derivatives[9]		28,657	2	2		
Total derivatives		$1,205,496	$2,255	$143		

(1) We use the lower of S&P and Moody's ratings to manage collateral requirements. In this table, the rating of the legal entity is stated in terms of the S&P equivalent.
(2) Based on legal entities. Affiliated legal entities are reported separately.
(3) Notional or contractual amounts are used to calculate the periodic settlement amounts to be received or paid and generally do not represent actual amounts to be exchanged.
(4) For each counterparty, this amount includes derivatives with a positive fair value (recorded as derivative assets, net), including the related accrued interest receivable/payable, when applicable. For counterparties included in the subtotal, positions are shown netted at the counterparty level including accrued interest receivable/payable and trade/settle fees.
(5) Calculated as Total Exposure at Fair Value less cash collateral held as determined at the counterparty level. Includes amounts related to our posting of cash collateral in excess of our derivative liability as determined at the counterparty level. For derivatives settled through an exchange or clearinghouse, excludes consideration of maintenance margin posted by our counterparty.
(6) Counterparties are required to post collateral when their exposure exceeds agreed-upon collateral posting thresholds. These thresholds are typically based on the counterparty's credit rating and are individually negotiated.
(7) Consists of OTC derivative agreements for interest-rate swaps, option-based derivatives (excluding certain written options), foreign-currency swaps, and purchased interest-rate caps.
(8) Commitments include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts.
(9) Consists primarily of certain written options and certain credit derivatives. Written options do not present counterparty credit exposure, because we receive a one-time up-front premium in exchange for giving the holder the right to execute a contract under specified terms, which generally puts us in a liability position.

Over time, our exposure to individual counterparties for OTC interest-rate swaps, option-based derivatives, foreign-currency swaps, and purchased interest rate caps varies depending on changes in fair values, which are affected by changes in period-end interest rates, the implied volatility of interest rates, foreign-currency exchange rates, and the amount of derivatives held. If all of our counterparties for these derivatives defaulted simultaneously on December 31, 2011, the combined amount of our uncollateralized and overcollateralized exposure to these counterparties, or our maximum loss for accounting purposes after applying netting agreements and collateral, would have been approximately

$71 million. Our similar exposure as of December 31, 2010 was $32 million. Three counterparties each accounted for greater than 10% and collectively accounted for 97% of our net uncollateralized exposure to derivative counterparties, excluding commitments, at December 31, 2011. These counterparties were HSBC Bank USA, Royal Bank of Scotland, and UBS AG., all of which were rated "A" or above by S&P as of February 27, 2012.

Approximately 99% of our counterparty credit exposure for OTC interest-rate swaps, option-based derivatives, foreign-currency swaps, and purchased interest rate caps was collateralized at December 31, 2011 (excluding amounts related to our posting of cash collateral in excess of our derivative liability as determined at the counterparty level). The remaining exposure was primarily due to exposure amounts below the applicable counterparty collateral posting threshold, as well as market movements during the time period between when a derivative was marked to fair value and the date we received the related collateral. In some instances, these market movements result in us having provided collateral that has fair value in excess of our obligation, which represents our overcollateralization exposure. Collateral is typically transferred within one business day based on the values of the related derivatives.

In the event a derivative counterparty defaults, our economic loss may be higher than the uncollateralized exposure of our derivatives if we are not able to replace the defaulted derivatives in a timely and cost-effective fashion. We could also incur economic loss if the collateral held by us cannot be liquidated at prices that are sufficient to recover the amount of such exposure. We monitor the risk that our uncollateralized exposure to each of our OTC counterparties for interest-rate swaps, option-based derivatives, foreign-currency swaps, and purchased interest rate caps will increase under certain adverse market conditions by performing daily market stress tests. These tests, which involve significant management judgment, evaluate the potential additional uncollateralized exposure we would have to each of these derivative counterparties on OTC derivatives contracts assuming certain changes in the level and implied volatility of interest rates and certain changes in foreign currency exchange rates over a brief time period. Our actual exposure could vary significantly from amounts forecasted by these tests.

The total exposure on our OTC forward purchase and sale commitments, which are treated as derivatives for accounting purposes, was $38 million and $103 million at December 31, 2011 and December 31, 2010, respectively. These commitments are uncollateralized. Because the typical maturity of our forward purchase and sale commitments is less than 60 days and they are generally settled through a clearinghouse, we do not require master netting and collateral agreements for the counterparties of these commitments. However, we monitor the credit fundamentals of the counterparties to our forward purchase and sale commitments on an ongoing basis in an effort to ensure that they continue to meet our internal risk-management standards.

Selected European Sovereign and Non-Sovereign Exposures

The sovereign debt of Spain, Italy, Ireland, Portugal, and Greece (which we refer to herein as "troubled European countries") and the credit status of financial institutions with significant exposure to the troubled European countries has been adversely impacted due to weaknesses in the economic and fiscal situations of those countries. Moody's and Standard & Poor's recently downgraded a number of European countries, including Italy, Spain, and Portugal. We are monitoring our exposures to these countries and institutions.

As of December 31, 2011, we did not hold any debt issued by the governments of these troubled European countries and did not hold any financial instruments entered into with sovereign governments in those countries. As of that date, we also did not hold any debt issued by corporations or financial institutions domiciled in these troubled European countries and did not hold any other financial instruments entered into with corporations or financial institutions domiciled in those countries. For purposes of this discussion, we consider an entity to be domiciled in a country if its parent entity is headquartered in that country.

Our derivative portfolio and cash and other investments portfolio counterparties include a number of major European and non-European financial institutions. Many of these institutions operate in Europe, and we believe that all of these financial institutions have direct or indirect exposure to these troubled European countries. For many of these institutions, their direct and indirect exposures to these troubled European countries change on a daily basis. We monitor our major counterparties' exposures to troubled European countries, and adjust our exposures and risk limits to individual counterparties accordingly. Our exposures to derivative portfolio and cash and other investments portfolio counterparties are described in "Derivative Counterparties," "Cash and Other Investments Counterparties" and "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

In recent months, we have taken a number of actions designed to reduce our exposures to certain derivative portfolio and cash and other investments portfolio counterparties due to their exposure to troubled European countries, including substantially reducing our derivative exposure limits, our limits on the amount of unsecured overnight deposits, and our

limits for asset-backed commercial paper. For certain repurchase counterparties, we have reduced the credit limit and restricted the term of such transactions to overnight. We have also ceased investing in prime money funds that could hold substantial amounts of the non-U.S. sovereign debt.

It is possible that continued adverse developments in Europe could significantly impact our counterparties that have direct or indirect exposure to troubled European countries. In turn, this could adversely affect their ability to meet their obligations to us. For more information, see "RISK FACTORS — Competitive and Market Risks — *We depend on our institutional counterparties to provide services that are critical to our business, and our results of operations or financial condition may be adversely affected if one or more of our institutional counterparties do not meet their obligations to us."*

Mortgage Credit Risk

We are exposed to mortgage credit risk principally in our single-family credit guarantee and multifamily mortgage portfolios because we either hold the mortgage assets or have guaranteed mortgages in connection with the issuance of a Freddie Mac mortgage-related security, or other guarantee commitment. We are also exposed to mortgage credit risk related to our investments in non-Freddie Mac mortgage-related securities. For information about our holdings of these securities, see "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities — *Mortgage-Related Securities.*"

Single-family mortgage credit risk is primarily influenced by the credit profile of the borrower of the mortgage (*e.g.*, credit score, credit history, and monthly income relative to debt payments), documentation level, the number of borrowers, the features of the mortgage itself, the purpose of the mortgage, occupancy type, property type, the LTV ratio, and local and regional economic conditions, including home prices and unemployment rates. Multifamily mortgage credit risk is primarily influenced by multifamily market conditions (*e.g.*, rental and vacancy rates), the quality of the property's management, the features of the mortgage itself, the LTV ratio, the property's operating cash flow, and the local and regional economic conditions.

All mortgages that we purchase or guarantee have an inherent risk of default. To manage our mortgage credit risk in our single-family credit guarantee and multifamily mortgage portfolios, we focus on three key areas: underwriting standards and quality control process; portfolio diversification; and portfolio management activities, including loss mitigation and use of credit enhancements.

Single-Family Mortgage Credit Risk

Through our delegated underwriting process, single-family mortgage loans and the borrowers' ability to repay the loans are evaluated using several critical risk characteristics, including, but not limited to, the borrower's credit score and credit history, the borrower's monthly income relative to debt payments, the original LTV ratio, the type of mortgage product and the occupancy type of the loan. As part of our quality control process, after our purchase of the loans, we review the underwriting documentation for a sample of loans for compliance with our contractual standards. The most common underwriting deficiencies found in our reviews in 2011 are related to insufficient income and inadequate or missing documentation to support borrower qualification. The next most common deficiency is inaccurate data entered into Loan Prospector, our automated underwriting system. We are continuing to perform quality control sampling for loans we purchased in 2011 and have not yet compiled our results.

We meet with our larger seller/servicers with deficiencies from our performing loan sampling to help ensure they make appropriate changes to their underwriting process. In addition, for all of our largest seller/servicers, we actively manage the current quality of loan originations by providing monthly written and oral communications regarding loan defect rates and the drivers of those defects as identified in our performing loan quality control sampling reviews. If necessary, we work with seller/servicers to develop an appropriate plan of corrective action. For loans with identified underwriting deficiencies, we may require immediate repurchase or allow performing loans to remain in our portfolio subject to our continued right to issue a repurchase request to the seller/servicers, depending on the facts and circumstances. Our right to request repurchase by seller/servicers is intended to protect us against deficiencies in underwriting by our seller/servicers. While this protection is intended to reduce our mortgage credit risk, it increases our institutional risk exposure to seller/servicers. See "*Institutional Credit Risk — Single-Family Mortgage Seller/Servicers*" for further information on repurchase requests. Our contracts with some seller/servicers give us the right to levy financial penalties when mortgage loans delivered to us fail to meet our aggregate loan quality metrics. See "BUSINESS — Our Business" and "BUSINESS — Our Business Segments — *Single-Family Guarantee Segment — Underwriting Requirements and Quality Control Standards*" for information about our charter requirements for single-family loan purchases, delegated underwriting, and our quality control monitoring. See "BUSINESS— Regulation and Supervision —

Federal Housing Finance Agency — *Affordable Housing Goals*" for a discussion of factors that may cause us to purchase loans that do not meet our normal standards.

We were significantly adversely affected by deteriorating conditions in the single-family housing and mortgage markets during 2008 and 2009. During 2005 to 2007, financial institutions substantially increased origination and securitization of certain higher risk mortgage loans, such as subprime, option ARM, interest-only and Alt-A, and these loans comprised a much larger proportion of origination and securitization issuance volumes during 2006 and 2007, and to a lesser extent in 2005, as compared to prior or subsequent years. During this time, we increased our participation in the market for these products through our purchases of non-agency mortgage-related securities and through our loan securitization and guarantee activities. Our expanded participation in these products was driven by a combination of competing objectives and pressures, including meeting our affordable housing goals, competition, the desire to maintain or increase market share, and generating returns for investors. The mortgage market has changed considerably since 2007. Financial institutions have tightened their underwriting standards, which has significantly reduced the amount of subprime, option ARM, interest-only, and Alt-A loans being originated.

Conditions in the mortgage market continued to remain challenging during 2011. Most single-family mortgage loans, especially those originated from 2005 through 2008, have been affected by the compounding pressures on household wealth caused by significant declines in home values that began in 2006 and the ongoing weak employment environment. Our serious delinquency rates remained high in 2011 compared to historical levels, as discussed in "Credit Performance — Delinquencies." The UPB of our single-family non-performing loans remained at high levels during 2011.

Characteristics of the Single-Family Credit Guarantee Portfolio

The average UPB of loans in our single-family credit guarantee portfolio was approximately $151,000 and $150,000 at December 31, 2011 and December 31, 2010, respectively. Our single-family mortgage purchases and other guarantee commitment activity in 2011 decreased by 17% to $320.8 billion, as compared to $386.4 billion in 2010. Approximately 92% of the single-family mortgages we purchased in 2011 were fixed-rate amortizing mortgages, based on UPB. Approximately 78% of the single-family mortgages we purchased in 2011 were refinance mortgages, including approximately 26% that were relief refinance mortgages, based on UPB.

The table below provides additional characteristics of single-family mortgage loans purchased during 2011, 2010, and 2009, and of our credit guarantee portfolio at December 31, 2011, 2010, and 2009.

Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio[1]

	Percent of Purchases During The Year Ended December 31,			Portfolio[2] at December 31,		
	2011	2010	2009	2011	2010	2009
Original LTV Ratio Range[3][4]						
60% and below	30%	31%	34%	23%	23%	23%
Above 60% to 70%	17	17	18	16	16	16
Above 70% to 80%	44	45	41	42	43	45
Above 80% to 90%	5	4	5	9	9	8
Above 90% to 100%	4	3	2	8	8	8
Above 100%	<1	<1	<1	2	1	—
Total	100%	100%	100%	100%	100%	100%
Weighted average original LTV ratio	67%	67%	66%	72%	71%	71%
Estimated Current LTV Ratio Range[5]						
60% and below				25%	27%	28%
Above 60% to 70%				12	12	12
Above 70% to 80%				18	17	16
Above 80% to 90%				15	16	16
Above 90% to 100%				10	10	10
Above 100% to 110%				6	6	6
Above 110% to 120%				4	4	4
Above 120%				10	8	8
Total				100%	100%	100%
Weighted average estimated current LTV ratio:						
Relief refinance mortgages[6]				79%	78%	85%
All other mortgages				80%	78%	77%
Total mortgages				80%	78%	77%
Credit Score[3][7]						
740 and above	74%	73%	73%	55%	53%	50%
700 to 739	17	17	18	21	21	22
660 to 699	7	7	7	14	15	16
620 to 659	2	2	2	7	7	8
Less than 620	<1	1	<1	3	3	3
Not available	<1	<1	<1	<1	1	1
Total	100%	100%	100%	100%	100%	100%
Weighted average credit score:						
Relief refinance mortgages[6]				744	745	738
All other mortgages				734	732	729
Total mortgages				735	733	730
Loan Purpose						
Purchase	22%	20%	20%	30%	31%	35%
Cash-out refinance	18	21	26	27	29	30
Other refinance[8]	60	59	54	43	40	35
Total	100%	100%	100%	100%	100%	100%
Property Type						
Detached/townhome[9]	94%	94%	94%	92%	92%	92%
Condo/Co-op	6	6	6	8	8	8
Total	100%	100%	100%	100%	100%	100%
Occupancy Type						
Primary residence	92%	93%	93%	91%	91%	91%
Second/vacation home	4	4	5	5	5	5
Investment	4	3	2	4	4	4
Total	100%	100%	100%	100%	100%	100%

(1) Purchases and ending balances are based on the UPB of the single-family credit guarantee portfolio. Other Guarantee Transactions with ending balances of $2 billion at December 31, 2011, 2010, and 2009, are excluded from portfolio balance data since these securities are backed by non-Freddie Mac issued securities for which the loan characteristics data was not available.
(2) Includes loans acquired under our relief refinance initiative, which began in 2009.
(3) Purchases columns exclude mortgage loans acquired under our relief refinance initiative. See "Table 52 — Single-Family Refinance Loan Volume" for further information on the LTV ratios of these loans.
(4) Original LTV ratios are calculated as the amount of the mortgage we guarantee including the credit-enhanced portion, divided by the lesser of the appraised value of the property at the time of mortgage origination or the mortgage borrower's purchase price. Second liens not owned or guaranteed by us are excluded from the LTV ratio calculation because we generally do not receive data about them. The existence of a second lien mortgage reduces the borrower's equity in the home and, therefore, can increase the risk of default.
(5) Current LTV ratios are management estimates, which are updated on a monthly basis. Current market values are estimated by adjusting the value of the property at origination based on changes in the market value of homes in the same geographical area since origination. Estimated current LTV ratio range is not applicable to purchase activity, and excludes any secondary financing by third parties.
(6) Relief refinance mortgages comprised approximately 11%,7%, and 2% of our single-family credit guarantee portfolio by UPB as of December 31, 2011, 2010, and 2009, respectively.
(7) Credit score data is based on FICO scores. Although we obtain updated credit information on certain borrowers after the origination of a mortgage, such as those borrowers seeking a modification, the scores presented in this table represent only the credit score of the borrower at the time of loan origination.
(8) Other refinance transactions include: (a) refinance mortgages with "no cash-out" to the borrower; and (b) refinance mortgages for which the delivery data provided was not sufficient for us to determine whether the mortgage was a cash-out or a no cash-out refinance transaction.
(9) Includes manufactured housing and homes within planned unit development communities. The UPB of manufactured housing mortgage loans purchased during 2011, 2010, and 2009, was $376 million, $403 million, and $607 million, respectively.

Loan-to-Value Ratio

An important safeguard against credit losses on mortgage loans in our single-family credit guarantee portfolio is provided by the borrowers' equity in the underlying properties. As estimated current LTV ratios increase, the borrower's equity in the home decreases, which negatively affects the borrower's ability to refinance or sell the property for an amount at or above the balance of the outstanding mortgage loan. There is an increase in borrower default risk as LTV ratios increase, particularly for loans with LTV ratios above 80%. If a borrower has an estimated current LTV ratio greater than 100%, the borrower is "underwater" and, based upon historical information, is more likely to default than other borrowers due to limits in the ability to sell or refinance. The UPB of mortgages in our single-family credit guarantee portfolio with estimated current LTV ratios greater than 100% was 20% and 18% as of December 31, 2011 and December 31, 2010, respectively. The serious delinquency rate for single-family loans with estimated current LTV ratios greater than 100% was 12.8% and 14.9% as of December 31, 2011 and December 31, 2010, respectively. Due to declines in home prices since 2006, we estimate that as of December 31, 2011, approximately 49% of the loans originated in 2005 through 2008 that remained in our single-family credit guarantee portfolio as of that date had current LTV ratios greater than 100%. In recent years, loans with current LTV ratios greater than 100% contributed disproportionately to our credit losses. As of December 31, 2011 and December 31, 2010, for the loans in our single-family credit guarantee portfolio with greater than 80% estimated current LTV ratios, the borrowers had a weighted average credit score at origination of 724 and 721, respectively.

Credit Score

Credit scores are a useful measure for assessing the credit quality of a borrower. Credit scores are numbers reported by credit repositories, based on statistical models, that summarize an individual's credit record. FICO scores are the most commonly used credit scores today. FICO scores are ranked on a scale of approximately 300 to 850 points. Statistically, borrowers with higher credit scores are more likely to repay or have the ability to refinance than those with lower scores. We only obtain credit scores of borrowers at the time of origination and do not typically receive updated data on borrower credit scores after origination. Credit scores presented within this Annual Report on Form 10-K are at the time of origination and may not be indicative of borrowers' creditworthiness at December 31, 2011.

Loan Purpose

Mortgage loan purpose indicates how the borrower intends to use the funds from a mortgage loan. In a purchase transaction, the funds are used to acquire a property. In a cash-out refinance transaction, in addition to paying off existing mortgage liens, the borrower obtains additional funds that may be used for other purposes, including paying off subordinate mortgage liens and providing unrestricted cash proceeds to the borrower. In other refinance transactions, the funds are used to pay off existing mortgage liens and may be used in limited amounts for certain specified purposes; such refinances are generally referred to as "no cash-out" or "rate and term" refinances. The percentage of home purchase loans in our loan acquisition volume remained at low levels during 2011. Historically low interest rates contributed to high refinance activity in 2011, though it declined from 2010 levels. Cash-out refinancings generally have had a higher risk of default than mortgages originated in no cash-out, or rate and term, refinance transactions.

Property Type

Townhomes and detached single-family houses are the predominant type of single-family property. Condominiums are a property type that historically experiences greater volatility in home prices than detached single-family residences. Condominium loans in our single-family credit guarantee portfolio have a higher percentage of first-time homebuyers and homebuyers whose purpose is for investment or for a second home. In practice, investors and second home borrowers often seek to finance the condominium purchase with loans having a higher original LTV ratio than other borrowers. Approximately 36% of the condominium loans within our single-family credit guarantee portfolio are in California, Florida, and Illinois, which are among the states that have been most adversely affected by the economic recession and housing downturn. Condominium loans comprised 15% of our credit losses during both years ended December 31, 2011 and 2010, while these loans comprised 8% of our single-family credit guarantee portfolio at both dates.

Occupancy Type

Borrowers may purchase a home as a primary residence, second/vacation home or investment property that is typically a rental property. Mortgage loans on properties occupied by the borrower as a primary residence tend to have a lower credit risk than mortgages on investment properties or secondary residences.

Geographic Concentration

Local economic conditions can affect borrowers' ability to repay loans and the value of the collateral underlying the loans. Because our business involves purchasing mortgages from every geographic region in the U.S., we maintain a geographically diverse single-family credit guarantee portfolio. While our single-family credit guarantee portfolio's geographic distribution was relatively stable in recent years and remains broadly diversified across these regions, we were negatively impacted by overall home price declines in each region since 2006. Our credit losses continue to be greatest in those states that experienced significant decreases in property values since 2006, such as California, Florida, Nevada and Arizona. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for more information concerning the distribution of our single-family credit guarantee portfolio by geographic region.

Attribute Combinations

Certain combinations of loan characteristics often can indicate a higher degree of credit risk. For example, single-family mortgages with both high LTV ratios and borrowers who have lower credit scores typically experience higher rates of serious delinquency and default. We estimate that there were $11.1 billion and $11.8 billion at December 31, 2011 and December 31, 2010, respectively, of loans in our single-family credit guarantee portfolio with both original LTV ratios greater than 90% and FICO scores less than 620 at the time of loan origination. Certain mortgage product types, including interest-only or option ARM loans, that have additional higher risk characteristics, such as lower credit scores or higher LTV ratios, will also have a higher risk of default than those same products without these characteristics. The presence of a second lien mortgage can also increase the risk that a borrower will default. A second lien mortgage reduces the borrower's equity in the home, and has a similar negative effect on the borrower's ability to refinance or sell the property for an amount at or above the combined balances of the first and second mortgages. As of December 31, 2011 and December 31, 2010, approximately 15% and 14% of loans in our single-family credit guarantee portfolio had second lien financing by third parties at the time of origination of the first mortgage, and we estimate that these loans comprised 17% and 19%, respectively, of our seriously delinquent loans, based on UPB. However, borrowers are free to obtain second lien financing after origination and we are not entitled to receive notification when a borrower does so. Therefore, it is likely that additional borrowers have post-origination second lien mortgages.

Single-Family Mortgage Product Types

Product mix affects the credit risk profile of our total mortgage portfolio. The primary mortgage products in our single-family credit guarantee portfolio are first lien, fixed-rate mortgage loans. In general, 15-year amortizing fixed-rate mortgages exhibit the lowest default rate among the types of mortgage loans we securitize and purchase, due to the accelerated rate of principal amortization on these mortgages and the credit profiles of borrowers who seek and qualify for them. In a rising interest rate environment, balloon/reset and ARM borrowers typically default at a higher rate than fixed-rate borrowers. However, during recent years, when interest rates have generally declined, our delinquency and default rates on adjustable-rate and balloon/reset mortgage loans on a relative basis have been as high as, or higher than, fixed-rate loans because these borrowers are also susceptible to declining housing and economic conditions and/or had other higher-risk characteristics. Interest-only and option ARM loans are higher-risk mortgage products based on the features of these types of loans. Interest-only loans feature an increase in the monthly payment at the date of first reset (*i.e.*, when the monthly payment begins to include principal), while option ARMs feature initial periods during which the borrower has various options as to the amount of each monthly payment, until a specified date, when the terms are recast. See "*Other Categories of Single-Family Mortgage Loans*" below for additional information on higher-risk mortgages in our single-family credit guarantee portfolio.

In recent years, including 2011, we experienced a high volume of loan modifications, as troubled borrowers were able to take advantage of the various programs that we offered. The majority of our loan modifications result in new terms that include fixed interest rates after modification. However, our HAMP loan modifications result in an initial interest rate that subsequently adjusts to a new rate that is fixed for the remaining life of the loan. We have classified these loans as fixed-rate products for presentation within this Form 10-K and elsewhere in our reporting even though they have a rate adjustment provision because the change in rate is determined at the time of modification rather than at a future date.

The following paragraphs provide information on the interest-only, option ARM, adjustable-rate, and conforming jumbo loans in our single-family credit guarantee portfolio. Interest-only and option ARM loans have experienced significantly higher serious delinquency rates than fixed-rate amortizing mortgage products.

Interest-Only Loans

Interest-only loans have an initial period during which the borrower pays only interest, and at a specified date the monthly payment increases to begin reflecting repayment of principal. Interest-only loans represented approximately 4% and 5% of the UPB of our single-family credit guarantee portfolio at December 31, 2011 and December 31, 2010, respectively. We purchased a limited number of interest-only loans after 2008 and fully discontinued purchasing such loans on September 1, 2010.

The table below presents information for single-family mortgage loans in our single-family credit guarantee portfolio, excluding Other Guarantee Transactions, at December 31, 2011 that contain interest-only payment terms. The reported balances in the table below are aggregated by interest-only loan product type and categorized by the year in which the loan begins to require payments of principal. At December 31, 2011, approximately 11% of these interest-only loans are scheduled to begin requiring payments of principal in 2012 or 2013. The timing of the actual change in payment terms may differ from those presented due to a number of factors, including refinancing.

Table 46 — Single-Family Loans Scheduled Payment Change to Include Principal by Year at December 31, 2011[(1)]

	2011 and Prior	2012	2013	2014	2015	2016	2017 and Beyond	Total
				(in millions)				
ARM/interest-only	$13,002	$4,725	$3,498	$1,673	$4,207	$7,400	$19,526	$54,031
Fixed/interest-only	—	—	—	15	377	2,229	15,321	17,942
Total	$13,002	$4,725	$3,498	$1,688	$4,584	$9,629	$34,847	$71,973

(1) Based on the UPBs of mortgage products that contain interest-only provisions and that begin amortization of principal in each of the years shown. These reported balances are based on the UPB of the underlying mortgage loans and do not reflect the publicly-available security balances we use to report the composition of our PCs and REMICs and Other Structured Securities. Excludes: (a) mortgage loans underlying Other Guarantee Transactions; and (b) any mortgage loans which completed a modification before the end of the respective period and for which the terms of the loan were changed to an amortizing loan product.

The table below presents the trend of serious delinquency information for single-family interest-only mortgage loans in our single-family credit guarantee portfolio, excluding Other Guarantee Transactions, categorized by the year in which the loan begins to require payments of principal. Loans where the year of payment change is 2011 or prior have already changed to require payments of principal as of December 31, 2011; loans where the year of payment change is 2012 or later still require only payments of interest as of December 31, 2011 and will not require payments of principal until a future period.

Table 47 — Serious Delinquency Rates by Year of Payment Change to Include Principal[(1)]

	As of December 31,		
Year of payment change:	**2011**	**2010**	**2009**
2009 and prior	7.19%	8.66%	10.34%
2010	10.38	12.73	10.68
2011	18.96	19.65	16.95
2012 and after	18.63	19.11	18.49

(1) Based on loans remaining in the single-family guarantee portfolio as of December 31, 2011, 2010, and 2009, rather than all loans guaranteed by us and originated in the respective year. Excludes mortgage loans which completed a modification before the end of the respective period and for which the terms of the loan were changed to an amortizing loan product.

As shown in the table above, the serious delinquency rates of interest-only loans that experienced a change in payment to include principal during the last three years were not significantly impacted in the year the loan began the amortization of principal. We believe that the higher serious delinquency rates for interest-only loans with payment changes in 2010 and after (compared to those interest-only loans with payment changes in 2009 and prior) reflect that those borrowers have been more negatively impacted by the ongoing adverse economic conditions, including declines in home prices, than interest-only loans that experienced payment changes in earlier years.

In recent years, interest-only loans experienced high serious delinquency rates well before reaching the dates at which the loans begin to require amortization of principal. We believe that interest-only loan performance during the last three years was more adversely affected by changes in employment, home prices, and other regional and macro-economic conditions, than the increase in the borrower's monthly payment (when the loans begin to require payments of principal). In addition, a number of these loans were categorized as Alt-A, due to reduced documentation standards at the time of loan origination. The overall serious delinquency rate for all interest-only loans in our single-family credit guarantee portfolio was 17.6% as of December 31, 2011. Approximately 82% of all interest-only loans in our single-family credit guarantee portfolio had not yet begun amortization of principal and 69% of all interest-only loans in our single-family credit guarantee portfolio had current LTV ratios greater than 100% as of December 31, 2011. Since a substantial portion

of these loans were originated in 2005 through 2008 and are located in geographical areas that have been most impacted by declines in home prices since 2006, we believe that the serious delinquency rate for interest-only loans will remain high in 2012.

Option ARM Loans

Most option ARM loans have initial periods during which the borrower has various options as to the amount of each monthly payment, until a specified date, when the terms are recast. At both December 31, 2011 and December 31, 2010, option ARM loans represented less than 1% of the UPB of our single-family credit guarantee portfolio. Included in this exposure was $7.3 billion and $8.4 billion of option ARM securities underlying certain of our Other Guarantee Transactions at December 31, 2011 and December 31, 2010, respectively. While we have not categorized these option ARM securities as either subprime or Alt-A securities for presentation within this Form 10-K and elsewhere in our reporting, they could exhibit similar credit performance to collateral identified as subprime or Alt-A. We have not purchased option ARM loans in our single-family credit guarantee portfolio since 2007. For information on our exposure to option ARM loans through our holdings of non-agency mortgage-related securities, see "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities."

Adjustable-Rate Mortgage Loans

The table below presents information for single-family mortgage loans in our single-family credit guarantee portfolio, excluding Other Guarantee Transactions, at December 31, 2011 that contain adjustable payment terms. The reported balances in the table below are aggregated by product type and categorized by year of the next scheduled contractual reset date. At December 31, 2011, approximately 59% of these loans have interest rates that are scheduled to reset in 2012 or 2013. The timing of the actual reset dates may differ from those presented due to a number of factors, including prepayments or exercising of provisions within the terms of the mortgage (certain of which could delay or accelerate the timing of the reset date).

Table 48 — Single-Family Scheduled Adjustable-Rate Resets by Year at December 31, 2011[(1)]

	2012	2013	2014	2015	2016	Thereafter	Total
				(in millions)			
ARMs/amortizing	$29,540	$ 2,557	$2,103	$ 8,329	$14,802	$12,838	$ 70,169
ARMs/interest-only[(2)]	33,650	7,825	3,611	2,805	2,531	3,609	54,031
Balloon/resets	384	62	11	9	<1	2	468
Total	$63,574	$10,444	$5,725	$11,143	$17,333	$16,449	$124,668

(1) Based on the UPBs of mortgage products that contain adjustable-rate interest provisions and are scheduled to reset during the periods specified above. These reported balances are based on the UPB of the underlying mortgage loans and do not reflect the publicly-available security balances we use to report the composition of our PCs and REMICs and Other Structured Securities. Excludes: (a) mortgage loans underlying Other Guarantee Transactions since rate reset information is not available to us for these loans; and (b) any amortizing ARM loans which completed a modification before the end of the respective period and for which the terms of the loan were changed to a fixed-rate loan product.
(2) Reflects the UPB of interest-only loans that reset in each of the years shown. We report loans in the interest-only category if their original terms include interest-only provisions for a pre-determined period of time before the monthly payment changes to include amortization of principal. Includes $13.0 billion of loans that were interest-only at origination that have converted to include amortization of principal as of December 31, 2011.

The table below presents serious delinquency information for single-family adjustable-rate mortgage loans in our single-family credit guarantee portfolio, excluding Other Guarantee Transactions, categorized by the year in which the loan first had an interest rate reset. Loans where the year of first interest rate reset is 2011 or prior have already had one or more interest rate resets as of December 31, 2011; loans where the year of first interest rate reset is 2012 or later have not yet had an interest rate reset as of December 31, 2011 and will not have an interest rate reset until a future period.

Table 49 — Serious Delinquency Rates by Year of First Rate Reset[(1)]

	As of December 31,		
Year of payment change:	2011	2010	2009
2009 and prior	3.48%	3.70%	4.45%
2010	7.63	9.90	8.38
2011	17.50	18.01	17.31
2012 and after	10.16	13.24	14.62

(1) Based on loans remaining in the single-family credit guarantee portfolio as of December 31, 2011, 2010, and 2009, rather than all loans guaranteed by us and originated in the respective year. Excludes mortgage loans which completed a modification before the end of the respective period and for which the terms of the loan were changed to a fixed-rate loan product.

As shown in the table above, the trend in serious delinquency rates of adjustable-rate loans that experienced an interest rate reset during the last three years has not been significantly impacted by the change in interest rate of the loan.

Except for interest-only loans that began to amortize at the reset date, there were not significant increases to the borrowers' payments when these loans reached their first reset dates because market interest rates have generally declined in recent years. Interest-only loans are a higher-risk mortgage product, which feature an increase in the monthly payment at the date of first reset which is not solely related to the contractual interest rate (*i.e.*, when the monthly payment begins to include principal). In recent years, ARM loans have experienced high serious delinquency rates well before reaching dates at which the loans have reached their first rate reset. We believe that ARM loan performance during the last three years has been more adversely affected by changes in employment, home prices, and other regional and macro-economic conditions, than by changes in the interest rates of the loans. See "RISK FACTORS — Competitive and Market Risks — *Changes in interest rates could negatively impact our results of operations, stockholders' equity (deficit) and fair value of net assets"* for additional information. Since a substantial portion of ARM loans were originated in 2005 through 2008 and are located in geographical areas that have been most impacted by declines in home prices since 2006, we believe that the serious delinquency rate for ARM loans will continue to remain high in 2012.

Conforming Jumbo Loans

We purchased $27.7 billion and $23.9 billion of conforming jumbo loans during the years ended December 31, 2011 and 2010, respectively. The UPB of conforming jumbo loans in our single-family credit guarantee portfolio as of December 31, 2011 and December 31, 2010 was $49.8 billion and $37.8 billion, respectively. The average size of these loans was approximately $545,000 and $548,000 at December 31, 2011 and December 31, 2010, respectively. See "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments*" for further information on the conforming loan limits.

Other Categories of Single-Family Mortgage Loans

While we have classified certain loans as subprime or Alt-A for purposes of the discussion below and elsewhere in this Form 10-K, there is no universally accepted definition of subprime or Alt-A, and our classification of such loans may differ from those used by other companies. For example, some financial institutions may use FICO scores to delineate certain residential mortgages as subprime. In addition, we do not rely primarily on these loan classifications to evaluate the credit risk exposure relating to such loans in our single-family credit guarantee portfolio. For a definition of the subprime and Alt-A single-family loans and securities in this Form 10-K, see "GLOSSARY."

Subprime Loans

Participants in the mortgage market may characterize single-family loans based upon their overall credit quality at the time of origination, generally considering them to be prime or subprime. While we have not historically characterized the loans in our single-family credit guarantee portfolio as either prime or subprime, we do monitor the amount of loans we have guaranteed with characteristics that indicate a higher degree of credit risk (see "*Higher Risk Loans in the Single-Family Credit Guarantee Portfolio*" and "Table 57 — Single-Family Credit Guarantee Portfolio by Attribute Combinations" for further information). In addition, we estimate that approximately $2.3 billion and $2.5 billion of security collateral underlying our Other Guarantee Transactions at December 31, 2011 and December 31, 2010, respectively, were identified as subprime based on information provided to us when we entered into these transactions.

We also categorize our investments in non-agency mortgage-related securities as subprime if they were identified as such based on information provided to us when we entered into these transactions. At December 31, 2011 and December 31, 2010, we held $49.0 billion and $54.2 billion, respectively, in UPB of non-agency mortgage-related securities backed by subprime loans. These securities were structured to provide credit enhancements, and 7% and 10% of these securities were investment grade at December 31, 2011 and December 31, 2010, respectively. The credit performance of loans underlying these securities deteriorated significantly beginning in 2008. For more information on our exposure to subprime mortgage loans through our investments in non-agency mortgage-related securities see "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities."

Alt-A Loans

Although there is no universally accepted definition of Alt-A, many mortgage market participants classify single-family loans with credit characteristics that range between their prime and subprime categories as Alt-A because these loans have a combination of characteristics of each category, may be underwritten with lower or alternative income or asset documentation requirements compared to a full documentation mortgage loan, or both. The UPB of Alt-A loans in our single-family credit guarantee portfolio declined to $94.3 billion as of December 31, 2011 from $115.5 billion as of December 31, 2010. The UPB of our Alt-A loans declined in 2011 primarily due to refinancing into other mortgage products, foreclosure transfers, and other liquidation events. As of December 31, 2011, for Alt-A loans in our single-

family credit guarantee portfolio, the average FICO score at origination was 718. Although Alt-A mortgage loans comprised approximately 5% of our single-family credit guarantee portfolio as of December 31, 2011, these loans represented approximately 28% of our credit losses during 2011.

During the first quarter of 2011, we identified approximately $0.6 billion in UPB of single-family loans underlying certain Other Guarantee Transactions that had been previously reported in both the Alt-A and subprime categories. Commencing March 31, 2011, we no longer report these loans as Alt-A (but continue to report them as subprime) and we revised the prior periods to conform to the current period presentation.

We did not purchase any new single-family Alt-A mortgage loans in our single-family credit guarantee portfolio during 2011. Although we discontinued new purchases of mortgage loans with lower documentation standards for assets or income beginning March 1, 2009 (or later, as our customers' contracts permitted), we continued to purchase certain amounts of these mortgages in cases where the loan was either: (a) purchased pursuant to a previously issued other guarantee commitment; (b) part of our relief refinance mortgage initiative; or (c) in another refinance mortgage initiative and the pre-existing mortgage (including Alt-A loans) was originated under less than full documentation standards. However, in the event we purchase a refinance mortgage in one of these programs and the original loan had been previously identified as Alt-A, such refinance loan may no longer be categorized or reported as an Alt-A mortgage in this Form 10-K and our other financial reports because the new refinance loan replacing the original loan would not be identified by the seller/servicer as an Alt-A loan. As a result, our reported Alt-A balances may be lower than would otherwise be the case had such refinancing not occurred. From the time the relief refinance initiative began in 2009 to December 31, 2011, we purchased approximately $15.3 billion of relief refinance mortgages that were previously categorized as Alt-A loans in our portfolio, including $5.1 billion during 2011.

We also hold investments in non-agency mortgage-related securities backed by single-family Alt-A loans. At December 31, 2011 and December 31, 2010, we held investments of $16.8 billion and $18.8 billion, respectively, of non-agency mortgage-related securities backed by Alt-A and other mortgage loans and 15% and 22%, respectively, of these securities were categorized as investment grade. The credit performance of loans underlying these securities deteriorated significantly since the beginning of 2008 and continued to deteriorate during 2011. We categorize our investments in non-agency mortgage-related securities as Alt-A if the securities were identified as such based on information provided to us when we entered into these transactions. For more information on our exposure to Alt-A mortgage loans through our investments in non-agency mortgage-related securities see "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities."

Higher-Risk Loans in the Single-Family Credit Guarantee Portfolio

The table below presents information about certain categories of single-family mortgage loans within our single-family credit guarantee portfolio that we believe have certain higher-risk characteristics. These loans include categories based on product type and borrower characteristics present at origination. The table includes a presentation of each higher risk category in isolation. A single loan may fall within more than one category (for example, an interest-only loan may also have an original LTV ratio greater than 90%). Mortgage loans with higher LTV ratios have a higher risk of default, especially during housing and economic downturns, such as the one the U.S. has experienced since 2007.

Table 50 — Certain Higher-Risk Categories in the Single-Family Credit Guarantee Portfolio[1]

	As of December 31, 2011			
	UPB	Estimated Current LTV[2]	Percentage Modified[3]	Serious Delinquency Rate[4]
	(dollars in billions)			
Loans with one or more specified characteristics	$342.9	105%	7.2%	9.3%
Categories (individual characteristics):				
Alt-A[5]	94.3	107	8.8	11.9
Interest-only[6]	72.0	120	0.2	17.6
Option ARM[7]	8.4	119	5.5	20.5
Original LTV ratio greater than 90%, non-relief refinance mortgages[8]	107.9	108	8.1	8.5
Original LTV ratio greater than 90%, relief refinance mortgages[8]	59.3	104	0.1	1.3
Lower FICO scores at origination (less than 620)[8]	55.6	93	13.4	12.9

	As of December 31, 2010			
	UPB	Estimated Current LTV[2]	Percentage Modified[3]	Serious Delinquency Rate[4]
	(dollars in billions)			
Loans with one or more specified characteristics	$368.8	100%	5.5%	10.3%
Categories (individual characteristics):				
Alt-A[5]	115.5	99	5.7	12.2
Interest-only[6]	95.4	112	0.5	18.4
Option ARM[7]	9.4	115	3.1	21.2
Original LTV ratio greater than 90%, non-relief refinance mortgages[8]	117.8	105	6.3	9.1
Original LTV ratio greater than 90%, relief refinance mortgages[8]	36.5	101	0.1	0.7
Lower FICO scores at origination (less than 620)[8]	61.2	89	10.4	13.9

(1) Categories are not additive and a single loan may be included in multiple categories if more than one characteristic is associated with the loan. Loans with a combination of these characteristics will have an even higher risk of default than those with an individual characteristic.
(2) See endnote (5) to "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for information on our calculation of current LTV ratios.
(3) Represents the percentage of loans based on loan count in our single-family credit guarantee portfolio that have been modified under agreement with the borrower, including those with no changes in the interest rate or maturity date, but where past due amounts are added to the outstanding principal balance of the loan. Excludes loans underlying certain Other Guarantee Transactions for which data was not available.
(4) See "Portfolio Management Activities-Credit Performance-Delinquencies" for further information about our reported serious delinquency rates.
(5) Loans within the Alt-A category continue to remain in that category following modification, even though the borrower may have provided full documentation of assets and income to complete the modification.
(6) The percentages of interest-only loans which have been modified at period end reflect that a number of these loans have not yet been assigned to their new product category (post-modification), primarily due to delays in processing.
(7) Loans within the option ARM category continue to remain in that category following modification, even though the modified loan no longer provides for optional payment provisions.
(8) See endnotes (4) and (7) to "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for information on our calculation of original LTV ratios and our use of FICO scores, respectively.

Loans with one or more of the above characteristics comprised approximately 20% of our single-family credit guarantee portfolio as of both December 31, 2011 and 2010. The total UPB of loans in our single-family credit guarantee portfolio with one or more of these characteristics declined approximately 7% to $343 billion as of December 31, 2011 from $369 billion as of December 31, 2010. This decline was principally due to liquidations resulting from prepayments, refinancing activity, and liquidations resulting from foreclosure events and foreclosure alternatives, but was partially offset by increases in loans with original LTV ratios greater than 90% due to our relief refinance mortgage activity in 2011. The serious delinquency rates associated with these loans declined to 9.3% as of December 31, 2011 from 10.3% as of December 31, 2010.

Credit Enhancements

The portfolio information below excludes our holdings of non-Freddie Mac mortgage-related securities. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities — *Mortgage-Related Securities*" for credit enhancement and other information about our investments in non-Freddie Mac mortgage-related securities.

Our charter requires that single-family mortgages with LTV ratios above 80% at the time of purchase be covered by specified credit enhancements or participation interests. However, as discussed below, under HARP, we allow eligible borrowers who have mortgages with high current LTV ratios to refinance their mortgages without obtaining new mortgage insurance in excess of what was already in place. Primary mortgage insurance is the most prevalent type of credit enhancement protecting our single-family credit guarantee portfolio, and is typically provided on a loan-level basis. In addition, for some mortgage loans, we elect to share the default risk by transferring a portion of that risk to various third parties through a variety of other credit enhancements.

At December 31, 2011 and December 31, 2010, our single-family credit-enhanced mortgages represented 14% and 15%, respectively, of our single-family credit guarantee portfolio, excluding those backing Ginnie Mae Certificates and

HFA bonds guaranteed by us under the HFA initiative. Freddie Mac securities backed by Ginnie Mae Certificates and HFA bonds guaranteed by us under the HFA initiative are excluded because we consider the incremental credit risk to which we are exposed to be insignificant.

We had recoveries (excluding reimbursements for our expenses) of $2.8 billion and $3.4 billion that reduced our charge-offs of single-family loans during the years ended December 31, 2011 and 2010, respectively. These amounts include $1.8 billion and $2.1 billion during the years ended December 31, 2011 and 2010, respectively, in recoveries associated with our primary and pool mortgage insurance policies and other credit enhancements. We had additional recoveries from credit enhancements that provided reimbursement for and reduced our expenses by $0.3 billion during both 2011 and 2010. During 2011 and 2010, the credit enhancement coverage for our single-family loan purchases was lower than in periods before 2009 and earlier, primarily as a result of high refinance activity. Refinance loans (other than relief refinance mortgages) typically have lower LTV ratios, and are more likely to have an LTV ratio below 80% and not require credit protection as specified in our charter. In addition, we have been purchasing significant amounts of relief refinance mortgages. These mortgages allow for the refinance of existing loans guaranteed by us under terms such that we may not have mortgage insurance for some or all of the UPB of the mortgage in excess of 80% of the value of the property for certain of these loans.

Our ability and desire to expand or reduce the portion of our total mortgage portfolio covered by credit enhancements will depend on: (a) our evaluation of the credit quality of new business purchase opportunities; (b) the risk profile of our portfolio; (c) the credit worthiness of potential counterparties; and (d) the future availability of effective credit enhancements at prices that permit an attractive return. While the use of credit enhancements reduces our exposure to mortgage credit risk, it increases our exposure to institutional credit risk. As guarantor, we remain responsible for the payment of principal and interest if mortgage insurance or other credit enhancements do not provide full reimbursement for covered losses. Our credit losses could increase if an entity that provides credit enhancement fails to fulfill its obligation, as this would reduce the amount of our credit loss recoveries.

Primary mortgage insurance is the most prevalent type of credit enhancement protecting our single-family credit guarantee portfolio and is typically provided on a loan-level basis. Primary mortgage insurance transfers varying portions of the credit risk associated with a mortgage to a third-party insurer. Generally, in order to file a claim under a primary mortgage insurance policy, the insured loan must be in default and the borrower's interest in the underlying property must have been extinguished, such as through a foreclosure action. The mortgage insurer has a prescribed period of time within which to process a claim and make a determination as to its validity and amount.

Other prevalent types of credit enhancements that we use are lender recourse (under which we may require a lender to repurchase a loan upon default) and indemnification agreements (under which we may require a lender to reimburse us for credit losses realized on mortgages), as well as pool insurance. Pool insurance provides insurance on a pool of loans up to a stated aggregate loss limit. In addition to a pool-level loss coverage limit, some pool insurance contracts may have limits on coverage at the loan level. In certain instances, the cumulative losses we have incurred as of December 31, 2011 combined with our expectations of potential future claims may exceed the maximum limit of loss allowed by the policy.

In order to file a claim under a pool insurance policy, we generally must have finalized the primary mortgage claim, disposed of the foreclosed property, and quantified the net loss payable to us with respect to the insured loan to determine the amount due under the pool insurance policy. Certain pool insurance policies have specified loss deductibles that must be met before we are entitled to recover under the policy. We have institutional credit risk relating to the potential insolvency or non-performance of mortgage insurers that insure mortgages we purchase or guarantee. See *"Institutional Credit Risk — Mortgage Insurers"* for further discussion about pool insurance coverage and our mortgage loan insurers.

Certain of our single-family Other Guarantee Transactions utilize subordinated security structures as a form of credit enhancement. At December 31, 2011 and 2010, the UPB of single-family Other Guarantee Transactions with subordination coverage at origination was $3.3 billion and $3.9 billion, and the subordination coverage on these securities was $647 million and $825 million, respectively. At December 31, 2011 and 2010, the average serious delinquency rate on single-family Other Guarantee Transactions with subordination coverage was 20.9% and 21.1%, respectively.

See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for additional information about credit protection and other forms of credit enhancements covering loans in our single-family credit guarantee portfolio as of December 31, 2011 and December 31, 2010.

Other Credit Risk Management Activities

To compensate us for higher levels of risk in some mortgage products, we may charge upfront delivery fees above a base management and guarantee fee, which are calculated based on credit risk factors such as the mortgage product type,

loan purpose, LTV ratio and other loan or borrower characteristics. We implemented several increases in delivery fees that became effective in 2009 applicable to single-family mortgages with certain higher-risk loan characteristics. We implemented additional delivery fee increases that become effective March 1, 2011 (or later, as outstanding contracts permitted) for single-family loans with higher LTV ratios. These fee increases do not apply to relief refinance mortgages with LTV ratios greater than 80% and with settlement dates on or after July 1, 2011. Given the uncertainty of the housing market in recent years, during 2011 and 2010, we entered into arrangements with certain existing customers at their renewal dates that allow us to change credit and pricing terms more quickly than in the past. In response to a July 2011 request from FHFA, we have incorporated into our agreements with single-family sellers the ability to change our management and guarantee fees upon 90 days or less notice to sellers, if directed to do so by FHFA.

On December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. Among its provisions, this new law directs FHFA to require Freddie Mac and Fannie Mae to increase guarantee fees by no less than 10 basis points above the average guarantee fees charged in 2011 on single-family mortgage-backed securities. For more information, see "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Legislated Increase to Guarantee Fees*."

Single-Family Loan Workouts and the MHA Program

Loan workout activities are a key component of our loss mitigation strategy for managing and resolving troubled assets and lowering credit losses. Our loan workouts consist of: (a) forbearance agreements; (b) repayment plans; (c) loan modifications; and (d) foreclosure alternatives (short sales or deed in lieu of foreclosure transactions). Our single-family loss mitigation strategy emphasizes early intervention by servicers in delinquent mortgages and provides alternatives to foreclosure. Other single-family loss mitigation activities include providing our single-family servicers with default management tools designed to help them manage non-performing loans more effectively and to assist borrowers in retaining home ownership where possible, or facilitate foreclosure alternatives when continued homeownership is not an option. See "BUSINESS — Our Business Segments — *Single-Family Guarantee Segment — Loss Mitigation and Loan Workout Activities*" for a general description of our loan workouts.

Loan workouts are intended to reduce the number of delinquent mortgages that proceed to foreclosure and, ultimately, mitigate our total credit losses by reducing or eliminating a portion of the costs related to foreclosed properties and avoiding the additional credit losses that likely would be incurred in a REO sale. While we incur costs in the short term to execute our loan workout initiatives, we believe that, overall, these initiatives could reduce our ultimate credit losses over the long term.

HAMP and our new non-HAMP standard loan modification are important components of our loan workout program and have many similar features, including the initial incentive fees paid to servicers upon completion of a modification. Both of these loan modification initiatives are intended to provide borrowers the opportunity to obtain more affordable monthly payments and to reduce the number of delinquent mortgages that proceed to foreclosure and, ultimately, mitigate our credit losses by reducing or eliminating a portion of the costs related to foreclosed properties. However, we cannot currently estimate whether, or the extent to which, costs incurred in the near term from HAMP and our new non-HAMP standard loan modification may be offset, if at all, by the prevention or reduction of potential future costs of serious delinquencies and foreclosures.

Our seller/servicers have a significant role in servicing loans in our single-family credit guarantee portfolio, which includes an active role in our loss mitigation efforts. Therefore, a decline in their performance could impact the overall quality of our credit performance (including through missed opportunities for mortgage modifications), which could adversely affect our financial condition or results of operations and have significant impacts on our ability to mitigate credit losses. The risk of such a decline in performance remains high. For more information, see "RISK FACTORS — Competitive and Market Risks — *We face the risk that seller/servicers may fail to perform their obligations to service loans in our single-family and multifamily mortgage portfolios or that their servicing performance could decline*."

We establish guidelines for our servicers to follow and provide them default management tools to use, in part, in determining which type of loan workout would be expected to provide the best opportunity for minimizing our credit losses. We require our single-family seller/servicers to first evaluate problem loans for a repayment or forbearance plan before considering modification. If a borrower is not eligible for a modification, our seller/servicers pursue other workout options before considering foreclosure. During 2011, we helped more than 208,000 borrowers either stay in their homes or sell their properties and avoid foreclosures through our various workout programs, including HAMP, and we completed approximately 122,000 foreclosures.

The MHA Program is designed to help in the housing recovery, promote liquidity and housing affordability, expand foreclosure prevention efforts, and set market standards. Participation in the MHA Program is an integral part of our mission of providing stability to the housing market. Through our participation in this program, we help borrowers maintain home ownership. Some of the key initiatives of this program include HAMP and HARP, which are discussed below.

Home Affordable Modification Program

HAMP commits U.S. government, Freddie Mac and Fannie Mae funds to help eligible homeowners avoid foreclosures and keep their homes through mortgage modifications, where possible. Under this program, we offer loan modifications to financially struggling homeowners with mortgages on their primary residences that reduce the monthly principal and interest payments on their mortgages. HAMP requires that each borrower complete a trial period during which the borrower will make monthly payments based on the estimated amount of the modification payments. Trial periods are required for at least three months. After the final trial-period payment is received by our servicer and the borrower has provided necessary documentation, the borrower and servicer will enter into the modification. We bear the costs of these activities, including the cost of any monthly payment reductions.

Pursuant to the servicing alignment initiative, we changed some of the processes and procedures for our loans under HAMP to match the new processes and procedures for the servicing alignment initiative. Certain other features of HAMP include the following:

- Under HAMP, the goal is to reduce the borrowers' monthly mortgage payments to 31% of gross monthly income, which may be achieved through a combination of methods, including interest rate reductions, term extensions, and principal forbearance. Although HAMP contemplates that some servicers will also make use of principal reduction to achieve reduced payments for borrowers, we have only used forbearance and have not used principal reduction in modifying our loans.
- For HAMP modifications with a trial period beginning on or after October 1, 2011, servicers are paid incentive fees on a tiered structure, ranging from $400 to $1,600, based on the severity of the delinquency at the start of the trial period. Prior to October 1, 2011, servicers were paid a $1,000 incentive fee when they modified a loan and an additional $500 incentive fee if the loan was current when it entered the trial period. In addition, servicers receive up to $1,000 for any modification that reduces a borrower's monthly payment by 6% or more, in each of the first three years after the modification, as long as the modified loan remains current.
- Borrowers whose loans are modified through HAMP accrue monthly incentive payments that are applied annually to reduce up to $1,000 of their principal per year, for five years, as long as they are making timely payments under the modified loan terms.
- HAMP applies to loans originated on or before January 1, 2009.

On January 27, 2012, Treasury announced enhancements to HAMP, including extending the end date to December 31, 2013, expanding the program's eligibility criteria for modifications, increasing incentives paid to investors who engage in principal reduction, and extending to the GSEs the opportunity to receive investor incentives for principal reduction. Treasury has not yet published details about the incentives that will be available to the GSEs. FHFA announced that the GSEs will extend their use of HAMP until December 31, 2013, and continue to offer the standard modification under the servicing alignment initiative. FHFA noted that Treasury's expanded eligibility criteria for HAMP modifications are consistent with our standard non-HAMP modification.

FHFA announced that it has been asked to consider the newly available HAMP incentives for principal reduction. FHFA previously released an analysis concluding that principal forgiveness does not provide benefits that are greater than principal forbearance as a loss mitigation tool. FHFA stated that its assessment of the investor incentives now being offered by Treasury will follow its previous analysis, including consideration of the eligible universe, operational costs to implement such changes, and potential borrower incentive effects.

The table below presents the number of single-family loans that completed modification or were in trial periods under HAMP as of December 31, 2011 and December 31, 2010.

Table 51 — Single-Family Home Affordable Modification Program Volume[1]

	As of December 31, 2011		As of December 31, 2010	
	Amount[2]	Number of Loans	Amount[2]	Number of Loans
	(dollars in millions)			
Completed HAMP modifications[3]	$33,681	152,519	$23,635	107,073
Loans in the HAMP trial period	$ 2,790	12,802	$ 4,905	22,352

(1) Based on information reported by our servicers to the MHA Program administrator.
(2) For loans in the HAMP trial period, this reflects the loan balance prior to modification. For completed HAMP modifications, the amount represents the balance of loans after modification under HAMP.
(3) Completed HAMP modifications are those where the borrower has made the last trial period payment, has provided the required documentation to the servicer and the modification has become effective. Amounts presented represent completed HAMP modifications with effective dates since our implementation of HAMP in 2009 through December 31, 2011 and December 31, 2010, respectively.

As of December 31, 2011, the borrower's monthly payment was reduced on average by an estimated $565, which amounts to an average of $6,780 per year, and a total of $1.0 billion in annual reductions for all of our completed HAMP modifications (these amounts are calculated by multiplying the number of completed modifications by the average reduction in monthly payment, and have not been adjusted to reflect the actual performance of the loans following modification). Except in limited instances, each borrower's reduced payment will remain in effect for a minimum of five years, and borrowers whose interest rates were adjusted below market levels will have their interest rate and payment gradually increased after the fifth year to a rate consistent with the market rate at the time of modification. We bear the cost associated with the borrowers' payment reductions. Although mortgage investors under the MHA Program are entitled to certain subsidies from Treasury for reducing the borrowers' monthly payments from 38% to 31% of the borrower's income, we do not receive such subsidies on modified mortgages owned or guaranteed by us.

A standard trial period plan is three months in duration. Our servicers are permitted to add an interim month, which will be reported as a fourth trial period month. In addition, our servicers are authorized to extend a trial period for up to an additional two months when the borrower is in bankruptcy in order to provide additional time to have the mortgage removed from the bankruptcy plan, which is a pre-requisite to a modification under HAMP. The number of our loans in the HAMP trial period declined to 12,802 as of December 31, 2011 from 22,352 as of December 31, 2010. A large number of borrowers entered into HAMP trial period plans when the program was initially introduced in 2009. Significantly fewer new borrowers entered into HAMP trial period plans beginning in the second half of 2010, when we changed the income documentation requirements as discussed below. We expect fewer borrowers will initiate HAMP modification during 2012 than 2011, because a large number of the delinquent borrowers that were eligible for the program have already completed the trial period or attempted to do so, but failed.

To address documentation issues experienced when the program began, guidelines for HAMP provide that, beginning with trial periods that became effective on or after June 1, 2010, borrowers must provide income documentation before entering into a HAMP trial period. Prior to the June 1, 2010 changes to HAMP, we experienced approximately a 38% modification completion rate under the program. Given the changes made to the program effective June 1, 2010, we have since experienced a modification completion rate in excess of 80%. When a borrower's HAMP trial period is cancelled, the loan is considered for our other workout activities.

Approximately 40% of our loans in the HAMP trial period as of December 31, 2011 have been in the trial period for more than the minimum duration of three months. Based on information provided by the program administrator, the average length of the trial period for loans in the program as of December 31, 2011 was five months. For more information on our redefault rates on these loans, see "Table 54 — Reperformance Rates of Modified Single-Family Loans."

HAMP is one modification option for single-family loans, but we also have completed a large volume of modifications through our non-HAMP loan modification initiatives.

The costs we incur related to HAMP have been, and will likely continue to be, significant for the following reasons:

- Except for certain Other Guarantee Transactions and loans underlying our other guarantee commitments, we bear the full cost of the monthly payment reductions related to modifications of loans we own or guarantee and all servicer and borrower incentives, and we will not receive a reimbursement of these costs from Treasury. We paid $184 million of servicer incentives during 2011, as compared to $178 million of such incentives during 2010. As of December 31, 2011, we accrued $77 million for both initial and recurring servicer incentives not yet due. We paid $111 million of borrower incentives during 2011, as compared to $64 million of these incentives during 2010.

As of December 31, 2011, we accrued $60 million for borrower incentives not yet due. We also have the potential to incur additional servicer incentives and borrower incentives as long as the borrower remains current on a loan modified under HAMP.

- Under HAMP, we typically provide concessions to borrowers, which generally include interest rate reductions and often also provide for forbearance (but not forgiveness) of principal.
- Some borrowers will fail to complete the HAMP trial period and others will default on their HAMP modified loans. For those borrowers who redefault or who do not complete the trial period and do not qualify for another loan workout, HAMP will have delayed the resolution of the loans through the foreclosure process. If home prices decline while these events take place, such delay in the foreclosure process may increase the losses we recognize on these loans, to the extent the prices we ultimately receive for the foreclosed properties are less than the prices we could have received had we foreclosed upon the properties earlier.
- Non-GSE mortgages modified under HAMP include mortgages backing our investments in non-agency mortgage-related securities. Such modifications reduce the monthly payments due from affected borrowers, and thus reduce the payments we receive on these securities (to the extent the payment reductions have not been absorbed by subordinated investors or by other credit enhancement).

Servicing Alignment Initiative and Non-HAMP Modifications

In February 2011, FHFA directed Freddie Mac and Fannie Mae to develop consistent requirements, policies, and processes for the servicing of non-performing loans. This directive was designed to create greater consistency in servicing practices and to build on the best practices of each of the GSEs. In April 2011, pursuant to this directive, FHFA announced a new set of aligned standards (known as the servicing alignment initiative) for servicing non-performing loans owned or guaranteed by Freddie Mac and Fannie Mae that are designed to help servicers do a better job of communicating and working with troubled borrowers and to bring greater accountability to the servicing industry. We announced our detailed requirements for this initiative on June 30, 2011, with implementation beginning for loans that were delinquent as of October 1, 2011. These standards provide for earlier and more frequent communication with delinquent borrowers, consistent requirements for collecting documents from borrowers, consistent timelines for responding to borrowers, and consistent timelines for processing foreclosures. These standards are expected to result in greater alignment of servicer processes for both HAMP and most non-HAMP workouts.

Under these new servicing standards, we will pay incentives to servicers that exceed certain performance standards with respect to servicing delinquent loans. We will also assess compensatory fees from servicers if they do not achieve a minimum performance benchmark with respect to servicing delinquent loans. These incentives may result in our payment of increased fees to our seller/servicers, the cost of which may be at least partially mitigated by the compensatory fees paid to us by our servicers that do not perform as required.

As part of the servicing alignment initiative, we began implementation of a new non-HAMP standard loan modification initiative. This new standard modification replaced our previous non-HAMP modification initiative beginning January 1, 2012. The new standard modification requires a three-month trial period. Servicers were permitted to begin offering standard modification trial period plans with effective dates on or after October 1, 2011. A modest number of borrowers entered trial periods under our standard non-HAMP modification initiative as of December 31, 2011. We expect to experience a temporary decline in completed modification volume in the first half of 2012, below what otherwise would be expected, as servicers transition borrowers to the new standard modification initiative and borrowers complete the trial period. This new standard modification program is expected to result in a higher volume of modifications where we partially forbear (but do not forgive) principal until the borrower sells the home or refinances or pays off the mortgage. The standard modification provides an extension of the loan's term to 480 months. In addition, the new modification initiative currently provides for a standard modified interest rate of 5% (though FHFA could change this in the future). This new initiative also provides for a servicer incentive fee schedule for non-HAMP modifications, comparable to the HAMP servicer incentive fee structure, effective October 1, 2011. The incentive fees are intended to provide greater incentives to our servicers to modify loans earlier in the delinquency, which may cause the servicer incentive costs associated with our modification activities to increase in the future. The standard modification does not include borrower incentive payments or recurring servicer incentive fees after the initial servicer incentive payment.

We expect that the costs we incur related to our new non-HAMP standard loan modifications will likely be significant. These costs will be similar to those described above under "Home Affordable Modification Program" relating to: (a) bearing the full cost of monthly payment reductions; (b) paying initial incentive fees to servicers; (c) providing concessions to borrowers; and (d) the potential for delaying the resolution of loans through the foreclosure process. While

we incur costs in the short-term to execute our non-HAMP standard modifications, we believe that, overall, our non-HAMP standard modification could reduce our ultimate credit losses over the long-term.

Home Affordable Refinance Program and Relief Refinance Mortgage Initiative

HARP gives eligible homeowners (whose monthly payments are current) with existing loans that are owned or guaranteed by us or Fannie Mae an opportunity to refinance into loans with more affordable monthly payments and/or fixed-rate terms. Through December 2011, under HARP, eligible borrowers who had mortgages with current LTV ratios above 80% and up to 125% were allowed to refinance their mortgages without obtaining new mortgage insurance in excess of what is already in place. Beginning December 2011, HARP was expanded to allow eligible borrowers who have mortgages with current LTV ratios above 125% to refinance under the program.

Our underwriting procedures for relief refinance mortgages are limited in many cases, and such procedures generally do not include all of the changes in underwriting standards we have implemented in the last several years. As a result, relief refinance mortgages generally reflect many of the credit risk attributes of the original loans. However, borrower participation in our relief refinance mortgage initiative may help reduce our exposure to credit risk in cases where borrower payments under their mortgages are reduced, thereby strengthening the borrower's potential to make their mortgage payments.

Part of the relief refinance mortgage initiative is our implementation of HARP, and relief refinance options are also available for certain non-HARP loans. HARP is targeted at borrowers with current LTV ratios above 80%; however, our relief refinance initiative also allows borrowers with LTV ratios of 80% and below to participate. Over time, relief refinance mortgages with LTV ratios above 80% (HARP loans) may not perform as well as other refinance mortgages because of the continued high LTV ratios of these loans. Our relief refinance initiative is only for qualifying mortgage loans that we already hold or guarantee. We continue to bear the credit risk for refinanced loans under this program, to the extent that such risk is not covered by existing mortgage insurance or other existing credit enhancements. The implementation of the relief refinance mortgage initiative resulted in a higher volume of purchases than we would expect in the absence of the program.

The table below presents the composition of our purchases of refinanced single-family loans during the year ended December 31, 2011 and 2010.

Table 52 — Single-Family Refinance Loan Volume[1]

	Year Ended December 31, 2011			Year Ended December 31, 2010		
	Amount	Number of Loans	Percent	Amount	Number of Loans	Percent
	(dollars in millions)					
Relief refinance mortgages:						
Above 105% LTV ratio	$ 8,174	36,307	3.1%	$ 3,977	16,667	1.1%
Above 80% to 105% LTV ratio	31,566	148,643	12.6	43,906	192,650	13.1
80% and below LTV ratio	42,304	267,633	22.6	57,766	323,851	22.0
Total relief refinance mortgages	$ 82,044	452,583	38.3%	$105,649	533,168	36.2%
Total refinance loan volume[2]	$246,913	1,183,304	100.0%	$303,060	1,470,786	100.0%

(1) Consists of all single-family refinance mortgage loans that we either purchased or guaranteed during the period, excluding those associated with other guarantee commitments and Other Guarantee Transactions.
(2) Consists of relief refinance mortgages and other refinance mortgages.

Relief refinance mortgages comprised approximately 33% and 35% of our total refinance volume during 2011 and 2010, respectively. Relief refinance mortgages with LTV ratios above 80% represented approximately 12% of our total single-family credit guarantee portfolio purchases during both 2011 and 2010. Relief refinance mortgages comprised approximately 11% and 7% of the UPB in our total single-family credit guarantee portfolio at December 31, 2011 and December 31, 2010, respectively. As of December 31, 2011, the serious delinquency rates for relief refinance loans with: (a) LTV ratios of 80% or less; (b) LTV ratios from 80% to 100%; (c) LTV ratios of more than 100%; and (d) total relief refinance mortgage loans for all LTV ratios were 0.2%, 0.9%, 1.5%, and 0.6%, respectively.

On October 24, 2011 FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to attract more eligible borrowers whose monthly payments are current and who can benefit from refinancing their home mortgages. The Acting Director of FHFA stated that the goal of pursuing these changes is to create refinancing opportunities for more borrowers whose mortgages are owned or guaranteed by Freddie Mac and Fannie Mae while reducing risk for these entities and bringing a measure of stability to housing markets. The revisions to HARP enable us to expand the assistance we may provide to homeowners by making their mortgage payments more affordable through one or more of the following ways: (a) a reduction in payment; (b) a reduction in rate; (c) movement to a more stable

mortgage product type (*i.e.*, from an ARM to a fixed-rate mortgage); or (d) a reduction in amortization term. See "BUSINESS — Our Business Segments — *Single-Family Guarantee Segment — Loss Mitigation and Loan Workout Activities*" for additional information about recent changes to HARP.

In November 2011, Freddie Mac and Fannie Mae issued guidance with operational details about the HARP changes to mortgage lenders and servicers after receiving information from FHFA about the fees that we may charge associated with the refinancing program. Since industry participation in HARP is not mandatory, we anticipate that implementation schedules will vary as individual lenders, mortgage insurers and other market participants modify their processes. It is too early to estimate how many eligible borrowers are likely to refinance under the revised program.

The revisions to HARP will help to reduce our exposure to credit risk to the extent that HARP refinancing strengthen the borrowers' capacity to repay their mortgages and, in some cases, reduce the payments under their mortgages. These revisions to HARP could also reduce our credit losses to the extent that the revised program contributes to bringing stability to the housing market. However, we may face greater exposure to credit and other losses on these HARP loans because we are not requiring lenders to provide us with certain representations and warranties on the refinanced HARP loans. We could also experience declines in the fair values of certain agency security investments classified as available-for-sale or trading resulting from changes in expectations of mortgage prepayments and lower net interest yields over time on other mortgage-related investments. As a result, there can be no assurance that the benefits from the revised program will exceed our costs. See "RISK FACTORS — Competitive and Market Risks — *The servicing alignment initiative, MHA Program and other efforts to reduce foreclosures, modify loan terms and refinance mortgages, including HARP, may fail to mitigate our credit losses and may adversely affect our results of operations or financial condition*" for additional information.

Home Affordable Foreclosure Alternatives Program

HAFA is designed to permit borrowers who meet basic HAMP eligibility requirements to sell their homes in short sales, if such borrowers did not qualify for or participate in a HAMP trial period, failed to complete their HAMP trial period, or defaulted on their HAMP modification. HAFA also provides a process for borrowers to convey title to their homes through a deed in lieu of foreclosure. HAFA took effect in April 2010 and ends on December 31, 2013. We began our implementation of this program in August 2010. We completed a small number of HAFA transactions on our single-family mortgage loans during 2011.

Hardest Hit Fund

In 2010, the federal government created the Hardest Hit Fund, which provides funding for state HFAs to create unemployment assistance initiatives to help homeowners in those states that have been hit hardest by the housing crisis and economic downturn. To the extent our borrowers participate in the HFA unemployment assistance programs and the full contractual payment is made by an HFA, a borrower's mortgage delinquency status will remain static and will not fall into further delinquency. Based on information provided to us by our seller/servicers, we believe participation in these programs by our borrowers has been limited through December 31, 2011.

Compliance Agent

We are the compliance agent for Treasury for certain foreclosure avoidance activities under HAMP by mortgage holders other than Freddie Mac and Fannie Mae. Among other duties, as the program compliance agent, we conduct examinations and review servicer compliance with the published requirements for the program. Some of these examinations are on-site, and others involve off-site documentation reviews. We report the results of our examination findings to Treasury. Based on the examinations, we may also provide Treasury with advice, guidance and lessons learned to improve operation of the program.

The table below presents volumes of single-family loan workouts, serious delinquency, and foreclosures for 2011, 2010, and 2009.

Table 53 — Single-Family Loan Workouts, Serious Delinquency, and Foreclosures Volumes(1)

	Years Ended December 31,					
	2011		2010		2009	
	Number of Loans	Loan Balances	Number of Loans	Loan Balances	Number of Loans	Loan Balances
	(dollars in millions)					
Home retention actions:						
Loan modifications(2)						
with no change in terms(3)	4,371	$ 778	4,639	$ 799	5,866	$ 1,008
with term extension	16,354	3,011	20,664	3,602	15,596	2,500
with reduction of contractual interest rate and, in certain cases, term extension	68,584	15,231	114,686	25,277	40,915	8,605
with rate reduction, term extension and principal forbearance	19,865	5,319	30,288	7,915	2,667	621
Total loan modifications(4)	109,174	24,339	170,277	37,593	65,044	12,734
Repayment plans(5)	33,421	4,787	31,210	4,523	33,725	4,711
Forbearance agreements(6)	19,516	3,821	34,594	7,156	14,628	2,848
Total home retention actions:	162,111	32,947	236,081	49,272	113,397	20,293
Foreclosure alternatives:						
Short sale	45,623	10,524	38,773	9,109	18,890	4,481
Deed in lieu of foreclosure transactions	540	94	402	63	329	56
Total foreclosure alternatives	46,163	10,618	39,175	9,172	19,219	4,537
Total single-family loan workouts	208,274	$43,565	275,256	$58,444	132,616	$24,830
Seriously delinquent loan additions	374,970		502,710		597,188	
Single-family foreclosures(7)	121,751		142,877		90,436	
Seriously delinquent loans, at period end	414,134		462,439		498,829	

(1) Based on completed actions with borrowers for loans within our single-family credit guarantee portfolio. Excludes those modification, repayment and forbearance activities for which the borrower has started the required process, but the actions have not been made permanent or effective, such as loans in modification trial periods. Also excludes certain loan workouts where our single-family seller/servicers have executed agreements in the current or prior periods, but these have not been incorporated into certain of our operational systems, due to delays in processing. These categories are not mutually exclusive and a loan in one category may also be included within another category in the same period (see endnote 6).
(2) As a result of our adoption of an amendment to the accounting guidance on the classification of loans as TDRs, which became effective in the third quarter of 2011, the population of loans we account for as TDRs significantly increased due to the inclusion of loans that were not previously considered TDRs, including those loans that were subject to workout activities that occurred during the first half of 2011. See "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for more information.
(3) Under this modification type, past due amounts are added to the principal balance and reamortized based on the original contractual loan terms.
(4) Includes completed loan modifications under HAMP; however, the number of such completions differs from that reported by the MHA Program administrator in part due to differences in the timing of recognizing the completions by us and the administrator.
(5) Represents the number of borrowers as reported by our seller/servicers that have completed the full term of a repayment plan for past due amounts. Excludes the number of borrowers that are actively repaying past due amounts under a repayment plan, which totaled 21,382 and 23,151 borrowers as of December 31, 2011 and 2010, respectively.
(6) Excludes loans with long-term forbearance under a completed loan modification. Many borrowers complete a short-term forbearance agreement before another loan workout is pursued or completed. We only report forbearance activity for a single loan once during each quarterly period; however, a single loan may be included under separate forbearance agreements in separate periods.
(7) Represents the number of our single-family loans that complete foreclosure transfers, including third-party sales at foreclosure auction in which ownership of the property is transferred directly to a third-party rather than to us.

We experienced declines in home retention actions, particularly loan modifications, in 2011 compared to 2010, primarily due to declines in the number of seriously delinquent loan additions and in borrower participation in HAMP in 2011. A large number of borrowers entered into HAMP trial period plans when the program was initially introduced in 2009, and completed or terminated their modifications in 2010. Significantly fewer borrowers entered into HAMP trial period plans beginning in the second half of 2010 when we changed the income documentation requirements. The UPB of loans in our single-family credit guarantee portfolio for which we have completed a loan modification increased to $69 billion as of December 31, 2011 from $52 billion as of December 31, 2010. The number of modified loans in our single-family credit guarantee portfolio continued to increase and such loans comprised approximately 2.9% and 2.1% of our single-family credit guarantee portfolio as of December 31, 2011 and December 31, 2010, respectively. The estimated current LTV ratio for all modified loans in our single-family credit guarantee portfolio was 123% and the serious delinquency rate on these loans was 17.2% as of December 31, 2011.

Foreclosure alternative volume increased 18% in 2011, compared to 2010, and we expect the volume of foreclosure alternatives to remain high in 2012 primarily because we offer incentives to servicers to complete short sales instead of foreclosures. We plan to introduce additional initiatives in 2012 designed to help more distressed borrowers avoid foreclosure through short sale and deed in lieu of foreclosure transactions.

The table below presents the reperformance rate of modified single-family loans in each of the last eight quarterly periods.

Table 54 — Reperformance Rates of Modified Single-Family Loans[1]

HAMP loan modifications:	Quarter of Loan Modification Completion[2]							
	3Q 2011	2Q 2011	1Q 2011	4Q 2010	3Q 2010	2Q 2010	1Q 2010	4Q 2009
Time since modification-								
3 to 5 months	96%	96%	95%	94%	93%	94%	95%	94%
6 to 8 months		93	93	92	92	91	93	93
9 to 11 months			90	89	90	89	90	90
12 to 14 months				87	87	87	88	88
15 to 17 months					85	85	86	86
18 to 20 months						83	84	85
21 to 23 months							82	82
24 to 26 months								81

Non-HAMP loan modifications:	Quarter of Loan Modification Completion[2]							
	3Q 2011	2Q 2011	1Q 2011	4Q 2010	3Q 2010	2Q 2010	1Q 2010	4Q 2009
Time since modification-								
3 to 5 months	92%	92%	93%	94%	93%	93%	94%	90%
6 to 8 months		85	86	89	90	86	87	82
9 to 11 months			81	83	85	82	80	75
12 to 14 months				78	81	78	77	69
15 to 17 months					77	74	74	66
18 to 20 months						70	70	64
21 to 23 months							66	61
24 to 26 months								58

Total (HAMP and Non-HAMP):	Quarter of Loan Modification Completion[2]							
	3Q 2011	2Q 2011	1Q 2011	4Q 2010	3Q 2010	2Q 2010	1Q 2010	4Q 2009
Time since modification-								
3 to 5 months	94%	95%	95%	94%	93%	94%	95%	92%
6 to 8 months		90	90	90	91	90	92	88
9 to 11 months			86	86	88	87	88	84
12 to 14 months				82	84	85	86	80
15 to 17 months					81	82	84	78
18 to 20 months						79	81	76
21 to 23 months							79	73
24 to 26 months								71

(1) Represents the percentage of loans that are current or less than three monthly payments past due as well as those paid-in-full or repurchased. Excludes loans in modification trial periods.
(2) Loan modifications are recognized as completed in the quarterly period in which the servicer has reported the modification as effective and the agreement has been accepted by us, which in certain cases may be delayed by a backlog in servicer processing of modifications. In the second quarter of 2011, we revised the calculation of reperformance rates to better account for re-modified loans (*i.e.*, those where a borrower has received a second modification). The revised calculation reflects the status of each modification separately. In the case of a remodified loan where the borrower is performing, the previous modification would be presented as being in default in the applicable period.

The redefault rate is the percentage of our modified loans that became seriously delinquent, transitioned to REO, or completed a loss-producing foreclosure alternative, and is the inverse of the reperformance rate. As of December 31, 2011, the redefault rate for all of our single-family loan modifications (including those under HAMP) completed during the first nine months of 2011, and full years 2010, 2009, and 2008 was 10%, 20%, 50%, and 67%, respectively. Many of the borrowers that received modifications in 2008 and 2009 were negatively affected by worsening economic conditions, including high unemployment rates during the last several years. As of December 31, 2011, the redefault rate for loans modified under HAMP in the first nine months of 2011, and full years 2010 and 2009 was approximately 7%, 16% and 19%, respectively. These redefault rates may not be representative of the future performance of modified loans, including those modified under HAMP. We believe the redefault rate for loans modified in the last three years, including those modified under HAMP, is likely to increase, particularly since the housing and economic environments remain challenging.

Credit Performance

Delinquencies

We report single-family serious delinquency rate information based on the number of loans that are three monthly payments or more past due or in the process of foreclosure, as reported by our servicers. Mortgage loans whose contractual terms have been modified under agreement with the borrower are not counted as delinquent as long as the borrower is current under the modified terms. Single-family loans for which the borrower is subject to a forbearance agreement will continue to reflect the past due status of the borrower. To the extent our borrowers participate in the HFA unemployment assistance initiatives and the full contractual payment is made by an HFA, a borrower's mortgage delinquency status will remain static and will not fall into further delinquency.

Our single-family delinquency rates include all single-family loans that we own, that back Freddie Mac securities, and that are covered by our other guarantee commitments, except financial guarantees that are backed by either Ginnie Mae Certificates or HFA bonds because these securities do not expose us to meaningful amounts of credit risk due to the guarantee or credit enhancements provided on them by the U.S. government.

Some of our workout and other loss mitigation activities create fluctuations in our delinquency statistics. For example, single-family loans that we report as seriously delinquent before they enter a trial period under HAMP or our new non-HAMP standard modification continue to be reported as seriously delinquent for purposes of our delinquency reporting until the modifications become effective and the loans are removed from delinquent status by our servicers. However, under our previous non-HAMP modifications, the borrower would return to a current payment status sooner, because these modifications did not have trial periods. Consequently, the volume, timing, and type of loan modifications impact our reported serious delinquency rate. As discussed above in "*Single-Family Loan Workouts and the MHA Program*," the new non-HAMP standard loan modification initiative includes a trial period comparable to that of our HAMP modification initiative. In addition, there may be temporary timing differences, or lags, in the reporting of payment status and modification completion due to differing practices of our servicers that can affect our delinquency reporting.

Our serious delinquency rates have been affected by delays, including those due to temporary actions to suspend foreclosure transfers of occupied homes, increases in foreclosure process timeframes, process requirements of HAMP, general constraints on servicer capacity (which affects the rate at which servicers modify or foreclose upon loans), and court backlogs (in states that require a judicial foreclosure process). These delays lengthen the period of time in which loans remain in seriously delinquent status, as the delays extend the time it takes for seriously delinquent loans to be modified, foreclosed upon or otherwise resolved and thus transition out of seriously delinquent status. As a result, we believe our single-family serious delinquency rates were higher in 2011 and 2010 than they otherwise would have been. As of December 31, 2011 and 2010, the percentage of seriously delinquent loans that have been delinquent for more than six months was 70% and 66%, respectively.

The table below presents serious delinquency rates for our single-family credit guarantee portfolio.

Table 55 — Single-Family Serious Delinquency Rates

	As of December 31,					
	2011		2010		2009	
	Percentage of Portfolio	Serious Delinquency Rate	Percentage of Portfolio	Serious Delinquency Rate	Percentage of Portfolio	Serious Delinquency Rate
Single-family:						
Non-credit-enhanced	86%	2.84%	85%	3.01%	84%	3.02%
Credit-enhanced	14	8.03	15	8.27	16	8.68
Total single-family credit guarantee portfolio[1]	100%	3.58	100%	3.84	100%	3.98

(1) As of December 31, 2011, 2010, and 2009, approximately 68%, 61%, and 49%, respectively, of the single-family loans reported as seriously delinquent were in the process of foreclosure.

Serious delinquency rates of our single-family credit guarantee portfolio declined to 3.58% as of December 31, 2011 from 3.84% as of December 31, 2010. Our serious delinquency rate remains high compared to historical levels, reflecting continued stress in the housing and labor markets. The improvement in our single-family serious delinquency rate during 2011 was primarily due to a high volume of loan modifications and foreclosure transfers, as well as a slowdown in new serious delinquencies. See "Table 54 — Reperformance Rates of Modified Single-Family Loans" for information on the performance of modified loans. Although the number of seriously delinquent loans declined in both 2010 and 2011, the decline in the size of our single-family credit guarantee portfolio in 2011 caused our delinquency rates to be higher than they otherwise would have been, because these rates are calculated on a smaller base of loans at the end the year.

Serious delinquency rates for interest-only and option ARM products, which together represented approximately 5% of our total single-family credit guarantee portfolio at December 31, 2011, were 17.6% and 20.5%, respectively, at December 31, 2011, compared with 18.4% and 21.2%, respectively, at December 31, 2010. Serious delinquency rates of single-family 30-year, fixed rate amortizing loans, a more traditional mortgage product, were approximately 3.9% and 4.0% at December 31, 2011 and 2010, respectively.

The tables below present serious delinquency rates categorized by borrower and loan characteristics, including geographic region and origination year, which indicate that certain concentrations of loans have been more adversely affected by declines in home prices since 2006. In certain states, our single-family serious delinquency rates have remained persistently high. As of December 31, 2011, single-family loans in Arizona, California, Florida, and Nevada

comprised 25% of our single-family credit guarantee portfolio, and the serious delinquency rate of loans in these states was 6.2%. During the year ended December 31, 2011, we also continued to experience high serious delinquency rates on single-family loans originated between 2005 and 2008. We purchased significant amounts of loans with higher-risk characteristics in those years. In addition, those borrowers are more susceptible to the declines in home prices since 2006 than those homeowners that have built up equity in their homes over time.

The table below presents credit concentrations for certain loan groups in our single-family credit guarantee portfolio.

Table 56 — Credit Concentrations in the Single-Family Credit Guarantee Portfolio

	As of December 31, 2011					
	Alt-A UPB	Non Alt-A UPB	Total UPB	Estimated Current LTV Ratio(1)	Percentage Modified(2)	Serious Delinquency Rate
	(dollars in billions)					
Geographical distribution:						
Arizona, California, Florida, and Nevada	$ 38	$ 406	$ 444	93%	4.6%	6.2%
All other states	56	1,246	1,302	75	2.5	2.9
Year of origination:						
2011	—	250	250	70	—	0.1
2010	—	324	324	71	<0.1	0.3
2009	<1	315	315	72	0.1	0.5
2008	7	113	120	92	4.4	5.7
2007	29	138	167	113	10.2	11.6
2006	25	99	124	112	9.3	10.8
2005	18	124	142	96	5.1	6.5
2004 and prior	15	289	304	61	2.5	2.8
	As of December 31, 2010					
	Alt-A UPB	Non Alt-A UPB	Total UPB	Estimated Current LTV Ratio(1)	Percentage Modified(2)	Serious Delinquency Rate
	(dollars in billions)					
Geographical distribution:						
Arizona, California, Florida, and Nevada	$ 47	$ 410	$ 457	91%	3.3%	7.1%
All other states	69	1,283	1,352	73	1.9	3.0
Year of origination:						
2010	—	323	323	70	—	0.1
2009	—	391	391	70	<0.1	0.3
2008	10	149	159	86	2.2	4.9
2007	36	172	208	104	6.2	11.6
2006	31	125	156	104	5.8	10.5
2005	21	156	177	91	3.3	6.0
2004 and prior	18	377	395	58	1.7	2.5
	2011			2010		
	Alt-A	Non Alt-A	Total	Alt-A	Non Alt-A	Total
	(in millions)			(in millions)		
Credit Losses						
Geographical distribution:						
Arizona, California, Florida, and Nevada	$2,641	$5,081	$7,722	$3,708	$4,950	$8,658
All other states	1,050	4,209	5,259	1,438	3,964	5,402
Year of origination:						
2011	—	2	2	—	—	—
2010	—	62	62	—	<1	<1
2009	<1	177	177	<1	63	63
2008	102	903	1,005	116	777	893
2007	1,455	3,245	4,700	1,905	2,836	4,741
2006	1,314	2,328	3,642	1,920	2,340	4,260
2005	713	1,566	2,279	1,091	1,701	2,792
2004 and prior	107	1,007	1,114	114	1,197	1,311

(1) See endnote (5) to "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for information on our calculation of estimated current LTV ratios.
(2) Represents the percentage of loans, based on loan count in our single-family credit guarantee portfolio, that have been modified under agreement with the borrower, including those with no changes in interest rate or maturity date, but where past due amounts are added to the outstanding principal balance of the loan.

The table below presents statistics for combinations of certain characteristics of the mortgages in our single-family credit guarantee portfolio as of December 31, 2011 and December 31, 2010.

Table 57 — Single-Family Credit Guarantee Portfolio by Attribute Combinations

	December 31, 2011								
	Current LTV Ratio ≤ 80[1]		Current LTV Ratio of > 80 to 100[1]		Current LTV > 100[1]		Current LTV Ratio All Loans[1]		
	Percentage of Portfolio[2]	Serious Delinquency Rate	Percentage of Portfolio[2]	Serious Delinquency Rate	Percentage of Portfolio[2]	Serious Delinquency Rate	Percentage of Portfolio[2]	Percentage Modified[3]	Serious Delinquency Rate
By Product Type									
FICO scores < 620:									
20 and 30- year or more amortizing fixed-rate	0.9%	8.1%	0.8%	13.4%	1.0%	23.7%	2.7%	16.6%	14.2%
15- year amortizing fixed-rate	0.2	4.2	<0.1	10.1	<0.1	17.6	0.2	1.2	4.7
ARMs/adjustable rate[4]	0.1	10.8	<0.1	17.2	<0.1	25.4	0.1	9.8	15.4
Interest-only[5]	<0.1	16.0	<0.1	22.4	0.1	34.9	0.1	0.4	30.3
Other[6]	<0.1	3.6	<0.1	7.4	0.1	14.1	0.1	4.2	5.6
Total FICO scores < 620	1.2	7.0	0.8	13.5	1.2	24.1	3.2	13.4	12.9
FICO scores of 620 to 659:									
20 and 30- year or more amortizing fixed-rate	2.0	5.2	1.5	8.9	2.0	18.4	5.5	11.5	10.1
15- year amortizing fixed-rate	0.6	2.5	<0.1	6.1	<0.1	15.1	0.6	0.6	2.8
ARMs/adjustable rate[4]	0.1	5.5	0.1	11.7	0.1	23.6	0.3	2.0	12.6
Interest-only[5]	<0.1	10.4	0.1	18.6	0.3	31.7	0.4	0.3	27.2
Other[6]	<0.1	2.8	<0.1	4.8	<0.1	5.5	<0.1	1.4	4.5
Total FICO scores of 620 to 659	2.7	4.4	1.7	9.1	2.4	19.4	6.8	8.9	9.4
FICO scores of >= 660:									
20 and 30- year or more amortizing fixed-rate	34.6	1.0	20.3	2.4	12.4	9.2	67.3	2.7	2.8
15- year amortizing fixed-rate	13.1	0.4	1.0	1.1	0.2	6.0	14.3	0.1	0.5
ARMs/adjustable rate[4]	2.5	1.1	0.8	4.3	0.8	14.8	4.1	0.5	4.5
Interest-only[5]	0.4	3.7	0.7	9.2	2.5	20.7	3.6	0.2	16.2
Other[6]	<0.1	2.0	<0.1	2.0	0.1	2.0	0.1	0.5	2.0
Total FICO scores >= 660	50.6	0.8	22.8	2.6	16.0	10.8	89.4	1.9	2.6
FICO scores not available	0.3	4.8	0.2	11.9	0.1	21.4	0.6	5.5	8.9
All FICO scores:									
20 and 30- year or more amortizing fixed-rate	37.7	1.6	22.5	3.4	15.6	11.5	75.8	4.1	3.9
15- year amortizing fixed-rate	13.8	0.6	1.1	1.5	0.2	7.3	15.1	0.1	0.7
ARMs/adjustable rate[4]	2.7	1.8	1.0	5.5	0.9	16.4	4.6	1.0	5.5
Interest-only[5]	0.5	4.4	0.8	10.5	2.8	22.2	4.1	0.2	17.6
Other[6]	0.1	8.9	0.1	8.4	0.2	8.4	0.4	6.8	8.6
Total single-family credit guarantee portfolio[7]	54.8%	1.3%	25.5%	3.6%	19.7%	12.8%	100.0%	2.9%	3.6%
By Region[8]									
FICO scores < 620:									
North Central	0.2%	6.3%	0.2%	11.7%	0.2%	20.1%	0.6%	13.4%	12.0%
Northeast	0.4	9.3	0.2	19.0	0.3	28.9	0.9	14.3	14.9
Southeast	0.2	7.9	0.2	13.9	0.3	29.5	0.7	13.9	15.9
Southwest	0.2	5.1	0.1	11.0	0.1	19.5	0.4	9.4	8.0
West	0.2	4.6	0.1	9.1	0.3	19.5	0.6	16.2	11.8
Total FICO scores < 620	1.2	7.0	0.8	13.5	1.2	24.1	3.2	13.4	12.9
FICO scores of 620 to 659:									
North Central	0.5	4.0	0.3	8.2	0.5	15.1	1.3	8.7	8.4
Northeast	0.8	5.8	0.5	12.9	0.4	23.3	1.7	9.1	10.3
Southeast	0.5	5.2	0.3	9.5	0.6	24.1	1.4	9.1	12.2
Southwest	0.5	3.1	0.3	7.0	0.1	13.6	0.9	5.9	5.1
West	0.4	3.1	0.3	6.8	0.8	17.6	1.5	12.0	10.0
Total FICO scores of 620 to 659	2.7	4.4	1.7	9.1	2.4	19.4	6.8	8.9	9.4
FICO scores >=660:									
North Central	8.5	0.7	4.7	2.3	2.8	7.4	16.0	1.6	2.0
Northeast	14.9	1.0	5.7	3.9	2.0	12.6	22.6	1.6	2.3
Southeast	7.1	1.2	3.9	2.8	3.8	14.4	14.8	2.1	4.2
Southwest	7.4	0.6	2.7	2.0	0.4	6.2	10.5	0.9	1.1
West	12.7	0.5	5.8	1.7	7.0	10.1	25.5	2.9	3.0
Total FICO scores >= 660	50.6	0.8	22.8	2.6	16.0	10.8	89.4	1.9	2.6
Total FICO scores not available	0.3	4.8	0.2	11.9	0.1	21.4	0.6	5.5	8.9
All FICO scores:									
North Central	9.1	1.0	5.3	3.2	3.6	9.5	18.0	2.6	2.9
Northeast	16.1	1.6	6.4	5.3	2.7	15.8	25.2	2.7	3.4
Southeast	7.9	1.8	4.4	4.0	4.7	16.8	17.0	3.4	5.5
Southwest	8.2	1.1	3.2	3.1	0.6	9.4	12.0	1.8	1.8
West	13.5	0.7	6.2	2.1	8.1	11.3	27.8	3.8	3.6
Total single-family credit guarantee portfolio[7]	54.8%	1.3%	25.5%	3.6%	19.7%	12.8%	100.0%	2.9%	3.6%

	December 31, 2010								
	Current LTV Ratio ≤ 80[1]		Current LTV Ratio of > 80 to 100[1]		Current LTV > 100[1]		Current LTV Ratio All Loans[1]		
	Percentage of Portfolio[2]	Serious Delinquency Rate	Percentage of Portfolio[2]	Serious Delinquency Rate	Percentage of Portfolio[2]	Serious Delinquency Rate	Percentage of Portfolio[2]	Percentage Modified[3]	Serious Delinquency Rate
By Product Type									
FICO scores < 620:									
20 and 30- year or more amortizing fixed-rate	1.1%	8.6%	0.8%	15.1%	0.9%	27.5%	2.8%	12.9%	15.1%
15- year amortizing fixed-rate	0.2	4.6	<0.1	11.8	<0.1	22.2	0.2	1.8	5.1
ARMs/adjustable rate[4]	0.1	12.2	<0.1	18.4	<0.1	28.6	0.1	7.6	16.9
Interest only[5]	<0.1	17.6	0.1	25.3	0.1	39.9	0.2	0.9	33.3
Other[6]	<0.1	3.7	<0.1	8.5	0.1	13.2	0.1	3.1	5.6
Total FICO scores < 620	1.4	7.6	0.9	15.3	1.1	27.9	3.4	10.4	13.9
FICO scores of 620 to 659:									
20 and 30- year or more amortizing fixed-rate	2.4	5.2	1.7	9.8	1.8	20.5	5.9	8.3	10.3
15- year amortizing fixed-rate	0.6	2.6	<0.1	7.3	<0.1	16.6	0.6	0.9	3.0
ARMs/adjustable rate[4]	0.1	6.0	0.1	13.5	0.1	25.9	0.3	1.5	13.6
Interest only[5]	<0.1	10.9	0.2	20.6	0.3	35.6	0.5	0.9	29.2
Other[6]	<0.1	2.6	<0.1	5.4	<0.1	5.3	<0.1	1.0	4.3
Total FICO scores of 620 to 659	3.1	4.5	2.0	10.3	2.2	22.0	7.3	6.5	9.9
FICO scores of >= 660:									
20 and 30- year or more amortizing fixed-rate	36.5	1.0	20.0	2.8	10.4	10.4	66.9	1.9	2.8
15- year amortizing fixed-rate	12.5	0.4	0.9	1.4	0.1	7.3	13.5	0.1	0.5
ARMs/adjustable rate[4]	1.9	1.6	0.8	5.4	0.8	17.0	3.5	0.4	5.6
Interest only[5]	0.7	3.7	1.2	10.3	2.8	23.1	4.7	0.4	16.7
Other[6]	<0.1	2.1	<0.1	2.0	0.1	1.3	0.1	0.4	1.7
Total FICO scores >= 660	51.6	0.8	22.9	3.1	14.2	12.6	88.7	1.3	2.7
FICO scores not available	0.4	4.6	0.1	11.9	0.1	23.7	0.6	4.1	8.8
All FICO scores:									
20 and 30- year or more amortizing fixed-rate	40.2	1.6	22.6	3.9	13.2	13.1	76.0	2.9	4.0
15- year amortizing fixed-rate	13.3	0.6	0.9	2.0	0.2	8.8	14.4	0.2	0.8
ARMs/adjustable rate[4]	2.1	2.4	1.0	7.0	0.9	18.7	4.0	0.8	6.7
Interest only[5]	0.7	4.5	1.3	11.7	3.2	24.9	5.2	0.5	18.4
Other[6]	0.2	9.3	0.1	8.6	0.1	7.3	0.4	5.2	8.6
Total single-family credit guarantee portfolio[7]	56.5%	1.4%	25.9%	4.3%	17.6%	14.9%	100.0%	2.1%	3.8%
By Region[8]									
FICO scores < 620:									
North Central	0.2%	7.1%	0.2%	13.7%	0.2%	22.5%	0.6%	10.9%	13.0%
Northeast	0.5	9.4	0.3	19.9	0.2	30.5	1.0	10.7	14.5
Southeast	0.2	8.4	0.2	15.5	0.3	31.9	0.7	10.7	16.4
Southwest	0.3	5.9	0.1	12.7	0.1	24.1	0.5	7.6	9.2
West	0.2	5.6	0.1	13.5	0.3	28.0	0.6	12.3	15.8
Total FICO scores < 620	1.4	7.6	0.9	15.3	1.1	27.9	3.4	10.4	13.9
FICO scores of 620 to 659:									
North Central	0.6	4.3	0.4	9.6	0.4	16.6	1.4	6.6	8.9
Northeast	0.9	5.4	0.6	13.7	0.3	23.2	1.8	6.4	9.6
Southeast	0.5	5.3	0.4	10.0	0.6	25.5	1.5	6.6	12.1
Southwest	0.6	3.4	0.3	8.1	0.1	15.3	1.0	4.5	5.6
West	0.5	3.5	0.3	9.6	0.8	23.7	1.6	8.5	12.7
Total FICO scores of 620 to 659	3.1	4.5	2.0	10.3	2.2	22.0	7.3	6.5	9.9
FICO scores of >= 660:									
North Central	8.9	0.7	4.9	2.8	2.3	7.9	16.1	1.2	2.1
Northeast	15.0	1.0	5.6	4.4	1.5	12.0	22.1	1.1	2.1
Southeast	7.4	1.2	4.1	3.0	3.6	15.1	15.1	1.4	4.1
Southwest	7.3	0.7	2.9	2.3	0.3	6.8	10.5	0.7	1.2
West	13.0	0.6	5.4	2.7	6.5	13.8	24.9	2.1	3.9
Total FICO scores >= 660	51.6	0.8	22.9	3.1	14.2	12.6	88.7	1.3	2.7
FICO scores not available	0.4	4.6	0.1	11.9	0.1	23.7	0.6	4.1	8.8
All FICO scores:									
North Central	9.6	1.2	5.6	3.9	3.0	10.5	18.2	2.0	3.1
Northeast	16.6	1.6	6.4	6.0	2.0	15.4	25.0	1.9	3.2
Southeast	8.2	1.9	4.7	4.3	4.5	17.8	17.4	2.4	5.6
Southwest	8.2	1.2	3.4	3.6	0.5	10.9	12.1	1.5	2.1
West	13.9	0.9	5.8	3.4	7.6	15.5	27.3	2.7	4.7
Total single-family credit guarantee portfolio[7]	56.5%	1.4%	25.9%	4.3%	17.6%	14.9%	100.0%	2.1%	3.8%

(1) The current LTV ratios are our estimates. See endnote (5) to "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for further information.
(2) Based on UPB of the single-family credit guarantee portfolio.
(3) See endnote (2) to "Table 56 — Credit Concentrations in the Single-Family Credit Guarantee Portfolio".
(4) Includes balloon/resets and option ARM mortgage loans.
(5) Includes both fixed rate and adjustable rate loans. The percentages of interest-only loans which have been modified at period end reflect that a number of these loans have not yet been assigned to their new product category(post-modification), primarily due to delays in processing.
(6) Consist of FHA/VA and other government guaranteed mortgages.
(7) The total of all FICO scores categories may not sum due to the inclusion of loans where FICO scores are not available in the respective totals for all loans. See endnote (7) to "Table 45 — Characteristics of the Single-Family Credit Guarantee Portfolio" for further information about our use of FICO scores.
(8) Presentation with the following regional designation: West (AK, AZ, CA, GU,HI, ID, MT, NV, OR, UT, WA); Northeast (CT, DE, DC, MA, ME, MD, NH, NJ, NY, PA,RI, VT, VA, WV); North Central (IL, IN, IA, MI, MN, ND, OH, SD, WI); Southeast(AL, FL, GA, KY, MS, NC, PR, SC, TN, VI); and Southwest (AR, CO, KS, LA, MO,NE, NM, OK, TX, WY).

The table below presents delinquency and default rate information for loans in our single-family credit guarantee portfolio based on year of origination.

Table 58 — Single-Family Credit Guarantee Portfolio by Year of Loan Origination

	As of December 31, 2011		As of December 31, 2010		As of December 31,2009	
Year of Loan Origination	Percentage of Portfolio	Foreclosure and Short Sale Rate[1]	Percentage of Portfolio	Foreclosure and Short Sale Rate[1]	Percentage of Portfolio	Foreclosure and Short Sale Rate[1]
2011	14%	—%	—%	—%	—%	—%
2010	19	0.05	18	—	—	—
2009	18	0.17	21	0.04	23	—
2008	7	2.23	9	1.26	12	0.37
2007	10	7.49	11	4.92	14	2.24
2006	7	6.95	9	5.00	11	2.70
2005	8	4.07	10	2.95	12	1.63
2000 through 2004	17	1.04	22	0.88	28	0.69
Total	100%		100%		100%	

(1) Calculated for each year of origination as the number of loans that have proceeded to foreclosure transfer or short sale and resulted in a credit loss, excluding any subsequent recoveries during the period from origination to December 31, 2011, 2010, and 2009, respectively, divided by the number of loans in our single-family credit guarantee portfolio originated in that year.

The UPB of loans originated after 2008 comprised 51% of our portfolio as of December 31, 2011, including 11% of our portfolio that were relief refinance mortgages (regardless of LTV ratio). At December 31, 2011, approximately 32% of our single-family credit guarantee portfolio consisted of mortgage loans originated from 2005 through 2008. Loans originated from 2005 through 2008 have experienced higher serious delinquency rates in the earlier years of their terms as compared to our historical experience. We attribute this serious delinquency performance to a number of factors, including: (a) the expansion of credit terms under which loans were underwritten during these years; (b) an increase in the origination and our purchase of interest-only and Alt-A mortgage products in these years; and (c) an environment of persistently high unemployment, decreasing home sales, and broadly declining home prices in the period following the loans' origination. Interest-only and Alt-A products have higher inherent credit risk than traditional fixed-rate mortgage products.

Multifamily Mortgage Credit Risk

Portfolio diversification, particularly by product and geographical area, is an important aspect of our strategy to manage mortgage credit risk for multifamily loans. We monitor a variety of mortgage loan characteristics that may affect the default experience on our multifamily mortgage portfolio, such as the LTV ratio, DSCR, geographic location and loan maturity. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for more information about the loans in our multifamily mortgage portfolio. We also monitor the performance and risk concentrations of our multifamily loans and the underlying properties throughout the life of the loan.

The table below provides certain attributes of our multifamily mortgage portfolio at December 31, 2011 and 2010.

Table 59 — Multifamily Mortgage Portfolio — by Attribute

	UPB [1] at		Delinquency Rate[2] at	
	December 31, 2011	December 31, 2010	December 31, 2011	December 31, 2010
Original LTV ratio[3]	(dollars in billions)			
Below 75%	$ 78.8	$ 72.0	0.10%	0.08%
75% to 80%	30.9	29.8	0.08	0.24
Above 80%	6.4	6.6	2.34	2.30
Total	$116.1	$108.4	0.22%	0.26%
Weighted average LTV ratio at origination	70%	70%		
Maturity Dates				
2011	N/A	$ 2.3	N/A	0.97%
2012	$ 3.0	4.1	1.35%	0.82
2013	5.6	6.8	—	—
2014	7.6	8.5	0.03	0.02
2015	11.0	12.0	0.17	0.09
Beyond 2015	88.9	74.7	0.22	0.29
Total	$116.1	$108.4	0.22%	0.26%
Year of Acquisition or Guarantee[4]				
2004 and prior	$ 12.4	$ 15.9	0.40%	0.31%
2005	7.2	7.9	0.20	—
2006	10.8	11.6	0.25	0.25
2007	19.8	20.8	0.74	0.97
2008	20.6	23.0	0.09	0.03
2009	13.8	15.2	—	—
2010	12.7	14.0	—	—
2011	18.8	N/A	—	N/A
Total	$116.1	$108.4	0.22%	0.26%
Current Loan Size Distribution				
Above $25 million	$ 42.8	$ 39.6	0.06%	0.07%
Above $5 million to $25 million	64.0	59.4	0.31	0.38
$5 million and below	9.3	9.4	0.31	0.37
Total	$116.1	$108.4	0.22%	0.26%
Legal Structure				
Unsecuritized loans	$ 82.3	$ 85.9	0.10%	0.11%
Non-consolidated Freddie Mac mortgage-related securities	24.2	12.8	0.64	1.30
Other guarantee commitments	9.6	9.7	0.18	0.23
Total	$116.1	$108.4	0.22%	0.26%
Credit Enhancement				
Credit-enhanced	$ 31.6	$ 20.9	0.52%	0.85%
Non-credit-enhanced	84.5	87.5	0.11	0.12
Total	$116.1	$108.4	0.22%	0.26%

(1) Beginning in the second quarter of 2011, we exclude non-consolidated mortgage-related securities for which we do not provide our guarantee. The prior period has been revised to conform to the current period presentation.
(2) See "Delinquencies" below for more information about our multifamily delinquency rates.
(3) Original LTV ratios are calculated as the UPB of the mortgage, divided by the lesser of the appraised value of the property at the time of mortgage origination or, except for refinance loans, the mortgage borrower's purchase price. Second liens not owned or guaranteed by us are excluded from the LTV ratio calculation. The existence of a second lien reduces the borrower's equity in the property and, therefore, can increase the risk of default.
(4) Based on either: (a) the year of acquisition, for loans recorded on our consolidated balance sheets; or (b) the year that we issued our guarantee, for the remaining loans in our multifamily mortgage portfolio.

Our multifamily mortgage portfolio consists of product types that are categorized based on loan terms. Multifamily loans may be interest-only or amortizing, fixed or variable rate, or may switch between fixed and variable rate over time. However, our multifamily loans generally have balloon maturities ranging from five to ten years. Amortizing loans reduce our credit exposure over time because the UPB declines with each mortgage payment. Fixed-rate loans may also create less risk for us because the borrower's payments are determined at origination, and, therefore, the risk that the monthly mortgage payment could increase if interest rates rise as with a variable-rate mortgage is eliminated. As of both December 31, 2011 and 2010, approximately 85% of the multifamily loans on our consolidated balance sheets had fixed interest rates while the remaining loans had variable interest rates.

Because most multifamily loans require a significant lump sum (*i.e.*, balloon) payment of unpaid principal at maturity, the inability to refinance or pay off the loan at maturity is a serious concern for us. Borrowers may be less able to refinance their obligations during periods of rising interest rates, which could lead to default if the borrower is unable to find affordable refinancing. Loan size at origination does not generally indicate the degree of a loan's risk, but it does indicate our potential exposure to default.

While we believe the underwriting practices we employ for our multifamily loan portfolio are prudent, the ongoing weak economic conditions in the U.S. negatively impacted multifamily rental properties. Our delinquency rates have remained relatively low compared to other industry participants, which we believe to be, in part, the result of our underwriting standards versus those used by others in the industry.

Although property values increased in recent quarters, they are still below the highs of a few years ago and are lower than when many of the loans were originally underwritten, particularly in areas where economic conditions remain weak. As a result, if property values do not continue to improve, borrowers may experience significant difficulty refinancing as their loans approach maturity, which could increase borrower defaults or increase modification volumes. Of the $116.1 billion in UPB of our multifamily mortgage portfolio as of December 31, 2011, only 3% and 5% will mature during 2012 and 2013, respectively, and the remaining 92% will mature in 2014 and beyond.

In certain cases, we may provide short-term loan extensions of up to 12 months for certain borrowers. Modifications and extensions of loans are performed in an effort to minimize our losses. During the year ended December 31, 2011, we extended and modified unsecuritized multifamily loans totaling $391 million in UPB, compared with $816 million during the year ended December 31, 2010. Multifamily unsecuritized loan modifications during the year ended December 31, 2011 included: (a) $99 million in UPB for short-term loan extensions; and (b) $292 million in UPB for loan modifications. Where we have granted a concession to borrowers experiencing financial difficulties, we account for these loans as TDRs. When we execute a modification classified as a TDR, the loan is then classified as nonperforming for the life of the loan regardless of its delinquency status. At December 31, 2011, we had $893 million of multifamily loan UPB classified as TDRs on our consolidated balance sheets.

We use credit enhancements to mitigate risk of loss on certain multifamily mortgages and housing revenue bonds. Historically, we required credit enhancements on loans in situations where we delegated the underwriting process for the loan to the seller/servicer, which provides first loss coverage on the mortgage loan. We may also require credit enhancements during construction or rehabilitation in cases where we commit to purchase or guarantee a permanent loan upon completion and in cases where occupancy has not yet reached a level that produces the operating income that was the basis for underwriting the mortgage. Additionally, certain Other Guarantee Transactions issued by our Multifamily segment have related subordinated classes, that we do not guarantee, that provide credit loss protection to the senior classes that we guarantee. Subordinated classes are allocated credit losses prior to the senior classes. See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for information about credit protections and other forms of credit enhancements covering loans in our multifamily mortgage portfolio as of December 31, 2011 and 2010.

Delinquencies

Our multifamily delinquency rates include all multifamily loans that we own, that are collateral for Freddie Mac securities, and that are covered by our other guarantee commitments, except financial guarantees that are backed by HFA bonds because these securities do not expose us to meaningful amounts of credit risk due to the guarantee or credit enhancement provided by the U.S. government. We report multifamily delinquency rates based on UPB of mortgage loans that are two monthly payments or more past due or in the process of foreclosure, as reported by our servicers. Mortgage loans whose contractual terms have been modified under agreement with the borrower are not counted as delinquent as long as the borrower is current under the modified terms. In addition, multifamily loans are not counted as delinquent if the borrower has entered into a forbearance agreement and is abiding by the terms of the agreement, whereas single-family loans for which the borrower has been granted forbearance will continue to reflect the past due status of the borrower, if applicable.

Our delinquency rates for multifamily loans are positively impacted to the extent we have been successful in working with troubled borrowers to modify their loans prior to becoming delinquent or by providing temporary relief through loan modifications, including short-term extensions. Some geographic areas, including the states of Arizona, Georgia, and Nevada, continue to exhibit weaker than average fundamentals that increase our risk of future losses. We own or guarantee loans in these states that are non-performing, or we believe are at risk of default. For further information regarding concentrations in our multifamily mortgage portfolio, including regional geographic composition, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

Our multifamily mortgage portfolio delinquency rate declined to 0.22% at December 31, 2011 from 0.26% at December 31, 2010. Our delinquency rate for credit-enhanced loans was 0.52% and 0.85% at December 31, 2011 and 2010, respectively, and for non-credit-enhanced loans was 0.11% and 0.12% at December 31, 2011 and 2010, respectively. As of December 31, 2011, more than one-half of our multifamily loans that were two monthly payments or more past due, measured both in terms of number of loans and on a UPB basis, had credit enhancements that we currently believe will mitigate our expected losses on those loans.

Non-Performing Assets

Non-performing assets consist of single-family and multifamily loans that have undergone a TDR, single-family seriously delinquent loans, multifamily loans that are three or more payments past due or in the process of foreclosure, and REO assets, net. Non-performing assets also include multifamily loans that are deemed impaired based on management judgment. We place non-performing loans on non-accrual status when we believe the collectability of interest and principal on a loan is not reasonably assured, unless the loan is well secured and in the process of collection. When a loan is placed on non-accrual status, any interest income accrued but uncollected is reversed. Thereafter, interest income is recognized only upon receipt of cash payments. We did not accrue interest on any loans three monthly payments or more past due in 2011 or 2010.

We classify TDRs as those loans where we have granted a concession to a borrower that is experiencing financial difficulties. TDRs remain categorized as non-performing throughout the remaining life of the loan regardless of whether the borrower makes payments which return the loan to a current payment status after modification. See "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for further information about our TDRs.

The table below provides detail on non-performing loans and REO assets on our consolidated balance sheets and non-performing loans underlying our financial guarantees.

Table 60 — Non-Performing Assets[(1)]

	December 31,				
	2011	2010	2009	2008	2007
	(dollars in millions)				
Non-performing mortgage loans — on balance sheet:					
Single-family TDRs:					
Reperforming (*i.e.*, less than three monthly payments past due)	$ 44,440	$ 26,612	$ 711	$ 484	$ 282
Seriously delinquent	11,639	3,144	477	163	67
Multifamily TDRs[(2)]	893	911	229	150	167
Total TDRs	56,972	30,667	1,417	797	516
Other single-family non-performing loans[(3)]	63,205	84,272	12,106	5,590	5,842
Other multifamily non-performing loans[(4)]	1,819	1,750	1,196	197	188
Total non-performing mortgage loans — on balance sheet	121,996	116,689	14,719	6,584	6,546
Non-performing mortgage loans — off-balance sheet:					
Single-family loans	1,230	1,450	85,395	36,718	7,786
Multifamily loans	246	198	178	63	51
Total non-performing mortgage loans — off-balance sheet	1,476	1,648	85,573	36,781	7,837
Real estate owned, net	5,680	7,068	4,692	3,255	1,736
Total non-performing assets	$129,152	$125,405	$104,984	$46,620	$16,119
Loan loss reserves as a percentage of our non-performing mortgage loans	32.0%	33.7%	33.8%	36.0%	19.6%
Total non-performing assets as a percentage of the total mortgage portfolio, excluding non-Freddie Mac securities	6.8%	6.4%	5.2%	2.4%	0.9%

(1) Mortgage loan amounts are based on UPB and REO, net is based on carrying values.
(2) As of December 31, 2011, approximately $872 million in UPB of these loans were current.
(3) Represents loans recognized by us on our consolidated balance sheets, including loans removed from PC trusts due to the borrower's serious delinquency.
(4) Of this amount, $1.8 billion, $1.6 billion, and $1.1 billion of UPB were current at December 31, 2011, December 31, 2010, and December 31, 2009 respectively.

The amount of non-performing assets increased to $129.2 billion as of December 31, 2011, from $125.4 billion at December 31, 2010, primarily due to a significant increase in single-family loans classified as TDRs, which was substantially offset by a decline in the rate at which loans transitioned into serious delinquency. The UPB of loans categorized as TDRs increased to $57.0 billion at December 31, 2011 from $30.7 billion at December 31, 2010, largely due to a continued high volume of loan modifications during 2011 in which we extended the term of the loan, decreased the contractual interest rate, deferred the balance on which contractual interest is computed, or made a combination of these changes. TDRs during 2011 include HAMP and non-HAMP loan modifications as well as loans in modification trial periods and certain other loss mitigation actions. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING

POLICIES," and "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for information about our implementation of an amendment to the accounting guidance on classification of loans as TDRs in 2011. In 2011, our non-HAMP modifications comprised a greater portion of our completed loan modification volume and the volume of HAMP modifications declined, compared to 2010 activity. We expect our non-performing assets, including loans deemed to be TDRs, to remain at elevated levels in 2012.

The table below provides detail by region for REO activity. Our REO activity consists almost entirely of single-family residential properties. Consequently, our regional REO acquisition trends generally follow a pattern that is similar to, but lags, that of regional serious delinquency trends of our single-family credit guarantee portfolio. See "Table 57 — Single-Family Credit Guarantee Portfolio by Attribute Combinations" for information about regional serious delinquency rates.

Table 61 — REO Activity by Region[1]

	December 31,		
	2011	2010	2009
	(number of properties)		
REO Inventory			
Beginning property inventory	72,093	45,052	29,346
Adjustment to beginning balance[2]	—	1,340	—
Properties acquired by region:			
Northeast	6,970	11,022	7,529
Southeast	23,195	35,409	19,255
North Central	26,259	29,550	19,946
Southwest	12,861	14,092	8,942
West	29,371	36,843	29,440
Total properties acquired	98,656	126,916	85,112
Properties disposed by region:			
Northeast	(8,883)	(8,490)	(5,663)
Southeast	(28,310)	(26,082)	(15,678)
North Central	(25,971)	(22,349)	(15,549)
Southwest	(13,099)	(11,044)	(7,142)
West	(33,931)	(33,250)	(25,374)
Total properties disposed	(110,194)	(101,215)	(69,406)
Ending property inventory	60,555	72,093	45,052

(1) See endnote (8) to "Table 57 — Single-Family Credit Guarantee Portfolio by Attribute Combinations" for a description of these regions.
(2) Represents REO assets associated with previously non-consolidated mortgage trusts recognized upon adoption of the amendment to the accounting guidance for consolidation of VIEs on January 1, 2010.

After having increased 60% in 2010, our REO property inventory declined 16% in 2011. The decline in 2011 is primarily due to a decline in the volume of single-family foreclosures caused by delays in the foreclosure process, combined with continued strong levels of REO disposition activity during the period. The increase in 2010 was due, in part, to increased levels of foreclosures associated with borrowers that did not qualify for or did not successfully complete a modification or short sale. The average length of time for foreclosure of a Freddie Mac loan significantly increased in recent years due to temporary suspensions, delays, and other factors. During 2011 and 2010, the nationwide average for completion of a foreclosure (as measured from the date of the last scheduled payment made by the borrower) on our single-family delinquent loans, excluding those underlying our Other Guarantee Transactions, was 506 days and 446 days, respectively, which included: (a) an average of 633 days and 551 days, respectively, for foreclosures completed in states that require a judicial foreclosure process; and (b) an average of 449 days and 384 days, respectively, for foreclosures completed in states that do not require a judicial foreclosure process. We experienced significant variability in the average time for foreclosure by state in 2011. For example, during 2011, the average time for completion of foreclosures associated with loans in our single-family credit guarantee portfolio, excluding Other Guarantee Transactions, was 375 days in Michigan and 841 days in Florida.

We expect the pace of our REO acquisitions will continue to be affected by delays in the foreclosure process in 2012. However, we expect the volume of our REO acquisitions will likely remain elevated, as we have a large inventory of seriously delinquent loans in our single-family credit guarantee portfolio, many of which will likely complete the foreclosure process and transition to REO during 2012 as our servicers continue to work through their foreclosure-related issues. This inventory of seriously delinquent loans arose due to various factors and events that have lengthened the problem loan resolution process and delayed the transition of such loans to a workout or foreclosure transfer (and then, to REO). These factors and events include the effect of HAMP, suspensions of foreclosure transfers, and the increasingly lengthy foreclosure process in many states.

Our single-family REO acquisitions in 2011 were most significant in the states of California, Michigan, Georgia, Florida, and Arizona, which collectively represented 43% of total REO acquisitions based on the number of properties. These states collectively represented 48% of total REO acquisitions in 2010. The states with the most properties in our REO inventory as of December 31, 2011 were Michigan and California. At December 31, 2011, our REO inventory in Michigan and California comprised 12% and 10%, respectively, of total REO property inventory, based on the number of properties.

We are limited in our REO disposition efforts by the capacity of the market to absorb large numbers of foreclosed properties. An increasing portion of our REO acquisitions are: (a) located in jurisdictions that require a period of time after foreclosure during which the borrower may reclaim the property; or (b) occupied and we have either retained the tenant under an existing lease or begun the process of eviction. All of these factors resulted in an increase in the aging of our inventory. During the period when the borrower may reclaim the property, or we are completing the eviction process, we are not able to market the property. As of December 31, 2011, 2010, and 2009, approximately 33%, 28%, and 35%, respectively, of our REO properties were not marketable due to the above conditions. Our temporary suspension of certain REO sales during the fourth quarter of 2010 (for up to three months) due to concerns about deficiencies in foreclosure documentation practices also caused the average holding period to increase. Primarily for these reasons, the average holding period of our REO properties increased in the last two years, though it varies significantly in different states. Excluding any post-foreclosure period during which borrowers may reclaim a foreclosed property, the average holding period associated with our REO dispositions during the years ended December 31, 2011 and 2010 was 197 days and 155 days, respectively. As of December 31, 2011 and 2010, the percentage of our single-family REO property inventory that had been held for sale longer than one year was 7.1% and 3.4%, respectively. We continue to actively market these properties through our established initiatives.

The percentage of interest-only and Alt-A loans in our single-family credit guarantee portfolio, based on UPB, was approximately 4% and 5%, respectively, at December 31, 2011 and was 8% on a combined basis. The percentage of our REO acquisitions in 2011 that had been financed by either of these loan types represented approximately 30% of our total REO acquisitions, based on loan amount prior to acquisition.

We began to expand our methods for REO sales during 2010, including the expanded use of REO auctions and bulk sale transactions of properties in certain geographical areas. Although auction and bulk sales are potentially available for use in all geographical areas, these methods of REO disposition have to date only been used for our more difficult to sell or highly distressed inventory. As a result, in 2011, auction and bulk sales represented an insignificant portion of our REO dispositions. In addition, in certain locations we have offered REO properties for purchase by Neighborhood Stabilization Program grant recipients prior to listing the properties for sale to the general public. For the first 15 days following listing, we also offer most of our REO properties exclusively to Neighborhood Stabilization Program grant recipients and purchasers who intend to occupy the properties.

On August 10, 2011, FHFA, in consultation with Treasury and HUD, announced a request for information seeking input on new options for sales and rentals of single-family REO properties held by Freddie Mac, Fannie Mae and FHA. According to the announcement, the objective of the request for information was to help address current and future REO inventory. The request for information solicited alternatives for maximizing value to taxpayers and increasing private investment in the housing market, including approaches that support rental and affordable housing needs. We are participating in discussions with FHFA and other agencies with respect to this initiative. It is too early to determine the impact this initiative may have on the levels of our REO property inventory, the process for disposing of REO property or our REO operations expense.

Credit Loss Performance

Many loans that are seriously delinquent, or in foreclosure, result in credit losses. The table below provides detail on our credit loss performance associated with mortgage loans and REO assets on our consolidated balance sheets and underlying our non-consolidated mortgage-related financial guarantees.

Table 62 — Credit Loss Performance

	December 31,		
	2011	2010	2009
	(dollars in millions)		
REO			
REO balances, net:			
Single-family	$ 5,548	$ 6,961	$ 4,661
Multifamily	132	107	31
Total	$ 5,680	$ 7,068	$ 4,692
REO operations (income) expense:			
Single-family	$ 596	$ 676	$ 287
Multifamily	(11)	(3)	20
Total	$ 585	$ 673	$ 307
Charge-offs			
Single-family:			
Charge-offs, gross[1] (including $14.7 billion, $16.2 billion, and $9.4 billion relating to loan loss reserves, respectively)	$15,149	$16,746	$ 9,661
Recoveries[2]	(2,764)	(3,362)	(2,088)
Single-family, net	$12,385	$13,384	$ 7,573
Multifamily:			
Charge-offs, gross[1] (including $75 million, $104 million, and $21 million relating to loan loss reserves, respectively)	$ 83	$ 104	$ 21
Recoveries[2]	(1)	(1)	—
Multifamily, net	$ 82	$ 103	$ 21
Total Charge-offs:			
Charge-offs, gross[1] (including $14.8 billion, $16.3 billion, and $9.4 billion relating to loan loss reserves, respectively)	$15,232	$16,850	$ 9,682
Recoveries[2]	(2,765)	(3,363)	(2,088)
Total Charge-offs, net	$12,467	$13,487	$ 7,594
Credit Losses[3]			
Single-family	$12,981	$14,060	$ 7,860
Multifamily	71	100	41
Total	$13,052	$14,160	$ 7,901
Total (in bps)[4]	68.1	72.2	40.7

(1) Represent the carrying amount of a loan that has been discharged in order to remove the loan from our consolidated balance sheets at the time of resolution, regardless of when the impact of the credit loss was recorded on our consolidated statements of income and comprehensive income through the provision for credit losses or losses on loans purchased. Charge-offs primarily result from foreclosure transfers and short sales and are generally calculated as the recorded investment of a loan at the date it is discharged less the estimated value in final disposition or actual net sales in a short sale.
(2) Recoveries of charge-offs primarily result from foreclosure transfers and short sales on loans where a share of default risk has been assumed by mortgage insurers, servicers, or other third parties through credit enhancements.
(3) Excludes foregone interest on non-performing loans, which reduces our net interest income but is not reflected in our total credit losses. In addition, excludes other market-based credit losses: (a) incurred on our investments in mortgage loans and mortgage-related securities; and (b) recognized in our consolidated statements of income and comprehensive income.
(4) Calculated as credit losses divided by the average carrying value of our total mortgage portfolio, excluding non-Freddie Mac mortgage-related securities and that portion of REMICs and Other Structured Securities that are backed by Ginnie Mae Certificates.

Our credit loss performance metric generally measures losses at the conclusion of the loan and related collateral resolution process. There is a significant lag in time from the implementation of problem loan workout activities until the final resolution of seriously delinquent mortgage loans and REO assets. Our credit loss performance is based on our charge-offs and REO expenses. We primarily record charge-offs at the time we take ownership of a property through foreclosure and at the time of settlement of foreclosure alternative transactions. Single-family charge-offs, gross, for 2011 and 2010 were $15.1 billion and $16.7 billion, respectively, and were associated with approximately $31.5 billion and $33.9 billion, respectively, in UPB of loans. Our net charge-offs in 2011 remained elevated, but reflect suppression of activity due to delays in the foreclosure process and continuing weak market conditions. We expect our charge-offs and credit losses to remain high in 2012 and they may increase over 2011 levels, due to the large number of single-family non-performing loans that will likely be resolved as our servicers work through their foreclosure-related issues and because market conditions, such as home prices and the rate of home sales, continue to remain weak.

Our credit losses during 2011 continued to be disproportionately high in those states that experienced significant declines in property values since 2006, such as California, Florida, Nevada, and Arizona, which collectively comprised approximately 60% of our total credit losses in 2011. Due to declines in property values since 2006, we continued to experience high REO disposition severity ratios on sales of our REO inventory during 2011. In addition, although Alt-A loans comprised approximately 5% and 6% of our single-family credit guarantee portfolio at December 31, 2011 and 2010, respectively, these loans accounted for approximately 28% and 37% of our credit losses in 2011 and 2010,

respectively. See "Table 3 — Credit Statistics, Single-Family Credit Guarantee Portfolio" for information on REO disposition severity ratios, and see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for additional information about our credit losses.

The table below provides detail by region for charge-offs. Regional charge-off trends generally follow a pattern that is similar to, but lags, that of regional serious delinquency trends.

Table 63 — Single-Family Charge-offs and Recoveries by Region[(1)]

	Year Ended December 31,								
	2011			2010			2009		
	Charge-offs, gross	Recoveries[(2)]	Charge-offs, net	Charge-offs, gross	Recoveries[(2)]	Charge-offs, net	Charge-offs, gross	Recoveries[(2)]	Charge-offs, net
					(in millions)				
Northeast	$ 1,033	$ (226)	$ 807	$ 1,367	$ (318)	$ 1,049	$ 854	$ (194)	$ 660
Southeast	3,210	(693)	2,517	4,311	(1,005)	3,306	2,124	(557)	1,567
North Central	2,502	(615)	1,887	2,638	(694)	1,944	1,502	(393)	1,109
Southwest	777	(243)	534	761	(288)	473	484	(169)	315
West	7,627	(987)	6,640	7,669	(1,057)	6,612	4,697	(775)	3,922
Total	$15,149	$(2,764)	$12,385	$16,746	$(3,362)	$13,384	$9,661	$(2,088)	$7,573

(1) See endnote (8) to "Table 57 — Single-Family Credit Guarantee Portfolio by Attribute Combinations" for a description of these regions.
(2) Recoveries of charge-offs primarily result from foreclosure transfers and short sales on loans where a share of default risk has been assumed by mortgage insurers, servicers, or other third parties through credit enhancements.

Loan Loss Reserves

We maintain mortgage-related loan loss reserves at levels we believe appropriate to absorb probable incurred losses on mortgage loans held-for-investment on our consolidated balance sheets and those underlying Freddie Mac mortgage-related securities and other guarantee commitments. Determining the loan loss reserves is complex and requires significant management judgment about matters that involve a high degree of subjectivity. See "CRITICAL ACCOUNTING POLICIES AND ESTIMATES — Allowance for Loan Losses and Reserve for Guarantee Losses" for further information.

The table below summarizes our loan loss reserves activity for held-for-investment mortgage loans recognized on our consolidated balance sheets and underlying Freddie Mac mortgage-related securities and other guarantee commitments, in total.

Table 64 — Loan Loss Reserves Activity[(1)]

	Year Ended December 31,				
	2011	2010	2009	2008	2007
	(dollars in millions)				
Total loan loss reserves:					
Beginning balance	$ 39,926	$ 33,857	$15,618	$ 2,822	$ 619
Adjustments to beginning balance[(2)]	—	(186)	—	—	—
Provision for credit losses	10,702	17,218	29,530	16,432	2,854
Charge-offs, gross[(3)]	(14,810)	(16,322)	(9,402)	(3,072)	(376)
Recoveries[(4)]	2,765	3,363	2,088	779	239
Transfers, net[(5)]	878	1,996	(3,977)	(1,343)	(514)
Ending balance	$ 39,461	$ 39,926	$33,857	$15,618	$2,822
Components of loan loss reserves:					
Single-family	$ 38,916	$ 39,098	$33,026	$15,341	$2,760
Multifamily	$ 545	$ 828	$ 831	$ 277	$ 62
Total loan loss reserve, as a percentage of the total mortgage portfolio, excluding non-Freddie Mac securities	2.08%	2.03%	1.69%	0.81%	0.16%

(1) Consists of reserves for loans held-for-investment and those underlying Freddie Mac mortgage-related securities and other guarantee commitments.
(2) Adjustments relate to the adoption of amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Recently Adopted Accounting Guidance" for further information.
(3) Charge-offs related to loan loss reserves represent the amount of a loan that has been discharged to remove the loan from our consolidated balance sheet due to either foreclosure transfer or a short sale or deed in lieu of foreclosure transaction. Charge-offs exclude $422 million, $528 million, $280 million, $377 million, and $156 million for the years ended December 31, 2011, 2010, 2009, 2008, and 2007, respectively, related to certain loans purchased under financial guarantees and reflected within losses on loans purchased on our consolidated statements of income and comprehensive income.
(4) Recoveries of charge-offs primarily result from foreclosure alternatives and REO acquisitions on loans where: (a) a share of default risk has been assumed by mortgage insurers, servicers or other third parties through credit enhancements; or (b) we received a reimbursement of our losses from a seller/servicer associated with a repurchase request on a loan that experienced a foreclosure transfer or a foreclosure alternative.
(5) Consist primarily of: (a) amounts related to agreements with seller/servicers where the transfer relates to recoveries received under these agreements to compensate us for previously incurred and recognized losses; (b) the transfer of a proportional amount of the recognized reserves for guarantee losses associated with loans purchased from non-consolidated Freddie Mac mortgage-related securities and other guarantee commitments; and (c) net amounts attributable to recapitalization of past due interest on modified mortgage loans. See "Institutional Credit Risk — Single-family Mortgage Seller/Servicers" for more information about our agreements with our seller/servicers.

We adopted an amendment to the accounting guidance related to the classification of loans as TDRs in the third quarter of 2011, which significantly increases the population of problem loans subject to our workout activities that we account for and disclose as TDRs. The impact of this change in guidance on our financial results for 2011 was not significant because the loan loss reserve associated with those loans determined on a collective basis prior to their classification as TDRs was not materially different from the loan loss reserve of the loans determined on an individual basis upon classification as TDRs at the time of the adoption of this amendment. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," and "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for additional information on our accounting policies for loan loss reserves and TDR loans, including our implementation of changes to the accounting guidance related to the classification of loans as TDRs.

The table below summarizes our allowance for loan loss activity for individually impaired single-family mortgage loans on our consolidated balance sheets for which we have recorded a specific reserve.

Table 65 — Single-Family Impaired Loans with Specific Reserve Recorded

	As of December 31, 2011	
	# of Loans	Amount
		(in millions)
TDRs (recorded investment):		
December 31, 2010 balance	128,241	$ 28,440
New additions	136,316	27,791
Repayments	(4,655)	(1,243)
Loss events[1]	(7,607)	(1,537)
Other	454	43
December 31, 2011 balance	252,749	53,494
Other (recorded investment)[2]	25,565	2,433
December 31, 2011 balance	278,314	55,927
Total single-family impaired loans-allowance for loan losses		(15,100)
Net investment		$ 40,827

(1) Consists of foreclosure transfer or foreclosures alternative, such as a deed in lieu of foreclosure or short sale transaction.
(2) Consists of loans impaired upon purchase which experienced further deterioration in borrower credit.

See "CONSOLIDATED RESULTS OF OPERATIONS — Provision for Credit Losses," for a discussion of our provision for credit losses and charge-off activity.

Credit Risk Sensitivity

Under a 2005 agreement with FHFA, then OFHEO, we are required to disclose the estimated increase in the NPV of future expected credit losses for our single-family credit guarantee portfolio over a ten year period as the result of an immediate 5% decline in home prices nationwide, followed by a stabilization period and return to the base case. This sensitivity analysis is hypothetical and may not be indicative of our actual results. We do not use this analysis for determination of our reported results under GAAP. As shown in the table below, our credit loss sensitivity declined in the last half of 2011, primarily due to the effects of a decline in mortgage interest rates, which affected recent and future expectations of refinancing activity.

Table 66 — Single-Family Credit Loss Sensitivity

	Before Receipt of Credit Enhancements[1]		After Receipt of Credit Enhancements[2]	
	NPV[3]	NPV Ratio[4]	NPV[3]	NPV Ratio[4]
	(dollars in millions)			
At:				
December 31, 2011	$ 8,328	47.7 bps	$7,842	44.9 bps
September 30, 2011	$ 8,824	49.5 bps	$8,229	46.1 bps
June 30, 2011	$10,203	56.5 bps	$9,417	52.2 bps
March 31, 2011	$ 9,832	54.2 bps	$8,999	49.6 bps
December 31, 2010	$ 9,926	54.9 bps	$9,053	50.0 bps

(1) Assumes that none of the credit enhancements currently covering our mortgage loans has any mitigating impact on our credit losses.
(2) Assumes we collect amounts due from credit enhancement providers after giving effect to certain assumptions about counterparty default rates.
(3) Based on the single-family credit guarantee portfolio, excluding REMICs and Other Structured Securities backed by Ginnie Mae Certificates.
(4) Calculated as the ratio of NPV of increase in credit losses to the single-family credit guarantee portfolio, defined in note (3) above.

Interest Rate and Other Market Risks

For a discussion of our interest rate and other market risks, see "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK."

Operational Risks

Risk types have become increasingly inter-related such that an operational breakdown can result in a credit- or market- related event or loss. Operational risks are inherent in all of our business activities and can become apparent in various ways, including accounting or operational errors, business interruptions, fraud, and failures of the technology used to support our business activities. Our risk of operational failure may be increased by vacancies or turnover in officer and key business unit positions and failed or inadequate internal controls. These operational risks may expose us to financial loss, interfere with our ability to sustain timely and reliable financial reporting, or result in other adverse consequences.

We have faced challenges with respect to managing servicers and credit loss mitigation due to a number of factors, including high volumes of seriously delinquent loans and inadequate systems. Implementation of the revised HARP initiative will place additional strain on existing systems, processes, and key resources. On December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. While we continue to assess the impact of this law on us, we currently believe that implementation of this law will present operational and accounting challenges for us. For more information, see, "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments*." We may also face increased operational risk due to the requirement that we and Fannie Mae align certain single-family mortgage servicing practices for non-performing loans. On April 28, 2011, FHFA announced a new set of aligned standards for servicing by Freddie Mac and Fannie Mae. Implementing this servicing alignment initiative has become a top priority for the company, but may pose significant short-term operational challenges in data management and place additional strain on existing systems, processes, and key resources, particularly if the requirements were to change or new requirements were to be imposed on servicers whether through government directives or servicer settlements with the state attorneys general. See "Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk — Single-Family Loan Workouts and the MHA Program*" for more information. There also have been a number of other regulatory developments in recent periods impacting single-family mortgage servicing and foreclosure practices, including top servicers entering into consent orders with federal banking regulators. The servicing model for single-family mortgages may face further significant changes in the future. As a result, we may be required to make additional significant changes to our practices, which could further increase our operational risk. See "BUSINESS — Regulation and Supervision — *Legislative and Regulatory Developments — Developments Concerning Single-Family Servicing Practices*" for more information.

Our business decision-making, risk management, and financial reporting are highly dependent on our use of models. In recent periods, external market factors have increasingly contributed to a growing risk associated with the use of these models. For example, certain economic events or the implementation of government policies could create increased model uncertainty as models may not fully capture these events, which makes it more difficult to assess model performance and requires a higher degree of management judgment. We have taken certain actions to mitigate this risk to the extent possible, including additional efforts in the area of model oversight and governance pertaining to clarifying roles, aligning model resources, and providing more transparency to management over model issues and changes.

Our primary business processing and financial accounting systems lack sufficient flexibility to handle all the complexities of, and changes in, our business transactions and related accounting policies and methods. This requires us to rely more extensively on spreadsheets and other end-user computing systems. These systems are likely to have a higher risk of operational failure and error than our primary systems, which are subject to our information technology general controls. We believe we are mitigating this risk through active monitoring of, and improvements to, controls over the development and use of end-user computing systems.

In order to manage the risk of inaccurate or unreliable valuations of our financial instruments, we engage in an ongoing internal review of our valuations. We perform analysis of valuations on a monthly basis to confirm the reasonableness of the valuations. For more information on the controls in our valuation process, see "FAIR VALUE MEASUREMENTS AND ANALYSIS — Fair Value Measurements — *Controls over Fair Value Measurement*."

Our risks related to employee turnover are increasing. Throughout 2011 and early 2012, Congress continued to publicly debate our: (a) current primary business objectives and whether we should be doing more to help distressed homeowners; (b) future business structure following conservatorship, including whether we will continue to exist; and (c) current compensation structure, including whether senior executives should be entitled to bonuses or whether all employees should be placed on the government pay scale. Moreover, the Administration has called for a "wind down" of the GSEs, an ongoing development our employees follow closely. The visible public debate regarding the future role of the GSEs continues within the media and Congress.

Uncertainty surrounding our future business model, organizational structure, and compensation structure is adversely impacting our internal control environment. We believe these factors are also contributing to increased levels of voluntary

employee turnover, including 17% voluntary turnover at our Senior and Executive Vice President levels in 2011. Additionally, the Conservator directed us to maintain individual salaries and wage rates for all employees at 2010 levels for 2011 and 2012 (except in the case of promotions or significant changes in responsibilities). In 2011, we made certain significant reorganizations which included targeted divisional staff reductions in an effort to manage general and administrative expenses. All of these activities impact our ability to retain our employees and compensate them for their work. Disruptive levels of turnover at both the executive and employee levels could lead to breakdowns in many of our operations that impact our ability to: (a) serve our mission and meet our objectives; (b) manage credit and other risks related to our $2.1 trillion total mortgage portfolio (including interest rate and other market risks related to our $653 billion mortgage-related investment portfolio); (c) reduce the need to draw funds from Treasury; and (d) issue timely financial statements.

We are finding it difficult to retain and engage critical employees and attract people with the skills and experience we need. Because we maintain succession plans for our senior management positions, we were able to quickly fill some of these positions vacated in 2011, or eliminate them through reorganizations. However, such alternatives are limited and may not be available to address future senior management departures. While we update our succession plans regularly, in many areas we have already executed these plans and we may need to search outside the company for replacements to fill these senior positions. We face increased difficulty filling senior positions given the uncertainty around compensation. We operate in an environment in which virtually every business decision is closely scrutinized and subject to public criticism and review by various government authorities. Many executives are unwilling to work in such an environment for potentially significantly less than what they could earn elsewhere. Accordingly, we may not be able to retain or replace executives or other employees with the requisite institutional knowledge and the technical, operational, risk management, and other key skills needed to conduct our business effectively.

As a result of the increasing risk of employee turnover, we are exploring options to enter into various strategic arrangements with outside firms to provide operational capability and staffing for key functions, if needed. Should we experience significant turnover in key areas, we may need to exercise these strategic arrangements and significantly increase the number of outside firms and consultants used in our business operations, limit certain business activities, and/or increase our operational costs. However, these or other efforts to manage this risk to the enterprise may not be successful.

A recovering economy is likely to put additional pressures on turnover in 2012, as other attractive opportunities may become available to people who we want to retain. For more information on these matters, including the potential impacts of the risks related to employee retention, see "RISK FACTORS — Conservatorship and Related Matters — *The conservatorship and uncertainty concerning our future has had, and will likely continue to have, an adverse effect on the retention, recruitment and engagement of management and other employees, which could have a material adverse effect on our ability to operate our business,"* "— Operational Risks — *Weaknesses in internal control over financial reporting and in disclosure controls could result in errors and inadequate disclosures, affect operating results, and cause investors to lose confidence in our reported results*" and *"— We have experienced significant management changes, internal reorganizations, and turnover of key staff, which could increase our operational and control risks and have a material adverse effect on our ability to do business and our results of operations."*

Freddie Mac management has determined that current business recovery capabilities may not be effective in the event of a catastrophic regional business event and could result in a significant business disruption and inability to process transactions through normal business processes. While management has developed a remediation plan to address the current capability gaps, any measures we take to mitigate this risk may not be sufficient to respond to the full range of catastrophic events that may occur. The remediation plan is designed to improve Freddie Mac's ability to recover an acceptable level of critical business functionality within predetermined time frames to address regional business disruptions, such as a terrorist event, natural disaster, loss of infrastructure services, denial of access, and/or a pandemic. For more information, see "RISK FACTORS — Operational Risks — *A failure in our operational systems or infrastructure, or those of third parties, could impair our liquidity, disrupt our business, damage our reputation, and cause losses.*"

Our operations rely on the secure receipt, processing, storage, and transmission of confidential and other information in our computer systems and networks and with our business partners. Like many corporations and government entities, from time to time we have been, and likely will continue to be, the target of cyber attacks. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, and because some techniques involve social engineering attempts addressed to employees who may have insufficient knowledge to recognize them, we may be unable to anticipate these techniques or to implement adequate preventative measures. While we have invested significant resources in our information security

program, there is a risk that it could prove to be inadequate to protect our computer systems, software, and networks. For additional information, see "RISK FACTORS — Operational Risks — *We may not be able to protect the security of our systems or the confidentiality of our information from cyber attack and other unauthorized access, disclosure, and disruption*."

Management, including the company's Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting and our disclosure controls and procedures as of December 31, 2011. As of December 31, 2011, we had two material weaknesses in our internal control over financial reporting causing us to conclude that both our internal control over financial reporting and disclosure controls and procedures were not effective as of December 31, 2011, at a reasonable level of assurance.

- The first material weakness relates to our inability to update our disclosure controls and procedures in a manner that adequately ensures the accumulation and communication to management of information known to FHFA that is needed to meet our disclosure obligations under the federal securities laws, including disclosures affecting our consolidated financial statements. We have not been able to update our disclosure controls and procedures to provide reasonable assurance that information known by FHFA on an ongoing basis is communicated from FHFA to Freddie Mac's management in a manner that allows for timely decisions regarding our required disclosure. Given the structural nature of this weakness, we believe it is likely that we will not remediate this material weakness while we are under conservatorship. We consider this situation to be a material weakness in our internal control over financial reporting.
- The second material weakness relates to our inability to effectively manage information technology changes and maintain adequate controls over information security monitoring, resulting from increased levels of employee turnover. As discussed above, we are finding it difficult to retain and engage critical employees and attract people with the skills and experience we need. In most areas, we have been able to leverage succession plans and reassign responsibilities to maintain sound internal control over financial reporting. However, in the fourth quarter of 2011, we experienced a significant increase in the number of control breakdowns within certain areas of our information technology division, specifically within groups responsible for information change management and information security. We identified deficiencies in the following areas: (a) approval and monitoring of changes to certain technology applications and infrastructure; (b) monitoring of select privileged user activities; and (c) monitoring user activities performed on certain technology hardware systems. These control breakdowns could have impacted applications which support our financial reporting processes. Increased levels of employee turnover contributed to ineffective management oversight of controls in these areas resulting in these deficiencies. We believe that these issues aggregate to a material weakness in our internal control over financial reporting. We also consider this material weakness to cause our disclosure controls and procedures to be ineffective.

In view of the mitigating actions we have undertaken related to these material weaknesses, we believe that our consolidated financial statements for the year ended December 31, 2011 have been prepared in conformity with GAAP. For additional information, see "CONTROLS AND PROCEDURES."

LIQUIDITY AND CAPITAL RESOURCES

Liquidity

Our business activities require that we maintain adequate liquidity to fund our operations, which may include the need to make payments of principal and interest on our debt securities, including securities issued by our consolidated trusts, and otherwise make payments related to our guarantees of mortgage assets; make payments upon the maturity, redemption or repurchase of our debt securities; make net payments on derivative instruments; pay dividends on our senior preferred stock; purchase mortgage-related securities and other investments; purchase mortgage loans; and remove modified or seriously delinquent loans from PC trusts.

We fund our cash requirements primarily by issuing short-term and long-term debt. Other sources of cash include:

- receipts of principal and interest payments on securities or mortgage loans we hold;
- other cash flows from operating activities, including the management and guarantee fees we receive in connection with our guarantee activities (excluding those we must remit to Treasury pursuant to the Temporary Payroll Tax Cut Continuation Act of 2011 commencing in April 2012);
- borrowings against mortgage-related securities and other investment securities we hold; and
- sales of securities we hold.

We have also received substantial amounts of cash from Treasury pursuant to draws under the Purchase Agreement, which are made to address deficits in our net worth. We received $8.0 billion in cash from Treasury during 2011 pursuant to draws under the Purchase Agreement.

We believe that the support provided by Treasury pursuant to the Purchase Agreement currently enables us to maintain our access to the debt markets and to have adequate liquidity to conduct our normal business activities, although the costs of our debt funding could vary.

As a result of the potential that the U.S. would exhaust its borrowing authority under the statutory debt limit and market concerns regarding the potential for a downgrade in the credit rating of the U.S. government, beginning in the third quarter of 2011, we changed the composition of our portfolio of liquid assets to hold more cash and overnight investments. On August 5, 2011, S&P lowered the long-term credit rating of the U.S. government to "AA+" from "AAA" and assigned a negative outlook to the rating. On August 8, 2011, S&P lowered our senior long-term debt credit rating to "AA+" from "AAA" and assigned a negative outlook to the rating. While this could adversely affect our liquidity, and the supply and cost of debt financing available to us in the future, we have not yet experienced such adverse effects. For more information, see "*Other Debt Securities — Credit Ratings*" and "RISK FACTORS — Competitive and Market Risks — *Any downgrade in the credit ratings of the U.S. government would likely be followed by a downgrade in our credit ratings. A downgrade in the credit ratings of our debt could adversely affect our liquidity and other aspects of our business.*"

We may require cash in order to fulfill our mortgage purchase commitments. Historically, we fulfilled our purchase commitments related to our mortgage purchase flow business primarily by swap transactions, whereby our customers exchanged mortgage loans for PCs, rather than using cash. However, it is at the discretion of the seller, subject to limitations imposed by the contract governing the commitment, whether the purchase commitment is fulfilled through a swap transaction or with cash. We provide liquidity to our seller/servicers through our cash purchase program. Loans purchased through the cash purchase program can be sold to investors through a cash auction of PCs, and, in the interim, are carried as mortgage loans on our consolidated balance sheets. See "OFF-BALANCE SHEET ARRANGEMENTS" for additional information regarding our mortgage purchase commitments.

We make extensive use of the Fedwire system in our business activities. The Federal Reserve requires that we fully fund our account in the Fedwire system to the extent necessary to cover cash payments on our debt and mortgage-related securities each day, before the Federal Reserve Bank of New York, acting as our fiscal agent, will initiate such payments. We routinely use an open line of credit with a third party, which provides intraday liquidity to fund our activities through the Fedwire system. This line of credit is an uncommitted intraday loan facility. As a result, while we expect to continue to use the facility, we may not be able to draw on it, if and when needed. This line of credit requires that we post collateral that, in certain circumstances, the secured party has the right to repledge to other third parties, including the Federal Reserve Bank. As of December 31, 2011, we pledged approximately $10.5 billion of securities to this secured party. See "NOTE 7: INVESTMENTS IN SECURITIES — Collateral Pledged" for further information.

Depending on market conditions and the mix of derivatives we employ in connection with our ongoing risk management activities, our derivative portfolio can be either a net source or a net use of cash. For example, depending on the prevailing interest-rate environment, interest-rate swap agreements could cause us either to make interest payments to counterparties or to receive interest payments from counterparties. Purchased options require us to pay a premium while written options allow us to receive a premium.

We are required to pledge collateral to third parties in connection with secured financing and daily trade activities. In accordance with contracts with certain derivative counterparties, we post collateral to those counterparties for derivatives in a net loss position, after netting by counterparty, above agreed-upon posting thresholds. See "NOTE 7: INVESTMENTS IN SECURITIES — Collateral Pledged" for information about assets we pledge as collateral.

We are involved in various legal proceedings, including those discussed in "LEGAL PROCEEDINGS," which may result in a use of cash in order to settle claims or pay certain costs.

For more information on our short- and long-term liquidity needs, see "CONTRACTUAL OBLIGATIONS."

Liquidity Management

Maintaining sufficient liquidity is of primary importance and we continually strive to enhance our liquidity management practices and policies. Under these practices and policies, we maintain an amount of cash and cash equivalent reserves in the form of liquid, high quality short-term investments that is intended to enable us to meet ongoing cash obligations for an extended period, in the event we do not have access to the short- or long-term unsecured debt markets. We also actively manage the concentration of debt maturities and closely monitor our monthly maturity profile.

Our liquidity management policies provide for us to:

- maintain funds sufficient to cover our maximum cash liquidity needs for at least the following 35 calendar days, assuming no access to the short- or long-term unsecured debt markets. At least 50% of such amount, which is based on the average daily 35-day cash liquidity needs of the preceding three months, must be held: (a) in U.S. Treasury securities with remaining maturities of five years or less or other U.S. government-guaranteed securities with remaining maturities of one year or less; or (b) as uninvested cash at the Federal Reserve Bank of New York;
- limit the proportion of debt maturing within the next year. We actively manage the composition of short-and long-term debt, as well as our patterns of redemption of callable debt, to manage the proportion of effective short-term debt to reduce the risk that we will be unable to refinance our debt as it comes due; and
- maintain unencumbered collateral with a value greater than or equal to the largest projected cash shortfall on any one day over the following 365 calendar days, assuming no access to the short- and long-term unsecured debt markets. This is based on a daily forecast of all existing contractual cash obligations over the following 365 calendar days.

Throughout 2011, we complied with all requirements under our liquidity management policies. Furthermore, the majority of the funds used to cover our short-term cash liquidity needs was invested in short-term assets with a rating of A-1/P-1 or AAA or was issued by a counterparty with that rating. In the event of a downgrade of a position or counterparty, as applicable, below minimum rating requirements, our credit governance policies require us to exit from the position within a specified period.

We also continue to manage our debt issuances to remain in compliance with the aggregate indebtedness limits set forth in the Purchase Agreement.

We are monitoring events related to troubled European countries and have taken a number of actions designed to reduce our exposures, including exposures related to certain derivative portfolio and cash and other investments portfolio counterparties. For more information, see "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Selected European Sovereign and Non-Sovereign Exposures*."

To facilitate cash management, we forecast cash outflows. These forecasts help us to manage our liabilities with respect to asset purchases and runoff, when financial markets are not in crisis. For further information on our management of interest-rate risk associated with asset and liability management, see "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK."

Notwithstanding these practices and policies, our ability to maintain sufficient liquidity, including by pledging mortgage-related and other securities as collateral to other financial institutions, could cease or change rapidly and the cost of the available funding could increase significantly due to changes in market confidence and other factors. For more information, see "RISK FACTORS — Competitive and Market Risks — *Our investment activities may be adversely affected by limited availability of financing and increased funding costs.*"

Actions of Treasury and FHFA

Since our entry into conservatorship, Treasury and FHFA have taken a number of actions that affect our cash requirements and ability to fund those requirements. The conservatorship, and the resulting support we received from Treasury, has enabled us to access debt funding on terms sufficient for our needs.

Under the Purchase Agreement, Treasury made a commitment to provide funding, under certain conditions, to eliminate deficits in our net worth. The Purchase Agreement provides that the $200 billion maximum amount of the commitment from Treasury will increase as necessary to accommodate any cumulative reduction in our net worth during 2010, 2011, and 2012. If we do not have a capital surplus (*i.e.*, positive net worth) at the end of 2012, then the amount of funding available after 2012 will be $149.3 billion ($200 billion funding commitment reduced by cumulative draws for net worth deficits through December 31, 2009). In the event we have a capital surplus at the end of 2012, then the amount of funding available after 2012 will depend on the size of that surplus relative to cumulative draws needed for deficits during 2010 to 2012, as follows:

- If the year-end 2012 surplus is lower than the cumulative draws needed for 2010 to 2012, then the amount of available funding is $149.3 billion less the surplus.
- If the year-end 2012 surplus exceeds the cumulative draws for 2010 to 2012, then the amount of available funding is $149.3 billion less the amount of those draws.

While we believe that the support provided by Treasury pursuant to the Purchase Agreement currently enables us to maintain our access to the debt markets and to have adequate liquidity to conduct our normal business activities, the costs of our debt funding could vary due to the uncertainty about the future of the GSEs and potential investor concerns about the adequacy of funding available to us under the Purchase Agreement after 2012. The costs of our debt funding could also increase due to the downgrades discussed above or in the event of any future downgrades in our credit ratings or the credit ratings of the U.S. government. Upon funding of the draw request that FHFA will submit to eliminate our net worth deficit at December 31, 2011, our aggregate funding received from Treasury under the Purchase Agreement will increase to $71.3 billion. This aggregate funding amount does not include the initial $1.0 billion liquidation preference of senior preferred stock that we issued to Treasury in September 2008 as an initial commitment fee and for which no cash was received. Our draw request represents our net worth deficit at quarter-end rounded up to the nearest $1 million.

We are required to pay a quarterly commitment fee to Treasury under the Purchase Agreement, as discussed below in "*Dividend Obligation on the Senior Preferred Stock*."

The GSE Act requires us to set aside or allocate monies each year to certain funds managed by HUD and Treasury. However, FHFA has suspended this requirement. For more information, see "BUSINESS — Regulation and Supervision — *Federal Housing Finance Agency — Affordable Housing Allocations*."

For more information on these matters, see "BUSINESS — Conservatorship and Related Matters" and "— Regulation and Supervision."

Dividend Obligation on the Senior Preferred Stock

Following funding of the draw request related to our net worth deficit at December 31, 2011, our annual cash dividend obligation to Treasury on the senior preferred stock will increase from $7.22 billion to $7.23 billion, which exceeds our annual historical earnings in all but one period. The senior preferred stock accrues quarterly cumulative dividends at a rate of 10% per year or 12% per year in any quarter in which dividends are not paid in cash until all accrued dividends have been paid in cash. We paid dividends of $6.5 billion in cash on the senior preferred stock during 2011 at the direction of our Conservator. Through December 31, 2011, we paid aggregate cash dividends to Treasury of $16.5 billion, an amount equal to 23% of our aggregate draws received under the Purchase Agreement. Continued cash payment of senior preferred dividends will have an adverse impact on our future financial condition and net worth and will increasingly drive future draws. In addition, we are required under the Purchase Agreement to pay a quarterly commitment fee to Treasury, which could contribute to future draws if the fee is not waived. Treasury waived the fee for all quarters of 2011 and the first quarter of 2012, but it has indicated that it remains committed to protecting taxpayers and ensuring that our future positive earnings are returned to taxpayers as compensation for their investment. The amount of the fee has not yet been established and could be substantial.

The payment of dividends on our senior preferred stock in cash reduces our net worth. For periods in which our earnings and other changes in equity do not result in positive net worth, draws under the Purchase Agreement effectively fund the cash payment of senior preferred dividends to Treasury. Under the Purchase Agreement, our ability to repay the liquidation preference of the senior preferred stock is limited and we will not be able to do so for the foreseeable future, if at all.

As discussed in "Capital Resources," we expect to make additional draws under the Purchase Agreement in future periods. Further draws will increase the liquidation preference of and the dividends we owe on the senior preferred stock.

Other Debt Securities

We fund our business activities primarily through the issuance of short- and long-term debt. The investor base for our debt is predominantly institutional. Competition for funding can vary with economic, financial market, and regulatory environments. Historically, we have mainly competed for funds in the debt issuance markets with Fannie Mae and the FHLBs. We repurchase or call our outstanding debt securities from time to time to help support the liquidity and predictability of the market for our debt securities and to manage our mix of liabilities funding our assets.

To fund our business activities, we depend on the continuing willingness of investors to purchase our debt securities. We expect that, over time, the reduction in our mortgage-related investments portfolio will reduce our funding needs. Changes or perceived changes in the government's support of us could have a severe negative effect on our access to the debt markets and on our debt funding costs. In addition, any change in applicable legislative or regulatory exemptions, including those described in "BUSINESS — Regulation and Supervision," could adversely affect our access to some debt investors, thereby potentially increasing our debt funding costs.

Spreads on our debt and our access to the debt markets remained favorable relative to historical levels during the three months and year ended December 31, 2011, due largely to support from the U.S. government. As a result, we were able to replace certain higher cost debt with lower cost debt. Our short-term debt was 24% of outstanding other debt at December 31, 2011 as compared to 28% at December 31, 2010. Beginning in the fourth quarter of 2011, we started issuing a higher percentage of long-term debt. This allows us to take advantage of attractive long-term rates while decreasing our reliance on interest-rate swaps, which may lessen the volatility of derivative gains (losses) on our consolidated statements of income and comprehensive income. For more information about derivative gains (losses), see "CONSOLIDATED RESULTS OF OPERATIONS — Non-Interest Income (Loss) — *Derivative Gains (Losses)*."

Because of the debt limit under the Purchase Agreement, we may be restricted in the amount of debt we are allowed to issue to fund our operations. Our debt cap under the Purchase Agreement was $972 billion in 2011 and declined to $874.8 billion on January 1, 2012. As of December 31, 2011, we estimate that the par value of our aggregate indebtedness totaled $674.3 billion, which was approximately $297.7 billion below the applicable debt cap. As of December 31, 2010, we estimate that the par value of our aggregate indebtedness totaled $728.2 billion, which was approximately $351.8 billion below the then applicable limit of $1.08 trillion. Our aggregate indebtedness is calculated as the par value of other debt. We disclose the amount of our indebtedness on this basis monthly under the caption "Other Debt Activities — Total Debt Outstanding" in our Monthly Volume Summary reports, which are available on our web site at www.freddiemac.com and in current reports on Form 8-K we file with the SEC.

Other Debt Issuance Activities

The table below summarizes the par value of other debt securities we issued, based on settlement dates, during 2011 and 2010.

Table 67 — Other Debt Security Issuances by Product, at Par Value[(1)]

	Year Ended December 31,	
	2011	2010
	(in millions)	
Other short-term debt:		
Reference Bills® securities and discount notes	$412,165	$481,853
Medium-term notes — callable	—	1,500
Medium-term notes — non-callable[(2)]	450	1,364
Total other short-term debt	412,615	484,717
Other long-term debt:		
Medium-term notes — callable	172,464	219,847
Medium-term notes — non-callable	77,810	74,487
U.S. dollar Reference Notes® securities — non-callable	47,500	36,500
Total other long-term debt	297,774	330,834
Total other debt issued	$710,389	$815,551

(1) Excludes federal funds purchased and securities sold under agreements to repurchase, and lines of credit. Also excludes debt securities of consolidated trusts held by third parties.
(2) Includes $450 million and $1.4 billion of medium-term notes — non-callable issued for the years ended December 31, 2011 and 2010, respectively, which were related to debt exchanges.

Other Short-Term Debt

We fund our operating cash needs, in part, by issuing Reference Bills® securities and other discount notes, which are short-term instruments with maturities of one year or less that are sold on a discounted basis, paying only principal at maturity. Our Reference Bills® securities program consists of large issues of short-term debt that we auction to dealers on a regular schedule. We issue discount notes with maturities ranging from one day to one year in response to investor demand and our cash needs. Short-term debt also includes certain medium-term notes that have original maturities of one year or less.

Other Long-Term Debt

We issue debt with maturities greater than one year primarily through our medium-term notes program and our Reference Notes® securities program.

Medium-term Notes

We issue a variety of fixed- and variable-rate medium-term notes, including callable and non-callable fixed-rate securities, zero-coupon securities and variable-rate securities, with various maturities ranging up to 30 years. Medium-term

notes with original maturities of one year or less are classified as short-term debt. Medium-term notes typically contain call provisions, effective as early as three months or as long as ten years after the securities are issued.

Reference Notes® Securities

Reference Notes® securities are regularly issued, U.S. dollar denominated, non-callable fixed-rate securities, which we generally issue with original maturities ranging from two through ten years. Prior to 2005, we issued €Reference Notes® securities denominated in Euros, which remain outstanding. We hedge our exposure to changes in foreign-currency exchange rates by entering into swap transactions that convert foreign-currency denominated obligations to U.S. dollar-denominated obligations. See "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK — Interest-Rate Risk and Other Market Risks — *Sources of Interest-Rate Risk and Other Market Risks*" for more information.

Subordinated Debt

During 2011 and 2010, we did not call or issue any Freddie SUBS® securities. At December 31, 2011 and 2010, the balance of our subordinated debt outstanding was $0.4 billion and $0.7 billion, respectively. Our subordinated debt in the form of Freddie SUBS® securities is a component of our risk management and disclosure commitments with FHFA. See "RISK MANAGEMENT AND DISCLOSURE COMMITMENTS" for a discussion of changes affecting our subordinated debt as a result of our placement in conservatorship and the Purchase Agreement, and the Conservator's suspension of certain requirements relating to our subordinated debt. Under the Purchase Agreement, we may not issue subordinated debt without Treasury's consent.

Other Debt Retirement Activities

We repurchase, call, or exchange our outstanding medium- and long-term debt securities from time to time to help support the liquidity and predictability of the market for our other debt securities and to manage our mix of liabilities funding our assets. When our debt securities become seasoned or one-time call options on our debt securities expire, they may become less liquid, which could cause their price to decline. By repurchasing debt securities, we help preserve the liquidity of our debt securities and improve their price performance, which helps to reduce our funding costs over the long-term. Our repurchase activities also help us manage the funding mismatch, or duration gap, created by changes in interest rates. For example, when interest rates decline, the expected lives of our investments in mortgage-related securities decrease, reducing the need for long-term debt. We use a number of different means to shorten the effective weighted average lives of our outstanding debt securities and thereby manage the duration gap, including retiring long-term debt through repurchases or calls; changing our debt funding mix between short- and long-term debt; or using derivative instruments, such as entering into receive-fixed swaps or terminating or assigning pay-fixed swaps. From time to time, we may also enter into transactions in which we exchange newly issued debt securities for similar outstanding debt securities held by investors.

The table below provides the par value, based on settlement dates, of other debt securities we repurchased, called, and exchanged during 2011 and 2010.

Table 68 — Other Debt Security Repurchases, Calls, and Exchanges[(1)]

	Year Ended December 31,	
	2011	2010
	(in millions)	
Repurchases of outstanding €Reference Notes® securities	$ 258	$ 262
Repurchases of outstanding medium-term notes	12,064	5,301
Calls of callable medium-term notes	185,489	256,256
Exchanges of medium-term notes	450	1,364

(1) Excludes debt securities of consolidated trusts held by third parties.

Credit Ratings

Our ability to access the capital markets and other sources of funding, as well as our cost of funds, is highly dependent upon our credit ratings. The table below indicates our credit ratings as of February 27, 2012.

Table 69 — Freddie Mac Credit Ratings

	Nationally Recognized Statistical Rating Organization		
	S&P	Moody's	Fitch
Senior long-term debt[1]	AA+	Aaa	AAA
Short-term debt[2]	A-1+	P-1	F1+
Subordinated debt[3]	A	Aa2	AA–
Preferred stock[4]	C	Ca	C/RR6
Outlook	Negative (for senior long-term debt and subordinated debt)	Negative (for senior long-term debt and subordinated debt)	Negative (for AAA-rated long-term Issuer Default Rating)

(1) Consists of medium-term notes, U.S. dollar Reference Notes® securities and €Reference Notes® securities.
(2) Consists of Reference Bills® securities and discount notes.
(3) Consists of Freddie SUBS® securities.
(4) Does not include senior preferred stock issued to Treasury.

Our credit ratings are primarily based on the support we receive from Treasury, and therefore are affected by changes in the credit ratings of the U.S. government.

On November 21, 2011, the Joint Select Committee (formed as a result of the Budget and Control Act of 2011) announced that efforts to reach a deficit reduction agreement had been unsuccessful. Subsequent to this announcement, on November 28, 2011, Fitch affirmed the U.S. government's long-term Issuer Default Rating, or IDR, at "AAA" and revised the rating outlook to negative from stable. On this date, Fitch also affirmed the ratings on our senior long-term debt, short-term debt, subordinated debt, and preferred stock, while affirming our "AAA" IDR and revising the outlook on this rating to negative from stable.

For information about other ratings actions in 2011 and factors that could lead to future ratings actions and the potential impact of a downgrade in our credit ratings, see "RISK FACTORS — Competitive and Market Risks — *Any downgrade in the credit ratings of the U.S. government would likely be followed by a downgrade in our credit ratings. A downgrade in the credit ratings of our debt could adversely affect our liquidity and other aspects of our business*."

A security rating is not a recommendation to buy, sell or hold securities. It may be subject to revision or withdrawal at any time by the assigning rating organization. Each rating should be evaluated independently of any other rating.

Cash and Cash Equivalents, Federal Funds Sold, Securities Purchased Under Agreements to Resell, and Non-Mortgage-Related Securities

Excluding amounts related to our consolidated VIEs, we held $67.8 billion in the aggregate of cash and cash equivalents, securities purchased under agreements to resell, and non-mortgage-related securities at December 31, 2011. These investments are important to our cash flow and asset and liability management and our ability to provide liquidity and stability to the mortgage market. At December 31, 2011, our non-mortgage-related securities primarily consisted of FDIC-guaranteed corporate medium-term notes and Treasury notes that we could sell to provide us with an additional source of liquidity to fund our business operations. For additional information on these assets, see "CONSOLIDATED BALANCE SHEETS ANALYSIS — Cash and Cash Equivalents, Federal Funds Sold and Securities Purchased Under Agreements to Resell" and "— Investments in Securities — *Non-Mortgage-Related Securities*."

Mortgage Loans and Mortgage-Related Securities

We invest principally in mortgage loans and mortgage-related securities, certain categories of which are largely unencumbered and highly liquid. Our primary source of liquidity among these mortgage assets is our holdings of agency securities. In addition, our unsecuritized performing single-family mortgage loans are also a potential source of liquidity. Our holdings of CMBS are less liquid than agency securities. Our holdings of non-agency mortgage-related securities backed by subprime, option ARM, and Alt-A and other loans are not liquid due to market conditions and the continued poor credit quality of the underlying assets. Our holdings of unsecuritized seriously delinquent and modified single-family mortgage loans are also illiquid.

We are subject to limits on the amount of mortgage assets we can sell in any calendar month without review and approval by FHFA and, if FHFA so determines, Treasury. See "BUSINESS — Conservatorship and Related Matters — *Impact of Conservatorship and Related Actions on Our Business — Limits on Investment Activity and Our Mortgage-Related Investments Portfolio*" for more information on these limits and on the relative liquidity of our mortgage assets.

Cash Flows

Our cash and cash equivalents decreased $8.6 billion to $28.4 billion during 2011 and decreased $27.7 billion to $37.0 billion during 2010. Cash flows provided by operating activities during 2011 and 2010 were $10.3 billion and $10.8 billion, respectively, primarily driven by cash proceeds from net interest income. Cash flows provided by investing activities during 2011 and 2010 were $373.7 billion and $385.6 billion, respectively, primarily resulting from net proceeds received as a result of repayments of single-family held-for-investment mortgage loans. Cash flows used for financing activities during 2011 and 2010 were $392.6 billion and $424.1 billion, respectively, largely attributable to funds used to repay debt securities of consolidated trusts held by third parties.

Our cash and cash equivalents increased approximately $19.4 billion during 2009 to $64.7 billion at December 31, 2009. Cash flows provided by operating activities during 2009 were $1.3 billion, which primarily related to cash proceeds from net interest income, partially offset by net cash proceeds used to purchase held-for-sale mortgage loans. Cash flows provided by investing activities during 2009 were $47.6 billion, primarily resulting from net proceeds related to sales and maturities of our available-for-sale securities, partially offset by a net increase in trading securities. Cash flows used for financing activities for 2009 were $29.5 billion, largely attributable to repayments of short-term debt, partially offset by $36.9 billion received from Treasury under the Purchase Agreement.

Capital Resources

Our entry into conservatorship resulted in significant changes to the assessment of our capital adequacy and our management of capital. On October 9, 2008, FHFA announced that it was suspending capital classification of us during conservatorship in light of the Purchase Agreement. FHFA continues to monitor our capital levels, but the existing statutory and FHFA-directed regulatory capital requirements are not binding during conservatorship. We continue to provide submissions to FHFA on minimum capital. See "NOTE 15: REGULATORY CAPITAL" for our minimum capital requirement, core capital, and GAAP net worth results as of December 31, 2011 and 2010. In addition, notwithstanding our failure to maintain required capital levels, FHFA directed us to continue to make interest and principal payments on our subordinated debt. For more information, see "BUSINESS — Regulation and Supervision — *Federal Housing Finance Agency — Subordinated Debt*."

Under the Purchase Agreement, Treasury made a commitment to provide us with funding, under certain conditions, to eliminate deficits in our net worth. The Purchase Agreement provides that, if FHFA determines as of quarter end that our liabilities have exceeded our assets under GAAP, Treasury will contribute funds to us in an amount equal to the difference between such liabilities and assets; a higher amount may be drawn if Treasury and Freddie Mac mutually agree that the draw should be increased beyond the level by which liabilities exceed assets under GAAP. In each case, the amount of the draw cannot exceed the maximum aggregate amount that may be funded under the Purchase Agreement.

We are focusing our risk and capital management, consistent with the objectives of conservatorship, on, among other things, maintaining a positive balance of GAAP equity in order to reduce the likelihood that we will need to make additional draws on the Purchase Agreement with Treasury. Our business objectives and strategies have in some cases been altered since we were placed into conservatorship, and may continue to change. Certain changes to our business objectives and strategies are designed to provide support for the mortgage market in a manner that serves public policy and other non-financial objectives. In this regard, we are focused on serving our mission, helping families keep their homes, and stabilizing the economy by playing a vital role in the Administration's housing programs. However, these changes to our business objectives and strategies may conflict with maintaining positive GAAP equity.

Under the GSE Act, FHFA must place us into receivership if FHFA determines in writing that our assets are and have been less than our obligations for a period of 60 days. Obtaining funding from Treasury pursuant to its commitment under the Purchase Agreement enables us to avoid being placed into receivership by FHFA. At December 31, 2011, our liabilities exceeded our assets under GAAP by $146 million. Accordingly, we must obtain funding from Treasury pursuant to its commitment under the Purchase Agreement in order to avoid being placed into receivership by FHFA. FHFA, as Conservator, will submit a draw request to Treasury under the Purchase Agreement in the amount of $146 million, which we expect to receive by March 31, 2012. See "BUSINESS — Regulation and Supervision — *Federal Housing Finance Agency — Receivership*" for additional information on mandatory receivership.

We expect to make further draws under the Purchase Agreement in future periods. Given the substantial senior preferred stock dividend obligation to Treasury, which will increase with additional draws, senior preferred stock dividend payments will increasingly drive our future draw requests. The size and timing of our future draws will be determined by the dividend obligation and a variety of other factors that could adversely affect our net worth. For more information, see

"RISK FACTORS — Conservatorship and Related Matters — *We expect to make additional draws under the Purchase Agreement in future periods, which will adversely affect our future results of operations and financial condition*."

For more information on the Purchase Agreement, its effect on our business and capital management activities, factors that could adversely affect the size and timing of further draws, and the potential impact of making additional draws, see "Liquidity — *Dividend Obligation on the Senior Preferred Stock*," "BUSINESS — Executive Summary — *Government Support for Our Business*" and "RISK FACTORS."

FAIR VALUE MEASUREMENTS AND ANALYSIS

Fair Value Measurements

Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The accounting guidance for fair value measurements and disclosures establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value based on the inputs a market participant would use at the measurement date. Observable inputs reflect market data obtained from independent sources. Unobservable inputs reflect assumptions based on the best information available under the circumstances. Unobservable inputs are used to measure fair value to the extent that observable inputs are not available, or in situations where there is little, if any, market activity for an asset or liability at the measurement date. We use valuation techniques that seek to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs.

The three levels of the fair value hierarchy under the accounting guidance for fair value measurements and disclosures are described below:

- Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for identical assets or liabilities;
- Level 2: Quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; inputs other than quoted market prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3: Unobservable inputs for the asset or liability that are supported by little or no market activity and that are significant to the fair values.

We categorize assets and liabilities measured and reported at fair value in our consolidated balance sheets within the fair value hierarchy based on the valuation process used to derive their fair values and our judgment regarding the observability of the related inputs. Those judgments are based on our knowledge and observations of the markets relevant to the individual assets and liabilities and may vary based on current market conditions. In applying our judgments, we review ranges of third party prices and transaction volumes, and hold discussions with dealers and pricing service vendors to understand and assess the extent of market benchmarks available and the judgments or modeling required in their processes. Based on these factors, we determine whether the inputs are observable and whether the principal markets are active or inactive.

Our Level 1 financial instruments consist of exchange-traded derivatives, Treasury bills, and Treasury notes, where quoted prices exist for the exact instrument in an active market.

Our Level 2 instruments generally consist of high credit quality agency securities, CMBS, non-mortgage-related asset-backed securities, FDIC-guaranteed corporate medium-term notes, interest-rate swaps, option-based derivatives, and foreign-currency denominated debt. These instruments are generally valued through one of the following methods: (a) dealer or pricing service inputs with the value derived by comparison to recent transactions involving similar securities and adjusting for differences in prepayment or liquidity characteristics; or (b) modeled through an industry standard modeling technique that relies upon observable inputs such as discount rates and prepayment assumptions.

Our Level 3 assets primarily consist of non-agency mortgage-related securities. The non-agency mortgage-related securities market continued to be illiquid during 2011, with low transaction volumes, wide credit spreads, and limited transparency. We value the non-agency mortgage-related securities we hold based primarily on prices received from pricing services and dealers. The techniques used by these pricing services and dealers to develop the prices generally are either: (a) a comparison to transactions involving instruments with similar collateral and risk profiles; or (b) industry standard modeling, such as a discounted cash flow model. For a large majority of the securities we value using dealers and pricing services, we obtain multiple independent prices, which are non-binding both to us and our counterparties.

When multiple prices are received, we use the median of the prices. The models and related assumptions used by the dealers and pricing services are owned and managed by them. However, we have an understanding of their processes used to develop the prices provided to us based on our ongoing due diligence. We periodically have discussions with our dealers and pricing service vendors to maintain a current understanding of the processes and inputs they use to develop prices. We make no adjustments to the individual prices we receive from third party pricing services or dealers for non-agency mortgage-related securities beyond calculating median prices and discarding certain prices that are determined not to be valid based on our validation processes. See "*Controls over Fair Value Measurement*" for information on our validation processes.

Our valuation process and related fair value hierarchy assessments require us to make judgments regarding the liquidity of the marketplace. These judgments are based on the volume of securities traded in the marketplace, the width of bid/ask spreads and dispersion of prices on similar securities. As previously mentioned, the non-agency mortgage-related security markets continued to be illiquid during 2011. We continue to utilize the prices on such securities provided to us by various pricing services and dealers and believe that the procedures executed by the pricing services and dealers, combined with our internal verification and analytical processes, help ensure that the prices used to develop our financial statements are in accordance with the accounting guidance for fair value measurements and disclosures.

The prices provided to us consider the existence of credit enhancements, including bond insurance coverage, and the current lack of liquidity in the marketplace. We also consider credit risk in the valuation of our assets and liabilities, with the credit risk of the counterparty considered in asset valuations and our own institutional credit risk considered in liability valuations. See "*Consideration of Credit Risk in Our Valuation*" for more information.

We periodically evaluate our valuation techniques and may change them to improve our fair value estimates, to accommodate market developments or to compensate for changes in data availability and reliability or other operational constraints. We review a range of market quotes from pricing services or dealers and perform analysis of internal valuations on a monthly basis to confirm the reasonableness of the valuations.

The table below summarizes our assets and liabilities measured at fair value on a recurring basis at December 31, 2011 and 2010.

Table 70 — Summary of Assets and Liabilities at Fair Value on a Recurring Basis

	December 31,			
	2011		2010	
	Total GAAP Recurring Fair Value	Percentage in Level 3	Total GAAP Recurring Fair Value	Percentage in Level 3
	(dollars in millions)			
Assets:				
Investments in securities:				
Available-for-sale, at fair value	$210,659	28%	$232,634	30%
Trading, at fair value	58,830	4	60,262	5
Mortgage loans:				
Held-for-sale, at fair value	9,710	100	6,413	100
Derivative assets, net(1)	118	—	143	—
Other assets:				
Guarantee asset, at fair value	752	100	541	100
All other, at fair value	151	100	235	100
Total assets carried at fair value on a recurring basis(1)	$280,220	23	$300,228	25
Liabilities:				
Debt securities recorded at fair value	$ 3,015	—%	$ 4,443	—%
Derivative liabilities, net(1)	435	—	1,209	3
Total liabilities carried at fair value on a recurring basis(1)	$ 3,450	—	$ 5,652	2

(1) Percentages by level are based on gross fair value of derivative assets and derivative liabilities before counterparty netting, cash collateral netting, net trade/settle receivable or payable and net derivative interest receivable or payable.

Changes in Level 3 Recurring Fair Value Measurements

At December 31, 2011 and 2010, we measured and recorded at fair value on a recurring basis, assets of $72.5 billion and $80.0 billion, respectively, or approximately 23% and 25% of total assets carried at fair value on a recurring basis, using significant unobservable inputs (Level 3), before the impact of counterparty and cash collateral netting. Our Level 3 assets at December 31, 2011 primarily consist of non-agency mortgage-related securities. At December 31, 2011 and 2010, we also measured and recorded at fair value on a recurring basis, Level 3 derivative liabilities of $0.1 billion and $0.8 billion, or less than 1% and 2%, respectively, of total liabilities carried at fair value on a recurring basis, before the impact of counterparty and cash collateral netting.

During 2011, the fair value of our Level 3 assets decreased due to: (a) monthly remittances of principal repayments from the underlying collateral of non-agency mortgage-related securities; and (b) the widening of OAS levels on these securities. During 2011, we had a net transfer into Level 3 assets of $267 million, resulting from a change in valuation method for certain mortgage-related securities due to a lack of relevant price quotes from dealers and third-party pricing services.

During 2010, our Level 3 assets decreased by $81.7 billion primarily due to the transfer of the majority of CMBS from Level 3 to Level 2 and our adoption of amendments to the accounting guidance applicable to the accounting for transfers of financial assets and the consolidation of VIEs. During 2010, the CMBS market continued to improve and we observed significantly less variability in fair value quotes received from dealers and third-party pricing services. In the fourth quarter of 2010 we determined that these market conditions stabilized to a degree that we believe indicates unobservable inputs are no longer significant to the fair values of these securities. As a result, we transferred $51.3 billion of CMBS from Level 3 to Level 2. The adoption of the amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs resulted in the elimination of $28.8 billion in our Level 3 assets on January 1, 2010, including: (a) certain mortgage-related securities issued by our consolidated trusts that are held by us; and (b) the guarantee asset for guarantees issued to our consolidated trusts. In addition, we transferred $0.4 billion of other Level 3 assets to Level 2 during 2010, resulting from improved liquidity and availability of price quotes received from dealers and third-party pricing services.

See "NOTE 17: FAIR VALUE DISCLOSURES — Table 17.2 — Fair Value Measurements of Assets and Liabilities Using Significant Unobservable Inputs" for the Level 3 reconciliation. For discussion of types and characteristics of mortgage loans underlying our mortgage-related securities, see "Table 23 — Characteristics of Mortgage-Related Securities on Our Consolidated Balance Sheets" and "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Single-Family Mortgage Credit Risk.*"

Consideration of Credit Risk in Our Valuation

We consider credit risk in the valuation of our assets and liabilities through consideration of credit risk of the counterparty in asset valuations and through consideration of our own institutional credit risk in liability valuations on our GAAP consolidated balance sheets.

We consider credit risk in our valuation of investments in securities based on fair value measurements that are largely the result of price quotes received from multiple dealers or pricing services. Some of the key valuation drivers of such fair value measurements can include the collateral type, collateral performance, credit quality of the issuer, tranche type, weighted average life, vintage, coupon, and interest rates. We also make adjustments for items such as credit enhancements or other types of subordination and liquidity, where applicable. In cases where internally developed models are used, we maximize the use of market-based inputs or calibrate such inputs to market data.

We also consider credit risk when we evaluate the valuation of our derivative positions. The fair value of derivative assets considers the impact of institutional credit risk in the event that the counterparty does not honor its payment obligation. For derivatives that are in an asset position, we hold collateral against those positions in accordance with agreed upon thresholds. The amount of collateral held depends on the credit rating of the counterparty and is based on our credit risk policies. Similarly, for derivatives that are in a liability position, we post collateral to counterparties in accordance with agreed upon thresholds. Based on this evaluation, our fair value of derivatives is not adjusted for credit risk because we obtain collateral from, or post collateral to, most counterparties, typically within one business day of the daily market value calculation, and substantially all of our credit risk arises from counterparties with investment-grade credit ratings of A or above. See "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Derivative Counterparties*" for a discussion of our counterparty credit risk.

See "NOTE 17: FAIR VALUE DISCLOSURES — Valuation Methods and Assumptions Subject to Fair Value Hierarchy" for additional information regarding the valuation of our assets and liabilities.

Controls over Fair Value Measurement

We employ control processes to validate the techniques and models we use to determine fair value. These processes are designed to help ensure that fair value measurements are appropriate and reliable. These control processes include review and approval of new transaction types, price verification, and review of valuation judgments, methods, models, process controls, and results. Groups within our Finance and Enterprise Risk Management divisions, independent of our trading and investing function, execute, validate, and review the valuation process. Additionally, the Valuation & Finance Model Committee (Valuation Committee), which includes senior representation from business areas and our Enterprise Risk Management and Finance divisions, participates in the review and validation process.

Our control process includes performing monthly independent verification of fair value measurements by comparing the methodology driven price to other market source data (to the extent available), and uses independent analytics to determine if assigned fair values are reasonable. This review covers all categories of products with increased attention to higher risk/impact valuations. Validation processes are intended to help ensure that the individual prices we receive from third parties are consistent with our observations of the marketplace and prices that are provided to us by other dealers or pricing services. Where applicable, prices are back-tested by comparing the settlement prices to our fair value measurements. Analytical procedures include automated checks of prices for reasonableness based on variations from prices in previous periods, comparisons of prices to internally calculated expected prices, based on market moves, and relative value and yield comparisons based on specific characteristics of securities. To the extent that we determine that a price is outside of established parameters, we will further examine the price, including follow up discussions with the specific pricing service or dealer and ultimately will not use that price if we are not able to determine that the price is valid. These processes are executed prior to the use of the prices in our financial statements.

Where models are employed to assist in the measurement of fair value, all changes made to those models during the periods presented are put through the corporate model change governance process and material changes are reviewed by the Valuation Committee. Inputs used by those models are regularly updated for changes in the underlying data, assumptions, or market conditions.

Consolidated Fair Value Balance Sheets Analysis

Our consolidated fair value balance sheets present our estimates of the fair value of our financial assets and liabilities. See "NOTE 17: FAIR VALUE DISCLOSURES — Table 17.6 — Consolidated Fair Value Balance Sheets" for our fair value balance sheets. In conjunction with the preparation of our consolidated fair value balance sheets, we use a number of financial models. See "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK — Interest-Rate Risk and Other Market Risks," "RISK FACTORS" and "RISK MANAGEMENT — Operational Risks" for information concerning the risks associated with these models.

During 2011 and 2010, our fair value results were impacted by several improvements in our approach for estimating the fair value of certain financial instruments. See "CRITICAL ACCOUNTING POLICIES AND ESTIMATES," "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," and "NOTE 17: FAIR VALUE DISCLOSURES" for more information on fair values.

Key Components of Changes in Fair Value of Net Assets

Our attribution of changes in the fair value of net assets relies on models, assumptions, and other measurement techniques that evolve over time. The following are the key components of the attribution analysis:

Core Spread Income

Core spread income on our investments in mortgage loans and mortgage-related securities is a fair value estimate of the net current period accrual of income from the spread between our mortgage-related investments and our debt, calculated on an option-adjusted basis. OAS is an estimate of the yield spread between a given financial instrument and a benchmark (LIBOR, agency or Treasury) yield curve, after consideration of potential variability in the instrument's cash flows resulting from any options embedded in the instrument, such as prepayment options.

Changes in Mortgage-To-Debt OAS

The fair value of our net assets can be significantly affected from period to period by changes in the net OAS between the mortgage and agency debt sectors. The fair value impact of changes in OAS for a given period represents an estimate of the net unrealized increase or decrease in fair value of net assets arising from net fluctuations in OAS during that period. We do not attempt to hedge or actively manage the basis risk represented by the impact of changes in mortgage-to-debt OAS because we generally hold a substantial portion of our mortgage assets for the long-term and we do not believe that periodic increases or decreases in the fair value of net assets arising from fluctuations in OAS will significantly affect the long-term value of our investments in mortgage loans and mortgage-related securities.

Asset-Liability Management Return

Asset-liability management return represents the estimated net increase or decrease in the fair value of net assets resulting from net exposures related to the market risks we actively manage. We do not hedge all of the interest-rate risk that exists at the time a mortgage is purchased or that arises over its life. The market risks to which we are exposed as a result of our investment activities that we actively manage include duration and convexity risks, yield curve risk and volatility risk.

We seek to manage these risk exposures within prescribed limits as part of our overall investment strategy. Taking these risk positions and managing them within prudent limits is an integral part of our investment activity. We expect that the net exposures related to market risks we actively manage will generate fair value returns, although those positions may result in a net increase or decrease in fair value for a given period. See "QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK — Interest-Rate Risk and Other Market Risks" for more information.

Core Management and Guarantee Fees, Net

Core management and guarantee fees, net represents a fair value estimate of the annual income of our credit guarantee activities, based on current credit guarantee characteristics and market conditions. This estimate considers both contractual management and guarantee fees collected over the life of the credit guarantees and credit-related delivery fees collected up front when pools are formed, and associated costs and obligations, which include default costs.

Change in the Fair Value of Credit Guarantee Activities

Change in the fair value of credit guarantee activities represents the estimated impact on the fair value of the credit guarantee business resulting from increases in the amount of such business we conduct plus the effect of changes in interest rates, projections of the future credit outlook and other market factors (*e.g.*, impact of the passage of time on cash flow discounting). Our estimated fair value of credit guarantee activities will change as credit conditions change.

We generally do not hedge changes in the fair value of our existing credit guarantee activities, with two exceptions discussed below. While periodic changes in the fair value of credit guarantee activities may have a significant impact on the fair value of net assets, we believe that changes in the fair value of our existing credit guarantee activities are not the best indication of long-term fair value expectations because such changes do not reflect our expectation that, over time, replacement business will largely replenish management and guarantee fee income lost because of prepayments. However, to the extent that projections of the future credit outlook reflected in the changes in fair value are realized, our fair value results may be affected.

We hedge interest rate exposure related to net buy-ups (up front payments we make that increase the management and guarantee fee that we will receive over the life of the pool) and float (expected gains or losses resulting from our mortgage security program remittance cycles). These value changes are considered in asset-liability management return (described above) because they relate to hedged positions. The change in the fair value of credit guarantee activities includes the impact of changes in interest rates and other market factors on the unhedged portion of the projected cash flows from the credit guarantee business.

Discussion of Fair Value Results

The table below summarizes the change in the fair value of net assets for 2011 and 2010.

Table 71 — Summary of Change in the Fair Value of Net Assets

	2011	2010
	(in billions)	
Beginning balance	$(58.6)	$(62.5)
Changes in fair value of net assets, before capital transactions	(21.3)	(2.9)
Capital transactions:		
Dividends and share issuances, net[1]	1.5	6.8
Ending balance	$(78.4)	$(58.6)

(1) Includes the funds received from Treasury of $8.0 billion and $12.5 billion for 2011 and 2010, respectively, under the Purchase Agreement, which increased the liquidation preference of our senior preferred stock.

During 2011, the fair value of net assets, before capital transactions, decreased by $21.3 billion, compared to a $2.9 billion decrease during 2010. The decrease in the fair value of net assets, before capital transactions, during 2011, was primarily due to: (a) a decrease in the fair value of our single-family loans due to our fourth quarter 2011 change in estimate discussed below, coupled with a decline in seasonally adjusted home prices in the continued weak credit environment; and (b) unrealized losses from the widening of OAS levels on our single-family non-agency mortgage-related securities. The decrease in fair value was partially offset by a tightening of OAS levels on our agency securities and high estimated core spread income.

During the fourth quarter of 2011, our fair value results as presented in our consolidated fair value balance sheets were affected by a change in estimate which increased the implied capital costs included in our valuation of single-family mortgage loans due to a change in the estimation of a risk premium assumption embedded in our modeled valuation of such loans. This change in estimate led to a $14.2 billion decrease in our fair value measurement of mortgage loans.

During 2010, the decrease in the fair value of net assets, before capital transactions, was primarily due to: (a) an increase in the risk premium related to our single-family loans as higher capital was applied reflecting the continued weak and uncertain credit environment; and (b) a change in the estimation of a risk premium assumption embedded in our model to apply credit costs, which led to a $6.9 billion decrease in our fair value measurement of mortgage loans. The decrease in fair value was partially offset by high estimated core spread income and an increase in the fair value of our investments in residential and commercial mortgage-related securities driven by the tightening of OAS levels.

When the OAS on a given asset widens, the fair value of that asset will typically decline, all other market factors being equal. However, we believe such OAS widening has the effect of increasing the likelihood that, in future periods, we will recognize income at a higher spread on this existing asset. The reverse is true when the OAS on a given asset tightens — current period fair values for that asset typically increase due to the tightening in OAS, while future income recognized on the asset is more likely to be earned at a reduced spread. However, as market conditions change, our estimate of expected fair value gains and losses from OAS may also change, and the actual core spread income recognized in future periods could be significantly different from current estimates.

OFF-BALANCE SHEET ARRANGEMENTS

We enter into certain business arrangements that are not recorded on our consolidated balance sheets or may be recorded in amounts that differ from the full contract or notional amount of the transaction. These off-balance sheet arrangements may expose us to potential losses in excess of the amounts recorded on our consolidated balance sheets.

Securitization Activities and Other Guarantee Commitments

We have certain off-balance sheet arrangements related to our securitization activities involving guaranteed mortgages and mortgage-related securities, though most of our securitization activities are on-balance sheet. Our off-balance sheet arrangements related to these securitization activities primarily consisted of: (a) Freddie Mac mortgage-related securities backed by multifamily loans; and (b) certain single-family Other Guarantee Transactions. We also have off-balance sheet arrangements related to other guarantee commitments, including long-term standby commitments and liquidity guarantees.

We guarantee the payment of principal and interest on Freddie Mac mortgage-related securities we issue and on mortgage loans covered by our other guarantee commitments. Therefore, our maximum potential off-balance sheet exposure to credit losses relating to these securitization activities and the other guarantee commitments is primarily represented by the UPB of the underlying loans and securities, which was $56.9 billion, $43.9 billion, and $1.5 trillion at December 31, 2011, 2010, and 2009, respectively. Our off-balance sheet arrangements related to securitization activity have been significantly reduced from historical levels due to accounting guidance for transfers of financial assets and the consolidation of VIEs, which we adopted on January 1, 2010. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Recently Adopted Accounting Guidance" and "NOTE 9: FINANCIAL GUARANTEES" for more information on our off-balance sheet securitization activities and other guarantee commitments.

We provide long-term standby commitments to certain of our customers, which obligate us to purchase seriously delinquent loans that are covered by those agreements. These other guarantee commitments totaled $8.6 billion, $5.5 billion, and $5.1 billion of UPB at December 31, 2011, 2010, and 2009, respectively. We also had other guarantee commitments outstanding with respect to multifamily housing revenue bonds of $9.6 billion, $9.7 billion, and $9.2 billion in UPB at December 31, 2011, 2010, and 2009, respectively. These other guarantee commitments allow us to expand our support to the housing markets in certain circumstances where securitization is not warranted or practicable. In addition, as of December 31, 2011, 2010, and 2009, we issued other guarantee commitments on HFA bonds under the TCLFP with UPB of $2.9 billion, $3.5 billion, and $0.8 billion respectively.

As part of the guarantee arrangements pertaining to certain multifamily housing revenue bonds and securities backed by multifamily housing revenue bonds, we provided commitments to advance funds, commonly referred to as "liquidity guarantees," totaling $12.0 billion, $12.6 billion, and $12.4 billion at December 31, 2011, 2010, and 2009, respectively. These guarantees require us to advance funds to third parties that enable them to repurchase tendered bonds or securities that are unable to be remarketed. Any repurchased securities are pledged to us to secure funding until the securities are remarketed. We hold cash and cash equivalents in excess of these commitments to advance funds. At December 31, 2011, 2010, and 2009, there were no liquidity guarantee advances outstanding. Advances under our liquidity guarantees would typically mature in 60 to 120 days. In addition, as part of the HFA initiative, we, together with Fannie Mae, provide liquidity guarantees for certain variable-rate single-family and multifamily housing revenue bonds, under which Freddie Mac generally is obligated to purchase 50% of any tendered bonds that cannot be remarketed within five business days. For more information on the HFA Initiative, including our participation in the TCLFP, see "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Housing Finance Agency Initiative."

Our exposure to losses on the transactions described above would be partially mitigated by the recovery we would receive through exercising our rights to the collateral backing the underlying loans and the available credit enhancements, which may include recourse and primary insurance with third parties. In addition, we provide for incurred losses each period on these guarantees within our provision for credit losses.

Other Agreements

We own interests in numerous entities that are considered to be VIEs for which we are not the primary beneficiary and which we do not consolidate in accordance with the accounting guidance for the consolidation of VIEs. These VIEs relate primarily to our investment activity in mortgage-related assets and non-mortgage assets, and include LIHTC partnerships, certain Other Guarantee Transactions, and certain asset-backed investment trusts. Our consolidated balance sheets reflect only our investment in the VIEs, rather than the full amount of the VIEs' assets and liabilities. See "NOTE 3: VARIABLE INTEREST ENTITIES" for additional information related to our variable interests in these VIEs.

As part of our credit guarantee business, we routinely enter into forward purchase and sale commitments for mortgage loans and mortgage-related securities. Some of these commitments are accounted for as derivatives. Their fair values are reported as either derivative assets, net or derivative liabilities, net on our consolidated balance sheets. For more information, see "RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Derivative Counterparties*." We also have purchase commitments primarily related to our mortgage purchase flow business, which we principally fulfill by issuing PCs in swap transactions, and, to a lesser extent, commitments to purchase or guarantee multifamily mortgage loans that are not accounted for as derivatives and are not recorded on our consolidated balance sheets. These non-derivative commitments totaled $271.8 billion, $220.7 billion and $325.9 billion, in notional value at December 31, 2011, 2010, and 2009, respectively.

In connection with the execution of the Purchase Agreement, we, through FHFA, in its capacity as Conservator, issued a warrant to Treasury to purchase 79.9% of our common stock outstanding on a fully diluted basis on the date of exercise. See "NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT)" for further information.

CONTRACTUAL OBLIGATIONS

The table below provides aggregated information about the listed categories of our contractual obligations as of December 31, 2011. These contractual obligations affect our short- and long-term liquidity and capital resource needs. The table includes information about undiscounted future cash payments due under these contractual obligations, aggregated by type of contractual obligation, including the contractual maturity profile of our debt securities (other than debt securities of consolidated trusts held by third parties). The timing of actual future payments may differ from those presented due to a number of factors, including discretionary debt repurchases. Our contractual obligations include other purchase obligations that are enforceable and legally binding. For purposes of this table, purchase obligations are included through the termination date specified in the respective agreement, even if the contract is renewable. Many of our purchase agreements for goods or services include clauses that would allow us to cancel the agreement prior to the expiration of the contract within a specified notice period; however, this table includes these obligations without regard to such termination clauses (unless we have provided the counterparty with actual notice of our intention to terminate the agreement).

In the table below, the amounts of future interest payments on debt securities outstanding at December 31, 2011 are based on the contractual terms of our debt securities at that date. These amounts were determined using the key assumptions that: (a) variable-rate debt continues to accrue interest at the contractual rates in effect at December 31, 2011 until maturity; and (b) callable debt continues to accrue interest until its contractual maturity. The amounts of future interest payments on debt securities presented do not reflect certain factors that will change the amounts of interest payments on our debt securities after December 31, 2011, such as: (a) changes in interest rates; (b) the call or retirement of any debt securities; and (c) the issuance of new debt securities. Accordingly, the amounts presented in the table do not represent a forecast of our future cash interest payments or interest expense.

The table below excludes certain obligations that could significantly affect our short- and long-term liquidity and capital resource needs. These items, which are listed below, have generally been excluded because the amount and timing of the related future cash payments are uncertain:

- future payments related to debt securities of consolidated trusts held by third parties, because the amount and timing of such payments are generally contingent upon the occurrence of future events and are therefore uncertain. These payments generally include payments of principal and interest we make to the holders of our guaranteed mortgage-related securities in the event a loan underlying a security becomes delinquent. We also remove

mortgages from pools underlying our PCs in certain circumstances, including when loans are 120 days or more delinquent, and retire the associated PC debt;

- any future cash payments associated with the liquidation preference of the senior preferred stock, as well as the quarterly commitment fee and the dividends on the senior preferred stock because the timing and amount of any such future cash payments are uncertain. As of December 31, 2011, the aggregate liquidation preference of the senior preferred stock was $72.2 billion and our annual dividend obligation was $7.22 billion. See "BUSINESS — Conservatorship and Related Matters — *Treasury Agreements*" for additional information;
- future cash settlements on derivative agreements not yet accrued, because the amount and timing of such payments are dependent upon changes in the underlying financial instruments in response to items such as changes in interest rates and foreign exchange rates and are therefore uncertain;
- future dividends on the preferred stock we have issued (other than the senior preferred stock), because dividends on these securities are non-cumulative;
- the guarantee arrangements pertaining to multifamily housing revenue bonds, where we provided commitments to advance funds, commonly referred to as "liquidity guarantees," because the amount and timing of such payments are generally contingent upon the occurrence of future events and are therefore uncertain; and
- future cash contributions to our Pension Plan, as we have not yet determined whether to make a cash contribution in 2012.

Table 72 — Contractual Obligations by Year at December 31, 2011

	Total	2012	2013	2014	2015	2016	Thereafter
				(in millions)			
Long-term debt(1)	$512,871	$127,798	$142,943	$87,453	$33,897	$45,526	$75,254
Short-term debt(1)	161,443	161,443	—	—	—	—	—
Interest payable(2)	55,882	17,189	7,806	6,062	4,685	3,683	16,457
Other liabilities reflected on our consolidated balance sheet:							
Other contractual liabilities(3)(4)(5)	680	492	11	11	9	8	149
Purchase obligations:							
Purchase commitments(6)	11,434	11,434	—	—	—	—	—
Other purchase obligations	545	461	50	17	9	6	2
Operating lease obligations	43	12	12	10	4	3	2
Total specified contractual obligations	$742,898	$318,829	$150,822	$93,553	$38,604	$49,226	$91,864

(1) Represents par value. Callable debt is included in this table at its contractual maturity. Excludes debt securities of consolidated trusts held by third parties. For additional information about our debt, see "NOTE 8: DEBT SECURITIES AND SUBORDINATED BORROWINGS."
(2) Includes estimated future interest payments on our short-term and long-term debt securities as well as the accrual of periodic cash settlements of derivatives, netted by counterparty. Also includes accrued interest payable recorded on our consolidated balance sheet, which consists primarily of the accrual of interest for our PCs and certain Other Guarantee Transactions, and the accrual of interest on short-term and long-term debt.
(3) Accrued obligations related to our defined benefit plans, defined contribution plans, and executive deferred compensation plan are included in the Total and 2012 columns. However, the timing of payments due under these obligations is uncertain.
(4) Other contractual liabilities include future cash payments due under our contractual obligations to make delayed equity contributions to LIHTC partnerships and payables to the consolidated trusts established for the administration of cash remittances received related to the underlying assets of Freddie Mac mortgage-related securities.
(5) As of December 31, 2011, we have recorded tax liabilities for unrecognized tax benefits totaling $1.4 billion and allocated interest of $266 million. These amounts have been excluded from this table because we cannot estimate the years in which these liabilities may be settled. See "NOTE 13: INCOME TAXES" for additional information.
(6) Purchase commitments represent our obligations to purchase mortgage loans and mortgage-related securities from third parties. The majority of purchase commitments included in this caption are accounted for as derivatives in accordance with the accounting guidance for derivatives and hedging.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in conformity with GAAP requires us to make a number of judgments, estimates and assumptions that affect the reported amounts within our consolidated financial statements. Certain of our accounting policies, as well as estimates we make, are critical, as they are both important to the presentation of our financial condition and results of operations and require management to make difficult, complex, or subjective judgments and estimates, often regarding matters that are inherently uncertain. Actual results could differ from our estimates and the use of different judgments and assumptions related to these policies and estimates could have a material impact on our consolidated financial statements.

Our critical accounting policies and estimates relate to: (a) allowances for loan losses and reserve for guarantee losses; (b) fair value measurements; (c) impairment recognition on investments in securities; and (d) realizability of net deferred tax assets. For additional information about our critical accounting policies and estimates and other significant accounting policies, including recently issued accounting guidance, including guidance that we have not yet adopted and

that will likely affect our consolidated financial statements, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES."

Allowance for Loan Losses and Reserve for Guarantee Losses

The allowance for loan losses and the reserve for guarantee losses represent estimates of incurred credit losses. The allowance for loan losses pertains to all single-family and multifamily loans classified as held-for-investment on our consolidated balance sheets, whereas the reserve for guarantee losses relates to single-family and multifamily loans underlying our non-consolidated Freddie Mac mortgage-related securities and other guarantee commitments. We use the same methodology to determine our allowance for loan losses and reserve for guarantee losses, as the relevant factors affecting credit risk are the same. Determining the appropriateness of the loan loss reserves is a complex process that is subject to numerous estimates and assumptions requiring significant management judgment about matters that involve a high degree of subjectivity. Our process involves a greater degree of management judgment than prior to this period of housing and mortgage market instability.

We estimate credit losses related to homogeneous pools of loans in accordance with the accounting guidance for contingencies. Loans that we evaluate for individual impairment are measured in accordance with the subsequent measurement requirements of the accounting guidance for receivables.

We believe the level of our loan loss reserves is reasonable based on internal reviews of the factors and methodologies used. No single statistic or measurement determines the appropriateness of the loan loss reserves. Changes in one or more of the estimates or assumptions used to calculate the loan loss reserves could have a material impact on the loan loss reserves and provision for credit losses.

Single-Family Loan Loss Reserves

Single-family loans are aggregated into pools based on similar risk characteristics and measured collectively using a statistically based model that evaluates a variety of factors affecting collectability, including but not limited to: current LTV ratios, a loan's product type, delinquency/default status and history, and geographic location. Inputs used by the model are regularly updated for changes in the underlying data, assumptions, and market conditions. We consider the output of this model, together with other information such as expected future levels of loan modifications and expected repurchases of loans by seller/servicers as a result of their non-compliance with our underwriting standards, the adequacy of third-party credit enhancements, and the effects of macroeconomic variables such as rates of unemployment and the effects of home price changes on borrower behavior. The inability to realize the benefits of our loss mitigation plans, a lower realized rate of seller/servicer repurchases, further declines in home prices, further deterioration in the financial condition of our mortgage insurance counterparties, or delinquency rates that exceed our current projections would cause our losses to be significantly higher than those currently estimated.

There is significant risk and uncertainty associated with our estimate of losses incurred on our single-family loans. The process for determining the estimate is complex. It uses models and requires us to make judgments about matters that are difficult to predict, the most significant of which are the probability of default and estimated loss severity. We regularly evaluate the underlying estimates and models we use when determining loan loss reserves and update our assumptions to reflect our historical experience and current view of economic factors. See "RISK FACTORS — Operational Risks — *We face risks and uncertainties associated with the internal models that we use for financial accounting and reporting purposes, to make business decisions and to manage risks. Market conditions have raised these risks and uncertainties*."

Individually impaired single-family loans include loans that have undergone a TDR and are measured for impairment as the excess of our recorded investment in the loan over the present value of the expected future cash flows. Our expectation of future cash flows incorporates many of the judgments indicated above.

Multifamily Loan Loss Reserves

To determine loan loss reserves for the multifamily loan portfolio, including determining which loans are individually impaired, we consider all available evidence including, but not limited to, operating cash flows from the underlying property as represented by its current DSCR, the fair value of collateral underlying the loans, evaluation of the repayment prospects, the adequacy of third-party credit enhancements, year of origination, certain macroeconomic data, and available economic data related to multifamily real estate, including apartment vacancy and rental rates.

Multifamily loans evaluated collectively for impairment are aggregated into book year vintages and measured by benchmarking published historical commercial mortgage data to those vintages based upon some of the factors listed above.

Individually impaired multifamily loans are measured for impairment based on the fair value of the underlying collateral, as reduced by estimated disposition costs, as multifamily loans are generally collateral-dependent and most multifamily loans are non-recourse to the borrower. Non-recourse means generally that the cash flows of the underlying property (including any associated credit enhancements) serve as the source of funds for repayment of the loan.

Fair Value Measurements

Assets and liabilities within our consolidated financial statements measured at fair value include: (a) mortgage-related and non-mortgage related securities; (b) mortgage loans held-for-sale; (c) derivative instruments; (d) debt securities denominated in foreign currencies and certain other debt; and (e) REO. The accounting guidance for fair value measurements and disclosures establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value based on the inputs a market participant would use at the measurement date. Fair value measurements under this hierarchy are distinguished by quoted market prices, observable inputs, and unobservable inputs. The measurement of fair value requires management to make judgments and assumptions and the process for determining fair value using unobservable inputs is generally more subjective and involves a higher degree of management judgment and assumptions than the measurement of fair value using observable inputs. These judgments and assumptions may have a significant effect on our measurements of fair value, and the use of different judgments and assumptions, as well as changes in market conditions, could have a material effect on our consolidated statements of income and comprehensive income as well as our consolidated fair value balance sheets. For information regarding our fair value methods and assumptions, see "NOTE 17: FAIR VALUE DISCLOSURES" and "FAIR VALUE MEASUREMENTS AND ANALYSIS" for additional information regarding fair value hierarchy and measurements.

Impairment Recognition on Investments in Securities

We recognize impairment losses on available-for-sale securities within our consolidated statements of income and comprehensive income as net impairment of available-for-sale securities recognized in earnings when we conclude that a decrease in the fair value of a security is other-than-temporary.

We conduct quarterly reviews to evaluate each available-for-sale security that has an unrealized loss for other-than-temporary impairment. An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis. We recognize other-than-temporary impairment in earnings if one of the following conditions exists: (a) we have the intent to sell the security; (b) it is more likely than not that we will be required to sell the security before recovery of its unrealized loss; or (c) we do not expect to recover the amortized cost basis of the security. If we do not intend to sell the security and we believe it is not more likely than not that we will be required to sell prior to recovery of its unrealized loss, we recognize only the credit component of other-than-temporary impairment in earnings and the amounts attributable to all other factors are recognized, net of tax, in AOCI. The credit component represents the amount by which the present value of cash flows expected to be collected from the security is less than the amortized cost basis of the security.

The evaluation of whether unrealized losses on available-for-sale securities are other-than-temporary requires significant management judgments and assumptions and consideration of numerous factors. We perform an evaluation on a security-by-security basis considering all available information. The relative importance of this information varies based on the facts and circumstances surrounding each security, as well as the economic environment at the time of assessment. For information regarding important factors, judgments and assumptions, see "NOTE 7: INVESTMENTS IN SECURITIES — Impairment Recognition on Investments in Securities."

For the majority of our available-for-sale securities in an unrealized loss position, we have asserted that we have no intent to sell and that we believe it is not more likely than not that we will be required to sell the security before recovery of its amortized cost basis. Where such an assertion has not been made, the security's entire decline in fair value is deemed to be other-than-temporary and is recorded within our consolidated statements of income and comprehensive income as net impairment of available-for-sale securities recognized in earnings.

See "NOTE 7: INVESTMENTS IN SECURITIES — Table 7.2 — Available-For-Sale Securities in a Gross Unrealized Loss Position" for the length of time our available-for-sale securities have been in an unrealized loss position. Also see "NOTE 7: INVESTMENTS IN SECURITIES — Table 7.3 — Significant Modeled Attributes for Certain Non-Agency Mortgage-Related Securities" for the modeled default rates and severities that were used to determine whether our senior interests in certain non-agency mortgage-related securities would experience a cash shortfall. See "CONSOLIDATED BALANCE SHEETS ANALYSIS — Investments in Securities" for more information on impairment recognition on securities.

We believe our judgments and assumptions used in our evaluation of other-than-temporary impairment are reasonable. However, different judgments or assumptions could have resulted in materially different recognition of other-than-temporary impairment. It is possible that the losses we ultimately realize could be significantly higher or lower than the losses we have recognized in our financial results to date.

Realizability of Deferred Tax Assets, Net

We use the asset and liability method to account for income taxes pursuant to the accounting guidance for income taxes. Under this method, deferred tax assets and liabilities are recognized based upon the expected future tax consequences of existing temporary differences between the financial reporting and the tax reporting basis of assets and liabilities using enacted statutory tax rates. Valuation allowances are recorded to reduce net deferred tax assets when it is more likely than not that a tax benefit will not be realized. The realization of these net deferred tax assets is dependent upon the generation of sufficient taxable income in available carryback years from current operations and unrecognized tax benefits, and upon our intent and ability to hold available-for-sale debt securities until the recovery of any temporary unrealized losses. On a quarterly basis, we determine whether a valuation allowance is necessary. In so doing, we consider all evidence currently available, both positive and negative, in determining whether, based on the weight of that evidence, it is more likely than not that the net deferred tax assets will be realized.

The consideration of this evidence requires significant estimates, assumptions, and judgments, particularly about our future financial condition and results of operations and our intent and ability to hold available-for-sale debt securities with temporary unrealized losses until recovery. As discussed in "RISK FACTORS," the conservatorship and related matters fundamentally affecting our control, management, and operations are likely to affect our future financial condition and results of operations. These events have resulted in a variety of uncertainties regarding our future operations, our business objectives and strategies, and our future profitability, the impact of which cannot be reliably forecasted at this time. As such, any changes in these estimates, assumptions or judgments may have a material effect on our financial position and results of operations.

We determined that, as of September 30, 2008, it was more likely than not that we would not realize the portion of our net deferred tax assets that is dependent upon the generation of future taxable income. This determination was driven by the events and the resulting uncertainties as of that date. Those conditions continued to exist as of December 31, 2011. As a result, we continue to maintain a valuation allowance against these net deferred tax assets at December 31, 2011. It is possible that, in future periods, the uncertainties regarding our future operations and profitability could be resolved such that it could become more likely than not that these net deferred tax assets would be realized due to the generation of sufficient taxable income. If that were to occur, we would assess the need for a reduction of the valuation allowance, which could have a material effect on our financial position and results of operations in the period of the reduction.

Also, we determined that a valuation allowance is not necessary for the portion of our net deferred tax assets that is dependent upon our intent and ability to hold available-for-sale debt securities until the recovery of any temporary unrealized losses. These temporary unrealized losses have only impacted AOCI, not income from continuing operations or our taxable income, nor will they impact income from continuing operations or taxable income if they are held to maturity. As such, the realization of this deferred tax asset is not dependent upon the generation of sufficient taxable income but rather on our intent and ability to hold these securities until recovery of these unrealized losses which may be at maturity. Our conclusion that these unrealized losses are temporary and that we have the intent and ability to hold these securities until recovery requires significant estimates, assumptions, and judgments, as described above in "Impairment Recognition on Investments in Securities." Any changes in these estimates, assumptions, or judgments in future periods may result in the recognition of an other-than-temporary impairment, which would result in some of this deferred tax asset not being realized and may have a material effect on our financial position and results of operations. For more information see "NOTE 13: INCOME TAXES."

RISK MANAGEMENT AND DISCLOSURE COMMITMENTS

In October 2000, we announced our adoption of a series of commitments designed to enhance market discipline, liquidity and capital. In September 2005, we entered into a written agreement with FHFA, then OFHEO, that updated these commitments and set forth a process for implementing them. A copy of the letters between us and OFHEO dated September 1, 2005 constituting the written agreement has been filed as an exhibit to our Registration Statement on Form 10, filed with the SEC on July 18, 2008, and is available on the Investor Relations page of our web site at www.freddiemac.com/investors/sec_filings/index.html.

In November 2008, FHFA suspended our periodic issuance of subordinated debt disclosure commitment during the term of conservatorship and thereafter until directed otherwise. In March 2009, FHFA suspended the remaining disclosure

commitments under the September 1, 2005 agreement until further notice, except that: (a) FHFA will continue to monitor our adherence to the substance of the liquidity management and contingency planning commitment through normal supervision activities; and (b) we will continue to provide interest-rate risk and credit risk disclosures in our periodic public reports.

For the year ended December 31, 2011, our duration gap averaged zero months, PMVS-L averaged $359 million and PMVS-YC averaged $21 million. Our 2011 monthly average duration gap, PMVS results and related disclosures are provided in our Monthly Volume Summary reports, which are available on our web site, www.freddiemac.com/investors/volsum and in current reports on Form 8-K we file with the SEC. For disclosures concerning credit risk sensitivity, see "RISK MANAGEMENT — Credit Risk — *Mortgage Credit Risk — Credit Risk Sensitivity*."

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest-Rate Risk and Other Market Risks

Sources of Interest-Rate Risk and Other Market Risks

Our investments in mortgage loans and mortgage-related securities expose us to interest-rate risk and other market risks arising primarily from the uncertainty as to when borrowers will pay the outstanding principal balance of mortgage loans and mortgage-related securities, known as prepayment risk, and the resulting potential mismatch in the timing of our receipt of cash flows related to our assets versus the timing of payment of cash flows related to our liabilities used to fund those assets. For the vast majority of our mortgage-related investments, the mortgage borrower has the option to make unscheduled payments of additional principal or to completely pay off a mortgage loan at any time before its scheduled maturity date (without having to pay a prepayment penalty) or make principal payments in accordance with their contractual obligation. We use derivatives as an important part of our strategy to manage interest-rate and prepayment risk. When determining to use derivatives to mitigate our exposures, we consider a number of factors, including cost, efficiency, exposure to counterparty risks, and our overall risk management strategy. See "MD&A — RISK MANAGEMENT" and "RISK FACTORS" for a discussion of our market risk exposure, including those related to derivatives, institutional counterparties, and other market risks.

Our credit guarantee activities also expose us to interest-rate risk because changes in interest rates can cause fluctuations in the fair value of our existing credit guarantees. We generally do not hedge these changes in fair value except for interest-rate exposure related to net buy-ups and float. Float, which arises from timing differences between when the borrower makes principal payments on the loan and the reduction of the PC balance, can lead to significant interest expense if the interest rate paid to a PC investor is higher than the reinvestment rate earned by the securitization trusts on payments received from mortgage borrowers and paid to us as trust management income.

The principal types of interest-rate risk and other market risks to which we are exposed are described below.

Duration Risk and Convexity Risk

Duration is a measure of a financial instrument's price sensitivity to changes in interest rates (expressed in percentage terms). We compute each instrument's duration by applying an interest-rate shock, both upward and downward, to the LIBOR curve and evaluating the impact on the instrument's fair value. As interest rates have reached historically low levels, the methodology previously used by management to calculate duration and convexity began to produce risk sensitivities that were increasingly unstable and not representative of expected price movements. In order to alleviate the instability, we changed the shift size required to calculate duration and convexity from 50 basis points to 25 basis points beginning November 14, 2011. The effect of this change on our duration and convexity measures was not material. Convexity is a measure of how much a financial instrument's duration changes as interest rates change. Similar to the duration calculation, we compute each instrument's convexity by applying the shock, both upward and downward, to the LIBOR curve and evaluating the impact on the duration. Currently, short-term interest rates are at historically low levels and, at some points, the LIBOR curve is less than 25 basis points (and less than 50 basis points that was the threshold before the November 14, 2011 change). As a result, the basis point shock to the LIBOR curve described above is bounded by zero. Our convexity risk primarily results from prepayment risk.

We seek to manage duration risk and convexity risk through asset selection and structuring (that is, by acquiring or structuring mortgage-related securities with attractive prepayment and other characteristics), by issuing a broad range of both callable and non-callable debt instruments, and by using interest-rate derivatives and written options. Managing the impact of duration risk and convexity risk is the principal focus of our daily market risk management activities. These risks are encompassed in our PMVS and duration gap risk measures, discussed in greater detail below. We use prepayment models to determine the estimated duration and convexity of mortgage assets for our PMVS and duration gap measures. When interest rates decline, mortgage asset prices tend to rise, but the rise is limited by the increased likelihood of prepayments, which exposes us to negative convexity. Through the use of our models, we estimate on a weekly basis the negative convexity profile of our portfolio over a wide range of interest rates. This process is designed to help us to identify the particular interest rate scenarios where the convexity of our portfolio appears to be most negative, and therefore the particular interest rate scenario where the interest rate price sensitivity of our financial instruments appears to be most acute. We use this information to develop hedging strategies that are customized to provide interest-rate risk protection for the specific interest rate environment where we believe we are most exposed to negative convexity risk. This strategy allows us to select hedging instruments that are expected to be most efficient for our portfolio, thereby reducing the overall cost of interest rate hedging activities.

By managing our convexity profile over a wide range of interest rates, we are able to hedge prepayment risk for particular interest rate scenarios. As a result, the intensity and frequency of our ongoing risk management actions is relatively constant over a wide range of interest rate environments. Our approach to convexity risk management focuses our portfolio rebalancing activities for the specific interest rate scenario where market and interest rate volatility appear to be most pronounced. This approach to convexity risk reduces our ongoing rebalancing activity to a relatively low level compared to the overall daily trading volume of interest-rate swaps and Treasury futures.

The expected loss in portfolio market value is an estimate of the sensitivity to changes in interest rates of the fair value of all interest-earning assets, interest-bearing liabilities, and derivatives on a pre-tax basis. When we calculate the expected loss in portfolio market value and duration gap, we also take into account the cash flows related to certain credit guarantee-related items, including net buy-ups and expected gains or losses due to net interest from float. In making these calculations, we do not consider the sensitivity to interest-rate changes of the following assets and liabilities:

- *Credit guarantee activities.* We do not consider the sensitivity of the fair value of credit guarantee activities to changes in interest rates except for the guarantee-related items mentioned above (*i.e.*, net buy-ups and float), because we believe the expected benefits from replacement business provide an adequate hedge against interest-rate changes over time.
- *Other assets with minimal interest-rate sensitivity.* We do not include other assets, primarily non-financial instruments such as fixed assets and REO, because we estimate their impact on PMVS and duration gap to be minimal.

Yield Curve Risk

Yield curve risk is the risk that non-parallel shifts in the yield curve (such as a flattening or steepening) will adversely affect the fair value of net assets and ultimately adversely affect GAAP total equity (deficit). Because changes in the shape, or slope, of the yield curve often arise due to changes in the market's expectation of future interest rates at different points along the yield curve, we evaluate our exposure to yield curve risk by examining potential reshaping scenarios at various points along the yield curve. We manage yield curve risk with the use of derivatives. Our yield curve risk under a specified yield curve scenario is reflected in our PMVS-YC disclosure.

Volatility Risk

Volatility risk is the risk that changes in the market's expectation of the magnitude of future variations in interest rates will adversely affect the fair value of net assets and ultimately adversely affect GAAP total equity (deficit). Volatility risk arises from the prepayment risk that is inherent in mortgages or mortgage-related securities. Volatility risk is the risk that the homeowner's prepayment option will gain or lose value as the expected volatility of future interest rates changes. In general, as expected future interest rate volatility increases, the homeowner's prepayment option increases in value, thus negatively impacting the value of the mortgage security backed by the underlying mortgages. We manage volatility risk by maintaining a portfolio of callable debt and option-based interest rate derivatives that have relatively long option terms. We actively manage and monitor our volatility risk exposure over a range of changing interest rate scenarios; however, we do not eliminate our volatility risk exposure completely.

Basis Risk

Basis risk is the risk that interest rates in different market sectors will not move in tandem and will adversely affect the fair value of net assets and ultimately adversely affect GAAP total equity (deficit). This risk arises principally because we generally hedge mortgage-related investments with debt securities. As principally a buy-and-hold investor, we do not actively manage overall basis risk, also referred to as mortgage-to-debt OAS risk or spread risk, arising from funding mortgage-related investments with our debt securities. See "MD&A — FAIR VALUE MEASUREMENTS AND ANALYSIS — Key Components of Changes in Fair Value of Net Assets — *Changes in Mortgage-To-Debt OAS*" for additional information. We also incur basis risk when we use LIBOR- or Treasury-based instruments in our risk management activities.

Model Risk

Proprietary models, including mortgage prepayment models, interest rate models, and mortgage default models, are an integral part of our investment framework. As market conditions change rapidly, as they have since 2007, the assumptions that we use in our models for our sensitivity analyses may not keep pace with these market changes. As such, these analyses are not intended to provide precise forecasts of the effect a change in market interest rates would have on the estimated fair values of our net assets. We actively manage our model risk by reviewing the performance of

our models. To improve the accuracy of our models, changes to the underlying assumptions or modeling techniques are made on a periodic basis. Model development and model testing are reviewed and approved independently by our Enterprise Risk Management division. Model performance is also reported regularly through a series of internal management committees. See "MD&A — RISK MANAGEMENT — Operational Risks" and "RISK FACTORS — Operational Risks — *We face risks and uncertainties associated with the internal models that we use for financial accounting and reporting purposes, to make business decisions and to manage risks. Market conditions have raised these risks and uncertainties"* for a discussion of the developments and risks associated with our use of models. Given the importance of models to our investment management practices, model changes undergo a rigorous review process. As a result, it is common for model changes to take several months to complete. Given the time consuming nature of the model change review process, it is sometimes necessary for risk management purposes for management to make adjustments to our interest-rate risk statistics that reflect the expected impact of the pending model change. These adjustments are included in our PMVS and duration gap disclosures.

Foreign-Currency Risk

Foreign-currency risk is the risk that fluctuations in currency exchange rates (*e.g.*, Euros to the U.S. dollar) will adversely affect the fair value of net assets and ultimately adversely affect GAAP total equity (deficit). We are exposed to foreign-currency risk because we have debt denominated in currencies other than the U.S. dollar, our functional currency. We mitigate virtually all of our foreign-currency risk by entering into swap transactions that effectively convert foreign-currency denominated obligations into U.S. dollar-denominated obligations.

Interest-Rate Risk Management Strategy and Framework

Although we cannot hedge all of our exposure to changes in interest rates, this exposure is subject to established limits and is monitored through our risk management process. We employ a risk management strategy that seeks to substantially match the duration characteristics of our assets and liabilities. Through our asset and liability management process, we seek to mitigate interest-rate risk by issuing a wide variety of callable and non-callable debt products. The prepayment option held by mortgage borrowers drives the fair value of our mortgage assets such that the combined fair value of our mortgage assets and non-callable debt will decline if interest rates move significantly in either direction. We seek to mitigate much of our exposure to changes in interest rates by funding a significant portion of our mortgage portfolio with callable debt. When interest rates change, our option to redeem this debt offsets a large portion of the fair value change driven by the mortgage prepayment option. However, because the mortgage prepayment option is not fully hedged by callable debt, the combined fair value of our mortgage assets and debt will be affected by changes in interest rates.

To further reduce our exposure to changes in interest rates, we hedge a significant portion of the remaining prepayment risk with option-based derivatives. These derivatives primarily consist of call swaptions, which tend to increase in value as interest rates decline, and put swaptions, which tend to increase in value as interest rates increase. We also seek to manage interest-rate risk by changing the effective interest terms of the portfolio, primarily using interest-rate swaps, which we refer to as rebalancing. For further discussion of why we use derivatives and the types of derivatives we use, see "NOTE 11: DERIVATIVES."

Our approach to managing interest-rate risk is designed to be disciplined and comprehensive. Our objective is to minimize our interest-rate risk exposure across a range of interest-rate scenarios. To do this, we analyze the interest-rate sensitivity of financial assets and liabilities at the instrument level on a daily basis and across a variety of interest rate scenarios. For risk management purposes, the interest-rate characteristics of each instrument are determined daily based on market prices and internal models. The fair values of our assets, liabilities and derivatives are primarily based on either third party prices, or observable market-based inputs. These fair values, whether direct from third parties or derived from observable inputs, are reviewed and validated by groups that are separate from our trading and investing function. See "MD&A — FAIR VALUE MEASUREMENTS AND ANALYSIS — Fair Value Measurements — *Controls over Fair Value Measurement*."

Annually, the Business and Risk Committee of our Board of Directors establishes certain Board limits for interest-rate risk measures, and if we exceed these limits we are required to notify the Business and Risk Committee and address the limit overage. These limits encompass a range of interest-rate risks that include duration risk, convexity risk, volatility risk, and yield curve risk associated with our use of various financial instruments, including derivatives. Also on an annual basis, our Enterprise Risk Management division establishes management limits and makes recommendations with respect to the limits to be established at the Board level. These limits are reviewed by our Enterprise Risk Management Committee, which is responsible for reviewing performance as compared to the established limits. The management limits

are set at values below those set at the Board level, which is intended to allow us to follow a series of predetermined actions in the event of a breach of the management limits and helps ensure proper oversight to reduce the possibility of exceeding the Board limits. We also establish management limits that do not have corresponding Board limits.

Portfolio Market Value Sensitivity and Measurement of Interest-Rate Risk

PMVS and Duration Gap

Our primary interest-rate risk measures are PMVS and duration gap. PMVS is an estimate of the change in the market value of our net assets and liabilities from an instantaneous 50 basis point shock to interest rates, assuming no rebalancing actions are undertaken and assuming the mortgage-to-LIBOR basis does not change. (The shock used for calculating PMVS is not the same as the shock used for calculating duration and convexity, described above under *"Duration Risk and Convexity Risk."*) PMVS is measured in two ways, one measuring the estimated sensitivity of our portfolio market value to parallel movements in interest rates (PMVS-Level or PMVS-L) and the other to nonparallel movements (PMVS-YC).

- We calculate our exposure to changes in interest rates using effective duration. Effective duration measures the percentage change in the price of financial instruments from a 1% change in interest rates. Financial instruments with positive duration increase in value as interest rates decline. Conversely, financial instruments with negative duration increase in value as interest rates rise.
- Together, duration and convexity provide a measure of an instrument's overall price sensitivity to changes in interest rates. We utilize the aggregate duration and convexity risk of all interest-rate sensitive instruments on a daily basis to estimate the two PMVS metrics. The duration and convexity measures are used to estimate PMVS under the following formula:

  $$\text{PMVS} = -[\textit{Duration}] \text{ multiplied by [rate shock] plus [0.5 multiplied by } \textit{Convexity}] \text{ multiplied by [rate shock]}^2$$

  In the equation, [rate shock] represents the interest-rate change expressed in percentage terms. For example, a 50 basis point adverse change will be expressed as 0.5%. The result of this formula is the percentage of sensitivity to the change in rate, which is expressed as: PMVS = (0.5 Duration) + (0.125 Convexity).
- To estimate PMVS-L, an instantaneous parallel 50 basis point shock is applied to the yield curve, as represented by the US swap curve, holding all spreads to the swap curve constant. This shock is applied to the duration and convexity of all interest-rate sensitive financial instruments. The resulting change in market value for the aggregate portfolio is computed for both the up rate and down rate shock and the change in market value in the more adverse scenario of the up and down rate shocks is the PMVS. In cases where both the up rate and down rate shock results in a positive impact, the PMVS is zero. Because this process uses a parallel, or level, shock to interest rates, we refer to this measure as PMVS-L.
- To estimate sensitivity related to the shape of the yield curve, a yield curve steepening and flattening of 25 basis points is applied to the duration of all interest-rate sensitive instruments. The resulting change in market value for the aggregate portfolio is computed for both the steepening and flattening yield curve scenarios. The more adverse yield curve scenario is then used to determine the PMVS-yield curve. Because this process uses a non-parallel shock to interest rates, we refer to this measure as PMVS-YC.
- Duration gap measures the difference in price sensitivity to interest rate changes between our assets and liabilities, and is expressed in months relative to the market value of assets. For example, assets with a six month duration and liabilities with a five month duration would result in a positive duration gap of one month. A duration gap of zero implies that the duration of our assets equals the duration of our liabilities. As a result, the change in the value of assets from an instantaneous move in interest rates, either up or down, would be expected to be accompanied by an equal and offsetting change in the value of liabilities, thus leaving the fair value of equity unchanged. A positive duration gap indicates that the duration of our assets exceeds the duration of our liabilities which, from a net perspective, implies that the fair value of equity will increase in value when interest rates fall and decrease in value when interest rates rise. A negative duration gap indicates that the duration of our liabilities exceeds the duration of our assets which, from a net perspective, implies that the fair value of equity will increase in value when interest rates rise and decrease in value when interest rates fall. Multiplying duration gap (expressed as a percentage of a year) by the fair value of our assets will provide an indication of the change in the fair value of our equity to be expected from a 1% change in interest rates.

The 50 basis point shift and 25 basis point change in slope of the LIBOR yield curve used for our PMVS measures reflect reasonably possible near-term changes that we believe provide a meaningful measure of our interest-rate risk

sensitivity. Our PMVS measures assume instantaneous shocks. Therefore, these PMVS measures do not consider the effects on fair value of any rebalancing actions that we would typically expect to take to reduce our risk exposure.

Limitations of Market Risk Measures

Our PMVS and duration gap estimates are determined using models that involve our best judgment of interest-rate and prepayment assumptions. Accordingly, while we believe that PMVS and duration gap are useful risk management tools, they should be understood as estimates rather than as precise measurements. While PMVS and duration gap estimate our exposure to changes in interest rates, they do not capture the potential impact of certain other market risks, such as changes in volatility, basis, and foreign-currency risk. The impact of these other market risks can be significant.

There are inherent limitations in any methodology used to estimate exposure to changes in market interest rates. Our sensitivity analyses for PMVS and duration gap contemplate only certain movements in interest rates and are performed at a particular point in time based on the estimated fair value of our existing portfolio. These sensitivity analyses do not consider other factors that may have a significant effect on our financial instruments, most notably business activities and strategic actions that management may take in the future to manage interest-rate risk. As such, these analyses are not intended to provide precise forecasts of the effect a change in market interest rates would have on the estimated fair value of our net assets.

In addition, it has been more difficult in recent years to measure and manage the interest-rate risk related to mortgage assets as risk for prepayment model error remains high due to uncertainty regarding default rates, unemployment, loan modification, and the volatility and impact of home price movements on mortgage durations. Mis-estimation of prepayments could result in hedging-related losses.

PMVS Results

The table below provides duration gap, estimated point-in-time and minimum and maximum PMVS-L and PMVS-YC results, and an average of the daily values and standard deviation for the years ended December 31, 2011 and 2010. The table below also provides PMVS-L estimates assuming an immediate 100 basis point shift in the LIBOR yield curve. We do not hedge the entire prepayment risk exposure embedded in our mortgage assets. The interest-rate sensitivity of a mortgage portfolio varies across a wide range of interest rates. Therefore, the difference between PMVS at 50 basis points and 100 basis points is non-linear. Our PMVS-L (50 basis points) exposure at the end of December 31, 2011 was $465 million; approximately half was driven by our duration exposure and the other half was driven by our negative convexity exposure. The PMVS-L at December 31, 2011 declined compared to December 31, 2010 primarily due to a decline in our negative convexity exposure as long-term rates significantly declined. On an average basis for the year, our PMVS-L (50 basis points) was $359 million, which was primarily driven by our negative convexity exposure on our mortgage assets.

Table 73 — PMVS Results

	PMVS-YC	PMVS-L	
	25 bps	50 bps	100 bps
		(in millions)	
Assuming shifts of the LIBOR yield curve:			
December 31, 2011	$ 7	$465	$1,349
December 31, 2010	$35	$588	$1,884

	Year Ended December 31,					
	2011			2010		
	Duration Gap	PMVS-YC 25 bps	PMVS-L 50 bps	Duration Gap	PMVS-YC 25 bps	PMVS-L 50 bps
	(in months)	(dollars in millions)		(in months)	(dollars in millions)	
Average	(0.0)	$21	$359	0.0	$23	$338
Minimum	(1.0)	$—	$ —	(0.7)	$—	$ —
Maximum	1.2	$94	$721	0.7	$83	$668
Standard deviation	0.3	$15	$126	0.3	$18	$179

Derivatives have historically enabled us to keep our interest-rate risk exposure at consistently low levels in a wide range of interest-rate environments. The table below shows that the PMVS-L risk levels for the periods presented would generally have been higher if we had not used derivatives. The derivative impact on our PMVS-L (50 basis points) was $(2.0) billion at December 31, 2011, a decline of $1.0 billion from December 31, 2010. The decline was primarily driven by a decline in long-term rates, which resulted in lower duration and convexity exposures on our mortgage assets, without a full offsetting impact from our existing debt and derivative portfolios. In order to remain within our risk management limits, we rebalanced our portfolio with receive-fixed swaps, which lowered our derivative duration exposure.

Table 74 — Derivative Impact on PMVS-L (50 bps)

	Before Derivatives	After Derivatives	Effect of Derivatives
		(in millions)	
At:			
December 31, 2011	$2,470	$465	$(2,005)
December 31, 2010	$3,614	$588	$(3,026)

Duration Gap Results

We actively measure and manage our duration gap exposure on a daily basis. In addition to duration gap management, we also measure and manage the price sensitivity of our portfolio to eleven different specific interest rate changes from three months to 30 years. The price sensitivity of an instrument to specific changes in interest rates is known as the instrument's key rate duration risk. By managing our duration exposure both in aggregate through duration gap and to specific changes in interest rates through key rate duration, we expect to limit our exposure to interest rate changes for a wide range of interest rate yield curve scenarios. Our average duration gap, rounded to the nearest month, for the months of December 2011 and 2010 was zero months in both periods. Our average duration gap, rounded to the nearest month, during the years ended December 31, 2011 and 2010 was zero months in both periods.

The disclosure in our Monthly Volume Summary reports, which are available on our website at www.freddiemac.com and in current reports on Form 8-K we file with the SEC, reflects the average of the daily PMVS-L, PMVS-YC and duration gap estimates for a given reporting period (a month, quarter or year).

Derivative-Related Risks

Our use of derivatives exposes us to credit risk with respect to our counterparties to derivative transactions. Through counterparty selection, all derivative transactions are executed in a manner that seeks to control and reduce counterparty credit exposure. In order to attempt to minimize the potential replacement cost should a derivative counterparty fail, we utilize derivative counterparty limits. Board-level counterparty limits are approved by the Board's Business and Risk Committee. Management and Board counterparty limits, which include current exposure and potential exposure in a stress scenario, are monitored by members of our Enterprise Risk Management division, which is responsible for establishing and monitoring credit and counterparty risk tolerances for our business activities and reporting to the Business and Risk Committee as appropriate. See "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Derivative Counterparties*" for information on derivative counterparty credit risk.

Our use of derivatives also exposes us to derivative market liquidity risk, which is the risk that we may not be able to enter into or exit out of derivative transactions at a reasonable cost. A lack of sufficient capacity or liquidity in the derivatives market could limit our risk management activities, increasing our exposure to interest-rate risk. To help maintain continuous access to derivative markets, we use a variety of products and transact with a number of different derivative counterparties. In addition to OTC derivatives, we also use exchange-traded derivatives, asset securitization activities, callable debt, and short-term debt to rebalance our portfolio.

The Dodd-Frank Act will require that, in the future, many types of derivatives be centrally cleared and traded on exchanges or comparable trading facilities. See "MD&A — RISK MANAGEMENT — Credit Risk — *Institutional Credit Risk — Derivative Counterparties*" for additional information on this requirement and our use of a central clearing platform for interest rate derivatives.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Freddie Mac:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income and comprehensive income, of equity (deficit), and of cash flows present fairly, in all material respects, the financial position of Freddie Mac, a stockholder-owned government-sponsored enterprise, and its subsidiaries at December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company did not maintain, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) because material weaknesses in internal control over financial reporting related to: (1) disclosure controls and procedures that do not provide adequate mechanisms for information known to the Federal Housing Finance Agency ("FHFA") that may have financial statement disclosure ramifications to be communicated to management, and (2) controls and procedures that do not provide adequate mechanisms for managing information technology changes and monitoring information security existed as of that date. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses referred to above are described in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. We considered these material weaknesses in determining the nature, timing, and extent of audit tests applied in our audit of the 2011 consolidated financial statements, and our opinion regarding the effectiveness of the Company's internal control over financial reporting does not affect our opinion on those consolidated financial statements. The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in management's report referred to above. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

We have also audited in accordance with auditing standards generally accepted in the United States of America the supplemental consolidated fair value balance sheets of the Company as of December 31, 2011 and 2010. As described in "Note 17: Fair Value Disclosures", the supplemental consolidated fair value balance sheets have been prepared by management to present relevant financial information that is not provided by the historical-cost consolidated balance sheets and is not intended to be a presentation in conformity with accounting principles generally accepted in the United States of America. In addition, the supplemental consolidated fair value balance sheets do not purport to present the net realizable, liquidation, or market value of the Company as a whole. Furthermore, amounts ultimately realized by the Company from the disposal of assets or amounts required to settle obligations may vary significantly from the fair values presented. In our opinion, the supplemental consolidated fair value balance sheets referred to above present fairly, in all material respects, the information set forth therein as described in "Note 17: Fair Value Disclosures".

As discussed in "Note 2: Conservatorship and Related Matters", in September 2008, the Company was placed into conservatorship by the FHFA. The U.S. Department of Treasury ("Treasury") has committed financial support to the Company and management continues to conduct business operations pursuant to the delegated authorities from FHFA during conservatorship. The Company is dependent upon the continued support of Treasury and FHFA.

As discussed in "Note 1: Summary of Significant Accounting Policies", the Company adopted as of January 1, 2010, amendments to the accounting guidance for transfers of financial assets and the consolidation of variable interest entities, which changed, among other things, how it evaluates securitization trusts for purposes of consolidation.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
McLean, Virginia
March 9, 2012

FREDDIE MAC
CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME

	Year Ended December 31,		
	2011	2010	2009
	(in millions, except share-related amounts)		
Interest income			
Mortgage loans:			
Held by consolidated trusts	$ 77,158	$ 86,698	$ —
Unsecuritized	9,124	8,727	6,815
Total mortgage loans	86,282	95,425	6,815
Investments in securities	12,791	14,375	33,290
Other	67	156	241
Total interest income	99,140	109,956	40,346
Interest expense			
Debt securities of consolidated trusts	(67,119)	(75,216)	—
Other debt	(12,869)	(16,915)	(22,150)
Total interest expense	(79,988)	(92,131)	(22,150)
Expense related to derivatives	(755)	(969)	(1,123)
Net interest income	18,397	16,856	17,073
Provision for credit losses	(10,702)	(17,218)	(29,530)
Net interest income (loss) after provision for credit losses	7,695	(362)	(12,457)
Non-interest income (loss)			
Gains (losses) on extinguishment of debt securities of consolidated trusts	(219)	(164)	—
Gains (losses) on retirement of other debt	44	(219)	(568)
Gains (losses) on debt recorded at fair value	91	580	(404)
Derivative gains (losses)	(9,752)	(8,085)	(1,900)
Impairment of available-for-sale securities:			
Total other-than-temporary impairment of available-for-sale securities	(2,101)	(1,778)	(23,125)
Portion of other-than-temporary impairment recognized in AOCI	(200)	(2,530)	11,928
Net impairment of available-for-sale securities recognized in earnings	(2,301)	(4,308)	(11,197)
Other gains (losses) on investment securities recognized in earnings	(896)	(1,252)	5,965
Other income	2,155	1,860	5,372
Non-interest income (loss)	(10,878)	(11,588)	(2,732)
Non-interest expense			
Salaries and employee benefits	(832)	(895)	(912)
Professional services	(270)	(297)	(344)
Occupancy expense	(62)	(64)	(68)
Other administrative expenses	(342)	(341)	(361)
Total administrative expenses	(1,506)	(1,597)	(1,685)
Real estate owned operations expense	(585)	(673)	(307)
Other expenses	(392)	(662)	(5,203)
Non-interest expense	(2,483)	(2,932)	(7,195)
Loss before income tax benefit	(5,666)	(14,882)	(22,384)
Income tax benefit	400	856	830
Net loss	(5,266)	(14,026)	(21,554)
Other comprehensive income, net of taxes and reclassification adjustments:			
Changes in unrealized gains (losses) related to available-for-sale securities	3,465	13,621	17,825
Changes in unrealized gains (losses) related to cash flow hedge relationships	509	673	773
Changes in defined benefit plans	62	13	42
Total other comprehensive income, net of taxes and reclassification adjustments	4,036	14,307	18,640
Comprehensive income (loss)	(1,230)	281	(2,914)
Less: Comprehensive loss attributable to noncontrolling interest	—	1	1
Total comprehensive income (loss) attributable to Freddie Mac	$ (1,230)	$ 282	$ (2,913)
Net loss	$ (5,266)	$ (14,026)	$ (21,554)
Less: Net loss attributable to noncontrolling interest	—	1	1
Net loss attributable to Freddie Mac	(5,266)	(14,025)	(21,553)
Preferred stock dividends	(6,498)	(5,749)	(4,105)
Net loss attributable to common stockholders	$ (11,764)	$ (19,774)	$ (25,658)
Net loss per common share:			
Basic	$ (3.63)	$ (6.09)	$ (7.89)
Diluted	$ (3.63)	$ (6.09)	$ (7.89)
Weighted average common shares outstanding (in thousands):			
Basic	3,244,896	3,249,369	3,253,836
Diluted	3,244,896	3,249,369	3,253,836

The accompanying notes are an integral part of these consolidated financial statements.

FREDDIE MAC
CONSOLIDATED BALANCE SHEETS

	December 31, 2011	December 31, 2010
	(in millions, except share-related amounts)	
Assets		
Cash and cash equivalents (includes $2 and $1, respectively, related to our consolidated VIEs)	$ 28,442	$ 37,012
Restricted cash and cash equivalents (includes $27,675 and $7,514, respectively, related to our consolidated VIEs)	28,063	8,111
Federal funds sold and securities purchased under agreements to resell (includes $0 and $29,350, respectively, related to our consolidated VIEs)	12,044	46,524
Investments in securities:		
Available-for-sale, at fair value (includes $204 and $817, respectively, pledged as collateral that may be repledged)	210,659	232,634
Trading, at fair value	58,830	60,262
Total investments in securities	269,489	292,896
Mortgage loans:		
Held-for-investment, at amortized cost:		
By consolidated trusts (net of allowances for loan losses of $8,351 and $11,644, respectively)	1,564,131	1,646,172
Unsecuritized (net of allowances for loan losses of $30,912 and $28,047, respectively)	207,418	192,310
Total held-for-investment mortgage loans, net	1,771,549	1,838,482
Held-for-sale, at lower-of-cost-or-fair-value (includes $9,710 and $6,413 at fair value, respectively)	9,710	6,413
Total mortgage loans, net	1,781,259	1,844,895
Accrued interest receivable (includes $6,242 and $6,895, respectively, related to our consolidated VIEs)	8,062	8,713
Derivative assets, net	118	143
Real estate owned, net (includes $60 and $118, respectively, related to our consolidated VIEs)	5,680	7,068
Deferred tax assets, net	3,546	5,543
Other assets (Note 19) (includes $6,083 and $6,001, respectively, related to our consolidated VIEs)	10,513	10,875
Total assets	$2,147,216	$2,261,780
Liabilities and equity (deficit)		
Liabilities		
Accrued interest payable (includes $5,943 and $6,502, respectively, related to our consolidated VIEs)	$ 8,898	$ 10,286
Debt, net:		
Debt securities of consolidated trusts held by third parties	1,471,437	1,528,648
Other debt (includes $3,015 and $4,443 at fair value, respectively)	660,546	713,940
Total debt, net	2,131,983	2,242,588
Derivative liabilities, net	435	1,209
Other liabilities (Note 19) (includes $3 and $172, respectively, related to our consolidated VIEs)	6,046	8,098
Total liabilities	2,147,362	2,262,181
Commitments and contingencies (Notes 9, 11, and 18)		
Equity (deficit)		
Senior preferred stock, at redemption value	72,171	64,200
Preferred stock, at redemption value	14,109	14,109
Common stock, $0.00 par value, 4,000,000,000 shares authorized, 725,863,886 shares issued and 649,725,302 shares and 649,179,789 shares outstanding, respectively	—	—
Additional paid-in capital	3	7
Retained earnings (accumulated deficit)	(74,525)	(62,733)
AOCI, net of taxes, related to:		
Available-for-sale securities (includes $10,334 and $10,740, respectively, related to net unrealized losses on securities for which other-than-temporary impairment has been recognized in earnings)	(6,213)	(9,678)
Cash flow hedge relationships	(1,730)	(2,239)
Defined benefit plans	(52)	(114)
Total AOCI, net of taxes	(7,995)	(12,031)
Treasury stock, at cost, 76,138,584 shares and 76,684,097 shares, respectively	(3,909)	(3,953)
Total equity (deficit)	(146)	(401)
Total liabilities and equity (deficit)	$2,147,216	$2,261,780

The accompanying notes are an integral part of these consolidated financial statements.

FREDDIE MAC
CONSOLIDATED STATEMENTS OF EQUITY (DEFICIT)

	Freddie Mac Stockholders' Equity (Deficit)											
	Shares Outstanding											
	Senior Preferred Stock	Preferred Stock	Common Stock	Senior Preferred Stock, at Redemption Value	Preferred Stock, at Redemption Value	Common Stock, at Par Value	Additional Paid-In Capital	Retained Earnings (Accumulated Deficit)	AOCI, Net of Tax	Treasury Stock, at Cost	Noncontrolling Interest	Total Equity (Deficit)
						(in millions)						
Balance as of December 31, 2008	1	464	647	$14,800	$14,109	$—	$ 19	$(23,191)	$(32,357)	$(4,111)	$ 97	$(30,634)
Cumulative effect of change in accounting principle	—	—	—	—	—	—	—	14,996	(9,931)	—	—	5,065
Comprehensive income (loss):												
Net loss	—	—	—	—	—	—	—	(21,553)	—	—	(1)	(21,554)
Other comprehensive income (loss), net of taxes	—	—	—	—	—	—	—	—	18,640	—	—	18,640
Comprehensive income (loss)	—	—	—	—	—	—	—	(21,553)	18,640	—	(1)	(2,914)
Increase in liquidation preference	—	—	—	36,900	—	—	—	—	—	—	—	36,900
Stock-based compensation	—	—	—	—	—	—	58	—	—	—	—	58
Income tax benefit from stock-based compensation	—	—	—	—	—	—	7	—	—	—	—	7
Common stock issuances	—	—	2	—	—	—	(90)	—	—	92	—	2
Transfer from retained earnings (accumulated deficit) to additional paid-in capital	—	—	—	—	—	—	63	(63)	—	—	—	—
Senior preferred stock dividends declared	—	—	—	—	—	—	—	(4,105)	—	—	—	(4,105)
Dividend equivalent payments on expired stock options	—	—	—	—	—	—	—	(5)	—	—	—	(5)
Dividends and other	—	—	—	—	—	—	—	—	—	—	(2)	(2)
Ending balance at December 31, 2009	1	464	649	$51,700	$14,109	$—	$ 57	$(33,921)	$(23,648)	$(4,019)	$ 94	$ 4,372
Balance as of December 31, 2009	1	464	649	$51,700	$14,109	$—	$ 57	$(33,921)	$(23,648)	$(4,019)	$ 94	$ 4,372
Cumulative effect of change in accounting principle	—	—	—	—	—	—	—	(9,011)	(2,690)	—	(2)	(11,703)
Balance as of January 1, 2010	1	464	649	51,700	14,109	—	57	(42,932)	(26,338)	(4,019)	92	(7,331)
Comprehensive income (loss):												
Net loss	—	—	—	—	—	—	—	(14,025)	—	—	(1)	(14,026)
Other comprehensive income (loss), net of taxes	—	—	—	—	—	—	—	—	14,307	—	—	14,307
Comprehensive income (loss)	—	—	—	—	—	—	—	(14,025)	14,307	—	(1)	281
Increase in liquidation preference	—	—	—	12,500	—	—	—	—	—	—	—	12,500
Stock-based compensation	—	—	—	—	—	—	24	—	—	—	—	24
Income tax benefit from stock-based compensation	—	—	—	—	—	—	1	—	—	—	—	1
Common stock issuances	—	—	—	—	—	—	(67)	—	—	66	—	(1)
Noncontrolling interest purchase	—	—	—	—	—	—	(31)	—	—	—	(89)	(120)
Transfer from retained earnings (accumulated deficit) to additional paid-in capital	—	—	—	—	—	—	23	(23)	—	—	—	—
Senior preferred stock dividends declared	—	—	—	—	—	—	—	(5,749)	—	—	—	(5,749)
Dividend equivalent payments on expired stock options	—	—	—	—	—	—	—	(4)	—	—	—	(4)
Dividends and other	—	—	—	—	—	—	—	—	—	—	(2)	(2)
Ending balance at December 31, 2010	1	464	649	$64,200	$14,109	$—	$ 7	$(62,733)	$(12,031)	$(3,953)	$ —	$ (401)
Balance as of December 31, 2010	1	464	649	$64,200	$14,109	$—	$ 7	$(62,733)	$(12,031)	$(3,953)	$ —	$ (401)
Comprehensive income (loss):												
Net loss	—	—	—	—	—	—	—	(5,266)	—	—	—	(5,266)
Other comprehensive income (loss), net of taxes	—	—	—	—	—	—	—	—	4,036	—	—	4,036
Comprehensive income (loss)	—	—	—	—	—	—	—	(5,266)	4,036	—	—	(1,230)
Increase in liquidation preference	—	—	—	7,971	—	—	—	—	—	—	—	7,971
Stock-based compensation	—	—	—	—	—	—	11	—	—	—	—	11
Income tax benefit from stock-based compensation	—	—	—	—	—	—	1	—	—	—	—	1
Common stock issuances	—	—	1	—	—	—	(44)	—	—	44	—	—
Transfer from retained earnings (accumulated deficit) to additional paid-in capital	—	—	—	—	—	—	28	(28)	—	—	—	—
Senior preferred stock dividends declared	—	—	—	—	—	—	—	(6,495)	—	—	—	(6,495)
Dividend equivalent payments on expired stock options	—	—	—	—	—	—	—	(3)	—	—	—	(3)
Ending balance at December 31, 2011	1	464	650	$72,171	$14,109	$—	$ 3	$(74,525)	$ (7,995)	$(3,909)	$ —	$ (146)

The accompanying notes are an integral part of these consolidated financial statements.

FREDDIE MAC
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Cash flows from operating activities			
Net loss	$ (5,266)	$ (14,026)	$ (21,554)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Derivative losses (gains)	4,721	3,591	(2,046)
Asset related amortization — premiums, discounts, and basis adjustments	2,063	326	163
Debt related amortization — premiums and discounts on certain debt securities and basis adjustments	(1,629)	1,127	3,959
Net discounts paid on retirements of other debt	(713)	(1,959)	(4,303)
Net premiums received from issuance of debt securities of consolidated trusts	4,091	3,888	—
Losses on extinguishment of debt securities of consolidated trusts and other debt	175	383	568
Provision for credit losses	10,702	17,218	29,530
Losses on investment activity	2,368	5,542	5,356
(Gains) losses on debt recorded at fair value	(91)	(580)	404
Deferred income tax benefit	(117)	(670)	(670)
Purchases of held-for-sale mortgage loans	(16,550)	(10,330)	(101,976)
Sales of mortgage loans acquired as held-for-sale	14,027	6,728	88,094
Repayments of mortgage loans acquired as held-for-sale	54	21	3,050
Change in:			
Accrued interest receivable	651	832	(1,193)
Accrued interest payable	(1,080)	(1,700)	(1,324)
Income taxes payable	(281)	662	312
Other, net	(2,805)	(233)	2,918
Net cash provided by operating activities	10,320	10,820	1,288
Cash flows from investing activities			
Purchases of trading securities	(47,977)	(55,509)	(250,411)
Proceeds from sales of trading securities	33,734	17,771	153,093
Proceeds from maturities of trading securities	14,545	40,389	69,025
Purchases of available-for-sale securities	(12,171)	(6,542)	(15,346)
Proceeds from sales of available-for-sale securities	2,643	2,645	22,259
Proceeds from maturities of available-for-sale securities	34,316	44,398	86,702
Purchases of held-for-investment mortgage loans	(44,129)	(68,180)	(23,606)
Repayments of mortgage loans acquired as held-for-investment	369,981	425,298	6,862
(Increase) decrease in restricted cash	(19,952)	7,399	426
Net proceeds from (payments of) mortgage insurance and acquisitions and dispositions of real estate owned	12,665	13,093	(4,690)
Net decrease (increase) in federal funds sold and securities purchased under agreements to resell	34,480	(32,023)	3,150
Derivative premiums and terminations and swap collateral, net	(4,447)	(3,075)	99
Purchase of noncontrolling interest	—	(23)	—
Net cash provided by investing activities	373,688	385,641	47,563
Cash flows from financing activities			
Proceeds from issuance of debt securities of consolidated trusts held by third parties	96,042	96,253	—
Repayments of debt securities of consolidated trusts held by third parties	(436,320)	(461,084)	—
Proceeds from issuance of other debt	1,024,323	1,115,097	1,333,859
Repayments of other debt	(1,078,050)	(1,180,935)	(1,395,806)
Increase in liquidation preference of senior preferred stock	7,971	12,500	36,900
Repurchase of REIT preferred stock	—	(100)	—
Payment of cash dividends on senior preferred stock	(6,495)	(5,749)	(4,105)
Excess tax benefits associated with stock-based awards	1	1	1
Payments of low-income housing tax credit partnerships notes payable	(50)	(115)	(343)
Net cash used in financing activities	(392,578)	(424,132)	(29,494)
Net (decrease) increase in cash and cash equivalents	(8,570)	(27,671)	19,357
Cash and cash equivalents at beginning of year	37,012	64,683	45,326
Cash and cash equivalents at end of year	$ 28,442	$ 37,012	$ 64,683
Supplemental cash flow information			
Cash paid (received) for:			
Debt interest	$ 84,370	$ 95,468	$ 25,169
Net derivative interest carry	4,791	4,305	2,274
Income taxes	(1)	(848)	(472)
Non-cash investing and financing activities:			
Held-for-sale mortgage loans securitized and retained as trading and available-for-sale securities	—	—	1,088
Underlying mortgage loans related to guarantor swap transactions	280,621	324,004	—
Debt securities of consolidated trusts held by third parties established for guarantor swap transactions	280,621	324,004	—
Transfers from held-for-investment mortgage loans to held-for-sale mortgage loans	—	196	435
Transfers from held-for-sale mortgage loans to held-for-investment mortgage loans	—	—	10,336

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Freddie Mac was chartered by Congress in 1970 to stabilize the nation's residential mortgage market and expand opportunities for home ownership and affordable rental housing. Our statutory mission is to provide liquidity, stability and affordability to the U.S. housing market. We are a GSE regulated by FHFA, the SEC, HUD, and the Treasury, and are currently operating under the conservatorship of FHFA. For more information on the roles of FHFA and the Treasury, see "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS."

We are involved in the U.S. housing market by participating in the secondary mortgage market. We do not participate directly in the primary mortgage market. Our participation in the secondary mortgage market includes providing our credit guarantee for mortgages originated by mortgage lenders in the primary mortgage market and investing in mortgage loans and mortgage-related securities.

Our operations consist of three reportable segments, which are based on the type of business activities each performs — Single-family Guarantee, Investments, and Multifamily. Our Single-family Guarantee segment reflects results from our single-family credit guarantee activities. In our Single-family Guarantee segment, we purchase single-family mortgage loans originated by our seller/servicers in the primary mortgage market. In most instances, we use the mortgage securitization process to package the purchased mortgage loans into guaranteed mortgage-related securities. We guarantee the payment of principal and interest on the mortgage-related securities in exchange for management and guarantee fees. Our Investments segment reflects results from our investment, funding, and hedging activities. In our Investments segment, we invest principally in mortgage-related securities and single-family performing mortgage loans, which are funded by debt issuances and hedged using derivatives. Our Multifamily segment reflects results from our investment (both purchases and sales), securitization, and guarantee activities in multifamily mortgage loans and securities. In our Multifamily segment, our primary business strategy is to purchase multifamily mortgage loans for aggregation and then securitization. See "NOTE 14: SEGMENT REPORTING" for additional information.

Under conservatorship, we are focused on the following primary business objectives: (a) meeting the needs of the U.S. residential mortgage market by making home ownership and rental housing more affordable by providing liquidity to mortgage originators and, indirectly, to mortgage borrowers; (b) working to reduce the number of foreclosures and helping to keep families in their homes, including through our role in FHFA and other governmental initiatives, such as the FHFA-directed servicing alignment initiative, HAMP and HARP, as well as our own workout and refinancing initiatives; (c) minimizing our credit losses; (d) maintaining sound credit quality of the loans we purchase and guarantee; and (e) strengthening our infrastructure and improving overall efficiency while also focusing on retention of key employees. We also have a variety of different, and potentially competing, objectives based on our charter, other legislation, public statements from Treasury and FHFA officials, and other guidance and directives from our Conservator. For information regarding these objectives, see "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Business Objectives."

Throughout our consolidated financial statements and related notes, we use certain acronyms and terms which are defined in the "GLOSSARY."

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with GAAP and include our accounts as well as the accounts of other entities in which we have a controlling financial interest. All intercompany balances and transactions have been eliminated.

Our current accounting policies are described below. We are operating under the basis that we will realize assets and satisfy liabilities in the normal course of business as a going concern and in accordance with the delegation of authority from FHFA to our Board of Directors and management. Certain amounts in prior periods' consolidated financial statements have been reclassified to conform to the current presentation.

We evaluate the materiality of identified errors in the financial statements using both an income statement, or "rollover," and a balance sheet, or "iron-curtain," approach, based on relevant quantitative and qualitative factors. Net loss includes certain adjustments to correct immaterial errors related to previously reported periods.

We recorded the cumulative effect of certain miscellaneous errors related to previously reported periods as corrections in the year ended December 31, 2011. We concluded that these errors are not material individually or in the aggregate to our previously issued consolidated financial statements for any of the periods affected, or to our earnings for the full year ended December 31, 2011, or to the trend of earnings. The impact to earnings, net of taxes, for the year ended December 31, 2011 was $0.4 billion.

Use of Estimates

The preparation of financial statements requires us to make estimates and assumptions that affect: (a) the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements; and (b) the reported amounts of revenues and expenses and gains and losses during the reporting period. Management has made significant estimates in preparing the financial statements, including, but not limited to, establishing the allowance for loan losses and reserve for guarantee losses, valuing financial instruments and other assets and liabilities, assessing impairments on investments, and assessing the realizability of net deferred tax assets. Actual results could be different from these estimates.

Consolidation and Equity Method of Accounting

The consolidated financial statements include our accounts and those of our subsidiaries. The net earnings attributable to the noncontrolling interests in our consolidated subsidiaries are reported separately in the consolidated statements of income and comprehensive income as comprehensive (income) loss attributable to noncontrolling interest. All material intercompany transactions have been eliminated in consolidation.

For each entity with which we are involved, we determine whether the entity should be consolidated in our financial statements. We consolidate entities in which we have a controlling financial interest. The method for determining whether a controlling financial interest exists varies depending on whether the entity is a VIE or non-VIE. A VIE is an entity: (a) that has a total equity investment at risk that is not sufficient to finance its activities without additional subordinated financial support provided by another party; or (b) where the group of equity holders does not have: (i) the power, through voting rights or similar rights, to direct the activities of an entity that most significantly impact the entity's economic performance; (ii) the obligation to absorb the entity's expected losses; or (iii) the right to receive the entity's expected residual returns.

Our policy is to consolidate VIEs in which we hold a controlling financial interest and are therefore deemed to be the primary beneficiary. An enterprise has a controlling financial interest in, and thus is deemed to be the primary beneficiary of, a VIE if it has both: (a) the power to direct the activities of the VIE that most significantly impact its economic performance; and (b) exposure to losses or benefits of the VIE that could potentially be significant to the VIE. We perform ongoing assessments to determine if we are the primary beneficiary of the VIEs with which we are involved and, as such, conclusions may change over time as the nature and extent of our involvement changes.

Historically, we were exempt from applying the accounting guidance applicable to consolidation of VIEs to the majority of our securitization trusts, as well as certain of our investment securities issued by third parties, because they had been designed to meet the definition of a QSPE. Upon the effective date of the amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs, the concept of a QSPE and the related scope exception from the consolidation provisions applicable to VIEs were removed from GAAP; consequently, all of our securitization trusts, as well as our investment securities issued by third parties that had previously been QSPEs, became subject to a consolidation assessment. The results of our consolidation assessments on certain types of securitization trusts are explained in the paragraphs that follow.

We use securitization trusts in our securities issuance process that are VIEs. We are the primary beneficiary of trusts that issue our single-family PCs and certain Other Guarantee Transactions. See "NOTE 3: VARIABLE INTEREST ENTITIES" for more information. When we transfer assets into a VIE that we consolidate at the time of the transfer (or shortly thereafter), we recognize the assets and liabilities of the VIE at the amounts that they would have been recognized if they had not been transferred, and no gain or loss is recognized on these transfers. For all other VIEs that we consolidate, we recognize the assets and liabilities of the VIE at fair value, and we recognize a gain or loss for the difference between: (a) the fair value of the consideration paid and the fair value of any noncontrolling interests held by third parties; and (b) the net amount, as measured on a fair value basis, of the assets and liabilities consolidated.

For entities that are not VIEs, the usual condition of a controlling financial interest is ownership of a majority voting interest in an entity. We use the equity method of accounting for entities over which we have the ability to exercise significant influence, but not control.

Securitization Activities through Issuances of Freddie Mac Mortgage-Related Securities

Overview

When we securitize single-family mortgages that we purchase, we issue mortgage-related securities called PCs that can be sold to investors or held by us. Guarantor swaps are transactions where financial institutions exchange mortgage loans for PCs backed by these mortgage loans. Multilender swaps are similar to guarantor swaps, except that formed PC

pools include loans that are contributed by more than one party. We issue PCs through various swap-based exchanges significantly more often than through cash-based exchanges. We issue REMICs and Other Structured Securities in transactions in which securities dealers or investors sell us mortgage-related assets in exchange for REMICs and Other Structured Securities. We also issue Other Guarantee Transactions to third parties in exchange for non-Freddie Mac mortgage-related securities.

PCs

Our PCs are pass-through debt securities that represent undivided beneficial interests in a pool of mortgages held by a securitization trust. For our fixed-rate PCs, we guarantee the timely payment of interest and principal. For our ARM PCs, we guarantee the timely payment of the weighted average coupon interest rate for the underlying mortgage loans. We do not guarantee the timely payment of principal for ARM PCs; however, we do guarantee the full and final payment of principal.

Various types of fixed income investors purchase our PCs, including pension funds, insurance companies, securities dealers, money managers, commercial banks, and foreign central banks. PCs differ from U.S. Treasury securities and certain other fixed-income investments in two primary ways. First, they can be prepaid at any time because homeowners may pay off the underlying mortgages at any time prior to a loan's maturity. Because homeowners have the right to prepay their mortgage, the securities implicitly have a call option that significantly reduces the average life of the security as compared to the contractual maturity of the underlying loans. Consequently, mortgage-related securities generally provide a higher nominal yield than certain other fixed-income products. Second, PCs are not backed by the full faith and credit of the United States, as are U.S. Treasury securities. However, we guarantee the payment of interest and principal on all of our PCs, as discussed above.

In return for providing our guarantee of the payment of principal and interest, we earn a management and guarantee fee that is paid to us over the life of an issued PC, representing a portion of the interest collected on the underlying loans.

PC Trusts

Prior to January 1, 2010, our PC trusts met the definition of QSPEs and were not consolidated. Effective January 1, 2010, the concept of a QSPE was removed from GAAP and entities previously considered QSPEs were required to be evaluated for consolidation. Based on our evaluation, we determined that we are the primary beneficiary of trusts that issue our single-family PCs. Therefore, effective January 1, 2010, we consolidated on our balance sheet the assets and liabilities of these trusts at their UPB, with accrued interest, allowance for credit losses or other-than-temporary impairments recognized as appropriate, using the practical expedient permitted upon adoption since we determined that calculation of carrying values was not practical. Other assets and liabilities that were consolidated effective January 1, 2010 that either did not have a UPB or were required to be carried at fair value were measured at fair value. As a result of this consolidation, we have recognized on our consolidated balance sheets the mortgage loans underlying our issued single-family PCs as mortgage loans held-for-investment by consolidated trusts, at amortized cost. We also recognized the corresponding single-family PCs held by third parties on our consolidated balance sheets as debt securities of consolidated trusts held by third parties. After January 1, 2010, the assets and liabilities of trusts that we consolidate are recorded at either their: (a) carrying value if the underlying assets are contributed by us to the trust; or (b) fair value for those securitization trusts established for our guarantor swap program. Refer to "Mortgage Loans" and "Debt Securities Issued" below for further information on the subsequent accounting treatment of these assets and liabilities, respectively.

REMICs and Other Structured Securities

Our REMICs and Other Structured Securities use resecuritization trusts that meet the definition of a VIE. REMICs and Other Structured Securities represent beneficial interests in groups of PCs and other types of mortgage-related assets. We create these securities primarily by using PCs or previously issued mortgage-related securities as collateral. Similar to our PCs, we guarantee the payment of principal and interest to the holders of the tranches of our REMICs and Other Structured Securities. However, for REMICs and Other Structured Securities where we have already guaranteed the underlying assets, there is no incremental exposure to credit loss assumed by us.

With respect to the resecuritization trusts used for REMICs and Other Structured Securities whose underlying assets are PCs, we do not have rights to receive benefits or obligations to absorb losses that could potentially be significant to the trusts because we have already provided a guarantee on the underlying assets. Additionally, our involvement with these trusts does not provide us with any power that would enable us to direct the significant economic activities of these entities. Although we may be exposed to prepayment risk through our ownership of the securities issued by these trusts, we do not have the ability through our involvement with the trust to impact the economic risks to which we are exposed.

As a result, we have concluded that we are not the primary beneficiary of, and therefore do not consolidate, the resecuritization trusts used for REMICs and Other Structured Securities whose underlying assets are PCs unless we hold substantially all of the outstanding beneficial interests that have been issued by the trust and are therefore considered the primary beneficiary of the trust.

We receive a transaction fee from third parties for issuing REMICs and Other Structured Securities in exchange for PCs or other mortgage-related assets. We defer the portion of the transaction fee that is equal to the estimated value of our future administrative responsibilities for issued REMICs and Other Structured Securities. These responsibilities include ongoing trustee services, administration of pass-through amounts, paying agent services, tax reporting, and other required services. We estimate the value of these future responsibilities based on quotes from third-party vendors who perform each type of service and, where quotes are not available, based on our estimates of what those vendors would charge. The remaining portion of the transaction fee relates to compensation earned in connection with structuring-related services we rendered to third parties and is allocated between REMICs and Other Structured Securities we retain, if any, and the REMICs and Other Structured Securities acquired by third parties, based on the relative fair value of the securities. The portion of the fee allocated to any REMICs and Other Structured Securities we retain is deferred as a carrying value adjustment and is amortized into interest income using the effective interest method over the contractual lives of these securities. The fee allocated to REMICs and Other Structured Securities acquired by third parties is recognized immediately in earnings as other income.

Other Guarantee Transactions

Other Guarantee Transactions are mortgage-related securities that we issue to third parties in exchange for non-Freddie Mac mortgage-related securities. Other Guarantee Transactions typically involve us purchasing either the senior tranches from a non-Freddie Mac senior-subordinated securitization or single-class pass-through securities, placing the acquired assets into a securitization trust, providing a guarantee of the principal and interest of the acquired assets and issuing securities backed by these assets. To the extent that we are deemed to be the primary beneficiary of such a securitization trust, we recognize the mortgage loans underlying the Other Guarantee Transaction as mortgage loans held-for-investment, at amortized cost. Correspondingly, we recognize the issued securities held by third parties as debt securities of consolidated trusts. However, to the extent we are not deemed to be the primary beneficiary of such a securitization trust, we recognize a guarantee asset, to the extent a management and guarantee fee is charged, and we recognize a guarantee obligation at fair value. We do not receive transaction fees, apart from our management and guarantee fee, for these transactions.

Purchases and Sales of Freddie Mac Mortgage-Related Securities

PCs

When we purchase PCs that have been issued by consolidated PC trusts, we extinguish the outstanding debt securities of the related consolidated trust. We recognize a gain (loss) on extinguishment of the debt securities to the extent the amount paid to redeem the debt differs from carrying value, adjusted for any related purchase commitments accounted for as derivatives.

When we sell PCs that have been issued by consolidated PC trusts, we recognize a liability to the third-party beneficial interest holders of the related consolidated trust as debt securities of consolidated trusts held by third parties. That is, our sale of PCs issued by consolidated PC trusts is accounted for as the issuance of debt, not as the sale of investment securities.

Single-Class REMICs and Other Structured Securities

Our mortgage-related securities that we classify as REMICs and Other Structured Securities may be single-class or multiclass resecuritization transactions. In REMICs and Other Structured Securities that are single-class securities, the collateral includes PCs and single-class REMICs and Other Structured Securities. We do not consolidate these resecuritization trusts as we are not deemed to be the primary beneficiary of such trusts. Our single-class REMICs and Other Structured Securities pass through all of the cash flows of the underlying PCs directly to the holders of the securities and are deemed to be substantially the same as the underlying PCs. As a result, when we purchase single-class REMICs and Other Structured Securities, we extinguish a pro rata portion of the outstanding debt securities of the related PC trust on our consolidated balance sheets.

When we sell single-class REMICs and Other Structured Securities, we recognize a liability to the third-party beneficial interest holders of the related consolidated PC trust as debt securities of consolidated trusts held by third

parties. That is, our sale of single-class REMICs and Other Structured Securities is accounted for as the issuance of debt, not as the sale of investment securities.

Multiclass REMICs and Other Structured Securities

In multiclass REMICs and Other Structured Securities, the collateral includes PCs and REMICs and Other Structured Securities. Generally, PCs serve as the primary type of collateral for these resecuritizations. We do not consolidate these resecuritization trusts as we are not deemed to be the primary beneficiary of such trusts unless we hold substantially all of the outstanding beneficial interests that have been issued by the trust and are therefore considered to be the primary beneficiary. In our multiclass REMICs and Other Structured Securities, the cash flows of the underlying PCs are divided (*e.g.*, stripped and/or time tranched). Due primarily to this division of cash flows, these securities are not deemed to be substantially the same as the underlying PCs. As a result, when we purchase multiclass REMICs and Other Structured Securities, we record these securities as investments in debt securities rather than as the extinguishment of debt since we are investing in the debt securities of a non-consolidated entity. See "Investments in Securities" for further information regarding our accounting for investments in multiclass REMICs and Other Structured Securities. The purchase of these securities is generally funded through the issuance of unsecured debt to third parties.

We recognize, as assets, both the investment in the multiclass REMICs and Other Structured Securities and the mortgage loans backing the PCs held by the trusts which underlie the multiclass REMICs and Other Structured Securities. Additionally, we recognize, as liabilities, the unsecured debt issued to third parties to fund the purchase of the multiclass REMICs and Other Structured Securities as well as the debt issued to third parties of the PC trusts we consolidate which underlie the multiclass REMICs and Other Structured Securities. This results in recognition of interest income from both assets and interest expense from both liabilities.

When we sell multiclass REMICs and Other Structured Securities, we account for the transfer in accordance with the accounting guidance for transfers of financial assets. To the extent the transfer of multiclass REMICs and Other Structured Securities qualifies as a sale, we de-recognize all assets sold and recognize all assets obtained and liabilities incurred. Any gain (loss) on the sale of multiclass REMICs and Other Structured Securities is reflected in our consolidated statements of income and comprehensive income as a component of other gains (losses) on investment securities. To the extent the transfer of multiclass REMICs and Other Structured Securities does not qualify as a sale, we account for the transfer as a financing transaction and recognize a liability for the proceeds received from third parties in the transfer.

Other Guarantee Commitments

In certain circumstances we also provide our guarantee of mortgage-related assets held by third parties without our securitization of the related assets. For example, we provide long-term standby commitments to certain of our single-family customers, which obligate us to purchase seriously delinquent loans that are covered by those agreements. In addition, during 2009 and 2010, we issued guarantees under the TCLFP on securities backed by HFA bonds as part of the HFA Initiative.

Cash and Cash Equivalents

Highly liquid investment securities that have an original maturity of three months or less are accounted for as cash equivalents. In addition, cash collateral that we have the right to use for general corporate purposes and that we obtain from counterparties to derivative contracts is recorded as cash and cash equivalents.

Restricted Cash and Cash Equivalents

Cash collateral accepted from counterparties that we do not have the right to use for general corporate purposes is recorded as restricted cash in our consolidated balance sheets. Restricted cash includes cash remittances received on the underlying assets of our consolidated trusts, which are deposited into a separate custodial account. These cash remittances include both scheduled and unscheduled principal and interest payments. The cash remittances are segregated in the separate custodial account until they are remitted to the PC, REMIC and Other Structured Securities holders on their respective security payment dates, and are not commingled with our general operating funds. As securities administrator, we invest the cash held in the custodial account, pending distribution to our PC, REMIC, and Other Structured Securities holders, in short-term investments and are entitled to the interest income earned on these short-term investments, which is recorded as interest income, other on our consolidated statements of income and comprehensive income.

Mortgage Loans

Upon acquisition, we classify a loan as either held-for-sale or held-for-investment. Mortgage loans that we have the ability and intent to hold for the foreseeable future are classified as held-for-investment. Historically, we classified

mortgage loans that we purchased to use as collateral for future PC and other mortgage-related security issuances as held-for-sale because we intended to securitize the loans in transactions that qualified for derecognition from our consolidated financial statements and did not have the intent to hold these loans for the foreseeable future. Effective January 1, 2010 we were required to consolidate our single-family PC trusts and certain Other Guarantee Transactions, and, therefore, recognized the loans underlying these securities on our consolidated balance sheets. These consolidated entities do not have the ability to sell mortgage loans and generally are only permitted to hold such loans for the settlement of the corresponding obligations of these entities. As such, loans we acquire and which we intend to securitize using an entity we will consolidate will generally be classified as held-for-investment both prior to and subsequent to their securitization, in accordance with our intent and ability to hold such loans for the foreseeable future.

Held-for-investment mortgage loans are reported in our consolidated balance sheets at their outstanding UPB, net of deferred fees and other cost basis adjustments (including unamortized premiums and discounts, delivery fees and other pricing adjustments). These deferred items are amortized into interest income over the contractual lives of the loans using the effective interest method. We recognize interest income on an accrual basis except when we believe the collection of principal or interest is not probable. If the collection of principal and interest is not probable, we cease the accrual of interest income.

Mortgage loans not classified as held-for-investment are classified as held-for-sale. Held-for-sale loans are reported at lower-of-cost-or-fair-value on our consolidated balance sheets. Any excess of a held-for-sale loan's cost over its fair value is recognized as a valuation allowance in other income on our consolidated statement of income and comprehensive income, with changes in this valuation allowance also being recorded in other income. Premiums, discounts, and other cost basis adjustments recognized upon acquisition on single-family loans classified as held-for-sale are deferred and not amortized. We have elected the fair value option for multifamily mortgage loans held for sale that we intend to securitize and sell to investors. See "NOTE 17: FAIR VALUE DISCLOSURES — Fair Value Election — *Multifamily Held-For-Sale Mortgage Loans with Fair Value Option Elected*." Thus, these multifamily mortgage loans are measured at fair value on a recurring basis, with subsequent gains or losses related to sales or changes in fair value reported in other income in our consolidated statements of income and comprehensive income.

Cash flows related to mortgage loans held by our consolidated trusts are classified as either investing activities (*e.g.*, principal repayments) or operating activities (*e.g.*, interest payments received from borrowers included within net income (loss)). In addition, cash flows related to purchases of mortgage loans held-for-sale are classified in operating activities. When mortgage loans held-for-sale are sold or securitized, proceeds from the sale or securitization and any related gain or loss are classified in operating activities.

Allowance for Loan Losses and Reserve for Guarantee Losses

The allowance for loan losses and the reserve for guarantee losses represent estimates of incurred credit losses. The allowance for loan losses pertains to all single-family and multifamily loans classified as held-for-investment on our consolidated balance sheets whereas the reserve for guarantee losses relates to single-family and multifamily loans underlying our non-consolidated Freddie Mac mortgage-related securities and other guarantee commitments. Total held-for-investment mortgage loans, net are shown net of the allowance for loan losses on our consolidated balance sheets. The reserve for guarantee losses is included within other liabilities on our consolidated balance sheets. We recognize incurred losses by recording a charge to the provision for credit losses in our consolidated statements of income and comprehensive income. Determining the appropriateness of the loan loss reserves is a complex process that is subject to numerous estimates and assumptions requiring significant judgment about matters that involve a high degree of subjectivity.

We estimate credit losses related to homogeneous pools of loans in accordance with the accounting guidance for contingencies. Accordingly, we maintain an allowance for loan losses on mortgage loans held-for-investment when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Loans that we evaluate for individual impairment are measured in accordance with the subsequent measurement requirements of the accounting guidance for receivables.

For both the single-family and multifamily portfolios, we charge off (in full or in part) our recorded investment in a loan in the period it is determined that the loan (or a portion thereof) is uncollectible, which generally occurs at final disposition of the loan. However, if losses are evident prior to final disposition, earlier recognition of a charge-off is required by our policies. We also consider charge-offs for certain very small balance loans and upon the occurrence of certain events such as natural disasters. A charge-off is also recorded if we realize a specific credit loss upon the modification of a loan in a TDR. We do not have any established threshold in terms of days past due beyond which we partially or fully charge-off loans.

Single-Family Loans

We determine single-family loan loss reserves both on a collective and individual basis. For further discussion on individually impaired single-family loans, refer to "Impaired Loans" below.

We estimate loan loss reserves on homogeneous pools of single-family loans using a statistically based model that evaluates a variety of factors affecting collectability. The homogeneous pools of single-family mortgage loans are determined based on common underlying characteristics, including current LTV ratios and trends in home prices, loan product type and geographic region. In determining the loan loss reserves for single-family loans at the balance sheet date, we evaluate key inputs and factors including, but not limited to:

- current LTV ratios and historical trends in home prices;
- loan product type;
- delinquency/default status and history;
- actual and estimated rates of collateral loss severity for similar loans;
- geographic location;
- loan age;
- sourcing channel;
- occupancy type;
- UPB at origination;
- expected ability to partially mitigate losses through loan modification or other alternatives to foreclosure;
- expected proceeds from mortgage insurance contracts that are contractually attached to a loan or other credit enhancements that were entered into contemporaneous with and in contemplation of a guarantee or loan purchase transaction;
- expected repurchases of mortgage loans by sellers under their obligations to repurchase loans that are inconsistent with certain representations and warranties made at the time of sale;
- counterparty credit of mortgage insurers and seller/servicers;
- pre-foreclosure real estate taxes and insurance;
- estimated selling costs should the underlying property ultimately be sold; and
- trends in the timing of foreclosures.

Freddie Mac relies upon third-parties to provide primary servicing for the performing and non-performing loan portfolio. At loan delivery, the seller provides us with the loan data, which includes loan characteristics and underwriting information. Each month, the servicers provide us with monthly loan level servicing data, including delinquency and loss information.

Certain loan servicing data is reported to us on a real-time basis, such as loan pay-offs and foreclosure events. However, certain monthly servicing data, including delinquency status, is delivered on a one-month delay. For example, December loan delinquency data delivered to Freddie Mac at the end of December or beginning of January reflects the loan delinquency status related to the December 1 payment cycle. We incorporate the delinquency status data into our allowance for loan loss calculation generally without adjustment for the one month delay.

Our single-family loan loss reserve default models are estimated based on the most recent 12 months of actual borrower behavior reflected in status and delinquency data reported by our servicers. The data provides a loan level history of delinquency, foreclosures, foreclosure alternatives, modifications, and repurchases. Our single-family loan loss reserve severity is estimated from the most recent three months of sales experience realized on our distressed property dispositions and the most recent six months of mortgage insurance recoveries and pre-foreclosure expenses on our distressed properties including REO, short sales, and third-party sales. We use historical trends in home prices in our single-family loan loss reserve process, primarily through the use of estimated current total LTV ratios in our default models and through the use of recent home price sales experience in our severity estimate. However, we do not use a forecast of trends in home prices in our single-family loan loss reserve process.

Our loan loss reserves reflect our best current estimates of incurred losses. Our loan loss reserve estimate includes projections related to strategic loss mitigation activities, including loan modifications for troubled borrowers, and projections of recoveries through repurchases by seller/servicers of defaulted loans due to failure to follow contractual

underwriting requirements at the time of the loan origination. For loans where foreclosure is probable, impairment is measured on an aggregate basis based upon an estimate of the underlying collateral value. At an individual loan level, our estimate also considers the effect of historical home price changes on borrower behavior and the impact of our loss mitigation actions, including our loan modification efforts. We apply estimated proceeds from primary mortgage insurance that is contractually attached to a loan and other credit enhancements entered into contemporaneous with and in contemplation of a guarantee or loan purchase transaction as a recovery of our recorded investment in a charged-off loan, up to the amount of loss recognized as a charge-off. Proceeds from credit enhancements received in excess of our recorded investment in charged-off loans are recorded as a decrease to REO operations expense in our consolidated statements of income and comprehensive income when received.

Our reserve estimate also reflects our best projection of delinquencies we believe are likely to occur as a result of loss events that have occurred through December 31, 2011 and 2010, respectively. However, the continued weakness in the national housing market, the uncertainty in other macroeconomic factors, and uncertainty of the success of modification efforts under HAMP and other loan workout programs, make forecasting of delinquency rates inherently imprecise.

We validate and update the model and factors to capture changes in actual loss experience, as well as the effects of changes in underwriting practices and in our loss mitigation strategies. We also consider macroeconomic and other factors that impact the quality of the loans underlying our portfolio including regional housing trends, applicable home price indices, unemployment and employment dislocation trends, consumer credit statistics and the extent of third party insurance. We determine our loan loss reserves based on our assessment of these factors.

Multifamily Loans

For multifamily loans identified as impaired, we individually determine the specific loan loss reserves. Refer to "Impaired Loans" below for further discussion on individually impaired multifamily loans. Multifamily loans evaluated collectively for impairment are aggregated into book year vintages and measured by benchmarking published historical commercial mortgage data to those vintages based upon available economic data related to multifamily real estate, including apartment vacancy and rental rates.

Non-Performing Loans

Non-performing loans consist of single-family and multifamily loans that have undergone a TDR, single-family seriously delinquent loans, multifamily loans that are three or more payments past due or in the process of foreclosure, and multifamily loans that are deemed impaired based upon management judgment. We place mortgage loans on non-accrual status when we believe collectability of interest and principal is not reasonably assured, which generally occurs when a loan is three monthly payments past due, unless the loan is well secured and in the process of collection based upon an individual loan assessment. A loan is considered past due if a full payment of principal and interest is not received within one month of its due date. When a loan is placed on non-accrual status, any interest income accrued but uncollected is reversed. Thereafter, interest income is recognized only upon receipt of cash payments.

A non-accrual mortgage loan may be returned to accrual status when the collectability of principal and interest is reasonably assured. For single-family loans, we determine that collectability is reasonably assured when we have received payment of principal and interest such that the loan becomes less than three monthly payments past due. For multifamily loans, the collectability of principal and interest is considered reasonably assured based on a quantitative and qualitative analysis of the factors specific to the loan being assessed. Upon a loan's return to accrual status, all previously reversed interest income is recognized and amortization of any basis adjustments into interest income is resumed.

Impaired Loans

We consider a loan to be impaired when it is probable, based on current information, that we will not receive all amounts due (including both principal and interest) in accordance with the contractual terms of the original loan agreement. This assessment is made taking into consideration any more than insignificant delays in the timing of our expected receipt of these amounts.

Single-Family

Individually impaired single-family loans include loans that have undergone a TDR. Impairment and interest income recognition are discussed separately in the paragraphs that follow. All other single-family loans are aggregated and measured collectively for impairment based on similar risk characteristics. Collective impairment is measured as described above in the "Allowance for Loan Losses and Reserve for Guarantee Losses — Single-Family Loans" section of this note.

If we determine that foreclosure on the underlying collateral is probable, we measure impairment based upon the fair value of the collateral, as reduced by estimated disposition costs and adjusted for estimated proceeds from insurance and similar sources.

Multifamily

Multifamily impaired loans include TDRs, loans three monthly payments or more past due, and loans that are deemed impaired based on management judgment. Factors considered by management in determining whether a loan is impaired include, but are not limited to, the underlying property's operating performance as represented by its current DSCR, available credit enhancements, current LTV ratio, management of the underlying property, and the property's geographic location. Multifamily loans are measured individually for impairment based on the fair value of the underlying collateral, as reduced by estimated disposition costs, as the repayment of these loans is generally provided from the cash flows of the underlying collateral and any associated credit-enhancement. Except for cases of fraud and certain other types of borrower defaults, most multifamily loans are non-recourse to the borrower so generally the cash flows of the underlying property (including any associated credit enhancements) serve as the source of funds for repayment of the loan. Interest income recognition on non-TDR multifamily impaired loans is subject to our non-accrual policy as discussed in "Non-Performing Loans."

Troubled Debt Restructurings

Both single-family and multifamily loans which experience a modification to their contractual terms which results in a concession being granted to a borrower experiencing financial difficulties are considered TDRs. A concession is deemed granted when, as a result of the restructuring, we do not expect to collect all amounts due, including interest accrued, at the original contractual interest rate. As appropriate, we also consider other qualitative factors in determining whether a concession is deemed granted, including whether the borrower's modified interest rate is consistent with that of a non-troubled borrower. We do not consider restructurings that result in a delay in payment that is insignificant to be a concession. We generally consider a delay in monthly amortizing payments of three months or less to be insignificant. We generally consider all other delays in payment, including balloon payments, to be more than insignificant. A concession typically includes one or more of the following being granted to the borrower: (a) loans in trial periods where the expected permanent modification will change our expectation of collecting all amounts due at the original contract rate; (b) a delay in payment that is more than insignificant; (c) a reduction in the contractual interest rate; (d) interest forbearance for a period of time that is not insignificant or forgiveness of accrued but uncollected interest amounts; and (e) a reduction in the principal amount of the loan. On July 1, 2011, we adopted an amendment to the accounting guidance related to the classification of loans as TDRs. This amendment clarified when a restructuring such as a loan modification is considered a TDR. For additional information, see "Recently Adopted Accounting Guidance — *A Creditor's Determination of Whether a Restructuring is a Troubled Debt Restructuring,"* below.

Impairment of a loan having undergone a TDR is measured as the excess of our recorded investment in the loan over the present value of the expected future cash flows, discounted at the loan's original effective interest rate for fixed-rate loans or at the loan's effective interest rate prior to modification for ARM loans. Our expectation of future cash flows incorporates, among other items, an estimated probability of default which is based on a number of market factors as well as the characteristics of the loan, such as past due status. Subsequent to the modification date, interest income is recognized at the modified interest rate, subject to our non-accrual policy as discussed in "Non-Performing Loans" above, with all other changes in the present value of expected future cash flows being recognized as a component of the provision for credit losses in our consolidated statement of income and comprehensive income.

Investments in Securities

Investments in securities consist primarily of mortgage-related securities. We classify securities as "available-for-sale" or "trading." We currently do not classify any securities as "held-to-maturity," although we may elect to do so in the future. In addition, we elected the fair value option for certain available-for-sale mortgage-related securities, including investments in securities that: (a) can contractually be prepaid or otherwise settled in such a way that we may not recover substantially all of our initial recorded investment; or (b) are not of high credit quality at the acquisition date and are identified as within the scope of the accounting guidance for investments in beneficial interests in securitized financial assets. Subsequent to our election, these securities were classified as trading securities. Securities classified as available-for-sale and trading are reported at fair value with changes in fair value included in AOCI and other gains (losses) on investment securities, respectively. See "NOTE 17: FAIR VALUE DISCLOSURES" for more information on how we determine the fair value of securities.

We record purchases and sales of securities that are specifically exempt from the requirements of derivatives and hedge accounting on a trade date basis. Securities underlying forward purchases and sales contracts that are not exempt from the requirements of derivatives and hedge accounting are recorded on the expected settlement date with a corresponding commitment recorded on the trade date.

When we purchase REMICs and Other Structured Securities and certain Other Guarantee Transactions that we have issued, we account for these securities as investments in debt securities, as we are investing in the debt securities of a non-consolidated entity. We consolidate the trusts that issue these securities when we hold substantially all of the outstanding beneficial interests issued by the trusts. We recognize interest income on the securities and interest expense on the debt we issued. See "Securitization Activities through Issuances of Freddie Mac Mortgage-Related Securities — *Purchases and Sales of Freddie Mac Mortgage-Related Securities*" for additional information on accounting for purchases of PCs and beneficial interests issued by resecuritization trusts.

In connection with transfers of financial assets that qualified as sales prior to the adoption of the amendments to the accounting guidance on transfers of financial assets and the consolidation of VIEs, we may have retained individual securities not transferred to third parties upon the completion of a securitization transaction. These securities may have been backed by mortgage-related assets purchased from our customers, PCs, and REMICs and Other Structured Securities. The securities we acquired in these transactions were classified as available-for-sale or trading and are considered guaranteed investments. Therefore, the fair values of these securities reflect that they are considered to be of high credit quality and the securities are not subject to credit-related impairments. They are subject to the credit risk associated with the underlying collateral. Therefore, our exposure to credit losses on collateral underlying our retained securitization interests was recorded within our reserve for guarantee losses.

For most of our investments in securities, interest income is recognized using the effective interest method. Deferred items, including premiums, discounts, and other basis adjustments, are amortized into interest income over the contractual lives of the securities.

For certain investments in securities, interest income is recognized using the prospective effective interest method. We specifically apply this accounting to beneficial interests in securitized financial assets that: (a) can contractually be prepaid or otherwise settled in such a way that we may not recover substantially all of our recorded investment; (b) are not of high credit quality at the acquisition date; or (c) have been determined to be other-than-temporarily impaired. We recognize as interest income (over the life of these securities) the excess of all estimated cash flows attributable to these interests over their book value using the effective interest method. We update our estimates of expected cash flows periodically and recognize changes in the calculated effective interest rate on a prospective basis.

We recognize impairment losses on available-for-sale securities within our consolidated statements of income and comprehensive income as net impairment of available-for-sale securities recognized in earnings when we conclude that a decrease in the fair value of a security is other-than-temporary. On April 1, 2009, we prospectively adopted an amendment to the accounting guidance for investments in debt and equity securities. This amendment changed the recognition, measurement, and presentation of other-than-temporary impairment for debt securities.

We conduct quarterly reviews to identify and evaluate each available-for-sale security that has an unrealized loss for other-than-temporary impairment. An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis.

We recognize other-than-temporary impairment in earnings if one of the following conditions exists: (a) we have the intent to sell the security; (b) it is more likely than not that we will be required to sell the security before recovery of its unrealized loss; or (c) we do not expect to recover the amortized cost basis of the security. If we do not intend to sell the security and it is not more likely than not that we will be required to sell the security prior to recovery of its unrealized loss, we recognize only the credit component of other-than-temporary impairment in earnings and the amounts attributable to all other factors are recognized, net of tax, in AOCI. The credit component represents the amount by which the present value of cash flows expected to be collected from the security is less than the amortized cost basis of the security. The evaluation of whether unrealized losses on available-for-sale securities are other-than-temporary contemplates numerous factors. We perform an evaluation on a security-by-security basis considering all available information and our analysis is refined where the current fair value or other characteristics of the security warrant. The relative importance of this information varies based on the facts and circumstances surrounding each security, as well as the economic environment at the time of assessment. See "NOTE 7: INVESTMENTS IN SECURITIES — Impairment Recognition on Investments in Securities" for a discussion of important factors we consider in our evaluation.

For the majority of our available-for-sale securities in an unrealized loss position, we have asserted that we have no intent to sell and that we believe it is not more likely than not that we will be required to sell the security before recovery

of its amortized cost basis. Where such an assertion has not been made, the security's entire decline in fair value is deemed to be other than temporary and is recorded within our consolidated statements of income and comprehensive income as net impairment of available-for-sale securities recognized in earnings.

We elected the fair value option for available-for-sale securities identified as within the scope of the accounting guidance for investments in beneficial interests in securitized financial assets to better reflect the valuation changes that occur subsequent to impairment write-downs recorded on these instruments. By electing the fair value option for these instruments, we reflect valuation changes through our consolidated statements of income and comprehensive income in the period they occur, including increases in value. For additional information on our election of the fair value option, see "NOTE 17: FAIR VALUE DISCLOSURES."

Gains and losses on the sale of securities are included in other gains (losses) on investment securities recognized in earnings, including those gains (losses) reclassified into earnings from AOCI. We use the specific identification method for determining the cost basis of a security in computing the gain or loss.

For securities classified as trading or available-for-sale and those securities where we elected the fair value option, we classify the cash flows as investing activities because we hold these securities for investment purposes. In cases where the transfer of available-for-sale securities represents a secured borrowing, we classify the related cash flows as financing activities.

Repurchase and Resale Agreements and Dollar Roll Transactions

We enter into repurchase and resale agreements primarily as an investor or to finance certain of our security positions. Such transactions are accounted for as secured financings because the transferor does not relinquish control over the transferred assets.

We also engage in dollar roll transactions whereby we enter into an agreement to sell and subsequently repurchase (or purchase and subsequently resell) agency securities. When these transactions involve securities issued by consolidated entities, they are treated as issuances and extinguishments of debt. When these transactions involve securities issued by entities we do not consolidate, they are treated as purchases and sales as the security initially transferred is not required to be the same or substantially the same as the security subsequently returned.

Debt Securities Issued

Debt securities that we issue are classified on our consolidated balance sheets as either debt securities of consolidated trusts held by third parties or other debt.

As a result of the adoption of the amendments to the accounting guidance on transfers of financial assets and the consolidation of VIEs, we consolidated our single-family PC trusts and certain Other Guarantee Transactions in our financial statements commencing January 1, 2010. Consequently, PCs and Other Guarantee Transactions issued by the consolidated trusts and held by third parties are recognized as debt securities of consolidated trusts held by third parties on our consolidated balance sheets. The debt securities of our consolidated trusts are prepayable without penalty at any time. Other debt represents short-term and long-term debt securities that we issue to third parties to fund our general business activities.

Both debt of our consolidated trusts and other debt, except for certain debt for which we elected the fair value option, are reported at amortized cost. Deferred items, including premiums, discounts, and hedging-related basis adjustments are reported as a component of total debt, net. Issuance costs are reported as a component of other assets. These items are amortized and reported through interest expense using the effective interest method over the contractual life of the related indebtedness. Amortization of premiums, discounts, and issuance costs begins at the time of debt issuance. Amortization of hedging-related basis adjustments is initiated upon the discontinuation of the related hedge relationship.

We elected the fair value option on foreign-currency denominated debt and certain other debt securities. The change in fair value for debt recorded at fair value is reported as gains (losses) on debt recorded at fair value in our consolidated statements of income and comprehensive income. Upfront costs and fees on foreign-currency denominated debt are recognized in earnings as incurred and not deferred. For additional information on our election of the fair value option, see "NOTE 17: FAIR VALUE DISCLOSURES."

When we purchase a PC or a REMIC and Other Structured Security that is a single-class security from a third party, we extinguish the debt of the related PC trusts and recognize a gain or loss related to the difference between the amount paid to redeem the debt security and its carrying value, adjusted for any related purchase commitments accounted for as derivatives, in earnings as a component of gains (losses) on extinguishment of debt securities of consolidated trusts. Cash

flows related to debt securities issued by our consolidated trusts are classified as either financing activities (*e.g.*, repayment of principal to PC holders) or operating activities (*e.g.*, interest payments to PC holders included within net income (loss)). Other than interest paid, cash flows related to other debt are classified as financing activities. Interest paid on other debt is classified as operating activities.

When we repurchase or call outstanding other debt, we recognize a gain or loss related to the difference between the amount paid to redeem the debt security and the carrying value in earnings as a component of gains (losses) on retirement of other debt. Contemporaneous transfers of cash between us and a creditor in connection with the issuance of a new debt security and satisfaction of an existing debt security are accounted for as either an extinguishment or a modification of an existing debt security. If the debt securities have substantially different terms, the transaction is accounted for as an extinguishment of the existing debt security. The issuance of a new debt security is recorded at fair value, fees paid to the creditor are expensed and fees paid to third parties are deferred and amortized into interest expense over the life of the new debt security using the effective interest method. If the terms of the existing debt security and the new debt security are not substantially different, the transaction is accounted for as a modification of the existing debt. Fees paid to the creditor are deferred and amortized over the life of the modified unsecured debt security using the effective interest method and fees paid to third parties are expensed as incurred.

Derivatives

Derivatives are reported at their fair value on our consolidated balance sheets. Derivatives in a net asset position, including net derivative interest receivable or payable, are reported as derivative assets, net. Similarly, derivatives in a net liability position, including net derivative interest receivable or payable, are reported as derivative liabilities, net. We offset fair value amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral against fair value amounts recognized for derivative instruments executed with the same counterparty under a master netting agreement. Changes in fair value and interest accruals on derivatives are recorded as derivative gains (losses) in our consolidated statements of income and comprehensive income.

We evaluate whether financial instruments that we purchase or issue contain embedded derivatives. In accordance with an amendment to derivatives and hedging accounting guidance regarding certain hybrid financial instruments, we elected to measure newly acquired or issued financial instruments that contain embedded derivatives at fair value, with changes in fair value recorded in our consolidated statements of income and comprehensive income. At December 31, 2011 and 2010, we did not have any embedded derivatives that were bifurcated and accounted for as freestanding derivatives.

At December 31, 2011 and 2010, we did not have any derivatives in hedge accounting relationships; however, there are amounts recorded in AOCI related to discontinued cash flow hedges which are recognized in earnings as the originally forecasted transactions affect earnings. If it becomes probable the originally forecasted transaction will not occur, the associated deferred gain or loss in AOCI would be reclassified to earnings immediately.

In the consolidated statements of cash flows, cash flows related to the acquisition and termination of derivatives, other than forward commitments, are generally classified in investing activities. Cash flows related to forward commitments are classified within the section of the consolidated statements of cash flows in accordance with the cash flows of the financial instruments to which they relate.

REO

REO is initially recorded at fair value less costs to sell and is subsequently carried at the lower of cost or fair value less costs to sell. When we acquire REO, losses arise when the carrying basis of the loan (including accrued interest) exceeds the fair value of the foreclosed property, net of estimated costs to sell and expected recoveries through credit enhancements. Losses are charged off against the allowance for loan losses at the time of REO acquisition. REO gains arise and are recognized immediately in earnings when the fair value of the foreclosed property less costs to sell plus expected recoveries through credit enhancements exceeds the carrying basis of the loan (including all amounts due from the borrower). Amounts we expect to receive from third-party insurance or other credit enhancements are recorded as receivables when REO is acquired. The receivable is adjusted when the actual claim is filed and is reported as a component of other assets on our consolidated balance sheets. Material development and improvement costs relating to REO are capitalized. Operating expenses specifically identifiable with an REO property are included in REO operations income (expense); all other expenses are recognized within other administrative expenses in our consolidated statement of income and comprehensive income. Estimated declines in REO fair value that result from ongoing valuation of the properties are provided for and charged to REO operations income (expense) when identified. Any gains and losses from REO dispositions are included in REO operations income (expense).

Income Taxes

We use the asset and liability method of accounting for income taxes under GAAP. Under this method, deferred tax assets and liabilities are recognized based upon the expected future tax consequences of existing temporary differences between the financial reporting and the tax reporting basis of assets and liabilities using enacted statutory tax rates as well as tax net operating loss and tax credit carryforwards. To the extent tax laws change, deferred tax assets and liabilities are adjusted, when necessary, in the period that the tax change is enacted. Valuation allowances are recorded to reduce net deferred tax assets when it is more likely than not that a tax benefit will not be realized. The realization of these net deferred tax assets is dependent upon the generation of sufficient taxable income in available carryback years, from current operations and from unrecognized tax benefits, and upon our intent and ability to hold available-for-sale debt securities until the recovery of any temporary unrealized losses. On a quarterly basis, our management determines whether a valuation allowance is necessary. In so doing, our management considers all evidence currently available, both positive and negative, in determining whether, based on the weight of that evidence, it is more likely than not that the net deferred tax assets will be realized. Our management determined that, as of December 31, 2011 and 2010, it was more likely than not that we would not realize the portion of our net deferred tax assets that is dependent upon the generation of future taxable income. This determination was driven by events and the resulting uncertainties that existed as of December 31, 2011 and 2010. For more information about the evidence that management considers and our determination of the need for a valuation allowance, see "NOTE 13: INCOME TAXES."

Income tax benefit (expense) includes: (a) deferred tax benefit (expense), which represents the net change in the deferred tax asset or liability balance during the year plus any change in a valuation allowance; and (b) current tax benefit (expense), which represents the amount of tax currently payable to or receivable from a tax authority including any related interest and penalties plus amounts accrued for unrecognized tax benefits (also including any related interest and penalties). Income tax benefit (expense) excludes the tax effects related to adjustments recorded to equity.

Regarding tax positions taken or expected to be taken (and any associated interest and penalties), we recognize a tax position so long as it is more likely than not that it will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. We measure the tax position at the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. See "NOTE 13: INCOME TAXES" for additional information.

Earnings Per Common Share

We have participating securities related to options and restricted stock units with dividend equivalent rights that receive dividends as declared on an equal basis with common shares but are not obligated to participate in undistributed net losses. These participating securities consist of: (a) vested and unvested options to purchase common stock; and (b) restricted stock units that earn dividend equivalents at the same rate when and as declared on common stock. Consequently, in accordance with accounting guidance for earnings per share, we use the "two-class" method of computing earnings per share. The "two-class" method is an earnings allocation formula that determines earnings per share for common stock and participating securities based on dividends declared and participation rights in undistributed earnings.

Basic earnings per common share is computed as net income available to common stockholders divided by the weighted average common shares outstanding for the period. The weighted average common shares outstanding for our basic earnings per share calculation includes the weighted average number of shares that are associated with the warrant for our common stock issued to Treasury as part of the Purchase Agreement. This warrant is included since it is unconditionally exercisable by the holder at a minimal cost of $0.00001 per share. Diluted earnings per common share is determined using the weighted average number of common shares during the period, adjusted for the dilutive effect of common stock equivalents. Dilutive common stock equivalents reflect the assumed net issuance of additional common shares pursuant to certain of our stock-based compensation plans that could potentially dilute earnings per common share. See "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS" for further information on the warrant for our common stock issued to Treasury as part of the Purchase Agreement.

Diluted loss per common share is computed as net loss attributable to common stockholders divided by weighted average common shares outstanding — diluted for the period, which considers the effect of dilutive common equivalent shares outstanding. For periods with net income, the effect of dilutive common equivalent shares outstanding includes: (a) the weighted average shares related to stock options; and (b) the weighted average of restricted shares and restricted stock units. Such items are included in the calculation of weighted average common shares outstanding — diluted during periods of net income, when the assumed conversion of the share equivalents has a dilutive effect. Such items are excluded from the weighted average common shares outstanding — basic.

Comprehensive Income

Comprehensive income is the change in equity, on a net of tax basis, resulting from transactions and other events and circumstances from non-owner sources during a period. It includes all changes in equity during a period, except those resulting from investments by stockholders. We define comprehensive income as consisting of net income (loss) plus changes in: (a) the unrealized gains and losses on available-for-sale securities; (b) the effective portion of derivatives accounted for as cash flow hedge relationships; and (c) defined benefit plans.

Recently Adopted Accounting Guidance

A Creditor's Determination of Whether a Restructuring is a Troubled Debt Restructuring

On July 1, 2011, we adopted an amendment to the accounting guidance related to the classification of loans as TDRs, which clarifies when a restructuring such as a loan modification is considered a TDR. This amendment clarifies the guidance regarding a creditor's evaluation of whether a debtor is experiencing financial difficulty and whether a creditor has granted a concession to a debtor for purposes of determining if a restructuring constitutes a TDR.

Both single-family and multifamily loans that experience restructurings resulting in a concession being granted to a borrower experiencing financial difficulties are considered TDRs. The amendment provides guidance to determine whether a borrower is experiencing financial difficulties, which is largely consistent with the guidance for debtors. As we had previously analogized to the guidance for debtors, this change does not have a significant impact on our determination of whether a borrower is experiencing financial difficulties. Pursuant to this amendment, a concession is deemed to have been granted when, as a result of the restructuring, we do not expect to collect all amounts due, including interest accrued, at the original contractual interest rate. The amendment also specifies that a concession shall not be determined by comparing the borrower's pre-restructuring effective interest rate to the post-restructuring effective interest rate. These changes result in a significant impact on our determination of whether a concession has been granted.

The amendment was effective for interim and annual periods beginning on or after June 15, 2011 and applied as of July 1, 2011 to restructurings occurring on or after January 1, 2011. As of September 30, 2011, the total recorded investment in loans identified as TDRs during the third quarter of 2011 which relate to modifications or agreements entered into between January 1, 2011 and June 30, 2011 was $7.5 billion, and the allowance for credit losses related to those loans was $1.7 billion. We recognized additional provision for credit losses of $0.2 billion during the third quarter of 2011 due to the population of restructurings occurring in the first half of 2011 that are now considered TDRs.

Please refer to "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for further disclosures regarding our loan restructurings accounted for and disclosed as TDRs and for discussion regarding how modifications and other loss mitigation activities are factored into our allowance for loan losses.

Accounting for Transfers of Financial Assets and Consolidation of VIEs

On January 1, 2010, we prospectively adopted amendments to the accounting guidance applicable to the accounting for transfers of financial assets and the consolidation of VIEs. The amendment for transfers of financial assets was applicable on a prospective basis to new transfers, while the amendment relating to consolidation of VIEs was applied prospectively to all entities within its scope as of the date of adoption.

We use securitization trusts in our securities issuance process. Prior to January 1, 2010, these trusts met the definition of QSPEs and were not subject to consolidation. Effective January 1, 2010, the concept of a QSPE was removed from GAAP and entities previously considered QSPEs were required to be evaluated for consolidation. Based on our consolidation evaluation, we determined that we are the primary beneficiary of trusts that issue our single-family PCs and certain Other Guarantee Transactions. As a result, a large portion of our off-balance sheet assets and liabilities prior to January 1, 2010 have been consolidated. Effective January 1, 2010, we consolidated these trusts and recognized the assets and liabilities at their UPB, with accrued interest, allowance for credit losses or other-than-temporary impairments recognized as appropriate, using the practical expedient permitted upon adoption since we determined that calculation of historical carrying values was not practical. Other newly consolidated assets and liabilities that either do not have a UPB or are required to be carried at fair value were measured at fair value. See "Consolidation and Equity Method of Accounting" above for a discussion of our assessment to determine whether we are considered the primary beneficiary of a trust and thus need to consolidate it. As such, we recognized on our consolidated balance sheets the mortgage loans underlying our issued single-family PCs and certain Other Guarantee Transactions as mortgage loans held-for-investment by consolidated trusts, at amortized cost. We also recognized the corresponding single-family PCs and certain Other Guarantee Transactions held by third parties on our consolidated balance sheets as debt securities of consolidated trusts held by third parties. After January 1, 2010, new consolidations of trust assets and liabilities are recorded at either their:

(a) carrying value if the underlying assets are contributed by us to the trust and consolidated at the time of transfer; or (b) fair value for the assets and liabilities that are consolidated under the securitization trusts established for our guarantor swap program.

In light of the consolidation of our single-family PC trusts and certain Other Guarantee Transactions as discussed above, effective January 1, 2010 we elected to change the amortization method for deferred items (*e.g.*, premiums, discounts, and other basis adjustments) related to mortgage loans and investments in securities. We made this change to align the amortization method for these assets with the amortization method for deferred items associated with the related liabilities. As a result of this change, deferred items are amortized into interest income using an effective interest method over the contractual lives of these assets instead of the estimated life that was used for periods prior to 2010. It was impracticable to retrospectively apply this change to prior periods, so we recognized this change as a cumulative effect adjustment to the opening balance of retained earnings (accumulated deficit), and future amortization of these deferred items will be recognized using this new method. The effect of the change in the amortization method for deferred items was immaterial to our consolidated financial statements in 2010.

The cumulative effect of these changes in accounting principles was a net decrease of $11.7 billion to total equity (deficit) as of January 1, 2010, which includes changes to the opening balances of retained earnings (accumulated deficit) and AOCI. This net decrease was driven principally by: (a) the elimination of unrealized gains resulting from the extinguishment of PCs held as investment securities upon consolidation of the PC trusts, representing the difference between the UPB of the loans underlying the PC trusts and the fair value of the PCs, including premiums, discounts, and other basis adjustments; (b) the elimination of the guarantee asset and guarantee obligation established for guarantees issued to securitization trusts we consolidated; and (c) the application of our non-accrual policy to single-family seriously delinquent mortgage loans consolidated as of January 1, 2010.

Change in the Impairment Model for Debt Securities

On April 1, 2009 we prospectively adopted an amendment to the accounting guidance for investments in debt and equity securities, which provided additional guidance on accounting for and presenting impairment losses on debt securities. This amendment changed the recognition, measurement and presentation of other-than-temporary impairment for debt securities, and was intended to bring greater consistency to the timing of impairment recognition and provide greater clarity to investors about the credit and non-credit components of impaired debt securities not expected to be sold. It also changed: (a) the method for determining whether an other-than-temporary impairment exists; and (b) the amount of an impairment charge to be recorded in earnings.

As a result of the adoption, we recognized a cumulative-effect adjustment, net of tax, of $15.0 billion to our opening balance of retained earnings (accumulated deficit) on April 1, 2009, with a corresponding adjustment of $(9.9) billion, net of tax, to AOCI. The cumulative adjustment reclassified the non-credit component of previously recognized other-than-temporary impairments from retained earnings to AOCI. The difference between these adjustments of $5.1 billion primarily represented the release of the valuation allowance previously recorded against the deferred tax asset that was no longer required upon adoption of this amendment. See "NOTE 7: INVESTMENTS IN SECURITIES" for further disclosures regarding our investments in securities and other-than-temporary impairments.

Recently Issued Accounting Guidance, Not Yet Adopted Within These Consolidated Financial Statements

Fair Value Measurement

In May 2011, the FASB issued amendments to the accounting guidance pertaining to fair value measurement and disclosure. These amendments provide both: (a) clarification about the FASB's intent about the application of existing fair value measurement and disclosure requirements; and (b) changes to some of the principles or requirements for measuring fair value or for disclosing information about fair value measurements. These amendments are effective for interim and annual periods beginning after December 15, 2011 and are to be applied prospectively, with early adoption not permitted by public companies. We do not expect that the adoption of these amendments will have a material impact on our consolidated financial statements.

Reconsideration of Effective Control for Repurchase Agreements

In April 2011, the FASB issued an amendment to the guidance for transfers and servicing with regard to repurchase agreements and other agreements that both entitle and obligate a transferor to repurchase or redeem financial assets before their maturity. This amendment removes the criterion related to collateral maintenance from the transferor's assessment of effective control. It focuses the assessment of effective control on the transferor's rights and obligations with respect to the transferred financial assets and not whether the transferor has the practical ability to perform in accordance with those

rights or obligations. The amendment is effective for interim and annual periods beginning on or after December 15, 2011. We do not expect that the adoption of this amendment will have a material impact on our consolidated financial statements.

NOTE 2: CONSERVATORSHIP AND RELATED MATTERS

Entry Into Conservatorship

On September 6, 2008, the Director of FHFA placed us into conservatorship. On September 7, 2008, Treasury and FHFA announced several actions regarding Freddie Mac and Fannie Mae. These actions included the execution of the Purchase Agreement, pursuant to which we issued to Treasury both senior preferred stock and a warrant to purchase common stock.

Business Objectives

We continue to operate under the direction of FHFA, as our Conservator. The conservatorship and related matters have had a wide-ranging impact on us, including our regulatory supervision, management, business, financial condition and results of operations. Upon its appointment, FHFA, as Conservator, immediately succeeded to all rights, titles, powers and privileges of Freddie Mac, and of any stockholder, officer or director thereof, with respect to the company and its assets. The Conservator also succeeded to the title to all books, records, and assets of Freddie Mac held by any other legal custodian or third party. During the conservatorship, the Conservator has delegated certain authority to the Board of Directors to oversee, and management to conduct, day-to-day operations so that the company can continue to operate in the ordinary course of business. The directors serve on behalf of, and exercise authority as directed by, the Conservator.

We are also subject to certain constraints on our business activities by Treasury due to the terms of, and Treasury's rights under, the Purchase Agreement. Our ability to access funds from Treasury under the Purchase Agreement is critical to keeping us solvent.

While in conservatorship, we can, and have continued to, enter into and enforce contracts with third parties. The Conservator continues to direct the efforts of the Board of Directors and management to address and determine the strategic direction for the company. While the Conservator has delegated certain authority to management to conduct day-to-day operations, many management decisions are subject to review and approval by FHFA and Treasury. In addition, management frequently receives directions from FHFA on various matters involving day-to-day operations.

FHFA has stated that it has focused Freddie Mac and Fannie Mae on their existing core business, including minimizing credit losses, and taking actions necessary to advance the goals of conservatorship, and is not permitting Freddie Mac and Fannie Mae to offer new products or enter into new lines of business. Our business objectives and strategies have, in some cases, been altered since we were placed into conservatorship, and may continue to change. These changes to our business objectives and strategies may not contribute to our profitability. Based on our charter, other legislation, public statements from Treasury and FHFA officials and other guidance and directives from our Conservator, we have a variety of different, and potentially competing, objectives, including:

- minimizing credit losses;
- conserving assets;
- providing liquidity, stability and affordability in the mortgage market;
- continuing to provide additional assistance to the struggling housing and mortgage markets;
- maintaining a positive stockholders' equity and reducing the need to draw funds from Treasury pursuant to the Purchase Agreement; and
- protecting the interests of taxpayers.

The Conservator has stated that it is taking actions in support of the objectives of gradual transition to greater private capital participation in housing finance and greater distribution of risk to participants other than the government. The Conservator has also stated that it is focusing on retaining value in the business operations of Freddie Mac and Fannie Mae, overseeing remediation of identified weaknesses in corporate operations and risk management, and ensuring that sound corporate governance principles are followed.

These objectives create conflicts in strategic and day-to-day decision making that will likely lead to suboptimal outcomes for one or more, or possibly all, of these objectives. We regularly receive direction from our Conservator on how to pursue our objectives under conservatorship, including direction to focus our efforts on assisting homeowners in the housing and mortgage markets. The Conservator and Treasury have also not authorized us to engage in certain

business activities and transactions, including the purchase or sale of certain assets, which we believe might have had a beneficial impact on our results of operations or financial condition, if executed. Our inability to execute such transactions may adversely affect our profitability, and thus contribute to our need to draw additional funds from Treasury. However, we believe that the support provided by Treasury pursuant to the Purchase Agreement currently enables us to maintain our access to the debt markets and to have adequate liquidity to conduct our normal business activities, although the costs of our debt funding could vary.

The Acting Director of FHFA stated that FHFA does not expect we will be a substantial buyer or seller of mortgages for our mortgage-related investments portfolio. We are also subject to limits on the amount of assets we can sell from our mortgage-related investments portfolio in any calendar month without review and approval by FHFA and, if FHFA determines, Treasury.

Given the important role the Administration and our Conservator have placed on Freddie Mac in addressing housing and mortgage market conditions and our public mission, we may be required to take additional actions that could have a negative impact on our business, operating results, or financial condition. Certain changes to our business objectives and strategies are designed to provide support for the mortgage market in a manner that serves our public mission and other non-financial objectives, but may not contribute to our profitability. Some of these changes increase our expenses, while others require us to forego revenue opportunities in the near term. In addition, the objectives set forth for us under our charter and by our Conservator, as well as the restrictions on our business under the Purchase Agreement, have adversely impacted and may continue to adversely impact our financial results, including our segment results. For example, our efforts to help struggling homeowners and the mortgage market, in line with our public mission, may help to mitigate our credit losses, but in some cases may increase our expenses or require us to forgo revenue opportunities in the near term. There is significant uncertainty as to the ultimate impact that our efforts to aid the housing and mortgage markets, including our efforts in connection with the MHA Program, will have on our future capital or liquidity needs. We are allocating significant internal resources to the implementation of the various initiatives under the MHA Program and to the servicing alignment initiative as directed by FHFA on April 28, 2011, which has increased, and will continue to increase, our expenses. We cannot currently estimate whether, or the extent to which, costs incurred in the near term from HAMP or other MHA Program efforts may be offset, if at all, by the prevention or reduction of potential future costs of serious delinquencies and foreclosures due to these initiatives.

There is significant uncertainty as to whether or when we will emerge from conservatorship, as it has no specified termination date, and as to what changes may occur to our business structure during or following conservatorship, including whether we will continue to exist. The Acting Director of FHFA stated on September 19, 2011 that "it ought to be clear to everyone at this point, given [Freddie Mac and Fannie Mae's] losses since being placed into conservatorship and the terms of the Treasury's financial support agreements, that [Freddie Mac and Fannie Mae] will not be able to earn their way back to a condition that allows them to emerge from conservatorship." The Acting Director of FHFA stated on November 15, 2011 that "the long-term outlook is that neither [Freddie Mac nor Fannie Mae] will continue to exist, at least in its current form, in the future." We are not aware of any current plans of our Conservator to significantly change our business model or capital structure in the near-term. Our future structure and role will be determined by the Administration and Congress, and there are likely to be significant changes beyond the near-term. We have no ability to predict the outcome of these deliberations.

On February 11, 2011, the Administration delivered a report to Congress that lays out the Administration's plan to reform the U.S. housing finance market, including options for structuring the government's long-term role in a housing finance system in which the private sector is the dominant provider of mortgage credit. The report recommends winding down Freddie Mac and Fannie Mae, and states that the Administration will work with FHFA to determine the best way to responsibly reduce the role of Freddie Mac and Fannie Mae in the market and ultimately wind down both institutions. The report states that these efforts must be undertaken at a deliberate pace, which takes into account the impact that these changes will have on borrowers and the housing market.

The report states that the government is committed to ensuring that Freddie Mac and Fannie Mae have sufficient capital to perform under any guarantees issued now or in the future and the ability to meet any of their debt obligations, and further states that the Administration will not pursue policies or reforms in a way that would impair the ability of Freddie Mac and Fannie Mae to honor their obligations. The report states the Administration's belief that under the companies' senior preferred stock purchase agreements with Treasury, there is sufficient funding to ensure the orderly and deliberate wind down of Freddie Mac and Fannie Mae, as described in the Administration's plan.

The report identifies a number of policy levers that could be used to wind down Freddie Mac and Fannie Mae, shrink the government's footprint in housing finance, and help bring private capital back to the mortgage market, including

increasing guarantee fees, phasing in a 10% down payment requirement, reducing conforming loan limits, and winding down Freddie Mac and Fannie Mae's investment portfolios, consistent with the senior preferred stock purchase agreements. These recommendations, if implemented, would have a material impact on our business volumes, market share, results of operations, and financial condition.

The temporary high-cost area limits expired on September 30, 2011. In addition, as discussed below, we have been directed to increase our guarantee fees. We cannot predict the extent to which the other recommendations in the report will be implemented or when any actions to implement them may be taken.

On December 23, 2011, President Obama signed into law the Temporary Payroll Tax Cut Continuation Act of 2011. Among its provisions, this new law directs FHFA to require Freddie Mac and Fannie Mae to increase guarantee fees by no less than 10 basis points above the average guarantee fees charged in 2011 on single-family mortgage-backed securities. Under the law, the proceeds from this increase will be remitted to Treasury to fund the payroll tax cut, rather than retained by the companies. The law also permits FHFA to determine a schedule for guarantee fee increases over a two-year period.

On October 24, 2011, FHFA, Freddie Mac, and Fannie Mae announced a series of FHFA-directed changes to HARP in an effort to attract more eligible borrowers whose monthly payments are current and who can benefit from refinancing their home mortgages. The revisions to HARP will be available to borrowers with loans that were sold to Freddie Mac and Fannie Mae on or before May 31, 2009 and who have current LTV ratios above 80%.

In November 2011, Freddie Mac and Fannie Mae issued guidance with operational details about the HARP changes to mortgage lenders and servicers after receiving information from FHFA about the fees that we may charge associated with the refinancing program. Because industry participation in HARP is not mandatory, we anticipate that implementation schedules will vary as individual lenders, mortgage insurers and other market participants modify their processes. It is too early to estimate how many eligible borrowers are likely to refinance under the revised program.

Purchase Agreement

Overview

The Conservator, acting on our behalf, entered into the Purchase Agreement on September 7, 2008. The Purchase Agreement was subsequently amended and restated on September 26, 2008, and further amended on May 6, 2009 and December 24, 2009. Under the December 2009 amendment to the Purchase Agreement, the $200 billion maximum amount of the commitment from Treasury will increase as necessary to accommodate any cumulative reduction in our net worth during 2010, 2011 and 2012. If we do not have a capital surplus (*i.e.*, positive net worth) at the end of 2012, then the amount of funding available after 2012 will be $149.3 billion ($200 billion funding commitment reduced by cumulative draws for net worth deficits through December 31, 2009). In the event we have a capital surplus at the end of 2012, then the amount of funding available after 2012 will depend on the size of that surplus relative to cumulative draws needed for deficits during 2010 to 2012, as follows:

- If the year-end 2012 surplus is lower than the cumulative draws needed for 2010 to 2012, then the amount of available funding is $149.3 billion less the surplus.
- If the year-end 2012 surplus exceeds the cumulative draws for 2010 to 2012, then the amount of available funding is $149.3 billion less the amount of those draws.

The Purchase Agreement requires Treasury, upon the request of the Conservator, to provide funds to us after any quarter in which we have a negative net worth (that is, our total liabilities exceed our total assets, as reflected on our GAAP balance sheet). In addition, the Purchase Agreement requires Treasury, upon the request of the Conservator, to provide funds to us if the Conservator determines, at any time, that it will be mandated by law to appoint a receiver for us unless we receive these funds from Treasury. In exchange for Treasury's funding commitment, we issued to Treasury, as an aggregate initial commitment fee: (a) one million shares of Variable Liquidation Preference Senior Preferred Stock (with an initial liquidation preference of $1 billion), which we refer to as the senior preferred stock; and (b) a warrant to purchase, for a nominal price, shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding on a fully diluted basis at the time the warrant is exercised, which we refer to as the warrant. We received no other consideration from Treasury for issuing the senior preferred stock or the warrant.

Under the terms of the Purchase Agreement, Treasury is entitled to a dividend of 10% per year, paid on a quarterly basis (which increases to 12% per year if not paid timely and in cash) on the aggregate liquidation preference of the senior preferred stock, consisting of the initial liquidation preference of $1 billion plus funds we receive from Treasury and any dividends and commitment fees not paid in cash. To the extent we draw on Treasury's funding commitment, the

liquidation preference of the senior preferred stock is increased by the amount of funds we receive. The senior preferred stock is senior in liquidation preference to our common stock and all other series of preferred stock.

In addition to the issuance of the senior preferred stock and warrant, we are required under the Purchase Agreement to pay a quarterly commitment fee to Treasury. Under the Purchase Agreement, the fee is to be determined in an amount mutually agreed to by us and Treasury with reference to the market value of Treasury's funding commitment as then in effect, and reset every five years. We may elect to pay the quarterly commitment fee in cash or add the amount of the fee to the liquidation preference of the senior preferred stock. Treasury may waive the quarterly commitment fee for up to one year at a time, in its sole discretion, based on adverse conditions in the U.S. mortgage market. The fee was originally scheduled to begin accruing on January 1, 2010 (with the first fee payable on March 31, 2010), but was delayed until January 1, 2011 (with the first fee payable on March 31, 2011) pursuant to an amendment to the Purchase Agreement. Treasury waived the fee for all quarters of 2011 and the first quarter of 2012, but has indicated that it remains committed to protecting taxpayers and ensuring that our future positive earnings are returned to taxpayers as compensation for their investment. Treasury stated that it would reevaluate whether the quarterly commitment fee should be set in the second quarter of 2012. Absent Treasury waiving the commitment fee in the second quarter of 2012, this quarterly commitment fee will begin accruing on April 1, 2012 and must be paid each quarter for as long as the Purchase Agreement is in effect. The amount of the fee has not yet been determined and could be substantial.

Under the Purchase Agreement, our ability to repay the liquidation preference of the senior preferred stock is limited and we will not be able to do so for the foreseeable future, if at all. The aggregate liquidation preference of the senior preferred stock and our related dividend obligations will increase further if we receive additional draws under the Purchase Agreement or if any dividends or quarterly commitment fees payable under the Purchase Agreement are not paid in cash. The amounts payable for dividends on the senior preferred stock are substantial and will have an adverse impact on our financial position and net worth.

The payment of dividends on our senior preferred stock in cash reduces our net worth. For periods in which our earnings and other changes in equity do not result in positive net worth, draws under the Purchase Agreement effectively fund the cash payment of senior preferred dividends to Treasury. It is unlikely that, over the long-term, we will generate net income or comprehensive income in excess of our annual dividends payable to Treasury, although we may experience period-to-period variability in earnings and comprehensive income. As a result, we expect to make additional draws in future periods.

The Purchase Agreement includes significant restrictions on our ability to manage our business, including limiting the amount of indebtedness we can incur and capping the size of our mortgage-related investments portfolio. While the senior preferred stock is outstanding, we are prohibited from paying dividends (other than on the senior preferred stock) or issuing equity securities without Treasury's consent.

The Purchase Agreement has an indefinite term and can terminate only in limited circumstances, which do not include the end of the conservatorship. The Purchase Agreement therefore could continue after the conservatorship ends. Treasury has the right to exercise the warrant, in whole or in part, at any time on or before September 7, 2028.

Purchase Agreement Covenants

The Purchase Agreement provides that, until the senior preferred stock is repaid or redeemed in full, we may not, without the prior written consent of Treasury:

- declare or pay any dividend (preferred or otherwise) or make any other distribution with respect to any Freddie Mac equity securities (other than with respect to the senior preferred stock or warrant);
- redeem, purchase, retire or otherwise acquire any Freddie Mac equity securities (other than the senior preferred stock or warrant);
- sell or issue any Freddie Mac equity securities (other than the senior preferred stock, the warrant and the common stock issuable upon exercise of the warrant and other than as required by the terms of any binding agreement in effect on the date of the Purchase Agreement);
- terminate the conservatorship (other than in connection with a receivership);
- sell, transfer, lease or otherwise dispose of any assets, other than dispositions for fair market value: (a) to a limited life regulated entity (in the context of a receivership); (b) of assets and properties in the ordinary course of business, consistent with past practice; (c) in connection with our liquidation by a receiver; (d) of cash or cash equivalents for cash or cash equivalents; or (e) to the extent necessary to comply with the covenant described below relating to the reduction of our mortgage-related investments portfolio;

- issue any subordinated debt;
- enter into a corporate reorganization, recapitalization, merger, acquisition or similar event; or
- engage in transactions with affiliates unless the transaction is: (a) pursuant to the Purchase Agreement, the senior preferred stock or the warrant; (b) upon arm's length terms; or (c) a transaction undertaken in the ordinary course or pursuant to a contractual obligation or customary employment arrangement in existence on the date of the Purchase Agreement.

The covenants also apply to our subsidiaries.

The Purchase Agreement also provides that we may not own mortgage assets with a UPB in excess of: (a) $900 billion on December 31, 2009; or (b) on December 31 of each year thereafter, 90% of the aggregate amount of mortgage assets we are permitted to own as of December 31 of the immediately preceding calendar year, provided that we are not required to own less than $250 billion in mortgage assets. Under the Purchase Agreement, we also may not incur indebtedness that would result in the par value of our aggregate indebtedness exceeding 120% of the amount of mortgage assets we are permitted to own on December 31 of the immediately preceding calendar year. The mortgage asset and indebtedness limitations are determined without giving effect to any change in the accounting guidance related to transfers of financial assets and consolidation of VIEs or any similar accounting guidance. Therefore, these limitations were not affected by our implementation of the changes to the accounting guidance for transfers of financial assets and consolidation of VIEs, under which we consolidated our single-family PCs and certain Other Guarantee Transactions in our financial statements as of January 1, 2010.

In addition, the Purchase Agreement provides that we may not enter into any new compensation arrangements or increase amounts or benefits payable under existing compensation arrangements of any named executive officer or other executive officer (as such terms are defined by SEC rules) without the consent of the Director of FHFA, in consultation with the Secretary of the Treasury.

Warrant Covenants

The warrant we issued to Treasury includes, among others, the following covenants: (a) our SEC filings under the Exchange Act will comply in all material respects as to form with the Exchange Act and the rules and regulations thereunder; (b) we may not permit any of our significant subsidiaries to issue capital stock or equity securities, or securities convertible into or exchangeable for such securities, or any stock appreciation rights or other profit participation rights; (c) we may not take any action that will result in an increase in the par value of our common stock; (d) we may not take any action to avoid the observance or performance of the terms of the warrant and we must take all actions necessary or appropriate to protect Treasury's rights against impairment or dilution; and (e) we must provide Treasury with prior notice of specified actions relating to our common stock, such as setting a record date for a dividend payment, granting subscription or purchase rights, authorizing a recapitalization, reclassification, merger or similar transaction, commencing a liquidation of the company or any other action that would trigger an adjustment in the exercise price or number or amount of shares subject to the warrant.

Termination Provisions

The Purchase Agreement provides that the Treasury's funding commitment will terminate under any of the following circumstances: (a) the completion of our liquidation and fulfillment of Treasury's obligations under its funding commitment at that time; (b) the payment in full of, or reasonable provision for, all of our liabilities (whether or not contingent, including mortgage guarantee obligations); and (c) the funding by Treasury of the maximum amount of the commitment under the Purchase Agreement. In addition, Treasury may terminate its funding commitment and declare the Purchase Agreement null and void if a court vacates, modifies, amends, conditions, enjoins, stays or otherwise affects the appointment of the Conservator or otherwise curtails the Conservator's powers. Treasury may not terminate its funding commitment under the Purchase Agreement solely by reason of our being in conservatorship, receivership or other insolvency proceeding, or due to our financial condition or any adverse change in our financial condition.

Waivers and Amendments

The Purchase Agreement provides that most provisions of the agreement may be waived or amended by mutual written agreement of the parties; however, no waiver or amendment of the agreement is permitted that would decrease Treasury's aggregate funding commitment or add conditions to Treasury's funding commitment if the waiver or amendment would adversely affect in any material respect the holders of our debt securities or Freddie Mac mortgage guarantee obligations.

Third-party Enforcement Rights

In the event of our default on payments with respect to our debt securities or Freddie Mac mortgage guarantee obligations, if Treasury fails to perform its obligations under its funding commitment and if we and/or the Conservator are not diligently pursuing remedies in respect of that failure, the holders of these debt securities or Freddie Mac mortgage guarantee obligations may file a claim in the United States Court of Federal Claims for relief requiring Treasury to fund to us the lesser of: (a) the amount necessary to cure the payment defaults on our debt and Freddie Mac mortgage guarantee obligations; and (b) the lesser of: (i) the deficiency amount; and (ii) the maximum amount of the commitment less the aggregate amount of funding previously provided under the commitment. Any payment that Treasury makes under those circumstances will be treated for all purposes as a draw under the Purchase Agreement that will increase the liquidation preference of the senior preferred stock.

Impact of the Purchase Agreement and FHFA Regulation on the Mortgage-Related Investments Portfolio

Under the terms of the Purchase Agreement and FHFA regulation, our mortgage-related investments portfolio is subject to a cap that decreases by 10% each year until the portfolio reaches $250 billion. As a result, the UPB of our mortgage-related investments portfolio could not exceed $729 billion as of December 31, 2011 and may not exceed $656.1 billion as of December 31, 2012. The UPB of our mortgage-related investments portfolio, for purposes of the limit imposed by the Purchase Agreement and FHFA regulation, was $653.3 billion at December 31, 2011. The annual 10% reduction in the size of our mortgage-related investments portfolio is calculated based on the maximum allowable size of the mortgage-related investments portfolio, rather than the actual UPB of the mortgage-related investments portfolio, as of December 31 of the preceding year. The limitation is determined without giving effect to the January 1, 2010 change in the accounting guidance related to transfers of financial assets and consolidation of VIEs.

Government Support for our Business

We are dependent upon the continued support of Treasury and FHFA in order to continue operating our business. Our ability to access funds from Treasury under the Purchase Agreement is critical to keeping us solvent and avoiding the appointment of a receiver by FHFA under statutory mandatory receivership provisions.

Significant recent developments with respect to the support we received from the government during 2011 include the following:

- we received $8.0 billion in funding from Treasury under the Purchase Agreement in 2011, which increased the aggregate liquidation preference of the senior preferred stock to $72.2 billion as of December 31, 2011; and
- we paid dividends of $6.5 billion in cash on the senior preferred stock to Treasury at the direction of the Conservator.

To address our net worth deficit of $146 million at December 31, 2011, FHFA will submit a draw request on our behalf to Treasury under the Purchase Agreement in the amount of $146 million, and will request that we receive these funds by March 31, 2012. Our draw request represents our net worth deficit at quarter-end rounded up to the nearest $1 million. Following funding of the draw request related to our net worth deficit at December 31, 2011, our annual cash dividend obligation to Treasury on the senior preferred stock will increase from $7.22 billion to $7.23 billion, which exceeds our annual historical earnings in all but one period.

Through December 31, 2011, we paid $16.5 billion in cash dividends in the aggregate on the senior preferred stock. Continued cash payment of senior preferred dividends will have an adverse impact on our future financial condition and net worth. In addition, cash payment of quarterly commitment fees payable to Treasury will negatively impact our future net worth over the long-term. Treasury waived the fee for all quarters of 2011 and the first quarter of 2012. The amount of the fee has not yet been established and could be substantial. As a result of additional draws and other factors: (a) the liquidation preference of, and the dividends we owe on, the senior preferred stock would increase and, therefore, we may need additional draws from Treasury in order to pay our dividend obligations; and (b) there is significant uncertainty as to our long-term financial sustainability.

See "NOTE 8: DEBT SECURITIES AND SUBORDINATED BORROWINGS" and "NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT)" for more information on the terms of the conservatorship and the Purchase Agreement.

Housing Finance Agency Initiative

On October 19, 2009, we entered into a Memorandum of Understanding with Treasury, FHFA, and Fannie Mae, which sets forth the terms under which Treasury and, as directed by FHFA, we and Fannie Mae, would provide assistance,

through three separate initiatives, to state and local HFAs so that the HFAs can continue to meet their mission of providing affordable financing for both single-family and multifamily housing. The parties agreed to certain modifications to the initiatives on November 23, 2011. FHFA directed us and Fannie Mae to participate in the HFA initiative on a basis that is consistent with the goals of being commercially reasonable and safe and sound. Treasury's participation in these assistance initiatives does not affect the amount of funding that Treasury can provide to Freddie Mac under the terms of the Purchase Agreement.

From October 19, 2009 to December 31, 2009, we, Treasury, Fannie Mae, and participating HFAs entered into definitive agreements setting forth the respective parties' obligations under this initiative. The initiatives are as follows:

- TCLFP — In December 2009, on a 50-50 pro rata basis, Freddie Mac and Fannie Mae agreed to provide $8.2 billion of credit and liquidity support, including outstanding interest at the date of the guarantee, for variable rate demand obligations, or VRDOs, previously issued by HFAs. This support was provided through the issuance of guarantees, which provide credit enhancement to the holders of such VRDOs and also create an obligation to provide funds to purchase any VRDOs that are put by their holders and are not remarketed. Treasury provided a credit and liquidity backstop on the TCLFP. These guarantees replaced existing liquidity facilities from other providers. The guarantees are scheduled to expire on or before December 31, 2012. However, Treasury has given TCLFP participants the option to extend their individual TCLFP facilities for an additional three years to December 31, 2015. This option must be exercised in 2012.
- NIBP — In December 2009, on a 50-50 pro rata basis, Freddie Mac and Fannie Mae agreed to issue in total $15.3 billion of partially guaranteed pass-through securities backed by new single-family and certain new multifamily housing bonds issued by HFAs. Treasury purchased all of the pass-through securities issued by Freddie Mac and Fannie Mae. This initiative provides financing for HFAs to issue new housing bonds.

Treasury will bear the initial losses of principal up to 35% of total principal for these two initiatives combined, and thereafter Freddie Mac and Fannie Mae each will be responsible only for losses of principal on the securities that it issues to the extent that such losses are in excess of 35% of all losses under both initiatives. Treasury will bear all losses of unpaid interest. Under both initiatives, we and Fannie Mae were paid fees at the time bonds were securitized and also will be paid ongoing fees.

The third initiative under the HFA initiative is described below:

- *Multifamily Credit Enhancement Initiative.* Using existing housing bond credit enhancement products, Freddie Mac is providing a guarantee of new housing bonds issued by HFAs, which Treasury purchased from the HFAs. Treasury will not be responsible for a share of any losses incurred by us in this initiative.

Related Parties as a Result of Conservatorship

As a result of our issuance to Treasury of the warrant to purchase shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding, on a fully diluted basis, we are deemed a related party to the U.S. government. Except for the transactions with Treasury discussed above in "Business Objectives," "Government Support for our Business" and "Housing Finance Agency Initiative" as well as in "NOTE 8: DEBT SECURITIES AND SUBORDINATED BORROWINGS," and "NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT)," no transactions outside of normal business activities have occurred between us and the U.S. government during the year ended December 31, 2011. In addition, we are deemed related parties with Fannie Mae as both we and Fannie Mae have the same relationships with FHFA and Treasury. All transactions between us and Fannie Mae have occurred in the normal course of business.

NOTE 3: VARIABLE INTEREST ENTITIES

We use securitization trusts in our securities issuance process, and are required to evaluate the trusts for consolidation on an ongoing basis. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Consolidation and Equity Method of Accounting" for further information regarding the consolidation of certain VIEs.

Based on our evaluation of whether we hold a controlling financial interest in these VIEs, we determined that we are the primary beneficiary of trusts that issue our single-family PCs and certain Other Guarantee Transactions. Therefore, we consolidate on our balance sheet the assets and liabilities of these trusts. In addition to our PC trusts, we are involved with numerous other entities that meet the definition of a VIE, as discussed below.

VIEs for which We are the Primary Beneficiary

Single-family PC Trusts

Our single-family PC trusts issue pass-through securities that represent undivided beneficial interests in pools of mortgages held by these trusts. For our fixed-rate PCs, we guarantee the timely payment of interest and principal. For our ARM PCs, we guarantee the timely payment of the weighted average coupon interest rate for the underlying mortgage loans and the full and final payment of principal; we do not guarantee the timely payment of principal on ARM PCs. In exchange for providing this guarantee, we may receive a management and guarantee fee and up-front delivery fees. We issue most of our single-family PCs in transactions in which our customers exchange mortgage loans for PCs. We refer to these transactions as guarantor swaps.

PCs are designed so that we bear the credit risk inherent in the loans underlying the PCs through our guarantee of principal and interest payments on the PCs. The PC holders bear the interest rate or prepayment risk on the mortgage loans and the risk that we will not perform on our obligation as guarantor. For purposes of our consolidation assessments, our evaluation of power and economic exposure with regard to PC trusts focuses on credit risk because the credit performance of the underlying mortgage loans was identified as the activity that most significantly impacts the economic performance of these entities. We have the power to impact the activities related to this risk in our role as guarantor and master servicer.

Specifically, in our role as master servicer, we establish requirements for how mortgage loans are serviced and what steps are to be taken to avoid credit losses (*e.g.,* modification, foreclosure). Additionally, in our capacity as guarantor, we have the ability to remove defaulted mortgage loans out of the PC trust to help manage credit losses. See "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS" for further information regarding our removal of mortgage loans out of PC trusts. These powers allow us to direct the activities of the VIE (*i.e.*, the PC trust) that most significantly impact its economic performance. In addition, we determined that our guarantee to each PC trust to provide principal and interest payments obligates us to absorb losses that could potentially be significant to the PC trusts. Accordingly, we concluded that we are the primary beneficiary of our single-family PC trusts.

At December 31, 2011 and 2010, we were the primary beneficiary of, and therefore consolidated, single-family PC trusts with assets totaling $1.6 trillion and $1.7 trillion, respectively, as measured using the UPB of issued PCs. The assets of each PC trust can be used only to settle obligations of that trust. In connection with our PC trusts, we have credit protection in the form of primary mortgage insurance, pool insurance, recourse to lenders, and other forms of credit enhancement. We also have credit protection for certain of our PC trusts that issue PCs backed by loans or certificates of federal agencies (such as FHA, VA, and USDA). See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES — Credit Protection and Other Forms of Credit Enhancement" for additional information regarding third-party credit enhancements related to our PC trusts.

Other Guarantee Transactions

Other Guarantee Transactions are mortgage-related securities that we issue to third parties in exchange for non-Freddie Mac mortgage-related securities. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Securitization Activities through Issuances of Freddie Mac Mortgage-Related Securities" for information on the nature of Other Guarantee Transactions. The degree to which our involvement with securitization trusts that issue Other Guarantee Transactions provides us with power to direct the activities that most significantly impact the economic performance of these VIEs (*e.g.,* the ability to direct the servicing of the underlying assets of these entities) and obligation to absorb losses that could potentially be significant to the VIEs (*e.g.,* the existence of third party credit enhancements) varies by transaction. For all Other Guarantee Transactions, our variable interest in these VIEs represents some form of credit guarantee, whether covering all the issued beneficial interests or only the most senior ones. The nature of our credit guarantee typically determines whether we have power over the activities that most significantly impact the economic performance of the VIE.

For those Other Guarantee Transactions where our credit guarantee is in a first loss position to absorb credit losses on the underlying assets of these entities as of the reporting date, we would also have the ability to direct servicing of the underlying assets, which is the power to direct the activities that most significantly impact the economic performance of these VIEs. As a result, we would be the primary beneficiary, and we would consolidate the VIE. For those Other Guarantee Transactions in which our credit guarantee is not in a first loss position to absorb credit losses on the underlying assets of these entities as of the reporting date (*i.e.*, our credit guarantee is in a secondary loss position), we would not have the ability to direct servicing of the underlying assets, so we would not be the primary beneficiary, and we would not consolidate the VIE.

Our consolidation determination took into consideration the specific facts and circumstances of our involvement with each of these entities. As a result, we have concluded that we are the primary beneficiary of certain Other Guarantee Transactions with underlying assets totaling $12.9 billion and $15.8 billion at December 31, 2011 and 2010, respectively. For those Other Guarantee Transactions that we do consolidate, the investors in these securities have recourse only to the assets of those VIEs.

Consolidated VIEs

The table below represents the carrying amounts and classification of the assets and liabilities of consolidated VIEs on our consolidated balance sheets.

Table 3.1 — Assets and Liabilities of Consolidated VIEs

Consolidated Balance Sheets Line Item	December 31, 2011	December 31, 2010
	(in millions)	
Cash and cash equivalents	$ 2	$ 1
Restricted cash and cash equivalents	27,675	7,514
Federal funds sold and securities purchased under agreements to resell	—	29,350
Mortgage loans held-for-investment by consolidated trusts	1,564,131	1,646,172
Accrued interest receivable	6,242	6,895
Real estate owned, net	60	118
Other assets	6,083	6,001
Total assets of consolidated VIEs	$1,604,193	$1,696,051
Accrued interest payable	$ 5,943	$ 6,502
Debt securities of consolidated trusts held by third parties	1,471,437	1,528,648
Other liabilities	3	172
Total liabilities of consolidated VIEs	$1,477,383	$1,535,322

VIEs for which We are not the Primary Beneficiary

The table below represents the carrying amounts and classification of the assets and liabilities recorded on our consolidated balance sheets related to our variable interests in non-consolidated VIEs, as well as our maximum exposure to loss as a result of our involvement with these VIEs. Our involvement with VIEs for which we are not the primary beneficiary generally takes one of two forms: (a) purchasing an investment in these entities; or (b) providing a guarantee to these entities. Our maximum exposure to loss for those VIEs in which we have purchased an investment is calculated as the maximum potential charge that we would recognize in earnings if that investment were to become worthless. This amount does not include other-than-temporary impairments or other write-downs that we previously recognized through earnings. Our maximum exposure to loss for those VIEs for which we have provided a guarantee represents the contractual amounts that could be lost under the guarantees if counterparties or borrowers defaulted, without consideration of possible recoveries under credit enhancement arrangements. We do not believe the maximum exposure to loss disclosed in the table below is representative of the actual loss we are likely to incur, based on our historical loss experience and after consideration of proceeds from related collateral liquidation, including possible recoveries under credit enhancement arrangements.

Table 3.2 — Variable Interests in VIEs for which We are not the Primary Beneficiary

	December 31, 2011				
		Mortgage-Related Security Trusts			
	Asset-Backed Investment Trusts(1)	Freddie Mac Securities(2)	Non-Freddie Mac Securities(1)	Unsecuritized Multifamily Loans(3)	Other(1)(4)
	(in millions)				
Assets and Liabilities Recorded on our Consolidated Balance Sheets					
Assets:					
Cash and cash equivalents	$ 447	$ —	$ —	$ —	$ —
Restricted cash and cash equivalents	—	53	—	33	167
Investments in securities:					
Available-for-sale, at fair value	—	81,092	121,743	—	—
Trading, at fair value	302	16,047	15,473	—	—
Mortgage loans:					
Held-for-investment, unsecuritized	—	—	—	72,295	—
Held-for-sale	—	—	—	9,710	—
Accrued interest receivable	—	471	420	353	6
Derivative assets, net	—	—	—	—	1
Other assets	—	432	1	375	434
Liabilities:					
Derivative liabilities, net	—	(1)	—	—	(42)
Other liabilities	—	(585)	—	(39)	(675)
Maximum Exposure to Loss	$ 749	$36,438	$153,620	$ 82,766	$11,198
Total Assets of Non-Consolidated VIEs(5)	$16,748	$41,740	$921,219	$134,145	$25,616

	December 31, 2010				
		Mortgage-Related Security Trusts			
	Asset-Backed Investment Trusts(1)	Freddie Mac Securities(2)	Non-Freddie Mac Securities(1)	Unsecuritized Multifamily Loans(3)	Other(1)(4)
	(in millions)				
Assets and Liabilities Recorded on our Consolidated Balance Sheets					
Assets:					
Cash and cash equivalents	$ 9,909	$ —	$ —	$ —	$ —
Restricted cash and cash equivalents	—	52	—	34	464
Investments in securities:					
Available-for-sale, at fair value	—	85,689	137,568	—	—
Trading, at fair value	44	13,437	18,914	—	—
Mortgage loans:					
Held-for-investment, unsecuritized	—	—	—	78,448	—
Held-for-sale	—	—	—	6,413	—
Accrued interest receivable	—	419	717	372	5
Derivative assets, net	—	—	—	—	2
Other assets	—	277	6	23	381
Liabilities:					
Derivative liabilities, net	—	(2)	—	—	(41)
Other liabilities	—	(408)	(3)	(36)	(1,034)
Maximum Exposure to Loss	$ 9,953	$26,392	$ 176,533	$ 85,290	$11,375
Total Assets of Non-Consolidated VIEs(5)	$129,479	$29,368	$1,036,975	$138,330	$25,875

(1) For our involvement with non-consolidated asset-backed investment trusts, non-Freddie Mac security trusts and certain other VIEs where we do not provide a guarantee, our maximum exposure to loss is computed as the carrying amount if the security is classified as trading or the amortized cost if the security is classified as available-for-sale for our investments and related assets recorded on our consolidated balance sheets, including any unrealized amounts recorded in AOCI for securities classified as available-for-sale.

(2) Freddie Mac securities include our variable interests in single-family multiclass REMICs and Other Structured Securities, multifamily PCs, multifamily Other Structured Securities, and Other Guarantee Transactions that we do not consolidate. For our variable interests in non-consolidated Freddie Mac security trusts for which we have provided a guarantee, our maximum exposure to loss is the outstanding UPB of the underlying mortgage loans or securities that we have guaranteed, which is the maximum contractual amount under such guarantees. However, our investments in single-family REMICs and Other Structured Securities that are not consolidated do not give rise to any additional exposure to credit loss as we already consolidate the underlying collateral.

(3) For unsecuritized multifamily loans, our maximum exposure to loss is based on the UPB of these loans, as adjusted for loan level basis adjustments, any associated allowance for loan losses, accrued interest receivable, and fair value adjustments on held-for-sale loans.

(4) For other non-consolidated VIEs where we have provided a guarantee, our maximum exposure to loss is the contractual amount that could be lost under the guarantee if the counterparty or borrower defaulted, without consideration of possible recoveries under credit enhancement arrangements.

(5) Represents the remaining UPB of assets held by non-consolidated VIEs using the most current information available, where our continuing involvement is significant. We do not include the assets of our non-consolidated trusts related to single-family REMICs and Other Structured Securities in this amount as we already consolidate the underlying collateral of these trusts on our consolidated balance sheets.

Asset-Backed Investment Trusts

We invest in a variety of short-term non-mortgage-related, asset-backed investment trusts. These short-term investments represent interests in trusts consisting of a pool of receivables or other financial assets, typically credit card receivables, auto loans, or student loans. These trusts act as vehicles to allow originators to securitize assets. Securities are structured from the underlying pool of assets to provide for varying degrees of risk. Primary risks include potential loss from the credit risk and interest-rate risk of the underlying pool. The originators of the financial assets or the underwriters

of the securities offering create the trusts and typically own the residual interest in the trust assets. See "NOTE 7: INVESTMENTS IN SECURITIES" for additional information regarding our asset-backed investments.

At December 31, 2011 and 2010, we had investments in 11 and 23 asset-backed investment trusts in which we had a variable interest but were not considered the primary beneficiary, respectively. Our investments in these asset-backed investment trusts as of December 31, 2011 were made in 2011. At both December 31, 2011 and 2010, we were not the primary beneficiary of any such trusts because our investments are passive in nature and do not provide us with the power to direct the activities of the trusts that most significantly impact their economic performance. As such, our investments in these asset-backed investment trusts are accounted for as investment securities as described in "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES." Our investments in these trusts totaled $0.7 billion and $10.0 billion as of December 31, 2011 and 2010, respectively, and are included as cash and cash equivalents, available-for-sale securities or trading securities on our consolidated balance sheets. At both December 31, 2011 and 2010, we did not guarantee any obligations of these investment trusts and our exposure was limited to the amount of our investment.

Mortgage-Related Security Trusts

Freddie Mac Securities

Freddie Mac securities related to our variable interests in non-consolidated VIEs primarily consist of our REMICs and Other Structured Securities and Other Guarantee Transactions. REMICs and Other Structured Securities are created by using PCs or previously issued REMICs and Other Structured Securities as collateral. Our involvement with the resecuritization trusts that issue these securities does not provide us with rights to receive benefits or obligations to absorb losses nor does it provide any power that would enable us to direct the most significant activities of these VIEs because the ultimate underlying assets are PCs for which we have already provided a guarantee (*i.e.*, all significant rights, obligations and powers are associated with the underlying PC trusts). As a result, we have concluded that we are not the primary beneficiary of these resecuritization trusts.

Other Guarantee Transactions are created by using non-Freddie Mac mortgage-related securities as collateral. At both December 31, 2011 and 2010, our involvement with certain Other Guarantee Transactions does not provide us with the power to direct the activities that most significantly impact the economic performance of these VIEs. As a result, we hold a variable interest in, but are not the primary beneficiary of, certain Other Guarantee Transactions.

For non-consolidated REMICs and Other Structured Securities and Other Guarantee Transactions, our investments are primarily included in either available-for-sale securities or trading securities on our consolidated balance sheets. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Securitization Activities through Issuances of Freddie Mac Mortgage-Related Securities" for additional information on accounting for purchases of PCs and beneficial interests issued by resecuritization trusts. Our investments in these trusts are funded through the issuance of unsecured debt, which is recorded as other debt on our consolidated balance sheets.

Non-Freddie Mac Securities

We invest in a variety of mortgage-related securities issued by third-parties, including non-Freddie Mac agency securities, CMBS, other private-label securities backed by various mortgage-related assets, and obligations of states and political subdivisions. These investments typically represent interests in trusts that consist of a pool of mortgage-related assets and act as vehicles to allow originators to securitize those assets. Securities are structured from the underlying pool of assets to provide for varying degrees of risk. Primary risks include potential loss from the credit risk and interest-rate risk of the underlying pool. The originators of the financial assets or the underwriters of the securities offering create the trusts and typically own the residual interest in the trust assets. See "NOTE 7: INVESTMENTS IN SECURITIES" for additional information regarding our non-Freddie Mac securities.

Our investments in these non-Freddie Mac securities at December 31, 2011 were made between 1994 and 2011. We are not generally the primary beneficiary of non-Freddie Mac securities trusts because our investments are passive in nature and do not provide us with the power to direct the activities of the trusts that most significantly impact their economic performance. We were not the primary beneficiary of any significant non-Freddie Mac securities trusts as of December 31, 2011 and 2010. Our investments in non-consolidated non-Freddie Mac mortgage-related securities are accounted for as investment securities as described in "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES." At both December 31, 2011 and 2010, we did not guarantee any obligations of these investment trusts and our exposure was limited to the amount of our investment. Our investments in these trusts are funded through the issuance of unsecured debt, which is recorded as other debt on our consolidated balance sheets.

Unsecuritized Multifamily Loans

We purchase loans made to various multifamily real estate entities. We primarily purchase such loans for securitization, and to a lesser extent, investment purposes. These real estate entities are primarily single-asset entities (typically partnerships or limited liability companies) established to acquire, construct, rehabilitate, or refinance residential properties, and subsequently to operate the properties as residential rental real estate. The loans we acquire usually are, at origination, equal to 80% or less of the value of the related underlying property. The remaining 20% of value is typically funded through equity contributions by the partners or members of the borrower entity. In certain cases, the 20% not funded through the loan we acquire also includes subordinate loans or mezzanine financing from third-party lenders.

We held more than 7,000 unsecuritized multifamily loans at both December 31, 2011 and 2010. The UPB of our investments in these loans was $82.3 billion and $85.9 billion as of December 31, 2011 and 2010, respectively, and was included in unsecuritized held-for-investment mortgage loans, at amortized cost, and held-for-sale mortgage loans at fair value on our consolidated balance sheets. We are not generally the primary beneficiary of the multifamily real estate borrowing entities because the loans we acquire are passive in nature and do not provide us with the power to direct the activities of these entities that most significantly impact their economic performance. However, when a multifamily loan becomes delinquent, we may become the primary beneficiary of the borrowing entity depending upon the structure of this entity and the rights granted to us under the governing legal documents. At both December 31, 2011 and 2010, the amount of unsecuritized multifamily loans for which we could be considered the primary beneficiary of the underlying borrowing entity was not material. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Mortgage Loans" and "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for more information.

Other

Our involvement with other VIEs includes our investments in LIHTC partnerships, certain other mortgage-related guarantees, and certain short-term default and other guarantee commitments that we account for as derivatives:

- *Investments in LIHTC Partnerships:* We hold equity investments in various LIHTC partnerships that invest in lower-tier or project partnerships that are single asset entities. In February 2010, the Acting Director of FHFA, after consultation with Treasury, informed us that we may not sell or transfer our investments in LIHTC assets and that he sees no other disposition options. As a result, we wrote down the carrying value of our LIHTC investments to zero as of December 31, 2009, as we will not be able to realize any value from these investments either through reductions to our taxable income and related tax liabilities or through a sale to a third party.
- *Certain other mortgage-related guarantees:* We have other guarantee commitments outstanding on multifamily housing revenue bonds that were issued by third parties. As part of certain other mortgage-related guarantees, we also provide commitments to advance funds, commonly referred to as "liquidity guarantees," which require us to advance funds to enable third parties to purchase variable-rate multifamily housing revenue bonds, or certificates backed by such bonds, that cannot be remarketed within five business days after they are tendered by their holders.
- *Certain short-term default and other guarantee commitments accounted for as derivatives*: Our involvement in these VIEs includes our guarantee of the performance of interest-rate swap contracts in certain circumstances and credit derivatives we issued to guarantee the payments on multifamily loans or securities.

At December 31, 2011 and 2010, we were the primary beneficiary of one and three, respectively, real estate entities that invest in credit-enhanced multifamily housing revenue bonds that were not deemed to be material. We were not the primary beneficiary of the remainder of other VIEs because our involvement in these VIEs is passive in nature and does not provide us with the power to direct the activities of the VIEs that most significantly impact their economic performance. See Table 3.2 for the carrying amounts and classification of the assets and liabilities recorded on our consolidated balance sheets related to our variable interests in non-consolidated VIEs, as well as our maximum exposure to loss as a result of our involvement with these VIEs. Also see "NOTE 9: FINANCIAL GUARANTEES" for additional information about our involvement with the VIEs related to mortgage-related guarantees and short-term default and other guarantee commitments discussed above.

NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES

We own both single-family mortgage loans, which are secured by one to four family residential properties, and multifamily mortgage loans, which are secured by properties with five or more residential rental units. For a discussion of our significant accounting policies regarding our mortgage loans and loan loss reserves, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES."

The table below summarizes the types of loans on our consolidated balance sheets as of December 31, 2011 and 2010.

Table 4.1 — Mortgage Loans

	December 31, 2011			December 31, 2010		
	Unsecuritized	Held by Consolidated Trusts	Total	Unsecuritized	Held by Consolidated Trusts	Total
	(in millions)					
Single-family:(1)						
Fixed-rate						
Amortizing	$153,177	$1,418,751	$1,571,928	$126,561	$1,493,206	$1,619,767
Interest-only	3,184	14,758	17,942	4,161	19,616	23,777
Total fixed-rate	156,361	1,433,509	1,589,870	130,722	1,512,822	1,643,544
Adjustable-rate						
Amortizing	3,428	68,362	71,790	3,625	59,851	63,476
Interest-only	10,376	43,655	54,031	13,018	58,792	71,810
Total adjustable-rate	13,804	112,017	125,821	16,643	118,643	135,286
Other Guarantee Transactions backed by non-Freddie Mac securities	—	12,776	12,776	—	15,580	15,580
FHA/VA and other governmental	1,494	3,254	4,748	1,498	3,348	4,846
Total single-family	171,659	1,561,556	1,733,215	148,863	1,650,393	1,799,256
Multifamily:(1)						
Fixed-rate	69,647	—	69,647	72,679	—	72,679
Adjustable-rate	12,661	—	12,661	13,201	—	13,201
Other governmental	3	—	3	3	—	3
Total multifamily	82,311	—	82,311	85,883	—	85,883
Total UPB of mortgage loans	253,970	1,561,556	1,815,526	234,746	1,650,393	1,885,139
Deferred fees, unamortized premiums, discounts and other cost basis adjustments	(6,125)	10,926	4,801	(7,665)	7,423	(242)
Lower of cost or fair value adjustments on loans held-for-sale(2)	195	—	195	(311)	—	(311)
Allowance for loan losses on mortgage loans held-for-investment	(30,912)	(8,351)	(39,263)	(28,047)	(11,644)	(39,691)
Total mortgage loans, net	$217,128	$1,564,131	$1,781,259	$198,723	$1,646,172	$1,844,895
Mortgage loans, net:						
Held-for-investment	$207,418	$1,564,131	$1,771,549	$192,310	$1,646,172	$1,838,482
Held-for-sale	9,710	—	9,710	6,413	—	6,413
Total mortgage loans, net	$217,128	$1,564,131	$1,781,259	$198,723	$1,646,172	$1,844,895

(1) Based on UPB and excluding mortgage loans traded, but not yet settled.
(2) Consists of fair value adjustments associated with mortgage loans for which we have made a fair value election.

During 2011 and 2010, we purchased $316.3 billion and $380.7 billion, respectively, in UPB of single-family mortgage loans and $2.7 billion and $3.2 billion, respectively, in UPB of multifamily loans that were classified as held-for-investment at purchase. Our sales of multifamily mortgage loans occur primarily through the issuance of multifamily Other Guarantee Transactions. See "NOTE 9: FINANCIAL GUARANTEES" for more information. We did not sell a significant amount of held-for-investment loans during 2011. We did not have significant reclassifications of mortgage loans into held-for-sale in 2011.

Credit Quality of Mortgage Loans

We evaluate the credit quality of single-family loans using different criteria than the criteria we use to evaluate multifamily loans. The current LTV ratio is one key factor we consider when estimating our loan loss reserves for single-family loans. As estimated current LTV ratios increase, the borrower's equity in the home decreases, which negatively affects the borrower's ability to refinance or to sell the property for an amount at or above the balance of the outstanding mortgage loan. If a borrower has an estimated current LTV ratio greater than 100%, the borrower is "underwater" and, based upon historical information, is more likely to default than other borrowers due to limits in the ability to sell or refinance. A second lien mortgage also reduces the borrower's equity in the home, and has a similar negative effect on the borrower's ability to refinance or sell the property for an amount at or above the combined balances of the first and second mortgages. As of December 31, 2011 and 2010, approximately 15% and 14%, respectively, of loans in our single-family credit guarantee portfolio had second lien financing by third parties at the time of origination of the first mortgage, and we estimate that these loans comprised 17% and 19%, respectively, of our seriously delinquent loans, based on UPB. However, borrowers are free to obtain second lien financing after origination, and we are not entitled to receive notification when a borrower does so. Therefore, it is likely that additional borrowers have post-origination second lien

mortgages. For further information about concentrations of risk associated with our single-family and multifamily mortgage loans, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS."

The table below presents information on the estimated current LTV ratios of single-family loans on our consolidated balance sheets, all of which are held-for-investment. Our current LTV ratio estimates are based on available data through December of each year presented.

Table 4.2 — Recorded Investment of Held-For-Investment Mortgage Loans, by LTV Ratio

	As of December 31, 2011				As of December 31, 2010			
	Estimated Current LTV Ratio[1]				Estimated Current LTV Ratio[1]			
	<= 80	>80 to 100	> 100[2]	Total	<= 80	>80 to 100	> 100[2]	Total
	(in millions)							
Single-family loans:								
20 and 30-year or more, amortizing fixed-rate[3]	$641,698	$383,320	$247,468	$1,272,486	$ 704,882	$393,853	$216,388	$1,315,123
15-year amortizing fixed-rate	238,287	18,280	2,966	259,533	233,422	16,432	2,523	252,377
Adjustable-rate[3][4]	43,728	13,826	9,180	66,734	34,252	13,273	9,149	56,674
Alt-A, interest-only, and option ARM[5]	30,589	29,251	79,418	139,258	45,068	44,540	85,213	174,821
Total single-family loans	$954,302	$444,677	$339,032	1,738,011	$1,017,624	$468,098	$313,273	1,798,995
Multifamily loans				72,801				79,178
Total recorded investment of held-for-investment loans				$1,810,812				$1,878,173

(1) The current LTV ratios are management estimates, which are updated on a monthly basis. Current market values are estimated by adjusting the value of the property at origination based on changes in the market value of homes in the same geographical area since that time. The value of a property at origination is based on the sales price for purchase mortgages and third-party appraisal for refinance mortgages. Changes in market value are derived from our internal index which measures price changes for repeat sales and refinancing activity on the same properties using Freddie Mac and Fannie Mae single-family mortgage acquisitions, including foreclosure sales. Estimates of the current LTV ratio include the credit-enhanced portion of the loan and exclude any secondary financing by third parties. The existence of a second lien reduces the borrower's equity in the property and, therefore, can increase the risk of default.

(2) The serious delinquency rate for the total of single-family mortgage loans with estimated current LTV ratios in excess of 100% was 12.8% and 14.9% as of December 31, 2011 and December 31, 2010, respectively.

(3) The majority of our loan modifications result in new terms that include fixed interest rates after modification. However, our HAMP loan modifications result in an initial interest rate that subsequently adjusts to a new rate that is fixed for the remaining life of the loan. We have classified these loans as fixed-rate for presentation even though they have a rate adjustment provision, because the change in rate is determined at the time of the modification rather than at a future date.

(4) Includes balloon/reset mortgage loans and excludes option ARMs.

(5) We discontinued purchases of Alt-A loans on March 1, 2009 (or later, as customers' contracts permitted), and interest-only loans effective September 1, 2010, and have not purchased option ARM loans since 2007. Modified loans within the Alt-A category remain as such, even though the borrower may have provided full documentation of assets and income to complete the modification. Modified loans within the option ARM category remain as such even though the modified loan no longer provides for optional payment provisions.

For information about the payment status of single-family and multifamily mortgage loans, including the amount of such loans we deem impaired, see "NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS." For a discussion of certain indicators of credit quality for the multifamily loans on our consolidated balance sheets, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Multifamily Mortgage Portfolio."

Allowance for Loan Losses and Reserve for Guarantee Losses, or Loan Loss Reserve

We maintain an allowance for loan losses on mortgage loans that we classify as held-for-investment on our consolidated balance sheets. Our reserve for guarantee losses is associated with Freddie Mac mortgage-related securities backed by multifamily loans, certain single-family Other Guarantee Transactions, and other guarantee commitments, for which we have incremental credit risk.

The table below summarizes loan loss reserve activity.

Table 4.3 — Detail of Loan Loss Reserves

	Year Ended December 31,							
	2011				2010			
	Allowance for Loan Losses				Allowance for Loan Losses			
	Unsecuritized	Held By Consolidated Trusts	Reserve for Guarantee Losses[1]	Total	Unsecuritized	Held By Consolidated Trusts	Reserve for Guarantee Losses[1]	Total
	(in millions)							
Single-family:								
Beginning balance	$ 27,317	$ 11,644	$137	$ 39,098	$ 693	$ —	$ 32,333	$ 33,026
Adjustments to beginning balance[2]	—	—	—	—	—	32,006	(32,192)	(186)
Provision for credit losses	2,796	8,059	43	10,898	7,532	9,540	47	17,119
Charge-offs[3]	(13,756)	(970)	(9)	(14,735)	(12,856)	(3,351)	(11)	(16,218)
Recoveries[3]	2,618	146	—	2,764	2,647	715	—	3,362
Transfers, net[4][5]	11,431	(10,528)	(12)	891	29,301	(27,266)	(40)	1,995
Ending balance	$ 30,406	$ 8,351	$159	$ 38,916	$ 27,317	$ 11,644	$ 137	$ 39,098
Multifamily:								
Beginning balance	$ 730	$ —	$ 98	$ 828	$ 748	$ —	$ 83	$ 831
Provision (benefit) for credit losses	(152)	—	(44)	(196)	84	—	15	99
Charge-offs[3]	(73)	—	(2)	(75)	(103)	—	(1)	(104)
Recoveries[3]	1	—	—	1	1	—	—	1
Transfers, net[5]	—	—	(13)	(13)	—	—	1	1
Ending balance	$ 506	$ —	$ 39	$ 545	$ 730	$ —	$ 98	$ 828
Total:								
Beginning balance	$ 28,047	$ 11,644	$235	$ 39,926	$ 1,441	$ —	$ 32,416	$ 33,857
Adjustments to beginning balance[2]	—	—	—	—	—	32,006	(32,192)	(186)
Provision for credit losses	2,644	8,059	(1)	10,702	7,616	9,540	62	17,218
Charge-offs[3]	(13,829)	(970)	(11)	(14,810)	(12,959)	(3,351)	(12)	(16,322)
Recoveries[3]	2,619	146	—	2,765	2,648	715	—	3,363
Transfers, net[4][5]	11,431	(10,528)	(25)	878	29,301	(27,266)	(39)	1,996
Ending balance	$ 30,912	$ 8,351	$198	$ 39,461	$ 28,047	$ 11,644	$ 235	$ 39,926
Total loan loss reserve as a percentage of the total mortgage portfolio, excluding non-Freddie Mac securities				2.08%				2.03%

(1) All of these loans are collectively evaluated for impairments. Our reserve for guarantee losses is included in other liabilities.
(2) Adjustments relate to the adoption of amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Recently Adopted Accounting Guidance" for further information.
(3) Charge-offs represent the amount of a loan that has been discharged to remove the loan from our consolidated balance sheet principally due to either foreclosure transfers or short sales. Charge-offs exclude $422 million and $528 million for the years ended December 31, 2011 and 2010, respectively, related to certain loans purchased under financial guarantees and recorded as losses on loans purchased within other expenses on our consolidated statements of income and comprehensive income. We record charge-offs and recoveries on loans held by consolidated trusts when a loss event (such as a foreclosure transfer or foreclosure alternative) occurs on a loan while it remains in a consolidated trust. Recoveries of charge-offs primarily result from foreclosure alternatives and REO acquisitions on loans where: (a) a share of default risk has been assumed by mortgage insurers, servicers, or other third parties through credit enhancements; or (b) we received a reimbursement of our losses from a seller/servicer associated with a repurchase request on a loan that experienced a foreclosure transfer or a foreclosure alternative.
(4) In February 2010, we began the practice of removing substantially all 120 days or more delinquent single-family mortgage loans from our PC trusts. We removed $44.1 billion and $127.5 billion in UPB of loans from PC trusts during the years ended December 31, 2011 and 2010, respectively. As a result, loan loss reserves associated with loans removed from PC trusts were transferred from the allowance for loan losses — held by consolidated trusts into the allowance for loan losses — unsecuritized.
(5) For the years ended December 31, 2011 and 2010, consists of: (a) approximately $10.5 billion and $27.5 billion, respectively, of reclassified single-family reserves related to our removal of loans previously held by consolidated trusts (as discussed in endnote (4) above); (b) approximately $1.1 billion and $1.1 billion, respectively, attributable to recapitalization of past due interest on modified mortgage loans; (c) $(258) million and $757 million, respectively, related to agreements with seller/servicers where the transfer relates to recoveries received under these agreements to compensate us for estimated credit losses; and (d) $48 million and $100 million, respectively, of other transfers.

The table below presents our allowance for loan losses and our recorded investment in mortgage loans, held-for-investment, by impairment evaluation methodology.

Table 4.4 — Net Investment in Mortgage Loans

	December 31, 2011			December 31, 2010		
	Single-family	Multifamily	Total	Single-family	Multifamily	Total
	(in millions)					
Recorded investment:						
Collectively evaluated	$1,677,974	$70,131	$1,748,105	$1,762,490	$76,541	$1,839,031
Individually evaluated	60,037	2,670	62,707	36,505	2,637	39,142
Total recorded investment	1,738,011	72,801	1,810,812	1,798,995	79,178	1,878,173
Ending balance of the allowance for loan losses:						
Collectively evaluated	(23,657)	(260)	(23,917)	(30,477)	(382)	(30,859)
Individually evaluated	(15,100)	(246)	(15,346)	(8,484)	(348)	(8,832)
Total ending balance of the allowance	(38,757)	(506)	(39,263)	(38,961)	(730)	(39,691)
Net investment in mortgage loans	$1,699,254	$72,295	$1,771,549	$1,760,034	$78,448	$1,838,482

A significant number of unsecuritized single-family mortgage loans on our consolidated balance sheets are individually evaluated for impairment and substantially all single-family mortgage loans held by our consolidated trusts are collectively evaluated for impairment. The ending balance of the allowance for loan losses associated with our held-for-investment unsecuritized mortgage loans represented approximately 13.0% and 12.7% of the recorded investment in such loans at December 31, 2011 and 2010, respectively. The ending balance of the allowance for loan losses associated with mortgage loans held by our consolidated trusts represented approximately 0.5% and 0.7% of the recorded investment in such loans as of December 31, 2011 and 2010, respectively.

Credit Protection and Other Forms of Credit Enhancement

In connection with many of our mortgage loans held-for-investment and other mortgage-related guarantees, we have credit protection in the form of primary mortgage insurance, pool insurance, recourse to lenders, and other forms of credit enhancements.

The table below presents the UPB of loans on our consolidated balance sheets or underlying our financial guarantees with credit protection and the maximum amounts of potential loss recovery by type of credit protection.

Table 4.5 — Recourse and Other Forms of Credit Protection[1]

	UPB at		Maximum Coverage[2] at	
	December 31, 2011	December 31, 2010	December 31, 2011	December 31, 2010
	(in millions)			
Single-family:				
Primary mortgage insurance	$198,007	$217,133	$48,741	$52,899
Lender recourse and indemnifications	8,798	10,064	8,453	9,566
Pool insurance[3]	26,754	37,868	1,855	2,687
HFA indemnification[4]	8,637	9,322	3,023	3,263
Subordination[5]	3,281	3,889	647	825
Other credit enhancements	133	223	99	118
Total	$245,610	$278,499	$62,818	$69,358
Multifamily:				
HFA indemnification[4]	$ 1,331	$ 1,551	$ 466	$ 543
Subordination[5]	23,636	12,252	3,359	1,414
Other credit enhancements	8,334	9,004	2,554	2,930
Total	$ 33,301	$ 22,807	$ 6,379	$ 4,887

(1) Includes the credit protection associated with unsecuritized mortgage loans, loans held by our consolidated trusts as well as our non-consolidated mortgage guarantees and excludes FHA/VA and other governmental loans. Except for subordination coverage, these amounts exclude credit protection associated with $16.6 billion and $19.8 billion in UPB of single-family loans underlying Other Guarantee Transactions as of December 31, 2011 and December 31, 2010, respectively, for which the information was not available.
(2) Except for subordination, this represents the remaining amount of loss recovery that is available subject to terms of counterparty agreements.
(3) Maximum coverage amounts presented have been limited to the remaining UPB at period end. Prior period amounts have been revised to conform to current period presentation. Excludes approximately $13.5 billion and $19.7 billion in UPB at December 31, 2011 and 2010, respectively, where the related loans are also covered by primary mortgage insurance.
(4) Represents the amount of potential reimbursement of losses on securities we have guaranteed that are backed by state and local HFA bonds, under which Treasury bears initial losses on these securities up to 35% of those issued under the HFA initiative on a combined basis. Treasury will also bear losses of unpaid interest.
(5) Represents Freddie Mac issued mortgage-related securities with subordination protection, excluding those backed by HFA bonds. Excludes mortgage-related securities where subordination coverage was exhausted or maximum coverage amounts were limited to the remaining UPB at that date. Prior period amounts have been revised to conform to current period presentation.

Primary mortgage insurance is the most prevalent type of credit enhancement protecting our single-family credit guarantee portfolio, and is typically provided on a loan-level basis. Pool insurance contracts generally provide insurance on a group, or pool, of mortgage loans up to a stated aggregate loss limit. We did not buy pool insurance in 2011 or 2010. In recent periods, we also reached the maximum limit of recovery on certain of these contracts. For information about counterparty risk associated with mortgage insurers, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Mortgage Insurers."

We also have credit protection for certain of the mortgage loans on our consolidated balance sheets that are covered by insurance or partial guarantees issued by federal agencies (such as FHA, VA, and USDA). The total UPB of these loans was $4.7 billion and $4.8 billion as of December 31, 2011 and 2010, respectively.

NOTE 5: INDIVIDUALLY IMPAIRED AND NON-PERFORMING LOANS

Individually Impaired Loans

Individually impaired single-family loans include performing and non-performing TDRs, as well as loans acquired under our financial guarantees with deteriorated credit quality. Individually impaired multifamily loans include TDRs, loans three monthly payments or more past due, and loans that are impaired based on management judgment. For a discussion of our significant accounting policies regarding impaired and non-performing loans, which are applied consistently for multifamily loans and single-family loan classes, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES."

Total loan loss reserves consist of a specific valuation allowance related to individually impaired mortgage loans, and a general reserve for other probable incurred losses. Our recorded investment in individually impaired mortgage loans and the related specific valuation allowance are summarized in the table below by product class (for single-family loans).

Table 5.1 — Individually Impaired Loans

	Balance at December 31, 2011				For The Year Ended December 31, 2011	
	UPB	Recorded Investment	Associated Allowance	Net Investment	Average Recorded Investment	Interest Income Recognized
	(in millions)					
Single-family —						
With no specific allowance recorded [1]:						
20 and 30-year or more, amortizing fixed-rate[2]	$ 7,073	$ 3,200	$ —	$ 3,200	$ 3,352	$ 336
15-year amortizing fixed-rate[2]	57	23	—	23	26	7
Adjustable rate[3]	13	6	—	6	7	1
Alt-A, interest-only, and option ARM[4]	1,987	881	—	881	940	72
Total with no specific allowance recorded	9,130	4,110	—	4,110	4,325	416
With specific allowance recorded:[5]						
20 and 30-year or more, amortizing fixed-rate[2]	44,672	43,533	(11,253)	32,280	35,707	889
15-year amortizing fixed-rate[2]	367	347	(43)	304	230	12
Adjustable rate[3]	280	268	(59)	209	155	5
Alt-A, interest-only, and option ARM[4]	12,103	11,779	(3,745)	8,034	9,391	173
Total with specific allowance recorded	57,422	55,927	(15,100)	40,827	45,483	1,079
Combined single-family:						
20 and 30-year or more, amortizing fixed-rate[2]	51,745	46,733	(11,253)	35,480	39,059	1,225
15-year amortizing fixed-rate[2]	424	370	(43)	327	256	19
Adjustable rate[3]	293	274	(59)	215	162	6
Alt-A, interest-only, and option ARM[4]	14,090	12,660	(3,745)	8,915	10,331	245
Total single-family[6]	$66,552	$60,037	$(15,100)	$44,937	$49,808	$1,495
Multifamily —						
With no specific allowance recorded [7]	$ 1,049	$ 1,044	$ —	$ 1,044	$ 1,427	$ 65
With specific allowance recorded	1,644	1,626	(246)	1,380	1,920	81
Total multifamily	$ 2,693	$ 2,670	$ (246)	$ 2,424	$ 3,347	$ 146
Total single-family and multifamily	$69,245	$62,707	$(15,346)	$47,361	$53,155	$1,641

	Balance at December 31, 2010				For The Year Ended December 31, 2010	
	UPB	Recorded Investment	Associated Allowance	Net Investment	Average Recorded Investment	Interest Income Recognized
			(in millions)			
Single-family —						
With no specific allowance recorded [1]:						
20 and 30-year or more, amortizing fixed-rate[2]	$ 8,462	$ 3,721	$ —	$ 3,721	$ 4,046	$ 521
15-year amortizing fixed-rate[2]	119	50	—	50	58	7
Adjustable rate[3]	20	9	—	9	12	1
Alt-A, interest-only, and option ARM[4]	2,525	1,098	—	1,098	1,220	114
Total with no specific allowance recorded	11,126	4,878	—	4,878	5,336	643
With specific allowance recorded:[5]						
20 and 30-year or more, amortizing fixed-rate[2]	25,504	24,502	(6,283)	18,219	15,128	561
15-year amortizing fixed-rate[2]	229	198	(17)	181	175	10
Adjustable rate[3]	168	153	(23)	130	114	5
Alt-A, interest-only, and option ARM[4]	7,035	6,774	(2,161)	4,613	3,753	116
Total with specific allowance recorded	32,936	31,627	(8,484)	23,143	19,170	$ 692
Combined single-family:						
20 and 30-year or more, amortizing fixed-rate[2]	33,966	28,223	(6,283)	21,940	19,174	1,082
15-year amortizing fixed-rate[2]	348	248	(17)	231	233	17
Adjustable rate[3]	188	162	(23)	139	126	6
Alt-A, interest-only, and option ARM[4]	9,560	7,872	(2,161)	5,711	4,973	230
Total single-family[6]	$44,062	$36,505	$(8,484)	$28,021	$24,506	$1,335
Multifamily —						
With no specific allowance recorded [7]	$ 734	$ 729	$ —	$ 729	$ 847	$ 33
With specific allowance recorded	1,927	1,908	(348)	1,560	2,112	74
Total multifamily	$ 2,661	$ 2,637	$ (348)	$ 2,289	$ 2,959	$ 107
Total single-family and multifamily	$46,723	$39,142	$(8,832)	$30,310	$27,465	$1,442

(1) Individually impaired loans with no specific related valuation allowance primarily represent mortgage loans purchased out of PC pools and accounted for in accordance with the accounting guidance for loans and debt securities acquired with deteriorated credit quality that have not experienced further deterioration.
(2) See endnote (3) of "Table 4.2 — Recorded Investment of Held-for-Investment Mortgage Loans, by LTV Ratio."
(3) Includes balloon/reset mortgage loans and excludes option ARMs.
(4) See endnote (5) of "Table 4.2 — Recorded Investment of Held-for-Investment Mortgage Loans, by LTV Ratio."
(5) Consists primarily of mortgage loans classified as TDRs.
(6) As of December 31, 2011 and 2010, includes $57.4 billion and $32.9 billion, respectively, of UPB associated with loans for which we have recorded a specific allowance, and $9.1 billion and $11.1 billion, respectively, of UPB associated with loans that have no specific allowance recorded. See endnote (1) for additional information.
(7) Individually impaired multifamily loans with no specific related valuation allowance primarily represent those loans for which the collateral value is sufficiently in excess of the loan balance to result in recovery of the entire recorded investment if the property were foreclosed upon or otherwise subject to disposition.

The average recorded investment in individually impaired loans for the year ended December 31 2009, was approximately $10.7 billion.

We recognized interest income on individually impaired loans of $0.8 billion for the year ended December 31, 2009. Interest income foregone on individually impaired loans was approximately $1.6 billion, $0.8 billion, and $0.3 billion for the years ended December 31, 2011, 2010, and 2009, respectively.

Mortgage Loan Performance

We do not accrue interest on loans three months or more past due.

The table below presents the recorded investment of our single-family and multifamily mortgage loans, held-for-investment, by payment status.

Table 5.2 — Payment Status of Mortgage Loans[1]

	December 31, 2011					
	Current	One Month Past Due	Two Months Past Due	Three Months or More Past Due, or in Foreclosure	Total	Non-accrual
	(in millions)					
Single-family —						
20 and 30-year or more, amortizing fixed-rate[2]	$1,191,809	$24,964	$ 9,006	$46,707	$1,272,486	$46,600
15-year amortizing fixed-rate[2]	256,306	1,499	361	1,367	259,533	1,361
Adjustable-rate[3]	63,929	724	239	1,842	66,734	1,838
Alt-A, interest-only, and option ARM[4]	109,967	4,617	2,172	22,502	139,258	22,473
Total single-family	1,622,011	31,804	11,778	72,418	1,738,011	72,272
Total multifamily	72,715	2	15	69	72,801	1,882
Total single-family and multifamily	$1,694,726	$31,806	$11,793	$72,487	$1,810,812	$74,154

	December 31, 2010					
	Current	One Month Past Due	Two Months Past Due	Three Months or More Past Due, or in Foreclosure	Total	Non-accrual
	(in millions)					
Single-family —						
20 and 30-year or more, amortizing fixed-rate[2]	$1,226,874	$26,442	$10,203	$51,604	$1,315,123	$51,507
15-year amortizing fixed-rate[2]	248,572	1,727	450	1,628	252,377	1,622
Adjustable-rate[3]	53,205	826	335	2,308	56,674	2,303
Alt-A, interest-only, and option ARM[4]	137,395	5,701	3,046	28,679	174,821	28,620
Total single-family	1,666,046	34,696	14,034	84,219	1,798,995	84,052
Total multifamily	79,044	41	7	86	79,178	1,751
Total single-family and multifamily	$1,745,090	$34,737	$14,041	$84,305	$1,878,173	$85,803

(1) Based on recorded investment in the loan. Mortgage loans whose contractual terms have been modified under agreement with the borrower are not counted as past due as long as the borrower is current under the modified terms. The payment status of a loan may be affected by temporary timing differences, or lags, in the reporting of this information to us by our servicers.
(2) See endnote (3) of "Table 4.2 — Recorded Investment of Held-for-Investment Mortgage Loans, by LTV Ratio."
(3) Includes balloon/reset mortgage loans and excludes option ARMs.
(4) See endnote (5) of "Table 4.2 — Recorded Investment of Held-for-Investment Mortgage Loans, by LTV Ratio."

We have the option under our PC agreements to remove mortgage loans from the loan pools that underlie our PCs under certain circumstances to resolve an existing or impending delinquency or default. Since the first quarter of 2010, our practice generally has been to remove loans from PC trusts when the loans have been delinquent for 120 days or more. As of December 31, 2011, there were $3.0 billion in UPB of loans underlying our PCs that were 120 days or more delinquent, and that met our criteria for removing the loan from the consolidated trust. Generally, we remove these delinquent loans from the PC trust, and thereby extinguish the related PC debt, at the next scheduled PC payment date, unless the loans proceed to foreclosure transfer, complete a foreclosure alternative or are paid in full by the borrower before such date.

When we remove mortgage loans from consolidated trusts, we reclassify the loans from mortgage loans held-for-investment by consolidated trusts to unsecuritized mortgage loans held-for-investment and record an extinguishment of the corresponding portion of the debt securities of the consolidated trusts. We removed $44.1 billion and $127.5 billion in UPB of loans from PC trusts or associated with other guarantee commitments during the years ended December 31, 2011 and 2010, respectively.

The table below summarizes the delinquency rates of mortgage loans within our single-family credit guarantee and multifamily mortgage portfolios.

Table 5.3 — Delinquency Rates[1]

	December 31, 2011	December 31, 2010
Single-family:		
Non-credit-enhanced portfolio:		
Serious delinquency rate	2.80%	2.97%
Total number of seriously delinquent loans	273,184	296,397
Credit-enhanced portfolio:		
Serious delinquency rate	7.56%	7.83%
Total number of seriously delinquent loans	120,622	144,116
Total portfolio, excluding Other Guarantee Transactions		
Serious delinquency rate	3.46%	3.73%
Total number of seriously delinquent loans	393,806	440,513
Other Guarantee Transactions:[2]		
Serious delinquency rate	10.54%	9.86%
Total number of seriously delinquent loans	20,328	21,926
Total single-family:		
Serious delinquency rate	3.58%	3.84%
Total number of seriously delinquent loans	414,134	462,439
Multifamily:[3]		
Non-credit-enhanced portfolio:		
Delinquency rate	0.11%	0.12%
UPB of delinquent loans (in millions)	$ 93	$ 106
Credit-enhanced portfolio:		
Delinquency rate	0.52%	0.85%
UPB of delinquent loans (in millions)	$ 166	$ 182
Total Multifamily:		
Delinquency rate	0.22%	0.26%
UPB of delinquent loans (in millions)	$ 259	$ 288

(1) Single-family mortgage loans whose contractual terms have been modified under agreement with the borrower are not counted as seriously delinquent if the borrower is less than three monthly payments past due under the modified terms. Serious delinquencies on single-family mortgage loans underlying certain REMICs and Other Structured Securities, Other Guarantee Transactions, and other guarantee commitments may be reported on a different schedule due to variances in industry practice.
(2) Other Guarantee Transactions generally have underlying mortgage loans with higher risk characteristics, but some Other Guarantee Transactions may provide inherent credit protections from losses due to underlying subordination, excess interest, overcollateralization and other features.
(3) Multifamily delinquency performance is based on UPB of mortgage loans that are two monthly payments or more past due or those in the process of foreclosure and includes multifamily Other Guarantee Transactions. Excludes mortgage loans whose contractual terms have been modified under an agreement with the borrower as long as the borrower is less than two monthly payments past due under the modified contractual terms.

We continue to implement a number of initiatives to modify and restructure loans, including the MHA Program. Our implementation of the MHA Program, for our loans, includes the following: (a) an initiative to allow mortgages currently owned or guaranteed by us to be refinanced without obtaining additional credit enhancement beyond that already in place for the loan (our relief refinance mortgage, which is our implementation of HARP); (b) an initiative to modify mortgages for both homeowners who are in default and those who are at risk of imminent default (HAMP); and (c) an initiative designed to permit borrowers who meet basic HAMP eligibility requirements to sell their homes in short sales or to complete a deed in lieu of foreclosure transaction (HAFA). As part of accomplishing certain of these initiatives, we pay various incentives to servicers and borrowers. We bear the full costs associated with these loan workout and foreclosure alternatives on mortgages that we own or guarantee and do not receive a reimbursement for any component from Treasury. These initiatives slowed the rate of growth in single-family REO assets on our consolidated balance sheets during 2011 and 2010; however, the number and amount of individually impaired loans increased due to higher volumes of TDRs. We cannot currently estimate whether, or the extent to which, costs incurred in the near term from HAMP or other MHA Program efforts may be offset, if at all, by the prevention or reduction of potential future costs of serious delinquencies and foreclosures due to these initiatives. As discussed below, we recently introduced a new non-HAMP standard loan modification process that replaced our previous non-HAMP modification initiative.

Troubled Debt Restructurings

On July 1, 2011, we adopted an amendment to the accounting guidance for receivables, which clarifies the guidance regarding a creditor's evaluation of when a restructuring is considered a TDR. While our adoption of this amendment did not have an impact on how we account for TDRs, it did have a significant impact on the population of loans that we account for as TDRs. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Recently Adopted Accounting Guidance" for further information on our implementation of this guidance.

Single-Family TDRs

We rely on our single-family servicers to contact borrowers who are in default and to identify a loan workout, or other alternative to foreclosure, in accordance with our requirements. We establish guidelines for our servicers to follow and provide them default management tools to use, in part, in determining which type of loan workout would be expected to provide the best opportunity for minimizing our credit losses. We require our single-family servicers to first evaluate problem loans for a repayment or forbearance plan before considering modification. If a borrower is not eligible for a modification, our seller/servicers pursue other workout options before considering foreclosure. We receive information related to loan workouts, such as modifications and loans in a modification trial period, and other alternatives to foreclosure from our servicers at the loan level on at least a monthly basis. For loans in a modification trial period under HAMP, we do not receive the terms of the expected completed modification until the modification is completed. For these loans, we only receive notification that they are in a modification trial period under HAMP. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Allowance for Loan Losses and Reserve for Guarantee Losses" for more detail.

Repayment plans are agreements with the borrower that give the borrower a defined period of time to reinstate the mortgage by paying regular payments plus an additional agreed upon amount in repayment of the past due amount. These agreements are considered TDRs if they result in a delay in payment that is considered to be more than insignificant.

Forbearance agreements are agreements between the servicer and the borrower where reduced payments or no payments are required during a defined period. These agreements are considered TDRs if they result in a delay in payment that is considered to be more than insignificant.

In the case of borrowers considered for modifications, our servicers obtain information on income, assets, and other borrower obligations to determine modified loan terms. Under HAMP, the goal of a single-family loan modification is to reduce the borrower's monthly mortgage payments to 31% of the borrower's gross monthly income, which may be achieved through a combination of methods, including: (a) interest rate reductions; (b) term extensions; and (c) principal forbearance. Principal forbearance is when a portion of the principal is non-interest-bearing, but this does not represent principal forgiveness. Although HAMP contemplates that some servicers will also make use of principal forgiveness to achieve reduced payments for borrowers, we have only used forbearance of principal and have not used principal forgiveness in modifying our loans.

HAMP requires that each borrower complete a trial period during which the borrower will make monthly payments based on the estimated amount of the modification payments. Trial periods are required for at least three months. After the final trial-period payment is received by our servicer, the borrower and servicer enter into the modification. With the adoption of the new accounting guidance for TDRs in the third quarter of 2011, we began to consider restructurings under HAMP as TDRs at the inception of the trial period if the expected modification will result in a change in our expectation to collect all amounts due at the original contract rate.

Our HAMP and non-HAMP modification initiatives are available for borrowers experiencing what is generally expected to be a longer-term financial hardship. Historically, for our non-HAMP modifications, our single-family servicers have generally taken an approach to modifying the loan's terms in the following order of priority until the borrower's monthly payment amount is reduced to a sustainable level given the borrower's individual circumstances: (a) extend the term of the loan; and (b) reduce the interest rate of the loan. As discussed below, this non-HAMP modification initiative has been replaced by the standard modification effective January 1, 2012.

In April 2011, FHFA announced a new set of aligned standards for servicing non-performing loans owned or guaranteed by Freddie Mac and Fannie Mae. As part of the servicing alignment initiative, we implemented a new non-HAMP standard loan modification initiative. This new standard modification replaced our previous non-HAMP modification initiative beginning January 1, 2012. The new standard modification requires a three month trial period. Servicers began offering standard modification trial period plans with effective dates on or after October 1, 2011. We consider restructurings under this initiative as TDRs at the inception of the trial period if the expected modification will result in a change in our expectation to collect all amounts due at the original contract rate.

In the table below, we provide information about our single-family loans that were initially classified as TDRs in 2011.

Table 5.4 — Single-Family TDRs, by Type

	Year Ended December 31, 2011		
	Number of Loans	Pre-TDR Recorded Investment	Percentage of Recorded Investment
	(in millions, except for number of loans)		
Type of completed loan modification:			
No change in terms[1][2]	4,084	$ 674	2%
Extension of term[2]	14,137	2,290	8
Reduction of contractual interest rate and, in certain cases, extension of term	51,592	10,569	38
Rate reduction, extension of term, and principal forbearance	13,645	3,314	12
Subtotal - loan modification activity	83,458	16,847	60
Other activity:			
Loans that entered into a modification trial period[3]	25,513	5,353	19
Forbearance agreement[2][4]	22,100	4,198	15
Repayment plan[2][5]	10,787	1,699	6
Subtotal - other activity	58,400	11,250	40
Total single-family TDRs	141,858	$28,097	100%

(1) Under this modification type, past due amounts are added to the principal balance and reamortized based on the original contractual loan terms.
(2) Represents only those agreements or plans that result in more than an insignificant delay, which is generally considered by us as more than three monthly payments under the original terms.
(3) Represents loans that entered into a trial period for modification. Beginning in the third quarter of 2011, we began to classify loans as TDRs when they entered a trial period rather than at the time the trial period is completed. As of December 31, 2011, 15,368 of these loans had completed the trial period and received a modification, 2,389 of these loans terminated the trial period without successful modification, and 7,756 loans remained in a trial period.
(4) As of December 31, 2011, there were 6,615 loans that completed a forbearance agreement or began the modification process, 9,705 loans that had experienced a loss event or returned to a delinquent payment status, and 5,780 loans that remained in forbearance.
(5) As of December 31, 2011, there were 3,220 loans that completed a repayment plan or began the modification process, 5,012 loans that experienced a loss event or terminated their plan and remained delinquent, and 2,555 loans where the borrowers were continuing their repayment plan (actively repaying past due amounts under the plan).

For information on how we determine our allowance for loan losses, including how payment defaults are considered in this determination, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES."

The table above presents completed loan modification activity based on the following types of modification:

- No change in terms: This involves the addition of past due amounts, including delinquent monthly principal and interest payments, to the remaining principal balance and allows for amortization of such past due amounts over the loan's remaining original contractual life with no other change in terms. These modifications are considered TDRs if they result in a delay in payment that is considered to be more than insignificant.
- Extension of term: This involves resetting the contractual life of the loan to a longer term, and the longer amortization period generally results in a reduced monthly payment compared to the pre-modified terms. These modifications are considered TDRs if they result in a delay in payment that is considered to be more than insignificant.
- Reduction of contractual interest rate: These modifications are considered TDRs as they result in a concession being granted to the borrower as we do not expect to collect all amounts due, including accrued interest at the original contractual interest rate.
- Principal forbearance: This involves the separation of a portion of the principal balance, which is not amortized nor used in determining the amount of monthly interest. No interest accrues on this portion of the principal and repayment is delayed until either the final payoff of the mortgage, the maturity date, or the transfer of the property. Accordingly, this reduces the monthly payment amount compared to the pre-modified terms. These modifications are considered TDRs as they result in a concession being granted to the borrower as we do not expect to collect all amounts due, including accrued interest at the original contractual interest rate.

During the year ended December 31, 2011, the average term extension was 96 months and the average interest rate reduction was 2.7% on completed modifications classified as TDRs.

Multifamily TDRs

The assessment as to whether a multifamily loan restructuring is considered a TDR contemplates the unique facts and circumstances of each loan. This assessment considers qualitative factors such as whether the borrower's modified interest

rate is consistent with that of a borrower having a similar credit profile at the time of modification. In certain cases, for maturing loans we may provide short-term loan extensions of up to 12 months with no changes to the effective borrowing rate. In other cases we may make more significant modifications of terms for borrowers experiencing financial difficulty, such as reducing the interest rate or extending the maturity for longer than 12 months. In cases where we do modify the contractual terms of the loan, the changes in terms may be similar to those of single-family loans, such as an extension of the term, reduction of contractual rate, principal forbearance, or some combination of these features.

TDR Activity and Performance

The table below provides additional information about both our single-family and multifamily TDR activity during the year ended December 31, 2011, based on the original category of the loan before modification. Our presentation of TDR activity includes all loans that were newly classified as a TDR during the respective periods. Prior to classification as a TDR, these loans were previously evaluated for impairment, including our estimation for loan losses, on a collective basis. Loans classified as a TDR in one period may be subject to further action (such as a modification or remodification) in a subsequent period. In such cases, the subsequent activity would not be reflected in the table below since the loan would already have been classified as a TDR.

Table 5.5 — TDR Activity, by Segment

	Year Ended December 31, 2011	
	# of Loans	Post-TDR Recorded Investment
	(in millions, except for number of loans)	
Single-family		
20 and 30-year or more, amortizing fixed-rate	100,948	$19,263
15-year amortizing fixed-rate	6,529	651
Adjustable-rate[1]	3,287	657
Alt-A, interest-only, and option ARM	31,094	8,355
Total Single-family	141,858	28,926
Multifamily	23	254
Total	141,881	$29,180

(1) Includes balloon/reset mortgage loans.

The aggregate recorded investment of single-family loans classified as TDRs during 2011 was higher post-modification (as shown in the table above) than the aggregate recorded investment of the pre-modified loans (as shown in Table 5.4 — Single-Family TDRs, by Type) since past due amounts are added to the principal balance at the time of restructuring.

The measurement of impairment for TDRs is based on the excess of our recorded investment in the loans over the present value of the loans' expected future cash flows. Generally, restructurings that are TDRs have a higher allowance for loan losses than restructurings that are not considered TDRs because TDRs involve a concession being granted to the borrower. Our process for determining the appropriate allowance for loan losses for both single-family and multifamily loans considers the impact that our loss mitigation activities, such as loan restructurings, have on probabilities of default. For single-family loans evaluated individually and collectively for impairment that have been modified, the probability of default is adversely impacted by the incidence of redefault that we have experienced on similar loans that have completed a modification. For multifamily loans, the incidence of redefault on loans that have been modified does not directly impact the allowance for loan losses as our multifamily loans are generally evaluated individually for impairment which is based on the fair value of the underlying collateral and contemplates the unique facts and circumstances of the loan. The process for determining the appropriate allowance for loan losses for multifamily loans evaluated collectively for impairment considers the incidence of redefault on loans that have completed a modification.

The table below presents the performance of our TDR modifications based on the original category of the loan before restructuring. Modified loans within the Alt-A category continue to remain in that category, even though the borrower may have provided full documentation of assets and income before completing the modification. Modified loans within the option ARM category continue to remain in that category even though the modified loan no longer provides for optional payment provisions. Substantially all of our completed single-family loan modifications classified as a TDR during 2011 resulted in a modified loan with a fixed interest rate or one that is fixed below market for five years and then gradually adjusts to a market rate (determined at the time of modification) and remains fixed at that new rate for the

remaining term. The table below reflects only performance of completed modifications and excludes loans subject to other loss mitigation activity that were classified as TDRs.

Table 5.6 — Payment Defaults of Completed TDR Modifications, by Segment(1)

	Year Ended December 31, 2011	
	# of Loans	Post-TDR Recorded Investment(2)
	(in millions, except number of loans modified)	
Single-family		
20 and 30-year or more, amortizing fixed-rate	23,592	$4,417
15-year amortizing fixed-rate	890	91
Adjustable-rate	519	111
Alt-A, interest-only, and option ARM	5,794	1,529
Total single-family	30,795	$6,148
Multifamily	7	$ 18

(1) Represents TDR loans that experienced a payment default during the period and had completed a modification event in the twelve months prior to the payment default. A payment default occurs when a borrower either: (a) became two or more months delinquent; or (b) completed a loss event, such as a short sale or foreclosure. We only include payment defaults for a single loan once during each quarterly period; however, a single loan will be reflected more than once if the borrower experienced another payment default in a subsequent quarter.
(2) Represents the recorded investment at the end of the period in which the loan was modified and does not represent the recorded investment as of December 31, 2011.

During 2011, there were 2,163 loans with other loss mitigation activities (*i.e.*, repayment plan, forbearance agreement, or trial period modifications) initially classified as TDRs, with a post-TDR recorded investment of $371 million, that returned to a current payment status, and then subsequently became two months delinquent. In addition, during 2011, there were 3,109 loans with other loss mitigation activities initially classified as TDRs, with a post-TDR recorded investment of $520 million that subsequently experienced a loss event, such as a short sale or a foreclosure transfer.

NOTE 6: REAL ESTATE OWNED

We obtain REO properties: (a) when we are the highest bidder at foreclosure sales of properties that collateralize non-performing single-family and multifamily mortgage loans owned by us; or (b) when a delinquent borrower chooses to transfer the mortgaged property to us in lieu of going through the foreclosure process. Upon acquiring single-family properties, we establish a marketing plan to sell the property as soon as practicable by either listing it with a sales broker or by other means, such as arranging a real estate auction. Upon acquiring multifamily properties, we may operate them using third-party property-management firms for a period to stabilize value and then sell the properties through commercial real estate brokers. However, certain jurisdictions require a period of time after foreclosure during which the borrower may reclaim the property. During the period when the borrower may reclaim the property, or we are completing the eviction process, we are not able to market the property and this extends our holding period for these properties. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for a discussion of our significant accounting policies for REO.

The table below provides a summary of the change in the carrying value of our combined single-family and multifamily REO balances. For the periods presented in the table below, the weighted average holding period for our disposed properties was less than one year.

Table 6.1 — REO

	Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Beginning balance — REO, gross	$ 7,908	$ 5,125	$ 4,216
Adjustments to beginning balance[1]	—	158	—
Additions	9,591	13,211	9,420
Dispositions	(11,255)	(10,586)	(8,511)
Ending balance — REO, gross	6,244	7,908	5,125
Beginning balance, valuation allowance	(840)	(433)	(961)
Adjustment to beginning balance[1]	—	(11)	—
Change in valuation allowance	276	(396)	528
Ending balance, valuation allowance	(564)	(840)	(433)
Ending balance — REO, net	$ 5,680	$ 7,068	$ 4,692

(1) Adjustment to the beginning balance related to the adoption of new accounting guidance for transfers of financial assets and consolidation of VIEs. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for further information.

The REO balance, net at December 31, 2011 and December 31, 2010 associated with single-family properties was $5.5 billion and $7.0 billion, respectively, and the balance associated with multifamily properties was $133 million and $107 million, respectively. The West region represented approximately 30% and 29% of our single-family REO additions during the years ended December 31, 2011 and 2010, respectively, based on the number of properties, and the North Central region represented approximately 27% and 23% of our single-family REO additions during these periods. Our single-family REO inventory consisted of 60,535 properties and 72,079 properties at December 31, 2011 and December 31, 2010, respectively. The pace of our REO acquisitions slowed beginning in the fourth quarter of 2010 due to delays in the foreclosure process. These delays in foreclosures continued in 2011, particularly in states that require a judicial foreclosure process. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Seller/Servicers" for information about regional concentration of our portfolio as well as further details about delays in the single-family foreclosure process.

Our REO operations expenses includes REO property expenses, net losses incurred on disposition of REO properties, adjustments to the holding period allowance associated with REO properties to record them at the lower of their carrying amount or fair value less the estimated costs to sell, and recoveries from insurance and other credit enhancements. An allowance for estimated declines in the REO fair value during the period properties are held reduces the carrying value of REO property. Excluding holding period valuation adjustments, we recognized losses of $165 million and $93 million on REO dispositions during 2011 and 2010, respectively. We increased our valuation allowance for properties in our REO inventory by $304 million and $498 million in 2011 and 2010, respectively.

REO property acquisitions that result from extinguishment of our mortgage loans held on our consolidated balance sheets are treated as non-cash transfers. The amount of non-cash acquisitions of REO properties during the years ended December 31, 2011, 2010, and 2009 was $8.7 billion, $12.3 billion, and $0.9 billion, respectively.

NOTE 7: INVESTMENTS IN SECURITIES

The table below summarizes amortized cost, estimated fair values, and corresponding gross unrealized gains and gross unrealized losses for available-for-sale securities by major security type. At December 31, 2011 and 2010, all available-for-sale securities are mortgage-related securities.

Table 7.1 — Available-For-Sale Securities

December 31, 2011	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in millions)		
Available-for-sale securities:				
Freddie Mac	$ 74,711	$ 6,429	$ (48)	$ 81,092
Subprime	41,347	60	(13,408)	27,999
CMBS	53,637	2,574	(548)	55,663
Option ARM	9,019	15	(3,169)	5,865
Alt-A and other	13,659	32	(2,812)	10,879
Fannie Mae	19,023	1,303	(4)	20,322
Obligations of states and political subdivisions	7,782	108	(66)	7,824
Manufactured housing	820	6	(60)	766
Ginnie Mae	219	30	—	249
Total available-for-sale securities	$220,217	$10,557	$(20,115)	$210,659
December 31, 2010				
Available-for-sale securities:				
Freddie Mac	$ 80,742	$ 5,142	$ (195)	$ 85,689
Subprime	47,916	1	(14,056)	33,861
CMBS	58,455	1,551	(1,919)	58,087
Option ARM	10,726	16	(3,853)	6,889
Alt-A and other	15,561	58	(2,451)	13,168
Fannie Mae	23,025	1,348	(3)	24,370
Obligations of states and political subdivisions	9,885	31	(539)	9,377
Manufactured housing	945	13	(61)	897
Ginnie Mae	268	28	—	296
Total available-for-sale securities	$247,523	$ 8,188	$(23,077)	$232,634

Available-For-Sale Securities in a Gross Unrealized Loss Position

The table below shows the fair value of available-for-sale securities in a gross unrealized loss position, and whether they have been in that position less than 12 months, or 12 months or greater, including the non-credit-related portion of other-than-temporary impairments which have been recognized in AOCI.

Table 7.2 — Available-For-Sale Securities in a Gross Unrealized Loss Position

	Less than 12 Months				12 Months or Greater				Total			
		Gross Unrealized Losses				Gross Unrealized Losses				Gross Unrealized Losses		
December 31, 2011	Fair Value	Other-Than-Temporary Impairment(1)	Temporary Impairment(2)	Total	Fair Value	Other-Than-Temporary Impairment(1)	Temporary Impairment(2)	Total	Fair Value	Other-Than-Temporary Impairment(1)	Temporary Impairment(2)	Total
	(in millions)											
Available-for-sale securities:												
Freddie Mac	$2,196	$ —	$ (4)	$ (4)	$ 1,884	$ —	$ (44)	$ (44)	$ 4,080	$ —	$ (48)	$ (48)
Subprime	8	(1)	—	(1)	27,742	(10,785)	(2,622)	(13,407)	27,750	(10,786)	(2,622)	(13,408)
CMBS	997	(20)	(41)	(61)	3,573	(9)	(478)	(487)	4,570	(29)	(519)	(548)
Option ARM	95	(13)	—	(13)	5,743	(3,067)	(89)	(3,156)	5,838	(3,080)	(89)	(3,169)
Alt-A and other	1,197	(114)	(4)	(118)	9,070	(2,088)	(606)	(2,694)	10,267	(2,202)	(610)	(2,812)
Fannie Mae	1,144	—	(2)	(2)	14	—	(2)	(2)	1,158	—	(4)	(4)
Obligations of states and political subdivisions	292	—	(6)	(6)	2,157	—	(60)	(60)	2,449	—	(66)	(66)
Manufactured housing	197	(5)	—	(5)	345	(44)	(11)	(55)	542	(49)	(11)	(60)
Total available-for-sale securities in a gross unrealized loss position	$6,126	$(153)	$(57)	$(210)	$50,528	$(15,993)	$(3,912)	$(19,905)	$56,654	$(16,146)	$(3,969)	$(20,115)

	Less than 12 Months				12 Months or Greater				Total			
		Gross Unrealized Losses				Gross Unrealized Losses				Gross Unrealized Losses		
December 31, 2010	Fair Value	Other-Than-Temporary Impairment(1)	Temporary Impairment(2)	Total	Fair Value	Other-Than-Temporary Impairment(1)	Temporary Impairment(2)	Total	Fair Value	Other-Than-Temporary Impairment(1)	Temporary Impairment(2)	Total
	(in millions)											
Available-for-sale securities:												
Freddie Mac	$2,494	$—	$ (70)	$ (70)	$ 1,880	$ —	$ (125)	$ (125)	$ 4,374	$ —	$ (195)	$ (195)
Subprime	6	—	—	—	33,839	(10,041)	(4,015)	(14,056)	33,845	(10,041)	(4,015)	(14,056)
CMBS	2,950	—	(51)	(51)	8,894	(844)	(1,024)	(1,868)	11,844	(844)	(1,075)	(1,919)
Option ARM	3	(1)	—	(1)	6,838	(3,744)	(108)	(3,852)	6,841	(3,745)	(108)	(3,853)
Alt-A and other	42	—	(3)	(3)	12,025	(1,846)	(602)	(2,448)	12,067	(1,846)	(605)	(2,451)
Fannie Mae	54	—	—	—	14	—	(3)	(3)	68	—	(3)	(3)
Obligations of states and political subdivisions	3,953	—	(163)	(163)	3,402	—	(376)	(376)	7,355	—	(539)	(539)
Manufactured housing	8	(1)	—	(1)	507	(45)	(15)	(60)	515	(46)	(15)	(61)
Total available-for-sale securities in a gross unrealized loss position	$9,510	$ (2)	$(287)	$(289)	$67,399	$(16,520)	$(6,268)	$(22,788)	$76,909	$(16,522)	$(6,555)	$(23,077)

(1) Represents the gross unrealized losses for securities for which we have previously recognized other-than-temporary impairments in earnings.
(2) Represents the gross unrealized losses for securities for which we have not previously recognized other-than-temporary impairments in earnings.

At December 31, 2011, total gross unrealized losses on available-for-sale securities were $20.1 billion. The gross unrealized losses relate to 1,625 individual lots representing 1,556 separate securities, including securities with non-credit-related other-than-temporary impairments recognized in AOCI. We purchase multiple lots of individual securities at different times and at different costs. We determine gross unrealized gains and gross unrealized losses by specifically evaluating investment positions at the lot level; therefore, some of the lots we hold for a single security may be in an unrealized gain position while other lots for that security may be in an unrealized loss position, depending upon the amortized cost of the specific lot.

Impairment Recognition on Investments in Securities

We recognize impairment losses on available-for-sale securities within our consolidated statements of income and comprehensive income as net impairment of available-for-sale securities recognized in earnings when we conclude that a decrease in the fair value of a security is other-than-temporary.

We conduct quarterly reviews to evaluate each available-for-sale security that has an unrealized loss for other-than-temporary impairment. An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis. We recognize other-than-temporary impairment in earnings if one of the following conditions exists: (a) we have the intent to sell the security; (b) it is more likely than not that we will be required to sell the security before recovery of its unrealized loss; or (c) we do not expect to recover the amortized cost basis of the security. If we do not intend to sell the security and we believe it is not more likely than not that we will be required to sell prior to recovery of its unrealized loss, we recognize only the credit component of other-than-temporary impairment in earnings and the amounts attributable to all other factors are recognized in AOCI. The credit component represents the amount by which the present value of expected future cash flows to be collected from the security is less than the amortized cost basis of the security. The present value of expected future cash flows represents our estimate of future contractual cash flows that we expect to collect, discounted at the effective interest rate implicit in the security at the date of acquisition or the effective interest rate determined based on significantly improved cash flows subsequent to initial impairment.

Our net impairment of available-for-sale securities recognized in earnings on our consolidated statements of income and comprehensive income for the years ended December 31, 2011, 2010, and 2009, includes amounts related to certain securities where we have previously recognized other-than-temporary impairments through AOCI, but upon the

recognition of additional credit losses, these amounts were reclassified out of non-credit losses in AOCI and charged to earnings. In certain instances, we recognized credit losses in excess of unrealized losses in AOCI.

The determination of whether unrealized losses on available-for-sale securities are other-than-temporary requires significant management judgments and assumptions and consideration of numerous factors. We perform an evaluation on a security-by-security basis considering all available information. The relative importance of this information varies based on the facts and circumstances surrounding each security, as well as the economic environment at the time of assessment. Important factors include, but are not limited to:

- whether we intend to sell the security and it is not more likely than not that we will be required to sell the security before sufficient time elapses to recover all unrealized losses;
- loan level default modeling for single-family residential mortgages that considers individual loan characteristics, including current LTV ratio, FICO score, and delinquency status, requires assumptions about future home prices and interest rates, and employs internal default models and prepayment assumptions. The modeling for CMBS employs third-party models that require assumptions about the economic conditions in the areas surrounding each individual property; and
- security loss modeling combining the modeled performance of the underlying collateral relative to its current and projected credit enhancements to determine the expected cash flows for each evaluated security.

For the majority of our available-for-sale securities in an unrealized loss position, we have asserted that we have no intent to sell and that we believe it is not more likely than not that we will be required to sell the security before recovery of its amortized cost basis. Where such an assertion has not been made, the security's entire decline in fair value is deemed to be other-than-temporary and is recorded within our consolidated statements of income and comprehensive income as net impairment of available-for-sale securities recognized in earnings.

See "Table 7.2 — Available-For-Sale Securities in a Gross Unrealized Loss Position" for the length of time our available-for-sale securities have been in an unrealized loss position. Also see "Table 7.3 — Significant Modeled Attributes for Certain Available-For-Sale Non-Agency Mortgage-Related Securities" for the modeled default rates and severities that were used to determine whether our senior interests in certain non-agency mortgage-related securities would experience a cash shortfall.

Freddie Mac and Fannie Mae Securities

We record the purchase of mortgage-related securities issued by Fannie Mae as investments in securities in accordance with the accounting guidance for investments in debt and equity securities. In contrast, our purchase of mortgage-related securities that we issued (*e.g.*, PCs, REMICs and Other Structured Securities, and Other Guarantee Transactions) is recorded as either investments in securities or extinguishment of debt securities of consolidated trusts depending on the nature of the mortgage-related security that we purchase. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Securitization Activities through Issuances of Freddie Mac Mortgage-Related Securities" for additional information.

We hold these investments in securities that are in an unrealized loss position at least to recovery and typically to maturity. As the principal and interest on these securities are guaranteed and we do not intend to sell these securities and it is not more likely than not that we will be required to sell such securities before a recovery of the unrealized losses, we consider these unrealized losses to be temporary.

Non-Agency Mortgage-Related Securities Backed by Subprime, Option ARM, Alt-A and Other Loans

We believe the unrealized losses on the non-agency mortgage-related securities we hold are a result of poor underlying collateral performance, limited liquidity, and large risk premiums. We consider securities to be other-than-temporarily impaired when future credit losses are deemed likely.

Our review of the securities backed by subprime, option ARM, and Alt-A and other loans includes loan level default modeling and analyses of the individual securities based on underlying collateral performance, including the collectability of amounts from bond insurers. In the case of bond insurers, we also consider factors such as the availability of capital, generation of new business, pending regulatory action, credit ratings, security prices, and credit default swap levels traded on the insurers. We consider loan level information including estimated current LTV ratios, FICO scores, and other loan level characteristics. We also consider the differences between the loan level characteristics of the performing and non-performing loan populations. For additional information regarding bond insurers, see "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Bond Insurers."

The table below presents the modeled default rates and severities, without regard to subordination, that are used to determine whether our senior interests in certain available-for-sale non-agency mortgage-related securities will experience a cash shortfall. Our proprietary default model incorporates assumptions about future home prices, as defaults and severities are modeled at the loan level and then aggregated. The model uses projections of future home prices at the state level. Assumptions about voluntary prepayment rates are also an input to the model and are discussed below.

Table 7.3 — Significant Modeled Attributes for Certain Available-For-Sale Non-Agency Mortgage-Related Securities

	December 31, 2011				
			Alt-A[(1)]		
	Subprime First Lien[(2)]	Option ARM	Fixed Rate	Variable Rate	Hybrid Rate
	(dollars in millions)				
Issuance Date					
2004 and prior:					
UPB	$ 1,218	$ 117	$ 867	$ 512	$2,195
Weighted average collateral defaults[(3)]	36%	33%	8%	43%	24%
Weighted average collateral severities[(4)]	56%	55%	47%	52%	41%
Weighted average voluntary prepayment rates[(5)]	6%	7%	19%	7%	8%
Average credit enhancement[(6)]	43%	15%	14%	18%	15%
2005:					
UPB	$ 6,293	$ 2,882	$1,206	$ 840	$3,944
Weighted average collateral defaults[(3)]	55%	51%	24%	53%	38%
Weighted average collateral severities[(4)]	67%	63%	55%	59%	50%
Weighted average voluntary prepayment rates[(5)]	4%	6%	14%	7%	8%
Average credit enhancement[(6)]	52%	12%	3%	26%	5%
2006:					
UPB	$19,823	$ 6,661	$ 549	$1,127	$1,183
Weighted average collateral defaults[(3)]	65%	63%	37%	61%	50%
Weighted average collateral severities[(4)]	72%	69%	61%	68%	57%
Weighted average voluntary prepayment rates[(5)]	7%	6%	13%	9%	8%
Average credit enhancement[(6)]	15%	3%	7%	(1)%	1%
2007:					
UPB	$21,310	$ 4,289	$ 159	$1,354	$ 324
Weighted average collateral defaults[(3)]	62%	58%	53%	60%	60%
Weighted average collateral severities[(4)]	73%	69%	69%	67%	67%
Weighted average voluntary prepayment rates[(5)]	7%	7%	11%	9%	8%
Average credit enhancement[(6)]	17%	11%	11%	(7)%	—%
Total:					
UPB	$48,644	$13,949	$2,781	$3,833	$7,646
Weighted average collateral defaults[(3)]	61%	59%	24%	56%	37%
Weighted average collateral severities[(4)]	72%	68%	58%	64%	51%
Weighted average voluntary prepayment rates[(5)]	6%	6%	15%	8%	8%
Average credit enhancement[(6)]	21%	7%	8%	5%	7%

(1) Excludes non-agency mortgage-related securities backed by other loans, which are primarily comprised of securities backed by home equity lines of credit.
(2) Excludes non-agency mortgage-related securities backed exclusively by subprime second liens. Certain securities identified as subprime first lien may be backed in part by subprime second lien loans, as the underlying loans of these securities were permitted to include a small percentage of subprime second lien loans.
(3) The expected cumulative default rate expressed as a percentage of the current collateral UPB.
(4) The expected average loss given default calculated as the ratio of cumulative loss over cumulative default for each security.
(5) The security's voluntary prepayment rate represents the average of the monthly voluntary prepayment rate weighted by the security's outstanding UPB.
(6) Reflects the ratio of the current principal amount of the securities issued by a trust that will absorb losses in the trust before any losses are allocated to securities that we own. Percentage generally calculated based on: (a) the total UPB of securities subordinate to the securities we own, divided by (b) the total UPB of all of the securities issued by the trust (excluding notional balances). Only includes credit enhancement provided by subordinated securities; excludes credit enhancement provided by bond insurance, overcollateralization and other forms of credit enhancement. Negative values are shown when collateral losses that have yet to be applied to the tranches exceed the remaining credit enhancement, if any.

In evaluating the non-agency mortgage-related securities backed by subprime, option ARM, and Alt-A and other loans for other-than-temporary impairment, we noted that the percentage of securities that were AAA-rated and the percentage that were investment grade declined significantly since acquisition. While these ratings have declined, the ratings themselves are not determinative that a loss is more or less likely. While we consider credit ratings in our analysis, we believe that our detailed security-by-security analyses provide a more consistent view of the ultimate collectability of contractual amounts due to us. As such, we have impaired securities with current ratings ranging from CCC to AAA and have determined that other securities within the same ratings were not other-than-temporarily impaired. However, we carefully consider individual ratings, especially those below investment grade, including changes since December 31, 2011.

Our analysis is subject to change as new information regarding delinquencies, severities, loss timing, prepayments, and other factors becomes available. While it is reasonably possible that, under certain conditions, collateral losses on our remaining available-for-sale securities for which we have not recorded an impairment charge could exceed our credit enhancement levels and a principal or interest loss could occur, we do not believe that those conditions were likely as of December 31, 2011.

Commercial Mortgage-Backed Securities

CMBS are exposed to stresses in the commercial real estate market. We use external models to identify securities that may have an increased risk of failing to make their contractual payments. We then perform an analysis of the underlying collateral on a security-by-security basis to determine whether we will receive all of the contractual payments due to us. During the year ended December 31, 2011, we recognized the unrealized fair value losses related to certain investments in CMBS of $181 million as an impairment charge in earnings because we have the intent to sell these securities. While it is reasonably possible that, under certain conditions, collateral losses on our CMBS for which we have not recorded an impairment charge could exceed our credit enhancement levels and a principal or interest loss could occur, we do not believe that those conditions were likely as of December 31, 2011. We do not intend to sell the remaining CMBS and it is not more likely than not that we will be required to sell such securities before recovery of the unrealized losses.

Obligations of States and Political Subdivisions

These investments consist of housing revenue bonds. We believe the unrealized losses on obligations of states and political subdivisions are primarily a result of movements in interest rates and liquidity and risk premiums. We have determined that the impairment of these securities is temporary based on our conclusion that we do not intend to sell these securities and it is not more likely than not that we will be required to sell such securities before a recovery of the unrealized losses. We believe that any credit risk related to these securities is minimal because of the issuer guarantees provided on these securities.

Bond Insurance

We rely on bond insurance, including secondary coverage, to provide credit protection on some of our non-agency mortgage-related securities. Circumstances in which it is likely a principal and interest shortfall will occur and there is substantial uncertainty surrounding a bond insurer's ability to pay all future claims can give rise to recognition of other-than-temporary impairment recognized in earnings. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS — Bond Insurers" for additional information.

Other-Than-Temporary Impairments on Available-for-Sale Securities

The table below summarizes our net impairments of available-for-sale securities recognized in earnings by security type.

Table 7.4 — Net Impairment of Available-For-Sale Securities Recognized in Earnings[1]

	Net Impairment of Available-For-Sale Securities Recognized in Earnings For The Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Available-for-sale securities:			
Subprime	$(1,315)	$(1,769)	$ (6,526)
Option ARM	(424)	(1,395)	(1,726)
Alt-A and other	(198)	(1,020)	(2,572)
CMBS[2]	(353)	(97)	(137)
Manufactured housing	(11)	(27)	(51)
Total other-than-temporary impairments on mortgage-related securities	(2,301)	(4,308)	(11,012)
Non-mortgage-related securities:			
Asset-backed securities	—	—	(185)
Total other-than-temporary impairments on non-mortgage-related securities	—	—	(185)
Total other-than-temporary impairments on available-for-sale securities	$(2,301)	$(4,308)	$(11,197)

(1) As a result of the adoption of an amendment to the accounting guidance for investments in debt and equity securities on April 1, 2009, net impairment of available-for-sale securities recognized in earnings for the nine months ended December 31, 2009 (which is included in the year ended December 31, 2009) and the years ended December 31, 2011 and 2010 includes credit-related other-than-temporary impairments and other-than-temporary impairments on securities which we intend to sell or it is more likely than not that we will be required to sell. In contrast, net impairment of available-for-sale securities recognized in earnings for the three months ended March 31, 2009 (which is included in the year ended December 31, 2009) includes both credit-related and non-credit-related other-than-temporary impairments as well as other-than-temporary impairments on securities for which we could not assert the positive intent and ability to hold until recovery of the unrealized losses.

(2) Includes $181 million of other-than-temporary impairments recognized in earnings for the year ended December 31, 2011, as we have the intent to sell the related securities before recovery of its amortized cost basis.

The table below presents the changes in the unrealized credit-related other-than-temporary impairment component of the amortized cost related to available-for-sale securities: (a) that we have written down for other-than-temporary impairment; and (b) for which the credit component of the loss is recognized in earnings. The credit-related other-than-temporary impairment component of the amortized cost represents the difference between the present value of expected future cash flows, including the estimated proceeds from bond insurance, and the amortized cost basis of the security prior to considering credit losses. The beginning balance represents the other-than-temporary impairment credit loss component related to available-for-sale securities for which other-than-temporary impairment occurred prior to January 1, 2011, but will not be realized until the securities are sold, written off, or mature. Net impairment of available-for-sale securities recognized in earnings is presented as additions in two components based upon whether the current period is: (a) the first time the debt security was credit-impaired; or (b) not the first time the debt security was credit-impaired. The credit loss component is reduced if we sell, intend to sell or believe we will be required to sell previously credit-impaired available-for-sale securities. Additionally, the credit loss component is reduced by the amortization resulting from significant increases in cash flows expected to be collected that are recognized over the remaining life of the security.

Table 7.5 — Other-Than-Temporary Impairments Related to Credit Losses on Available-For-Sale Securities[1]

	Year Ended December 31, 2011
	(in millions)
Credit-related other-than-temporary impairments on available-for-sale securities recognized in earnings:	
Beginning balance — remaining credit losses to be realized on available-for-sale securities held at the beginning of the period where other-than-temporary impairments were recognized in earnings	$15,049
Additions:	
Amounts related to credit losses for which an other-than-temporary impairment was not previously recognized	80
Amounts related to credit losses for which an other-than-temporary impairment was previously recognized	2,070
Reductions:	
Amounts related to securities which were sold, written off or matured	(957)
Amounts previously recognized in other comprehensive income that were recognized in earnings because we intend to sell the security or it is more likely than not that we will be required to sell the security before recovery of its amortized cost basis	(161)
Amounts related to amortization resulting from significant increases in cash flows expected to be collected that are recognized over the remaining life of the security	(93)
Ending balance — remaining credit losses to be realized on available-for-sale securities held at period end where other-than-temporary impairments were recognized in earnings	$15,988

(1) Excludes other-than-temporary impairments on securities that we intend to sell or it is more likely than not that we will be required to sell before recovery of the unrealized losses.

Realized Gains and Losses on Sales of Available-For-Sale Securities

The table below illustrates the gross realized gains and gross realized losses received from the sale of available-for-sale securities.

Table 7.6 — Gross Realized Gains and Gross Realized Losses on Sales of Available-For-Sale Securities

	Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Gross realized gains			
Mortgage-related securities:			
Freddie Mac	$ 77	$27	$ 879
Fannie Mae	14	54	2
CMBS	37	—	—
Obligations of states and political subdivisions	11	3	2
Total mortgage-related securities gross realized gains	139	84	883
Non-mortgage-related securities:			
Asset-backed securities	—	10	313
Total non-mortgage-related securities gross realized gains	—	10	313
Gross realized gains	139	94	1,196
Gross realized losses			
Mortgage related securities:[1]			
Freddie Mac	—	(1)	(113)
CMBS	(81)	—	—
Option ARM	—	(6)	—
Total mortgage-related securities gross realized losses	(81)	(7)	(113)
Gross realized losses	(81)	(7)	(113)
Net realized gains (losses)	$ 58	$87	$1,083

(1) These individual sales do not change our conclusion that we do not intend to sell the majority of our remaining mortgage-related securities and it is not more likely than not that we will be required to sell such securities before a recovery of the unrealized losses.

Maturities and Weighted Average Yield of Available-For-Sale Securities

The table below summarizes the remaining contractual maturities of available-for-sale securities and weighted average yield of available-for-sale securities.

Table 7.7 — Maturities and Weighted Average Yield of Available-For-Sale Securities[1]

December 31, 2011	Amortized Cost	Fair Value	Weighted Average Yield[2]
	(dollars in millions)		
Available-for-sale securities:			
Due within 1 year or less	$ 40	$ 40	4.84%
Due after 1 through 5 years	1,208	1,259	5.34
Due after 5 through 10 years	5,269	5,540	5.07
Due after 10 years	213,700	203,820	3.59
Total available-for-sale securities	$220,217	$210,659	3.63

(1) Maturity information provided is based on contractual maturities, which may not represent expected life as obligations underlying these securities may be prepaid at any time without penalty.
(2) The weighted average yield is calculated based on a yield for each individual lot held at December 31, 2011 excluding any fully taxable-equivalent adjustments related to tax exempt sources of interest income. The numerator for the individual lot yield consists of the sum of: (a) the year-end interest coupon rate multiplied by the year-end UPB; and (b) the annualized amortization income or expense calculated for December 2011 (excluding the accretion of non-credit-related other-than-temporary impairments and any adjustments recorded for changes in the effective rate). The denominator for the individual lot yield consists of the year-end amortized cost of the lot excluding effects of other-than-temporary impairments on the UPB of impaired lots.

AOCI Related to Available-For-Sale Securities

The table below presents the changes in AOCI related to available-for-sale securities. The net unrealized holding gains represent the net fair value adjustments recorded on available-for-sale securities throughout the periods presented, after the effects of our federal statutory tax rate of 35%. The net reclassification adjustment for net realized losses represents the amount of those fair value adjustments, after the effects of our federal statutory tax rate of 35%, that have been recognized in earnings due to a sale of an available-for-sale security or the recognition of an impairment loss.

Table 7.8 — AOCI Related to Available-For-Sale Securities

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Beginning balance	$(9,678)	$(20,616)	$(28,510)
Adjustment to initially apply the adoption of amendments to accounting guidance for transfers of financial assets and the consolidation of VIEs[1]	—	(2,683)	—
Adjustment to initially apply the adoption of an amendment to the accounting guidance for investments in debt and equity securities[2]	—	—	(9,931)
Net unrealized holding gains[3]	2,007	10,876	11,250
Net reclassification adjustment for net realized losses[4][5]	1,458	2,745	6,575
Ending balance	$(6,213)	$ (9,678)	$(20,616)

(1) Net of tax benefit of $1.4 billion for the year ended December 31, 2010.
(2) Net of tax benefit of $5.3 billion for the year ended December 31, 2009.
(3) Net of tax expense of $1.1 billion, $5.9 billion and $6.1 billion for the years ended December 31, 2011, 2010 and 2009, respectively.
(4) Net of tax benefit of $785 million, $1.5 billion, and $3.5 billion for the years ended December 31, 2011, 2010, and 2009, respectively.
(5) Includes the reversal of previously recorded unrealized losses that have been recognized on our consolidated statements of income and comprehensive income as impairment losses on available-for-sale securities of $1.5 billion, $2.8 billion, and $7.3 billion, net of taxes, for the years ended December 31, 2011, 2010, and 2009, respectively.

Trading Securities

The table below summarizes the estimated fair values by major security type for trading securities.

Table 7.9 — Trading Securities

	December 31, 2011	December 31, 2010
	(in millions)	
Mortgage-related securities:		
Freddie Mac	$16,047	$13,437
Fannie Mae	15,165	18,726
Ginnie Mae	156	172
Other	164	31
Total mortgage-related securities	31,532	32,366
Non-mortgage-related securities:		
Asset-backed securities	302	44
Treasury bills	100	17,289
Treasury notes	24,712	10,122
FDIC-guaranteed corporate medium-term notes	2,184	441
Total non-mortgage-related securities	27,298	27,896
Total fair value of trading securities	$58,830	$60,262

Trading securities mainly include Treasury securities, agency fixed-rate and variable-rate pass-through mortgage-related securities, and agency REMICs, including inverse floating rate, interest-only and principal-only securities. With the exception of principal-only securities, our agency securities, classified as trading, were at a net premium (*i.e.*, have higher net fair value than UPB) as of December 31, 2011.

For the years ended December 31, 2011, 2010, and 2009, we recorded net unrealized gains (losses) on trading securities held at those dates of $(1.0) billion, $(1.4) billion, and $4.3 billion, respectively.

Total trading securities include $1.9 billion and $2.5 billion, respectively, of hybrid financial assets as defined by the derivative and hedging accounting guidance regarding certain hybrid financial instruments as of December 31, 2011 and 2010. Gains (losses) on trading securities on our consolidated statements of income and comprehensive income include $(109) million and $(53) million, respectively, related to these hybrid financial securities for the years ended December 31, 2011 and 2010.

Collateral Pledged

Collateral Pledged to Freddie Mac

Our counterparties are required to pledge collateral for securities purchased under agreements to resell transactions, and most derivative instruments are subject to collateral posting thresholds generally related to a counterparty's credit rating. We consider the types of securities being pledged to us as collateral when determining how much we lend related to securities purchased under agreements to resell transactions. Additionally, we subsequently and regularly review the market values of these securities compared to amounts loaned in an effort to minimize our exposure to losses. We had cash and cash equivalents pledged to us related to derivative instruments of $3.2 billion and $2.2 billion at December 31, 2011 and 2010, respectively. Although it is our practice not to repledge assets held as collateral, a portion of the collateral may be repledged based on master agreements related to our derivative instruments. At December 31, 2011 and 2010, we did not have collateral in the form of securities pledged to and held by us under these master agreements. Also at December 31, 2011 and 2010, we did not have securities pledged to us for securities purchased under agreements to resell transactions that we had the right to repledge. From time to time we may obtain pledges of collateral from certain seller/servicers as additional security for their obligations to us, including their obligations to repurchase mortgages sold to us in breach of representations and warranties. This collateral may take the form of cash, cash equivalents, or agency securities.

In addition, we hold cash and cash equivalents as collateral in connection with certain of our multifamily guarantees and mortgage loans as credit enhancements. The cash and cash equivalents held as collateral related to these transactions at December 31, 2011 and 2010 was $246 million and $550 million, respectively.

Collateral Pledged by Freddie Mac

We are required to pledge collateral for margin requirements with third-party custodians in connection with secured financings and derivative transactions with some counterparties. The level of collateral pledged related to our derivative instruments is determined after giving consideration to our credit rating. As a result of S&P's downgrade of our senior long-term debt credit rating from AAA to AA+ on August 8, 2011, we posted additional collateral to certain derivative

counterparties in accordance with the terms of the collateral agreements with such counterparties. As of December 31, 2011, we had one secured, uncommitted intraday line of credit with a third party in connection with the Federal Reserve's payments system risk policy, which restricts or eliminates daylight overdrafts by the GSEs, in connection with our use of the Fedwire system. In certain circumstances, the line of credit agreement gives the secured party the right to repledge the securities underlying our financing to other third parties, including the Federal Reserve Bank. We pledge collateral to meet our collateral requirements under the line of credit agreement upon demand by the counterparty.

The table below summarizes all securities pledged as collateral by us, including assets that the secured party may repledge and those that may not be repledged.

Table 7.10 — Collateral in the Form of Securities Pledged

	December 31,	
	2011	2010
	(in millions)	
Securities pledged with the ability for the secured party to repledge:		
Debt securities of consolidated trusts held by third parties[1]	$10,293	$ 9,915
Available-for-sale securities	204	817
Securities pledged without the ability for the secured party to repledge:		
Debt securities of consolidated trusts held by third parties[1]	88	5
Total securities pledged	$10,585	$10,737

(1) Represents PCs held by us in our Investments segment mortgage investments portfolio and pledged as collateral which are recorded as a reduction to debt securities of consolidated trusts held by third parties on our consolidated balance sheets.

Securities Pledged with the Ability of the Secured Party to Repledge

At December 31, 2011, we pledged securities with the ability of the secured party to repledge of $10.5 billion, of which $10.5 billion was collateral posted in connection with our secured uncommitted intraday line of credit with a third party as discussed above.

At December 31, 2010, we pledged securities with the ability of the secured party to repledge of $10.7 billion, of which $10.5 billion was collateral posted in connection with our secured uncommitted intraday line of credit with a third party as discussed above.

There were no borrowings against the line of credit at December 31, 2011 or 2010. The remaining $25 million and $0.2 billion of collateral posted with the ability of the secured party to repledge at December 31, 2011 and 2010, respectively, was posted in connection with our margin account related to futures transactions.

Securities Pledged without the Ability of the Secured Party to Repledge

At December 31, 2011 and 2010, we pledged securities without the ability of the secured party to repledge of $88 million and $5 million, respectively, at a clearinghouse in connection with the trading and settlement of securities.

Collateral in the Form of Cash Pledged

At December 31, 2011, we pledged $12.7 billion of collateral in the form of cash and cash equivalents, all but $133 million of which related to our derivative agreements as we had $12.7 billion of such derivatives in a net loss position. At December 31, 2010, we pledged $8.5 billion of collateral in the form of cash and cash equivalents, all but $40 million of which related to our derivative agreements as we had $9.3 billion of such derivatives in a net loss position. The remaining $133 million and $40 million was posted at clearinghouses in connection with our securities and other derivative transactions at December 31, 2011 and 2010, respectively.

NOTE 8: DEBT SECURITIES AND SUBORDINATED BORROWINGS

Debt securities that we issue are classified on our consolidated balance sheets as either debt securities of consolidated trusts held by third parties or other debt. We issue other debt to fund our operations.

Under the Purchase Agreement, without the prior written consent of Treasury, we may not incur indebtedness that would result in the par value of our aggregate indebtedness exceeding 120% of the amount of mortgage assets we are allowed to own on December 31 of the immediately preceding calendar year. Because of this debt limit, we may be restricted in the amount of debt we are allowed to issue to fund our operations. Under the Purchase Agreement, the amount of our "indebtedness" is determined without giving effect to the January 1, 2010 change in the accounting guidance related to transfers of financial assets and consolidation of VIEs. Therefore, "indebtedness" does not include

debt securities of consolidated trusts held by third parties. We also cannot become liable for any subordinated indebtedness without the prior consent of Treasury.

Our debt cap under the Purchase Agreement was $972.0 billion in 2011 and declined to $874.8 billion on January 1, 2012. As of December 31, 2011, we estimate that the par value of our aggregate indebtedness totaled $674.3 billion, which was approximately $297.7 billion below the applicable debt cap. Our aggregate indebtedness is calculated as the par value of other debt.

In the tables below, the categories of short-term debt (due within one year) and long-term debt (due after one year) are based on the original contractual maturity of the debt instruments classified as other debt.

The table below summarizes the interest expense and the balances of total debt, net per our consolidated balance sheets.

Table 8.1 — Total Debt, Net

	Interest Expense For The Year Ended December 31,			Balance, Net(1)	
	2011	2010	2009	December 31, 2011	December 31, 2010
	(in millions)			(in millions)	
Other debt:					
Short-term debt	$ 331	$ 552	$ 2,234	$ 161,399	$ 197,106
Long-term debt:					
Senior debt	12,505	16,317	19,754	498,779	516,123
Subordinated debt	33	46	162	368	711
Total long-term debt	12,538	16,363	19,916	499,147	516,834
Total other debt	12,869	16,915	22,150	660,546	713,940
Debt securities of consolidated trusts held by third parties	67,119	75,216	—	1,471,437	1,528,648
Total debt, net	$79,988	$92,131	$22,150	$2,131,983	$2,242,588

(1) Represents par value, net of associated discounts, premiums, and hedge-related basis adjustments, with $0.2 billion and $0.9 billion, respectively, of other short-term debt, and $2.8 billion and $3.6 billion, respectively, of other long-term debt that represents the fair value of debt securities with the fair value option elected at December 31, 2011 and 2010.

During 2011, 2010, and 2009, we recognized fair value gains (losses) of $91 million, $581 million, and $(405) million, respectively, on our foreign-currency denominated debt, of which $40 million, $461 million, and $(209) million, respectively, are gains (losses) related to our net foreign-currency translation.

Other Short-Term Debt

As indicated in "Table 8.2 — Other Short-Term Debt", a majority of other short-term debt consisted of Reference Bills® securities and discount notes, paying only principal at maturity. Reference Bills® securities, discount notes, and medium-term notes are unsecured general corporate obligations. Certain medium-term notes that have original maturities of one year or less are classified as other short-term debt.

The table below summarizes the balances and effective interest rates for other short-term debt.

Table 8.2 — Other Short-Term Debt

	December 31, 2011			December 31, 2010		
	Par Value	Balance, Net(1)	Weighted Average Effective Rate(2)	Par Value	Balance, Net(1)	Weighted Average Effective Rate(2)
	(dollars in millions)					
Reference Bills® securities and discount notes	$161,193	$161,149	0.11%	$194,875	$194,742	0.24%
Medium-term notes	250	250	0.24	2,364	2,364	0.31
Other short-term debt	$161,443	$161,399	0.11	$197,239	$197,106	0.25

(1) Represents par value, net of associated discounts and premiums.
(2) Represents the weighted average effective rate that remains constant over the life of the instrument, which includes the amortization of discounts or premiums and issuance costs.

Federal Funds Purchased and Securities Sold Under Agreements to Repurchase

Securities sold under agreements to repurchase are effectively collateralized borrowing transactions where we sell securities with an agreement to repurchase such securities. These agreements require the underlying securities to be delivered to the dealers who are the counterparties to the transactions. Federal funds purchased are unsecuritized borrowings from commercial banks that are members of the Federal Reserve System. At both December 31, 2011 and 2010, we had no balances in federal funds purchased and securities sold under agreements to repurchase.

Other Long-Term Debt

The table below summarizes our other long-term debt.

Table 8.3 — Other Long-Term Debt

	Contractual Maturity[1]	December 31, 2011 Par Value	Balance, Net[2]	Weighted Average Effective Rate[3]	December 31, 2010 Par Value	Balance, Net[2]	Weighted Average Effective Rate[3]
		(dollars in millions)					
Other long-term debt:							
Other senior debt:[4]							
Fixed-rate:							
Medium-term notes — callable[5]	2012 - 2037	$ 96,958	$ 96,938	1.78%	$107,328	$107,272	2.60%
Medium-term notes — non-callable	2012 - 2028	41,303	41,470	1.33	31,107	31,335	1.73
U.S. dollar Reference Notes® securities — non-callable	2012 - 2032	238,145	238,244	3.17	239,497	239,486	3.69
€Reference Notes® securities — non-callable	2012 - 2014	1,722	1,766	4.76	2,021	2,131	4.72
Variable-rate:							
Medium-term notes — callable[6]	2012 - 2028	21,230	21,229	2.40	32,404	32,403	2.81
Medium-term notes — non-callable	2012 - 2026	86,010	86,019	0.26	91,332	91,346	0.57
Zero-coupon:							
Medium-term notes — callable	2033 - 2041	12,475	3,281	5.39	12,191	2,971	5.69
Medium-term notes — non-callable	2012 - 2039	14,475	9,753	4.67	14,189	9,035	5.07
Hedging-related basis adjustments		N/A	79		N/A	144	
Total other senior debt		512,318	498,779		530,069	516,123	
Other subordinated debt:							
Fixed-rate	2016 - 2018	221	218	6.59	578	575	5.74
Zero-coupon	2019	332	150	10.51	331	136	10.51
Total other subordinated debt		553	368		909	711	
Total other long-term debt		$512,871	$499,147	2.27	$530,978	$516,834	2.78

(1) Represents contractual maturities at December 31, 2011.
(2) Represents par value of long-term debt securities and subordinated borrowings, net of associated discounts or premiums and hedge-related basis adjustments.
(3) Represents the weighted average effective rate that remains constant over the life of the instrument, which includes the amortization of discounts or premiums, issuance costs, and hedging-related basis adjustments.
(4) For debt denominated in a currency other than the U.S. dollar, the outstanding balance is based on the exchange rate at December 31, 2011 and 2010, respectively.
(5) Includes callable FreddieNotes® securities of $2.9 billion and $5.4 billion at December 31, 2011 and 2010, respectively.
(6) Includes callable FreddieNotes® securities of $1.3 billion and $7.0 billion at December 31, 2011 and 2010, respectively.

A portion of our other long-term debt is callable. Callable debt gives us the option to redeem the debt security at par on one or more specified call dates or at any time on or after a specified call date.

Debt Securities of Consolidated Trusts Held by Third Parties

Debt securities of consolidated trusts held by third parties represents our liability to third parties that hold beneficial interests in our consolidated securitization trusts (*i.e.*, single-family PC trusts and certain Other Guarantee Transactions).

The table below summarizes the debt securities of consolidated trusts held by third parties based on underlying mortgage product type.

Table 8.4 — Debt Securities of Consolidated Trusts Held by Third Parties[1]

	December 31, 2011				December 31, 2010			
	Contractual Maturity[2]	UPB	Balance, Net[3]	Weighted Average Coupon[2]	Contractual Maturity[2]	UPB	Balance, Net[3]	Weighted Average Coupon[2]
		(dollars in millions)				(dollars in millions)		
Single-family:								
30-year or more, fixed-rate	2012 - 2048	$1,034,680	$1,047,556	4.92%	2011 - 2048	$1,110,943	$1,118,994	5.03%
20-year fixed-rate	2012 - 2032	67,323	68,502	4.53	2012 - 2031	63,941	64,752	4.78
15-year fixed-rate	2012 - 2027	242,077	246,023	4.09	2011 - 2026	227,269	229,510	4.41
Adjustable-rate	2012 - 2047	60,544	61,395	3.18	2011 - 2047	50,904	51,351	3.69
Interest-only[4]	2026 - 2041	45,807	45,884	4.91	2026 - 2040	61,773	61,830	5.30
FHA/VA	2012 - 2041	2,045	2,077	5.67	2011 - 2040	2,171	2,211	5.88
Total debt securities of consolidated trusts held by third parties[5]		$1,452,476	$1,471,437			$1,517,001	$1,528,648	

(1) Debt securities of consolidated trusts held by third parties are prepayable without penalty.
(2) Based on the contractual maturity and interest rate of debt securities of our consolidated trusts held by third parties.
(3) Represents par value, net of associated discounts, premiums, and other basis adjustments.
(4) Includes interest-only securities and interest-only mortgage loans that allow the borrowers to pay only interest for a fixed period of time before the loans begin to amortize.
(5) The effective rate for debt securities of consolidated trusts held by third parties was 4.22% and 4.57% as of December 31, 2011 and 2010, respectively.

The table below summarizes the contractual maturities of other long-term debt securities and debt securities of consolidated trusts held by third parties at December 31, 2011.

Table 8.5 — Contractual Maturity of Other Long-Term Debt and Debt Securities of Consolidated Trusts Held by Third Parties

Annual Maturities	Par Value[1][2]
	(in millions)
Other debt:	
2012	$ 127,798
2013	142,943
2014	87,453
2015	33,897
2016	45,526
Thereafter	75,254
Debt securities of consolidated trusts held by third parties[3]	1,452,476
Total	1,965,347
Net discounts, premiums, hedge-related and other basis adjustments[4]	5,237
Total debt securities of consolidated trusts held by third parties and other long-term debt	$1,970,584

(1) Represents par value of long-term debt securities and subordinated borrowings and UPB of debt securities of our consolidated trusts held by third parties.
(2) For other debt denominated in a currency other than the U.S. dollar, the par value is based on the exchange rate at December 31, 2011.
(3) Contractual maturities of debt securities of consolidated trusts held by third parties may not represent expected maturity as they are prepayable at any time without penalty.
(4) Other basis adjustments primarily represent changes in fair value attributable to instrument-specific credit risk and interest-rate risk related to other foreign-currency denominated debt.

Lines of Credit

At both December 31, 2011 and 2010, we had one secured, uncommitted intraday line of credit with a third party totaling $10 billion. We use this line of credit regularly to provide us with additional liquidity to fund our intraday payment activities through the Fedwire system in connection with the Federal Reserve's payments system risk policy, which restricts or eliminates daylight overdrafts by the GSEs. No amounts were drawn on this line of credit at December 31, 2011 or 2010. We expect to continue to use the current facility to satisfy our intraday financing needs; however, as the line is uncommitted, we may not be able to draw on it if and when needed.

Subordinated Debt Interest and Principal Payments

In a September 23, 2008 statement concerning the conservatorship, the Director of FHFA stated that we would continue to make interest and principal payments on our subordinated debt, even if we fail to maintain required capital

levels. As a result, the terms of any of our subordinated debt that provide for us to defer payments of interest under certain circumstances, including our failure to maintain specified capital levels, are no longer applicable.

NOTE 9: FINANCIAL GUARANTEES

When we securitize single-family mortgages that we purchase, we issue mortgage-related securities that can be sold to investors or held by us. During the years ended December 31, 2011 and 2010, we issued and guaranteed $300.2 billion and $375.9 billion, respectively, in UPB of Freddie Mac mortgage-related securities backed by single-family mortgage loans (excluding those backed by HFA bonds).

Beginning January 1, 2010, we no longer recognize a financial guarantee for such arrangements as we instead recognize both the mortgage loans and the debt securities of these securitization trusts on our consolidated balance sheets. The table below presents our maximum potential exposure, our recognized liability, and the maximum remaining term of our financial guarantees that are not consolidated on our balance sheets.

Table 9.1 — Financial Guarantees

	December 31, 2011			December 31, 2010		
	Maximum Exposure[1]	Recognized Liability	Maximum Remaining Term	Maximum Exposure[1]	Recognized Liability	Maximum Remaining Term
	(dollars in millions, terms in years)					
Non-consolidated Freddie Mac securities[2]	$35,879	$ 300	42	$25,279	$202	41
Other guarantee commitments[3]	21,064	487	37	18,670	427	38
Derivative instruments	37,737	2,977	34	37,578	301	35
Servicing-related premium guarantees	151	—	5	172	—	5

(1) Maximum exposure represents the contractual amounts that could be lost under the non-consolidated guarantees if counterparties or borrowers defaulted, without consideration of possible recoveries under credit enhancement arrangements, such as recourse provisions, third-party insurance contracts, or from collateral held or pledged. The maximum exposure disclosed above is not representative of the actual loss we are likely to incur, based on our historical loss experience and after consideration of proceeds from related collateral liquidation. The maximum exposure for our liquidity guarantees is not mutually exclusive of our default guarantees on the same securities; therefore, these amounts are included within the maximum exposure of non-consolidated Freddie Mac securities and other guarantee commitments.
(2) As of December 31, 2011 and December 31, 2010, the UPB of non-consolidated Freddie Mac securities associated with single-family mortgage loans was $10.7 billion and $11.3 billion, respectively. The remaining balances relate to multifamily mortgage loans.
(3) As of December 31, 2011 and December 31, 2010, the UPB of other guarantee commitments associated with single-family mortgage loans was $11.1 billion and $8.6 billion, respectively. The remaining balances relate to multifamily mortgage loans.

Non-Consolidated Freddie Mac Securities

We issue three types of mortgage-related securities: (a) PCs; (b) REMICs and Other Structured Securities; and (c) Other Guarantee Transactions. We guarantee the payment of principal and interest on these securities, which are backed by pools of mortgage loans, irrespective of the cash flows received from the borrowers. Commencing January 1, 2010, only our guarantees issued to non-consolidated securitization trusts are accounted for in accordance with the accounting guidance for guarantees (*i.e.*, a guarantee asset and guarantee obligation are recognized).

Our securities issued in resecuritizations of our PCs and other previously issued REMICs and Other Structured Securities are not consolidated as they do not give rise to any additional exposure to credit loss as we already consolidate the underlying collateral. The securities issued in these resecuritizations consist of single-class and multiclass securities backed by PCs, REMICs, interest-only strips, and principal-only strips. Since these resecuritizations do not increase our credit-risk, no guarantee asset or guarantee obligation is recognized for these transactions and they are excluded from the table above.

We recognize a guarantee asset, guarantee obligation and a reserve for guarantee losses, as necessary, for securities issued by non-consolidated securitization trusts and other guarantee commitments for which we are exposed to incremental credit risk. Our guarantee obligation represents the recognized liability, net of cumulative amortization, associated with our guarantee of multifamily PCs and certain Other Guarantee Transactions issued to non-consolidated securitization trusts. In addition to our guarantee obligation, we recognize a reserve for guarantee losses, which is included within other liabilities on our consolidated balance sheets, which totaled $0.2 billion at both December 31, 2011 and 2010, respectively. For many of the loans underlying our non-consolidated guarantees, there are credit protections from third parties, including subordination, covering a portion of our exposure. See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for information about credit protections on loans we guarantee. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for further information about our accounting for financial guarantees.

During 2011 we issued approximately $11.8 billion, compared to $5.9 billion in 2010, in UPB of non-consolidated Freddie Mac securities primarily backed by multifamily mortgage loans, for which a guarantee asset and guarantee

obligation were recognized. During 2010, we also issued $3.9 billion in UPB of non-consolidated Other Guarantee Transactions backed by HFA bonds as part of the NIBP, for which a guarantee asset and guarantee obligation were recognized.

In connection with transfers of financial assets to non-consolidated securitization trusts that are accounted for as sales and for which we have incremental credit risk, we recognize our guarantee obligation in accordance with the accounting guidance for guarantees. Additionally, we may retain an interest in the transferred financial assets (*e.g.*, a beneficial interest issued by the securitization trust). See "NOTE 10: RETAINED INTERESTS IN MORTGAGE-RELATED SECURITIZATIONS" for further information on these retained interests.

Other Guarantee Commitments

We provide long-term standby commitments to certain of our customers, which obligate us to purchase seriously delinquent loans that are covered by those agreements. During 2011 and 2010, we issued and guaranteed $4.4 billion and $3.2 billion, respectively, in UPB of long-term standby commitments. These other guarantee commitments totaled $8.6 billion and $5.5 billion of UPB at December 31, 2011 and December 31, 2010, respectively. We also had other guarantee commitments on multifamily housing revenue bonds that were issued by HFAs of $9.6 billion and $9.7 billion in UPB at December 31, 2011 and December 31, 2010, respectively. In addition, as of December 31, 2011, and 2010, respectively, we had issued guarantees under the TCLFP on securities backed by HFA bonds with UPB of $2.9 billion, and $3.5 billion, respectively.

Derivative Instruments

Derivative instruments include written options, written swaptions, interest-rate swap guarantees, and short-term default guarantee commitments accounted for as credit derivatives. See "NOTE 11: DERIVATIVES" for further discussion of these derivative guarantees.

We guarantee the performance of interest-rate swap contracts in two circumstances. First, we guarantee that a borrower will perform under an interest-rate swap contract linked to a borrower's ARM. And second, in connection with our issuance of certain REMICs and Other Structured Securities, which are backed by tax-exempt bonds, we guarantee that the sponsor of the transaction will perform under the interest-rate swap contract linked to the senior variable-rate certificates that we issued.

We also have issued REMICs and Other Structured Securities with stated final maturities that are shorter than the stated maturity of the underlying mortgage loans. If the underlying mortgage loans to these securities have not been purchased by a third party or fully matured as of the stated final maturity date of such securities, we will sponsor an auction of the underlying assets. To the extent that purchase or auction proceeds are insufficient to cover unpaid principal amounts due to investors in such REMICs and Other Structured Securities, we are obligated to fund such principal. Our maximum exposure on these guarantees represents the outstanding UPB of the REMICs and Other Structured Securities subject to stated final maturities.

Servicing-Related Premium Guarantees

We provide guarantees to reimburse servicers for premiums paid to acquire servicing in situations where the original seller is unable to perform under its separate servicing agreement. The liability associated with these agreements was not material at December 31, 2011 and 2010.

Other Indemnifications

In connection with certain business transactions, we may provide indemnification to counterparties for claims arising out of breaches of certain obligations (*e.g.*, those arising from representations and warranties) in contracts entered into in the normal course of business. Our assessment is that the risk of any material loss from such a claim for indemnification is remote and there are no significant probable and estimable losses associated with these contracts. In addition, we provided indemnification for litigation defense costs to certain former officers who are subject to ongoing litigation. See "NOTE 18: LEGAL CONTINGENCIES" for further information on ongoing litigation. The recognized liabilities on our consolidated balance sheets related to indemnifications were not significant at December 31, 2011 and 2010.

As part of the guarantee arrangements pertaining to multifamily housing revenue bonds, we provided commitments to advance funds, commonly referred to as "liquidity guarantees." These guarantees require us to advance funds to enable others to repurchase any tendered tax-exempt and related taxable bonds that are unable to be remarketed. Any such advances are treated as loans and are secured by a pledge to us of the repurchased securities until the securities are

remarketed. We hold cash and cash equivalents on our consolidated balance sheets for the amount of these commitments. No advances under these liquidity guarantees were outstanding at December 31, 2011 and 2010.

Securitization Trusts

We established securitization trusts for the administration of cash remittances received on the underlying assets of our PCs and REMICs and Other Structured Securities. As described in "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," we recognize the cash held by our consolidated single-family PC trusts and certain Other Guarantee Transactions as restricted cash and cash equivalents on our consolidated balance sheets. We receive fees as master servicer, issuer, trustee and administrator for our consolidated PCs and REMICs and Other Structured Securities. Such amounts are recorded within net interest income. These fees are derived from interest earned on principal and interest cash flows held in restricted cash and cash equivalents between the time funds are remitted to the trust by servicers and the date of distribution to our PCs and REMICs and Other Structured Securities holders. These fees are offset by interest expense we incur when a borrower prepays a mortgage, but the full amount of interest for the month is due to the PC investor. We recognized net trust management income (expense) of $0 million during 2011 and 2010 (on our non-consolidated trusts), and $(761) million during 2009 (on all trusts), on our consolidated statements of income and comprehensive income.

NOTE 10: RETAINED INTERESTS IN MORTGAGE-RELATED SECURITIZATIONS

Beginning January 1, 2010, in accordance with the amendment to the accounting guidance for consolidation of VIEs, we consolidated our single-family PC trusts and certain Other Guarantee Transactions. As a result, a large majority of our transfers of financial assets that historically qualified as sales (*e.g.*, the transfer of mortgage loans to our single-family PC trusts) are no longer treated as such because the financial assets are transferred to a consolidated entity. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for further information regarding the impacts of consolidation of our single-family PC trusts and certain Other Guarantee Transactions.

Certain of our transfers of financial assets to non-consolidated trusts and third parties may continue to qualify as sales. In connection with our transfers of financial assets that qualify as sales, we may retain certain interests in the transferred assets. Our retained interests are primarily beneficial interests issued by non-consolidated securitization trusts (*e.g.*, multifamily PCs and multiclass resecuritization securities). These interests are included in investments in securities on our consolidated balance sheets. In addition, our guarantee asset recognized in connection with non-consolidated securitization transactions also represents a retained interest. For more information about our retained interests in mortgage-related securitizations, see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Investments in Securities." These transfers and our resulting retained interests are not significant to our consolidated financial statements in 2011 and 2010.

Our exposure to credit losses on the loans underlying our retained securitization interests is recorded within our reserve for guarantee losses. For further information regarding our charge-offs and other activity associated with our reserve for guarantee losses on loans for which we have provided our guarantee, see "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES."

Retained Interests, Guarantee Asset

During 2009, the fair values of our guarantee asset associated with single-family loans at the time of securitization and subsequent fair value measurements at the end of a period were primarily estimated using third-party information. Consequently, we derived our assumptions by determining those implied by our valuation estimates, with the internal rate of return, or discount rate, adjusted where necessary to align our internal models with estimated fair values determined using third-party information. However, prepayment rates are presented based on our internal models and were not similarly adjusted. For the portion of our guarantee asset that was valued by obtaining dealer quotes on proxy securities, we derived the assumptions from the prices we were provided. For the year ended December 31, 2009, we estimate the average internal rate of return, prepayment rates and weighted average lives used in measuring the fair value of our guarantee asset associated with single-family loans were 13.8%, 26.4%, and 3.3 years, respectively. These estimates represent the average assumptions used both at the end of the period as well as the valuation assumptions at guarantee issuance during the year on a combined basis. Our estimate of the average internal rate of return represents a UPB weighted average of the discount rates implied by a model which employs multiple interest rate scenarios versus a single assumption.

Cash Flows Associated with Non-Consolidated Trusts

We receive proceeds in securitizations accounted for as sales for those securities sold to third parties. Subsequent to these securitizations, we receive cash flows related to interest income and repayment of principal on the securities we retain for investment. Regardless of whether our issued mortgage-related security is sold to third parties or held by us for investment, we are obligated to make cash payments to acquire foreclosed properties and certain delinquent or impaired mortgages under our financial guarantees. In addition to the securitization and sale transactions discussed below, the cash flows on retained interests related to securitizations accounted for as sales during 2009 consisted of: (a) cash receipts associated with our guarantee asset of $2.9 billion; (b) cash receipts associated with principal and interest on our retained interests of $21.4 billion; and (c) cash payments associated with delinquent or foreclosed loans and required purchase of balloon mortgages of $26.3 billion. In addition, we are obligated under our guarantee to make up any shortfalls in principal and interest to the holders of our securities. See "NOTE 9: FINANCIAL GUARANTEES" for additional information on these payments in 2009. Cash flows associated with our retained interests in 2011 and 2010 were not significant.

Gains and Losses on Securitizations Accounted for as Sales

The gain or loss on a securitization that qualifies as a sale is determined, in part, based on the carrying amounts of the financial assets sold. The carrying amounts of the assets sold are allocated between those sold to third parties and those held as retained interests based on their relative fair value at the date of sale. We recognized net pre-tax gains (losses) on transfers of mortgage loans, PCs and REMICs and Other Structured Securities that were accounted for as sales of approximately $1.5 billion for the year ended December 31, 2009. These transactions were not significant in 2011 and 2010 due to the changes in the accounting guidance for consolidation of VIEs that became effective January 1, 2010.

NOTE 11: DERIVATIVES

Use of Derivatives

We use derivatives primarily to:

- hedge forecasted issuances of debt;
- synthetically create callable and non-callable funding;
- regularly adjust or rebalance our funding mix in response to changes in the interest-rate characteristics of our mortgage-related assets; and
- hedge foreign-currency exposure.

Hedge Forecasted Debt Issuances

When we commit to purchase mortgage investments, such commitments are typically for a future settlement ranging from two weeks to three months after the date of the commitment. To facilitate larger and more predictable debt issuances that contribute to lower funding costs, we use interest-rate derivatives to economically hedge the interest-rate risk exposure from the time we commit to purchase a mortgage to the time the related debt is issued.

Create Synthetic Funding

We also use derivatives to synthetically create the substantive economic equivalent of various debt funding structures. For example, the combination of a series of short-term debt issuances over a defined period and a pay-fixed interest rate swap with the same maturity as the last debt issuance is the substantive economic equivalent of a long-term fixed-rate debt instrument of comparable maturity. Similarly, the combination of non-callable debt and a call swaption, or option to enter into a receive-fixed interest rate swap, with the same maturity as the non-callable debt, is the substantive economic equivalent of callable debt. These derivatives strategies increase our funding flexibility and allow us to better match asset and liability cash flows, often reducing overall funding costs.

Adjust Funding Mix

We generally use interest-rate swaps to mitigate contractual funding mismatches between our assets and liabilities. We also use swaptions and other option-based derivatives to adjust the contractual terms of our debt funding in response to changes in the expected lives of our investments in mortgage-related assets. As market conditions dictate, we take rebalancing actions to keep our interest-rate risk exposure within management-set limits. In a declining interest-rate environment, we typically enter into receive-fixed interest rate swaps or purchase Treasury-based derivatives to shorten the duration of our funding to offset the declining duration of our mortgage assets. In a rising interest-rate environment, we

typically enter into pay-fixed interest rate swaps or sell Treasury-based derivatives in order to lengthen the duration of our funding to offset the increasing duration of our mortgage assets.

Foreign-Currency Exposure

We use foreign-currency swaps to eliminate virtually all of our exposure to fluctuations in exchange rates related to our foreign-currency denominated debt by entering into swap transactions that effectively convert foreign-currency denominated obligations into U.S. dollar-denominated obligations.

Types of Derivatives

We principally use the following types of derivatives:

- LIBOR- and Euribor-based interest-rate swaps;
- LIBOR- and Treasury-based options (including swaptions);
- LIBOR- and Treasury-based exchange-traded futures; and
- Foreign-currency swaps.

In addition to swaps, futures and purchased options, our derivative positions include the following:

Written Options and Swaptions

Written call and put swaptions are sold to counterparties allowing them the option to enter into receive- and pay-fixed interest rate swaps, respectively. Written call and put options on mortgage-related securities give the counterparty the right to execute a contract under specified terms, which generally occurs when we are in a liability position. We use these written options and swaptions to manage convexity risk over a wide range of interest rates. Written options lower our overall hedging costs, allow us to hedge the same economic risk we assume when selling guaranteed final maturity REMICs with a more liquid instrument, and allow us to rebalance the options in our callable debt and REMICs portfolios. We may, from time to time, write other derivative contracts such as caps, floors, interest-rate futures and options on buy-up and buy-down commitments.

Commitments

We routinely enter into commitments that include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts. Most of these commitments are considered derivatives and therefore are subject to the accounting guidance for derivatives and hedging.

Swap Guarantee Derivatives

In connection with some of the guarantee arrangements pertaining to multifamily housing revenue bonds and multifamily pass-through certificates, we may also guarantee the sponsor's or the borrower's obligations as a counterparty on any related interest-rate swaps used to mitigate interest-rate risk, which are accounted for as swap guarantee derivatives.

Credit Derivatives

We entered into credit-risk sharing agreements for certain credit enhanced multifamily housing revenue bonds held by third parties in exchange for a monthly fee. In addition, we have purchased mortgage loans containing debt cancellation contracts, which provide for mortgage debt or payment cancellation for borrowers who experience unanticipated losses of income dependent on a covered event. The rights and obligations under these agreements have been assigned to the servicers. However, in the event the servicer does not perform as required by contract, under our guarantee, we would be obligated to make the required contractual payments.

For a discussion of our significant accounting policies related to derivatives, please see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Derivatives."

Derivative Assets and Liabilities at Fair Value

The table below presents the location and fair value of derivatives reported in our consolidated balance sheets.

Table 11.1 — Derivative Assets and Liabilities at Fair Value

	At December 31, 2011			At December 31, 2010		
	Notional or Contractual Amount	Derivatives at Fair Value		Notional or Contractual Amount	Derivatives at Fair Value	
		Assets[1]	Liabilities[1]		Assets[1]	Liabilities[1]
	(in millions)					
Total derivative portfolio						
Derivatives not designated as hedging instruments under the accounting guidance for derivatives and hedging[2]						
Interest-rate swaps:						
Receive-fixed	$211,808	$ 12,998	$ (108)	$ 324,590	$ 6,952	$ (3,267)
Pay-fixed	289,335	19	(34,507)	394,294	3,012	(24,210)
Basis (floating to floating)	2,750	5	(7)	2,375	6	(2)
Total interest-rate swaps	503,893	13,022	(34,622)	721,259	9,970	(27,479)
Option-based:						
Call swaptions						
Purchased	76,275	12,975	—	114,110	8,391	—
Written	27,525	—	(2,932)	11,775	—	(244)
Put Swaptions						
Purchased	70,375	638	—	59,975	1,404	—
Written	500	—	(2)	6,000	—	(8)
Other option-based derivatives[3]	38,549	2,256	(2)	47,234	1,460	(10)
Total option-based	213,224	15,869	(2,936)	239,094	11,255	(262)
Futures	41,281	5	—	212,383	3	(170)
Foreign-currency swaps	1,722	106	(9)	2,021	172	—
Commitments[4]	14,318	38	(94)	14,292	103	(123)
Credit derivatives	10,190	1	(5)	12,833	12	(5)
Swap guarantee derivatives	3,621	—	(37)	3,614	—	(36)
Total derivatives not designated as hedging instruments	788,249	29,041	(37,703)	1,205,496	21,515	(28,075)
Netting adjustments[5]		(28,923)	37,268		(21,372)	26,866
Total derivative portfolio, net	$788,249	$ 118	$ (435)	$1,205,496	$ 143	$ (1,209)

(1) The value of derivatives on our consolidated balance sheets is reported as derivative assets, net and derivative liabilities, net.
(2) See "Use of Derivatives" for additional information about the purpose of entering into derivatives not designated as hedging instruments and our overall risk management strategies.
(3) Primarily includes purchased interest-rate caps and floors.
(4) Commitments include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts.
(5) Represents counterparty netting, cash collateral netting, net trade/settle receivable or payable, and net derivative interest receivable or payable. The net cash collateral posted and net trade/settle receivable were $9.4 billion and $1 million, respectively, at December 31, 2011. The net cash collateral posted and net trade/settle receivable were $6.3 billion and $1 million, respectively, at December 31, 2010. The net interest receivable (payable) of derivative assets and derivative liabilities was approximately $(1.1) billion and $(0.8) billion at December 31, 2011 and 2010, respectively, which was mainly related to interest-rate swaps that we have entered into.

The carrying value of our derivatives on our consolidated balance sheets is equal to their fair value, including net derivative interest receivable or payable and net trade/settle receivable or payable and is net of cash collateral held or posted, where allowable by a master netting agreement. Derivatives in a net asset position are reported as derivative assets, net. Similarly, derivatives in a net liability position are reported as derivative liabilities, net. Cash collateral we obtained from counterparties to derivative contracts that has been offset against derivative assets at December 31, 2011 and 2010 was $3.2 billion and $2.2 billion, respectively. Cash collateral we posted to counterparties to derivative contracts that has been offset against derivative liabilities at December 31, 2011 and 2010 was $12.6 billion and $8.5 billion, respectively. We are subject to collateral posting thresholds based on the credit rating of our long-term senior unsecured debt securities from S&P or Moody's. The lowering or withdrawal of our credit rating by S&P or Moody's may increase our obligation to post collateral, depending on the amount of the counterparty's exposure to Freddie Mac with respect to the derivative transactions. As a result of S&P's downgrade of Freddie Mac's credit rating of our long-term senior unsecured debt from AAA to AA+ on August 8, 2011, we posted additional collateral to certain derivative counterparties in accordance with the terms of the derivative agreements.

The aggregate fair value of all derivative instruments with credit-risk-related contingent features that were in a liability position on December 31, 2011, was $12.7 billion for which we posted collateral of $12.6 billion in the normal course of business. If the credit-risk-related contingent features underlying these agreements had been triggered on December 31, 2011, we would have been required to post an additional $0.1 billion of collateral to our counterparties.

At December 31, 2011 and 2010, there were no amounts of cash collateral that were not offset against derivative assets, net or derivative liabilities, net, as applicable. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for further information related to our derivative counterparties.

Gains and Losses on Derivatives

The table below presents the gains and losses on derivatives reported in our consolidated statements of income and comprehensive income.

Table 11.2 — Gains and Losses on Derivatives

Derivatives in Cash Flow Hedging Relationships[1][2]	Amount of Gain or (Loss) Reclassified from AOCI into Earnings (Effective Portion)		
	Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Closed cash flow hedges[3]	$ (758)	$ (1,010)	$ (1,165)

Derivatives not designated as hedging instruments under the accounting guidance for derivatives and hedging[5]	Derivative Gains (Losses)[4]		
	Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Interest-rate swaps:			
Receive-fixed			
Foreign-currency denominated	$ (49)	$ (119)	$ 64
U.S. dollar denominated	12,686	9,825	(13,337)
Total receive-fixed swaps	12,637	9,706	(13,273)
Pay-fixed	(22,999)	(17,450)	27,078
Basis (floating to floating)	(5)	65	(194)
Total interest-rate swaps	(10,367)	(7,679)	13,611
Option based:			
Call swaptions			
Purchased	10,234	6,548	(10,566)
Written	(2,337)	(199)	248
Put swaptions			
Purchased	(1,614)	(1,621)	323
Written	14	82	(321)
Other option-based derivatives[6]	879	33	(370)
Total option-based	7,176	4,843	(10,686)
Futures	(154)	(210)	(300)
Foreign-currency swaps[7]	(41)	(468)	138
Commitments[8]	(1,340)	(85)	(708)
Credit derivatives	—	5	(4)
Swap guarantee derivatives	3	3	(20)
Other[9]	3	—	12
Subtotal	(4,720)	(3,591)	2,043
Accrual of periodic settlements:[10]			
Receive-fixed interest-rate swaps[11]	4,173	6,381	5,817
Pay-fixed interest-rate swaps	(9,241)	(10,909)	(9,964)
Foreign-currency swaps	22	19	89
Other	14	15	115
Total accrual of periodic settlements	(5,032)	(4,494)	(3,943)
Total	$ (9,752)	$ (8,085)	$ (1,900)

(1) Derivatives that meet specific criteria may be accounted for as cash flow hedges. Net deferred gains and losses on closed cash flow hedges (*i.e.*, where the derivative is either terminated or redesignated) are also included in AOCI until the related forecasted transaction affects earnings or is determined to be probable of not occurring.
(2) No amounts of gains or (losses) were recognized in AOCI on derivatives (effective portion) and in other income (ineffective portion and amount excluded from effectiveness testing).
(3) Amounts reported in AOCI related to changes in the fair value of commitments to purchase securities that were designated as cash flow hedges are recognized as basis adjustments to the related assets, which are amortized in earnings as interest income. Amounts linked to interest payments on long-term debt are recorded in other debt interest expense and amounts not linked to interest payments on long-term debt are recorded in expense related to derivatives.
(4) Gains (losses) are reported as derivative gains (losses) on our consolidated statements of income and comprehensive income.
(5) See "Use of Derivatives" for additional information about the purpose of entering into derivatives not designated as hedging instruments and our overall risk management strategies.
(6) Primarily includes purchased interest-rate caps and floors.
(7) Foreign-currency swaps are defined as swaps in which the net settlement is based on one leg calculated in a foreign-currency and the other leg calculated in U.S. dollars.
(8) Commitments include: (a) our commitments to purchase and sell investments in securities; (b) our commitments to purchase mortgage loans; and (c) our commitments to purchase and extinguish or issue debt securities of our consolidated trusts.
(9) Related to the bankruptcy of Lehman Brothers Holdings, Inc., or Lehman.
(10) For derivatives not in qualifying hedge accounting relationships, the accrual of periodic cash settlements is recorded in derivative gains (losses) on our consolidated statements of income and comprehensive income.
(11) Includes imputed interest on zero-coupon swaps.

Hedge Designation of Derivatives

At December 31, 2011 and 2010, we did not have any derivatives in hedge accounting relationships; however, there are deferred net losses recorded in AOCI related to closed cash flow hedges. As shown in "Table 11.3 — AOCI Related to Cash Flow Hedge Relationships", the total AOCI related to derivatives designated as cash flow hedges was a loss of $1.7 billion and $2.2 billion at December 31, 2011 and 2010, respectively, composed of deferred net losses on closed cash flow hedges. Closed cash flow hedges involve derivatives that have been terminated or are no longer designated as cash flow hedges. Fluctuations in prevailing market interest rates have no impact on the deferred portion of AOCI relating to losses on closed cash flow hedges.

The previous deferred amount related to closed cash flow hedges remains in our AOCI balance and will be recognized into earnings over the expected time period for which the forecasted transactions impact earnings. Over the next 12 months, we estimate that approximately $415 million, net of taxes, of the $1.7 billion of cash flow hedge losses in AOCI at December 31, 2011 will be reclassified into earnings. The maximum remaining length of time over which we have hedged the exposure related to the variability in future cash flows on forecasted transactions, primarily forecasted debt issuances, is 22 years. However, over 70% and 90% of AOCI relating to closed cash flow hedges at December 31, 2011 will be reclassified to earnings over the next five and ten years, respectively.

The table below presents the changes in AOCI related to derivatives designated as cash flow hedges. Net reclassifications of losses to earnings represents the AOCI amount that was recognized in earnings as the originally hedged forecasted transactions affected earnings, unless it was deemed probable that the forecasted transaction would not occur. If it is probable that the forecasted transaction will not occur, then the deferred gain or loss associated with the hedge related to the forecasted transaction would be reclassified into earnings immediately.

Table 11.3 — AOCI Related to Cash Flow Hedge Relationships

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Beginning balance[1]	$(2,239)	$(2,905)	$(3,678)
Cumulative effect of change in accounting principle[2]	—	(7)	—
Net reclassifications of losses to earnings[3]	509	673	773
Ending balance[1]	$(1,730)	$(2,239)	$(2,905)

(1) Represents net deferred gains and losses on closed (*i.e.*, terminated or redesignated) cash flow hedges.
(2) Represents adjustment to initially apply the accounting guidance for accounting for transfers of financial assets and consolidation of VIEs, as well as a change in the amortization method for certain related deferred items. Net of tax benefit of $4 million for the year ended December 31, 2010.
(3) Net of tax benefit of $249 million, $337 million, and $392 million for the years ended December 31, 2011, 2010, and 2009, respectively.

NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT)

Issuance of Senior Preferred Stock

Pursuant to the Purchase Agreement described in "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS," we issued one million shares of senior preferred stock to Treasury on September 8, 2008. The senior preferred stock was issued to Treasury in partial consideration of Treasury's commitment to provide funds to us under the Purchase Agreement.

Shares of the senior preferred stock have a par value of $1, and have a stated value and initial liquidation preference equal to $1,000 per share. The liquidation preference of the senior preferred stock is subject to adjustment. Dividends that are not paid in cash for any dividend period will accrue and be added to the liquidation preference of the senior preferred stock. In addition, any amounts Treasury pays to us pursuant to its funding commitment under the Purchase Agreement and any quarterly commitment fees that are not paid in cash to Treasury nor waived by Treasury will be added to the liquidation preference of the senior preferred stock. As described below, we may make payments to reduce the liquidation preference of the senior preferred stock in limited circumstances.

Treasury, as the holder of the senior preferred stock, is entitled to receive, when, as and if declared by our Board of Directors, cumulative quarterly cash dividends at the annual rate of 10% per year on the then-current liquidation preference of the senior preferred stock. Total dividends paid in cash during 2011, 2010, and 2009 at the direction of the Conservator were $6.5 billion, $5.7 billion, and $4.1 billion, respectively. If at any time we fail to pay cash dividends in a timely manner, then immediately following such failure and for all dividend periods thereafter until the dividend period following the date on which we have paid in cash full cumulative dividends (including any unpaid dividends added to the liquidation preference), the dividend rate will be 12% per year.

The senior preferred stock ranks ahead of our common stock and all other outstanding series of our preferred stock, as well as any capital stock we issue in the future, as to both dividends and rights upon liquidation. The senior preferred stock provides that we may not, at any time, declare or pay dividends on, make distributions with respect to, or redeem, purchase or acquire, or make a liquidation payment with respect to, any Freddie Mac common stock or other securities ranking junior to the senior preferred stock unless: (a) full cumulative dividends on the outstanding senior preferred stock (including any unpaid dividends added to the liquidation preference) have been declared and paid in cash; and (b) all amounts required to be paid with the net proceeds of any issuance of capital stock for cash (as described in the following paragraph) have been paid in cash. Shares of the senior preferred stock are not convertible. Shares of the senior preferred stock have no general or special voting rights, other than those set forth in the certificate of designation for the senior preferred stock or otherwise required by law. The consent of holders of at least two-thirds of all outstanding shares of senior preferred stock is generally required to amend the terms of the senior preferred stock or to create any class or series of stock that ranks prior to or on parity with the senior preferred stock.

We are not permitted to redeem the senior preferred stock prior to the termination of Treasury's funding commitment set forth in the Purchase Agreement; however, we are permitted to pay down the liquidation preference of the outstanding shares of senior preferred stock to the extent of: (a) accrued and unpaid dividends previously added to the liquidation preference and not previously paid down; and (b) quarterly commitment fees previously added to the liquidation preference and not previously paid down. In addition, if we issue any shares of capital stock for cash while the senior preferred stock is outstanding, the net proceeds of the issuance must be used to pay down the liquidation preference of the senior preferred stock; however, the liquidation preference of each share of senior preferred stock may not be paid down below $1,000 per share prior to the termination of Treasury's funding commitment. Following the termination of Treasury's funding commitment, we may pay down the liquidation preference of all outstanding shares of senior preferred stock at any time, in whole or in part. If, after termination of Treasury's funding commitment, we pay down the liquidation preference of each outstanding share of senior preferred stock in full, the shares will be deemed to have been redeemed as of the payment date.

The table below provides a summary of our senior preferred stock outstanding at December 31, 2011.

Table 12.1 — Senior Preferred Stock

	Draw Date	Shares Authorized	Shares Outstanding	Total Par Value	Initial Liquidation Preference Price per Share	Total Liquidation Preference[1]	Redeemable On or After[2]
		(in millions, except initial liquidation preference price per share)					
Senior preferred stock:[3]							
10%	September 8, 2008[4]	1.00	1.00	$1.00	$1,000	$ 1,000	N/A
10%[5]	November 24, 2008	—	—	—	N/A	13,800	N/A
10%[5]	March 31, 2009	—	—	—	N/A	30,800	N/A
10%[5]	June 30, 2009	—	—	—	N/A	6,100	N/A
10%[5]	June 30, 2010	—	—	—	N/A	10,600	N/A
10%[5]	September 30, 2010	—	—	—	N/A	1,800	N/A
10%[5]	December 30, 2010	—	—	—	N/A	100	N/A
10%[5]	March 31, 2011	—	—	—	N/A	500	N/A
10%[5]	September 30, 2011	—	—	—	N/A	1,479	N/A
10%[5]	December 30, 2011	—	—	—	N/A	5,992	N/A
Total, senior preferred stock		1.00	1.00	$1.00		$72,171	

(1) Amounts stated at redemption value.
(2) In accordance with the Purchase Agreement, until the senior preferred stock is repaid or redeemed in full, we may not, without the prior written consent of Treasury, redeem, purchase, retire or otherwise acquire any Freddie Mac equity securities (other than the senior preferred stock or warrant).
(3) Dividends on the senior preferred stock are cumulative, and the dividend rate is 10% per year. However, if at any time we fail to pay cash dividends in a timely manner, then immediately following such failure and for all dividend periods thereafter until the dividend period following the date on which we have paid in cash full cumulative dividends, the dividend rate will be 12% per year.
(4) We did not receive any cash proceeds from Treasury as a result of issuing the initial liquidation preference.
(5) Represents an increase in the liquidation preference of our senior preferred stock due to the receipt of funds from Treasury.

We received $500 million in March 2011, $1.5 billion in September 2011, and $6.0 billion in December 2011 pursuant to draw requests that FHFA submitted to Treasury on our behalf to address the deficits in our net worth as of December 31, 2010, June 30, 2011, and September 30, 2011, respectively. In addition, we had a deficit in net worth of $146 million as of December 31, 2011. See "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Government Support for our Business" for additional information regarding the draw request that FHFA, as Conservator, will submit on our behalf to Treasury to address our deficit in net worth. The aggregate liquidation preference on the senior preferred stock owned by Treasury was $72.2 billion and $64.2 billion as of December 31, 2011 and December 31, 2010, respectively. See "NOTE 15: REGULATORY CAPITAL" for additional information.

Common Stock Warrant

Pursuant to the Purchase Agreement described in "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS," on September 7, 2008, we, through FHFA, in its capacity as Conservator, issued a warrant to purchase common stock to Treasury. The warrant was issued to Treasury in partial consideration of Treasury's commitment to provide funds to us under the terms set forth in the Purchase Agreement.

The warrant gives Treasury the right to purchase shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding on a fully diluted basis on the date of exercise. The warrant may be exercised in whole or in part at any time on or before September 7, 2028, by delivery to us of: (a) a notice of exercise; (b) payment of the exercise price of $0.00001 per share; and (c) the warrant. If the market price of one share of our common stock is greater than the exercise price, then, instead of paying the exercise price, Treasury may elect to receive shares equal to the value of the warrant (or portion thereof being canceled) pursuant to the formula specified in the warrant. Upon exercise of the warrant, Treasury may assign the right to receive the shares of common stock issuable upon exercise to any other person.

We account for the warrant in permanent equity. At issuance on September 7, 2008, we recognized the warrant at fair value, and we do not recognize subsequent changes in fair value while the warrant remains classified in equity. We recorded an aggregate fair value of $2.3 billion for the warrant as a component of additional paid-in-capital. We derived the fair value of the warrant using a modified Black-Scholes model. If the warrant is exercised, the stated value of the common stock issued will be reclassified to common stock in our consolidated balance sheets. The warrant was determined to be in-substance non-voting common stock, because the warrant's exercise price of $0.00001 per share is considered non-substantive (compared to the market price of our common stock). As a result, the warrant is included in the computation of basic and diluted earnings (loss) per share. The weighted average shares of common stock outstanding for the years ended December 31, 2011, 2010, and 2009, respectively, included shares of common stock that would be issuable upon full exercise of the warrant issued to Treasury.

Preferred Stock

The table below provides a summary of our preferred stock outstanding at December 31, 2011. We have the option to redeem our preferred stock on specified dates, at their redemption price plus dividends accrued through the redemption date. However, without the consent of Treasury, we are restricted from making payments to purchase or redeem preferred stock as well as paying any preferred dividends, other than dividends on the senior preferred stock. In addition, all 24 classes of preferred stock are perpetual and non-cumulative, and carry no significant voting rights or rights to purchase additional Freddie Mac stock or securities. Costs incurred in connection with the issuance of preferred stock are charged to additional paid-in capital.

Table 12.2 — Preferred Stock

	Issue Date	Shares Authorized	Shares Outstanding	Total Par Value	Redemption Price per Share	Total Outstanding Balance[1]	Redeemable On or After[2]	OTC Symbol[3]
		(in millions, except initial liquidation preference price per share)						
Preferred stock:								
1996 Variable-rate[4]	April 26, 1996	5.00	5.00	$ 5.00	$50.00	$ 250	June 30, 2001	FMCCI
5.81%	October 27, 1997	3.00	3.00	3.00	50.00	150	October 27, 1998	(5)
5%	March 23, 1998	8.00	8.00	8.00	50.00	400	March 31, 2003	FMCKK
1998 Variable-rate[6]	September 23 and 29, 1998	4.40	4.40	4.40	50.00	220	September 30, 2003	FMCCG
5.10%	September 23, 1998	8.00	8.00	8.00	50.00	400	September 30, 2003	FMCCH
5.30%	October 28, 1998	4.00	4.00	4.00	50.00	200	October 30, 2000	(5)
5.10%	March 19, 1999	3.00	3.00	3.00	50.00	150	March 31, 2004	(5)
5.79%	July 21, 1999	5.00	5.00	5.00	50.00	250	June 30, 2009	FMCCK
1999 Variable-rate[7]	November 5, 1999	5.75	5.75	5.75	50.00	287	December 31, 2004	FMCCL
2001 Variable-rate[8]	January 26, 2001	6.50	6.50	6.50	50.00	325	March 31, 2003	FMCCM
2001 Variable-rate[9]	March 23, 2001	4.60	4.60	4.60	50.00	230	March 31, 2003	FMCCN
5.81%	March 23, 2001	3.45	3.45	3.45	50.00	173	March 31, 2011	FMCCO
6%	May 30, 2001	3.45	3.45	3.45	50.00	173	June 30, 2006	FMCCP
2001 Variable-rate[10]	May 30, 2001	4.02	4.02	4.02	50.00	201	June 30, 2003	FMCCJ
5.70%	October 30, 2001	6.00	6.00	6.00	50.00	300	December 31, 2006	FMCKP
5.81%	January 29, 2002	6.00	6.00	6.00	50.00	300	March 31, 2007	(5)
2006 Variable-rate[11]	July 17, 2006	15.00	15.00	15.00	50.00	750	June 30, 2011	FMCCS
6.42%	July 17, 2006	5.00	5.00	5.00	50.00	250	June 30, 2011	FMCCT
5.90%	October 16, 2006	20.00	20.00	20.00	25.00	500	September 30, 2011	FMCKO
5.57%	January 16, 2007	44.00	44.00	44.00	25.00	1,100	December 31, 2011	FMCKM
5.66%	April 16, 2007	20.00	20.00	20.00	25.00	500	March 31, 2012	FMCKN
6.02%	July 24, 2007	20.00	20.00	20.00	25.00	500	June 30, 2012	FMCKL
6.55%	September 28, 2007	20.00	20.00	20.00	25.00	500	September 30, 2017	FMCKI
2007 Fixed-to-floating rate[12]	December 4, 2007	240.00	240.00	240.00	25.00	6,000	December 31, 2012	FMCKJ
Total, preferred stock		464.17	464.17	$464.17		$14,109		

(1) Amounts stated at redemption value.
(2) In accordance with the Purchase Agreement, until the senior preferred stock is repaid or redeemed in full, we may not, without the prior written consent of Treasury, redeem, purchase, retire or otherwise acquire any Freddie Mac equity securities (other than the senior preferred stock or warrant).
(3) Preferred stock trades exclusively through the OTC market unless otherwise noted.
(4) Dividend rate resets quarterly and is equal to the sum of three-month LIBOR plus 1% divided by 1.377, and is capped at 9.00%.
(5) Issued through private placement.
(6) Dividend rate resets quarterly and is equal to the sum of three-month LIBOR plus 1% divided by 1.377, and is capped at 7.50%.
(7) Dividend rate resets on January 1 every five years after January 1, 2005 based on a five-year Constant Maturity Treasury rate, and is capped at 11.00%. Optional redemption on December 31, 2004 and on December 31 every five years thereafter.
(8) Dividend rate resets on April 1 every two years after April 1, 2003 based on the two-year Constant Maturity Treasury rate plus 0.10%, and is capped at 11.00%. Optional redemption on March 31, 2003 and on March 31 every two years thereafter.
(9) Dividend rate resets on April 1 every year based on 12-month LIBOR minus 0.20%, and is capped at 11.00%. Optional redemption on March 31, 2003 and on March 31 every year thereafter.
(10) Dividend rate resets on July 1 every two years after July 1, 2003 based on the two-year Constant Maturity Treasury rate plus 0.20%, and is capped at 11.00%. Optional redemption on June 30, 2003 and on June 30 every two years thereafter.
(11) Dividend rate resets quarterly and is equal to the sum of three-month LIBOR plus 0.50% but not less than 4.00%.
(12) Dividend rate is set at an annual fixed rate of 8.375% from December 4, 2007 through December 31, 2012. For the period beginning on or after January 1, 2013, dividend rate resets quarterly and is equal to the higher of: (a) the sum of three-month LIBOR plus 4.16% per annum; or (b) 7.875% per annum. Optional redemption on December 31, 2012, and on December 31 every five years thereafter.

Stock-Based Compensation

Following the implementation of the conservatorship in September 2008, we suspended the operation of our ESPP, and are no longer making grants under our 2004 Employee Plan or our Directors' Plan. We collectively refer to the 2004 Employee Plan and the 1995 Employee Plan as the Employee Plans. Under the Purchase Agreement, we cannot issue any new options, rights to purchase, participations or other equity interests without Treasury's prior approval. However, grants outstanding as of the date of the Purchase Agreement remain in effect in accordance with their terms.

We did not repurchase or issue any of our common shares or non-cumulative preferred stock during 2011 and 2010, except for issuances of treasury stock as reported on our consolidated statements of equity (deficit) relating to stock-based compensation granted prior to conservatorship. Common stock delivered under these stock-based compensation plans consists of treasury stock or shares acquired in market transactions on behalf of the participants. During 2011, restrictions lapsed on 851,131 restricted stock units and 37,630 restricted stock units were forfeited. At December 31, 2011, 491,363 restricted stock units remained outstanding. In addition, there were 41,160 shares of restricted stock outstanding at both December 31, 2011 and 2010. During 2011, no stock options were exercised and 1,160,820 stock options were forfeited or expired. At December 31, 2011, 2,021,632 stock options were outstanding.

For purposes of the earnings-per-share calculation, antidilutive potential common shares excluded from the computation of dilutive potential common shares were 3,383,185, 5,290,347, and 7,541,077 at December 31, 2011, 2010, and 2009, respectively.

Dividends Declared During 2011

No common dividends were declared in 2011. During 2011, we paid dividends of $6.5 billion in cash on the senior preferred stock at the direction of our Conservator. We did not declare or pay dividends on any other series of Freddie Mac preferred stock outstanding during 2011.

On March 30, 2010, our REIT subsidiaries paid preferred stock dividends for one quarter, consistent with approval from Treasury and direction from FHFA. During 2010, each of our two REIT subsidiaries was eliminated via a merger transaction and no other preferred or common stock dividends were paid by the REITs during the year ended December 31, 2010.

Delisting of Common Stock and Preferred Stock from NYSE

On July 8, 2010, we delisted our common and 20 previously-listed classes of preferred securities from the NYSE pursuant to a directive by FHFA, our Conservator.

Our common stock and the classes of preferred stock that were previously listed on the NYSE are traded exclusively in the OTC market. Shares of our common stock now trade under the ticker symbol FMCC. We expect that our common stock and the previously listed classes of preferred stock will continue to trade in the OTC market so long as market makers demonstrate an interest in trading the common and preferred stock.

NOTE 13: INCOME TAXES

Income Tax Benefit

We are exempt from state and local income taxes. The table below presents the components of our income tax benefit for 2011, 2010, and 2009.

Table 13.1 — Federal Income Tax Benefit

	Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Current income tax benefit	$283	$186	$160
Deferred income tax benefit	117	670	670
Total income tax benefit[1]	$400	$856	$830

(1) Does not reflect: (a) the deferred tax effects of unrealized (gains) losses on available-for-sale securities, the tax effects of net (gains) losses related to the effective portion of derivatives designated in cash flow hedge relationships, and the tax effects of certain changes in our defined benefit plans which are reported as part of AOCI; (b) certain stock-based compensation tax effects reported as part of additional paid-in capital; and (c) the tax effect of the cumulative effect of change in accounting principles.

A reconciliation between our federal statutory income tax rate and our effective tax rate for 2011, 2010, and 2009 is presented in the table below.

Table 13.2 — Reconciliation of Statutory to Effective Tax Rate

	Year Ended December 31,					
	2011		2010		2009	
	Amount	Percent	Amount	Percent	Amount	Percent
	(dollars in millions)					
Statutory corporate tax rate	$ 1,983	35.0%	$ 5,209	35.0%	$ 7,834	35.0%
Tax-exempt interest	179	3.2	213	1.4	252	1.1
Tax credits	566	10.0	585	3.9	594	2.7
Unrecognized tax benefits and related interest/contingency reserves	(21)	(0.4)	(12)	(0.1)	(12)	(0.1)
Valuation allowance	(2,325)	(41.0)	(5,155)	(34.6)	(7,860)	(35.1)
Other	18	0.3	16	0.1	22	0.1
Effective tax rate	$ 400	7.1%	$ 856	5.7%	$ 830	3.7%

In 2011, 2010, and 2009, our effective tax rate differs from the statutory tax rate of 35% primarily due to the establishment of a valuation allowance against a portion of our net deferred tax assets. Our income tax benefits recognized in 2011, 2010, and 2009 represent amounts related to the amortization of net deferred losses on pre-2008 closed cash flow hedges, as well as the current tax benefits associated with our ability to carry back net operating tax losses generated in 2008 and 2009.

Deferred Tax Assets, Net

The sources and tax effects of temporary differences that give rise to significant deferred tax assets and liabilities for the years ended December 31, 2011 and 2010 are presented in the table below.

Table 13.3 — Deferred Tax Assets, Net

	2011	2010
	(in millions)	
Deferred tax assets:		
Deferred fees	$ 3,957	$ 1,561
Basis differences related to derivative instruments	4,903	4,630
Credit related items and allowance for loan losses	12,398	17,850
Unrealized (gains) losses related to available-for-sale securities	3,345	5,211
LIHTC and AMT credit carryforward	2,885	2,360
Net operating loss carryforward, net of unrecognized tax benefits	18,053	12,122
Other items, net	172	268
Total deferred tax assets	45,713	44,002
Deferred tax liabilities:		
Basis differences related to assets held for investment[1]	(6,367)	(4,886)
Basis differences related to debt	(140)	(192)
Total deferred tax liability	(6,507)	(5,078)
Valuation allowance[2]	(35,660)	(33,381)
Deferred tax assets, net	$ 3,546	$ 5,543

(1) The deferred tax liability balance for basis differences related to assets held for investment includes a basis adjustment on seriously delinquent loans. This deferred tax liability offsets a portion of the deferred tax asset for credit related items and allowance for loan losses.
(2) The valuation allowance as of December 31, 2010 includes $3.1 billion related to the adoption of the accounting guidance for transfers of financial assets and consolidation of VIEs.

We use the asset and liability method to account for income taxes in accordance with the accounting guidance for income taxes. Under this method, deferred tax assets and liabilities are recognized based upon the expected future tax consequences of existing temporary differences between the financial reporting and the tax reporting basis of assets and liabilities using enacted statutory tax rates. Valuation allowances are recorded to reduce net deferred tax assets when it is more likely than not that a tax benefit will not be realized. The realization of our net deferred tax assets is dependent upon the generation of sufficient taxable income in available carryback years from current operations and unrecognized tax benefits, and upon our intent and ability to hold available-for-sale debt securities until the recovery of any temporary unrealized losses.

After evaluating all available evidence, including our losses, the events and developments related to our conservatorship, volatility in the economy, and related difficulty in forecasting future profit levels, we continue to record a valuation allowance on a portion of our net deferred tax assets as of December 31, 2011 and 2010. Our valuation allowance increased by $2.3 billion during 2011 to $35.7 billion, primarily attributable to an increase in temporary differences during the period. As of December 31, 2011, after consideration of the valuation allowance, we had a net deferred tax asset of $3.5 billion, primarily representing the tax effect of unrealized losses on our available-for-sale securities. We believe the deferred tax asset related to these unrealized losses is more likely than not to be realized because of our assertion that we have the intent and ability to hold our available-for-sale securities until any temporary unrealized losses are recovered.

As of December 31, 2011, we had a net operating loss carryforward of $51.6 billion and a LIHTC carryforward of $2.9 billion that will expire over multiple years beginning in 2030 and 2027, respectively. Our AMT credit carryforward of $4 million will not expire.

Unrecognized Tax Benefits

Table 13.4 — Unrecognized Tax Benefits

	2011	2010	2009
		(in millions)	
Balance at January 1	$1,220	$ 805	$636
Changes based on tax positions in prior years	130	372	(34)
Changes based on tax positions in current years	6	48	203
Decreases in unrecognized tax benefits due to settlements with taxing authorities	(1)	(5)	—
Balance at December 31	$1,355	$1,220	$805

At December 31, 2011, we had total unrecognized tax benefits, exclusive of interest, of $1.4 billion. This amount relates to tax positions for which ultimate deductibility is highly certain, but for which there is uncertainty as to the

timing of such deductibility. If favorably resolved, $1.2 billion of unrecognized tax benefits would have a positive impact on the effective tax rate due to the reversal of the valuation allowance established against deferred tax assets created by the uncertain tax positions. This favorable impact would be offset by a $201 million tax expense related to the establishment of a valuation allowance against credits that have been carried forward. A valuation allowance has not been recorded against this amount because a portion of the unrecognized tax benefits was used as a source of taxable income in our realization assessment of our net deferred tax assets.

We continue to recognize interest and penalties, if any, in income tax expense. The net accrued interest receivable was approximately $254 million at December 31, 2011, a $9 million change from December 31, 2010. Amounts included in total accrued interest relate to: (a) unrecognized tax benefits; (b) pending claims with the IRS for open tax years; (c) the tax benefit related to the settlement for tax years 1985 to 1997; and (d) the impact of payments made to the IRS in prior years in anticipation of potential tax deficiencies. Included in the $254 million of net accrued interest receivable as of December 31, 2011 and $245 million as of December 31, 2010, is interest payable of approximately $266 million and $248 million, respectively, which is allocable to unrecognized tax benefits. We have accrued no amounts for penalties during 2011, 2010, or 2009.

The period for assessment under the statute of limitations for federal income tax purposes is open on corporate income tax returns filed for tax years 1998 to 2010. We received Statutory Notices from the IRS assessing $3.0 billion of additional income taxes and penalties for the 1998 to 2007 tax years, principally related to questions of timing and potential penalties regarding our tax accounting method for certain hedging transactions. We filed a petition with the U.S. Tax Court on October 22, 2010 in response to the Statutory Notices for tax years 1998 to 2005. The IRS responded to our petition with the U.S. Tax Court on December 21, 2010. On July 6, 2011, the U.S. Tax Court issued a Notice Setting Case for Trial and a Standing Pretrial Order. The trial date set forth in the Notice was December 12, 2011. On September 7, 2011, a joint motion for continuance was filed with the U.S. Tax Court. The joint motion was granted and on October 11, 2011 the parties submitted a status report and the court set a revised trial date of November 5, 2012. We paid the tax assessed in the Statutory Notice received in December 2011 for the years 2006 to 2007 of $36 million and will seek a refund through the administrative process, which could include filing suit in Federal District Court.

We believe appropriate reserves have been provided for settlement on reasonable terms. However, changes could occur in the gross balance of unrecognized tax benefits that could have a material impact on income tax expense in the period the issue is resolved if the outcome reached is not in our favor and the assessment is in excess of the amount currently reserved. In light of the revised trial date, the fact that no settlement discussions have occurred for an extended period of time, and the information currently available, we do not believe it is reasonably possible that the issue will be resolved within the next 12 months.

For a discussion of our significant accounting policies related to income taxes, please see "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Income Taxes."

NOTE 14: SEGMENT REPORTING

We evaluate segment performance and allocate resources based on a Segment Earnings approach, subject to the conduct of our business under the direction of the Conservator. See "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS" for additional information about the conservatorship.

We present Segment Earnings by: (a) reclassifying certain investment-related activities and credit guarantee-related activities between various line items on our GAAP consolidated statements of income and comprehensive income; and (b) allocating certain revenues and expenses, including certain returns on assets and funding costs, and all administrative expenses to our three reportable segments. These reclassifications and allocations are described in "Segment Earnings."

We do not consider our assets by segment when evaluating segment performance or allocating resources. We conduct our operations solely in the U.S. and its territories. Therefore, we do not generate any revenue from geographic locations outside of the U.S. and its territories.

Segments

Our operations consist of three reportable segments, which are based on the type of business activities each performs — Investments, Single-family Guarantee, and Multifamily. The chart below provides a summary of our three reportable segments and the All Other category. As reflected in the chart, certain activities that are not part of a reportable segment are included in the All Other category. The All Other category consists of material corporate level expenses that are: (a) infrequent in nature; and (b) based on management decisions outside the control of the management of our reportable segments. By recording these types of activities to the All Other category, we believe the financial results of our three reportable segments reflect the decisions and strategies that are executed within the reportable segments and provide greater comparability across time periods. Items included in the All Other category consist of: (a) the deferred tax asset valuation allowance associated with previously recognized income tax credits carried forward; and (b) in 2009, the write-down of our LIHTC investments. Other items previously recorded in the All Other category prior to the revision to our method for presenting Segment Earnings on January 1, 2010, as discussed below, have been allocated to our three reportable segments.

Segment	Description	Activities/Items
Investments	The Investments segment reflects results from our investment, funding and hedging activities. In our Investments segment, we invest principally in mortgage-related securities and single-family performing mortgage loans, which are funded by other debt issuances and hedged using derivatives. In our Investments segment, we also provide funding and hedging management services to the Single-family Guarantee and Multifamily segments. The Investments segment reflects changes in the fair value of the Multifamily segment assets that are associated with changes in interest rates. Segment Earnings for this segment consist primarily of the returns on these investments, less the related funding, hedging, and administrative expenses.	• Investments in mortgage-related securities and single-family performing mortgage loans • Investments in asset-backed securities • All other traded instruments / securities, excluding CMBS and multifamily housing revenue bonds • Debt issuances • All asset / liability management returns • Guarantee buy-ups / buy-downs, net of execution gains / losses • Cash and liquidity management • Deferred tax asset valuation allowance • Allocated administrative expenses and taxes
Single-Family Guarantee	The Single-family Guarantee segment reflects results from our single-family credit guarantee activities. In our Single-family Guarantee segment, we purchase single-family mortgage loans originated by our seller/servicers in the primary mortgage market. In most instances, we use the mortgage securitization process to package the purchased mortgage loans into guaranteed mortgage-related securities. We guarantee the payment of principal and interest on the mortgage-related security in exchange for management and guarantee fees. Segment Earnings for this segment consist primarily of management and guarantee fee revenues, including amortization of upfront fees, less credit-related expenses, administrative expenses, allocated funding costs, and amounts related to net float benefits or expenses.	• Management and guarantee fees on PCs, including those retained by us, and single-family mortgage loans in the mortgage investments portfolio • Up-front credit delivery fees • Adjustments for security performance • Credit losses on all single-family assets • Expected net float income or expense on the single-family credit guarantee portfolio • Deferred tax asset valuation allowance • Allocated debt costs, administrative expenses and taxes
Multifamily	The Multifamily segment reflects results from our investment (both purchases and sales), securitization, and guarantee activities in multifamily mortgage loans and securities. Although we hold multifamily mortgage loans and non-agency CMBS that we purchased for investment, our purchases of such multifamily mortgage loans for investment have declined significantly since 2010, and our purchases of CMBS have declined significantly since 2008. The only CMBS that we have purchased since 2008 have been senior, mezzanine, and interest-only tranches related to certain of our securitization transactions, and these purchases have not been significant. Currently, our primary business strategy is to purchase multifamily mortgage loans for aggregation and then securitization. We guarantee the senior tranches of these securitizations in Other Guarantee Transactions. Our Multifamily segment also issues Other Structured Securities, but does not issue REMIC securities. Our Multifamily segment also enters into other guarantee commitments for multifamily HFA bonds and housing revenue bonds held by third parties. Historically, we issued multifamily PCs, but this activity has been insignificant in recent years. Segment Earnings for this segment consist primarily of the interest earned on assets related to multifamily investment activities and management and guarantee fee income, less credit-related expenses, administrative expenses, and allocated funding costs. In addition, the Multifamily segment reflects gains on sale of mortgages and the impact of changes in fair value of CMBS and held-for-sale loans associated only with factors other than changes in interest rates, such as liquidity and credit.	• Multifamily mortgage loans held-for-sale and associated securitization activities • Investments in CMBS, multifamily housing revenue bonds, and multifamily mortgage loans held-for-investment • Allocated debt costs, administrative expenses and taxes • Other guarantee commitments on multifamily HFA bonds and housing revenue bonds • LIHTC and valuation allowance • Deferred tax asset valuation allowance
All Other	The All Other category consists of material corporate-level expenses that are:(a) infrequent in nature; and(b) based on management decisions outside the control of the management of our reportable segments.	• LIHTC write-down • Tax settlements, as applicable • Legal settlements, as applicable • The deferred tax asset valuation allowance associated with previously recognized income tax credits carried forward.

Segment Earnings

Beginning January 1, 2010, we revised our method for presenting Segment Earnings to reflect changes in how management measures and assesses the performance of each segment and the company as a whole. This change in method, in conjunction with our implementation of changes in accounting guidance relating to transfers of financial assets and the consolidation of VIEs, resulted in significant changes to our presentation of Segment Earnings. Under the revised method, the financial performance of our Single-family Guarantee segment and Multifamily segment are measured based on each segment's contribution to GAAP net income (loss). Our Investments segment is measured on its contribution to GAAP total comprehensive income (loss), which consists of the sum of its contribution to: (a) GAAP net income (loss); and (b) GAAP total other comprehensive income, net of taxes. Beginning January 1, 2010, under the revised method, the sum of Segment Earnings for each segment and the All Other category equals GAAP net income (loss) attributable to Freddie Mac.

Segment Earnings for 2009 reflects the changes in our method of measuring and assessing the performance of our reportable segments described above. However, Segment Earnings for 2009 does not include changes to the guarantee asset, guarantee obligation or other items that were eliminated or changed as a result of our implementation of the amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs adopted on January 1, 2010, as this change was applied prospectively consistent with our GAAP results. Consequently, our Segment Earnings results for 2011 and 2010 are not directly comparable with the results for 2009. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" for further information regarding the consolidation of certain of our securitization trusts.

The sum of Segment Earnings for each segment and the All Other category equals GAAP net income (loss) attributable to Freddie Mac. Likewise, the sum of total comprehensive income (loss) for each segment and the All Other category equals GAAP total comprehensive income (loss) attributable to Freddie Mac. However, the accounting principles we apply to present certain financial statement line items in Segment Earnings for our reportable segments, in particular Segment Earnings net interest income and management and guarantee income, differ significantly from those applied in preparing the comparable line items in our consolidated financial statements prepared in accordance with GAAP. Accordingly, the results of such line items differ significantly from, and should not be used as a substitute for, the comparable line items as determined in accordance with GAAP. For reconciliations of the Segment Earnings line items to the comparable line items in our consolidated financial statements prepared in accordance with GAAP, see "Table 14.2 — Segment Earnings and Reconciliation to GAAP Results."

Many of the reclassifications, adjustments and allocations described below relate to the amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs. These amendments require us to consolidate our single-family PC trusts and certain Other Guarantee Transactions, which makes it difficult to view the results of the three operating segments from a GAAP perspective. For example, as a result of the amendments, the net guarantee fee earned on mortgage loans held by our consolidated trusts is included in net interest income on our GAAP consolidated statements of income and comprehensive income. Previously, we separately recorded the guarantee fee on our GAAP consolidated statements of income and comprehensive income as a component of non-interest income. Through the reclassifications described below, we move the net guarantee fees earned on mortgage loans into Segment Earnings management and guarantee income.

Investment Activity-Related Reclassifications

In preparing certain line items within Segment Earnings, we make various reclassifications to earnings determined under GAAP related to our investment activities, including those described below. Through these reclassifications, we move certain items into or out of net interest income so that, on a Segment Earnings basis, net interest income reflects how we measure the effective interest on securities held in our mortgage investments portfolio and our cash and other investments portfolio.

We use derivatives extensively in our investment activity. The reclassifications described below allow us to reflect, in Segment Earnings net interest income, the costs associated with this use of derivatives.

- The accrual of periodic cash settlements of all derivatives is reclassified in Segment Earnings from derivative gains (losses) into net interest income to fully reflect the periodic cost associated with the protection provided by these contracts.
- Up-front cash paid or received upon the purchase or writing of swaptions and other option contracts is reclassified in Segment Earnings prospectively on a straight-line basis from derivative gains (losses) into net interest income

over the contractual life of the instrument to fully reflect the periodic cost associated with the protection provided by these contracts.

Amortization related to certain items is not relevant to how we measure the economic yield earned on the securities held in our investments portfolio. Therefore, as described below, we reclassify these items in Segment Earnings from net interest income to non-interest income.

- Amortization related to derivative commitment basis adjustments associated with mortgage-related and non-mortgage-related securities is reclassified in Segment Earnings from net interest income to non-interest income.
- Amortization related to accretion of other-than-temporary impairments on non-mortgage-related securities held in our cash and other investments portfolio is reclassified in Segment Earnings from net interest income to non-interest income.
- Amortization related to premiums and discounts associated with PCs and Other Guarantee Transactions issued by our consolidated trusts that we previously held and subsequently transferred to third parties is reclassified in Segment Earnings from net interest income to non-interest income. The amortization is related to deferred gains (losses) on transfers of these securities.

Credit Guarantee Activity-Related Reclassifications

In preparing certain line items within Segment Earnings, we make various reclassifications to earnings determined under GAAP related to our credit-guarantee activities, including those described below. All credit guarantee-related income and costs are included in Segment Earnings management and guarantee income.

- Net guarantee fee is reclassified in Segment Earnings from net interest income to management and guarantee income.
- Implied management and guarantee fee related to unsecuritized mortgage loans held in the mortgage investments portfolio is reclassified in Segment Earnings from net interest income to management and guarantee income.
- The portion of the amount reversed for accrued but uncollected interest upon placing loans on a non-accrual status that relates to guarantee fees is reclassified in Segment Earnings from net interest income to management and guarantee income. The remaining portion of the allowance for lost interest is reclassified in Segment Earnings from net interest income to provision for credit losses. Under GAAP-basis earnings and Segment Earnings, the guarantee fee is not accrued on loans three monthly payments or more past due.

Segment Adjustments

In presenting Segment Earnings net interest income and management and guarantee income, we make adjustments to better reflect how management measures and assesses the performance of each segment and the company as a whole. These adjustments relate to amounts that, effective January 1, 2010, are no longer reflected in net income (loss) as determined in accordance with GAAP as a result of the adoption of accounting guidance for the transfers of financial assets and the consolidation of VIEs. These adjustments are reversed through the segment adjustments line item within Segment Earnings, so that Segment Earnings (loss) for each segment equals GAAP net income (loss) attributable to Freddie Mac for each segment. Segment adjustments consist of the following:

- We adjust our Segment Earnings net interest income for the Investments segment to include the amortization of cash premiums and discounts and buy-up and buy-down fees on the consolidated Freddie Mac mortgage-related securities we purchase as investments. As of December 31, 2011, the unamortized balance of such premiums and discounts and buy-up and buy-down fees was $1.6 billion. These adjustments are necessary to reflect the economic yield realized on investments in consolidated Freddie Mac mortgage-related securities purchased at a premium or discount or with buy-up or buy-down fees.
- We adjust our Segment Earnings management and guarantee income for the Single-family Guarantee segment to include the amortization of delivery fees recorded in periods prior to the January 1, 2010 adoption of accounting guidance for the transfers of financial assets and the consolidation of VIEs. As of December 31, 2011, the unamortized balance of such fees was $2.2 billion. We consider such fees to be part of the effective rate of the guarantee fee on guaranteed mortgage loans. This adjustment is necessary in order to better reflect the realization of revenue associated with guarantee contracts over the life of the underlying loans.

Segment Allocations

The results of each reportable segment include directly attributable revenues and expenses. Administrative expenses that are not directly attributable to a segment are allocated to our segments using various methodologies, depending on the nature of the expense (*i.e.*, semi-direct versus indirect). Net interest income for each segment includes allocated debt funding costs related to certain assets of each segment. These allocations, however, do not include the effects of dividends paid on our senior preferred stock. The tax credits generated by the LIHTC partnerships and any valuation allowance on these tax credits are allocated to the Multifamily segment. The deferred tax asset valuation allowance associated with previously recognized income tax credits carried forward is allocated to the "All Other" category. All remaining taxes are calculated based on a 35% federal statutory rate as applied to pre-tax Segment Earnings.

The table below presents Segment Earnings by segment.

Table 14.1 — Summary of Segment Earnings and Total Comprehensive Income (Loss)[1]

	Year Ended December 31,		
	2011	2010	2009
		(in millions)	
Segment Earnings (loss), net of taxes:			
Investments	$ 3,366	$ 1,251	$ 6,476
Single-family Guarantee	(10,000)	(16,256)	(27,143)
Multifamily	1,319	965	(511)
All Other	49	15	(4,240)
Total Segment Earnings (loss), net of taxes	(5,266)	(14,025)	(25,418)
Reconciliation to GAAP net income (loss) attributable to Freddie Mac:			
Credit guarantee-related adjustments[2]	—	—	5,948
Tax-related adjustments	—	—	(2,083)
Total reconciling items, net of taxes	—	—	3,865
Net income (loss) attributable to Freddie Mac	$ (5,266)	$(14,025)	$(21,553)
Total comprehensive income (loss) of segments:			
Investments	$ 6,473	$ 11,477	$ 17,805
Single-family Guarantee	(9,970)	(16,250)	(27,124)
Multifamily	2,218	5,040	6,781
All Other	49	15	(4,240)
Total comprehensive income (loss) of segments	(1,230)	282	(6,778)
Reconciliation to GAAP net income (loss) attributable to Freddie Mac:			
Credit guarantee-related adjustments[2]	—	—	5,948
Tax-related adjustments	—	—	(2,083)
Total reconciling items, net of taxes	—	—	3,865
Total comprehensive income (loss) attributable to Freddie Mac	$ (1,230)	$ 282	$ (2,913)

(1) Beginning January 1, 2010, the sum of Segment Earnings for each segment and the All Other category equals GAAP net income (loss) attributable to Freddie Mac. Likewise, the sum of total comprehensive income (loss) for each segment and the All Other category equals GAAP total comprehensive income (loss) attributable to Freddie Mac.

(2) Consists primarily of amortization and valuation adjustments related to the guarantee asset and guarantee obligation which are excluded from Segment Earnings and cash compensation exchanged at the time of securitization, excluding buy-up and buy-down fees, which is amortized into earnings. These reconciling items exist in periods prior to 2010 as the amendment to the accounting guidance for transfers of financial assets and consolidation of VIEs was applied prospectively on January 1, 2010.

The table below presents detailed financial information by financial statement line item for our reportable segments and All Other.

Table 14.2 — Segment Earnings and Reconciliation to GAAP Results

Year Ended December 31, 2011

	Investments	Single-family Guarantee	Multifamily	All Other	Total Segment Earnings (Loss), Net of Taxes	Reconciliation to Consolidated Statements of Income and Comprehensive Income: Reclassifications[1]	Segment Adjustments[2]	Total Reconciling Items	Total per Consolidated Statements of Income and Comprehensive Income
					(in millions)				
Net interest income	$ 7,339	$ (23)	$1,200	$—	$ 8,516	$ 9,220	$ 661	$ 9,881	$ 18,397
(Provision) benefit for credit losses	—	(12,294)	196	—	(12,098)	1,396	—	1,396	(10,702)
Non-interest income (loss):									
Management and guarantee income[3]	—	3,647	127	—	3,774	(2,905)	(699)	(3,604)	170
Net impairment of available-for-sale securities recognized in earnings	(1,833)	—	(353)	—	(2,186)	(115)	—	(115)	(2,301)
Derivative gains (losses)	(3,597)	—	3	—	(3,594)	(6,158)	—	(6,158)	(9,752)
Gains (losses) on trading securities	(993)	—	39	—	(954)	—	—	—	(954)
Gains (losses) on sale of mortgage loans	28	—	383	—	411	—	—	—	411
Gains (losses) on mortgage loans recorded at fair value	501	—	(83)	—	418	—	—	—	418
Other non-interest income (loss)	1,266	1,216	86	—	2,568	(1,438)	—	(1,438)	1,130
Non-interest expense:									
Administrative expenses	(398)	(888)	(220)	—	(1,506)	—	—	—	(1,506)
REO operations income (expense)	—	(596)	11	—	(585)	—	—	—	(585)
Other non-interest expense	(2)	(321)	(69)	—	(392)	—	—	—	(392)
Segment adjustments[2]	661	(699)	—	—	(38)	—	38	38	—
Income tax (expense) benefit	394	(42)	(1)	49	400	—	—	—	400
Net income (loss)	3,366	(10,000)	1,319	49	(5,266)	—	—	—	(5,266)
Total other comprehensive income, net of taxes	3,107	30	899	—	4,036	—	—	—	4,036
Comprehensive income (loss)	$ 6,473	$ (9,970)	$2,218	$49	$ (1,230)	$ —	$ —	$ —	$ (1,230)

Year Ended December 31, 2010

	Investments	Single-family Guarantee	Multifamily	All Other	Total Segment Earnings (Loss), Net of Taxes	Reconciliation to Consolidated Statements of Income and Comprehensive Income: Reclassifications[1]	Segment Adjustments[2]	Total Reconciling Items	Total per Consolidated Statements of Income and Comprehensive Income
					(in millions)				
Net interest income	$ 6,192	$ 72	$1,114	$—	$ 7,378	$ 8,120	$1,358	$ 9,478	$ 16,856
Provision for credit losses	—	(18,785)	(99)	—	(18,884)	1,666	—	1,666	(17,218)
Non-interest income (loss):									
Management and guarantee income[3]	—	3,635	101	—	3,736	(2,640)	(953)	(3,593)	143
Net impairment of available-for-sale securities recognized in earnings	(3,819)	—	(96)	—	(3,915)	(393)	—	(393)	(4,308)
Derivative gains (losses)	(1,859)	—	6	—	(1,853)	(6,232)	—	(6,232)	(8,085)
Gains (losses) on trading securities	(1,386)	—	47	—	(1,339)	—	—	—	(1,339)
Gains (losses) on sale of mortgage loans	(76)	—	343	—	267	—	—	—	267
Gains (losses) on mortgage loans recorded at fair value	34	—	(283)	—	(249)	—	—	—	(249)
Other non-interest income (loss)	1,023	1,351	130	—	2,504	(521)	—	(521)	1,983
Non-interest expense:									
Administrative expenses	(455)	(930)	(212)	—	(1,597)	—	—	—	(1,597)
REO operations income (expense)	—	(676)	3	—	(673)	—	—	—	(673)
Other non-interest expense	(18)	(578)	(66)	—	(662)	—	—	—	(662)
Segment adjustments[2]	1,358	(953)	—	—	405	—	(405)	(405)	—
Income tax (expense) benefit	259	608	(26)	15	856	—	—	—	856
Net income (loss)	1,253	(16,256)	962	15	(14,026)	—	—	—	(14,026)
Less: net (income) loss — noncontrolling interests	(2)	—	3	—	1	—	—	—	1
Net income (loss) attributable to Freddie Mac	1,251	(16,256)	965	15	(14,025)	—	—	—	(14,025)
Total other comprehensive income, net of taxes	10,226	6	4,075	—	14,307	—	—	—	14,307
Total comprehensive income (loss) attributable to Freddie Mac	$11,477	$(16,250)	$5,040	$15	$ 282	$ —	$ —	$ —	$ 282

Year Ended December 31, 2009										
						Reconciliation to Consolidated Statements of Income and Comprehensive Income				
	Investments	Single-family Guarantee	Multifamily	All Other	Total Segment Earnings (Loss), Net of Taxes	Reclassifications[1]	Credit Guarantee-related Adjustments[4]	Tax-related Adjustments	Total Reconciling Items	Total per Consolidated Statements of Income and Comprehensive Income
	(in millions)									
Net interest income	$ 8,090	$ 307	$ 856	$ —	$ 9,253	$ 7,799	$ 21	$ —	$ 7,820	$ 17,073
Provision for credit losses	—	(29,102)	(574)	—	(29,676)	140	6	—	146	(29,530)
Non-interest income (loss):										
Management and guarantee income[3]	—	3,448	90	—	3,538	440	(945)	—	(505)	3,033
Net impairment of available-for-sale securities recognized in earnings	(9,870)	—	(137)	—	(10,007)	(1,190)	—	—	(1,190)	(11,197)
Derivative gains (losses)	4,695	—	(27)	—	4,668	(6,568)	—	—	(6,568)	(1,900)
Gains (losses) on trading securities	4,885	—	(3)	—	4,882	—	—	—	—	4,882
Gains (losses) on sale of mortgage loans	617	—	156	—	773	—	(28)	—	(28)	745
Gains (losses) on mortgage loans recorded at fair value	(46)	—	(144)	—	(190)	—	—	—	—	(190)
Other non-interest income (loss)	(774)	721	(471)	(3,653)	(4,177)	(1,011)	7,083	—	6,072	1,895
Non-interest expense:										
Administrative expenses	(515)	(949)	(221)	—	(1,685)	—	—	—	—	(1,685)
REO operations expense	—	(287)	(20)	—	(307)	—	—	—	—	(307)
Other non-interest expense	(33)	(4,854)	(18)	(109)	(5,014)	—	(189)	—	(189)	(5,203)
Income tax (expense) benefit	(572)	3,573	—	(478)	2,523	390	—	(2,083)	(1,693)	830
Net income (loss)	6,477	(27,143)	(513)	(4,240)	(25,419)	—	5,948	(2,083)	3,865	(21,554)
Less: net (income) loss — noncontrolling interests	(1)	—	2	—	1	—	—	—	—	1
Net income (loss) attributable to Freddie Mac	6,476	(27,143)	(511)	(4,240)	(25,418)	—	5,948	(2,083)	3,865	(21,553)
Total other comprehensive income, net of taxes	11,329	19	7,292	—	18,640	—	—	—	—	18,640
Total comprehensive income (loss) attributable to Freddie Mac	$17,805	$(27,124)	$6,781	$(4,240)	$ (6,778)	$ —	$5,948	$(2,083)	$ 3,865	$ (2,913)

(1) See "Segment Earnings — *Investment Activity-Related Reclassifications*" and "— *Credit Guarantee Activity-Related Reclassifications*" for information regarding these reclassifications.

(2) See "Segment Earnings — *Segment Adjustments*" for additional information regarding these adjustments.

(3) Management and guarantee income total per consolidated statements of income and comprehensive income is included in other income on our GAAP consolidated statements of income and comprehensive income.

(4) Consists primarily of amortization and valuation adjustments pertaining to the guarantee asset and guarantee obligation which are excluded from Segment Earnings and cash compensation exchanged at the time of securitization, excluding buy-up and buy-down fees, which is amortized into earnings. These reconciling items exist in periods prior to 2010 as the amendment to the accounting guidance for transfers of financial assets and consolidation of VIEs was applied prospectively on January 1, 2010.

The table below presents total comprehensive income (loss) by segment.

Table 14.3 — Total Comprehensive Income (Loss) of Segments[1]

	Year Ended December 31, 2011					
		Other Comprehensive Income (Loss), Net of Taxes				
	Net Income (Loss) – Freddie Mac	Changes in Unrealized Gains (Losses) Related to Available-For-Sale Securities	Changes in Unrealized Gains (Losses) Related to Cash Flow Hedge Relationships	Changes in Defined Benefit Plans	Total Other Comprehensive Income (Loss) Net of Taxes	Total Comprehensive Income (Loss) – Freddie Mac
	(in millions)					
Total comprehensive income (loss) of segments:						
Investments	$ 3,366	$2,573	$508	$26	$3,107	$ 6,473
Single-family Guarantee	(10,000)	—	—	30	30	(9,970)
Multifamily	1,319	892	1	6	899	2,218
All Other	49	—	—	—	—	49
Total per consolidated statements of income and comprehensive income	$ (5,266)	$3,465	$509	$62	$4,036	$(1,230)

	Year Ended December 31, 2010					
		Other Comprehensive Income (Loss), Net of Taxes				
	Net Income (Loss) – Freddie Mac	Changes in Unrealized Gains (Losses) Related to Available-For-Sale Securities	Changes in Unrealized Gains (Losses) Related to Cash Flow Hedge Relationships	Changes in Defined Benefit Plans	Total Other Comprehensive Income (Loss) Net of Taxes	Total Comprehensive Income (Loss) – Freddie Mac
	(in millions)					
Total comprehensive income (loss) of segments:						
Investments	$ 1,251	$ 9,547	$673	$ 6	$10,226	$ 11,477
Single-family Guarantee	(16,256)	—	—	6	6	(16,250)
Multifamily	965	4,074	—	1	4,075	5,040
All Other	15	—	—	—	—	15
Total per consolidated statements of income and comprehensive income	$(14,025)	$13,621	$673	$13	$14,307	$ 282

	Year Ended December 31, 2009					
		Other Comprehensive Income (Loss), Net of Taxes				
	Net Income (Loss) – Freddie Mac	Changes in Unrealized Gains (Losses) Related to Available-For-Sale Securities	Changes in Unrealized Gains (Losses) Related to Cash Flow Hedge Relationships	Changes in Defined Benefit Plans	Total Other Comprehensive Income (Loss) Net of Taxes	Total Comprehensive Income (Loss) – Freddie Mac
	(in millions)					
Total comprehensive income (loss) of segments:						
Investments	$ 6,476	$10,536	$774	$19	$11,329	$ 17,805
Single-family Guarantee	(27,143)	—	—	19	19	(27,124)
Multifamily	(511)	7,289	(1)	4	7,292	6,781
All Other	(4,240)	—	—	—	—	(4,240)
Total Segment Earnings (loss), net of taxes	(25,418)	17,825	773	42	18,640	(6,778)
Reconciliation to GAAP net income (loss) attributable to Freddie Mac:						
Credit guarantee-related adjustments	5,948	—	—	—	—	5,948
Tax-related adjustments	(2,083)	—	—	—	—	(2,083)
Total reconciling items, net of taxes	3,865	—	—	—	—	3,865
Total per consolidated statements of income and comprehensive income	$(21,553)	$17,825	$773	$42	$18,640	$ (2,913)

(1) Beginning January 1, 2010, the sum of total comprehensive income (loss) for each segment and the All Other category equals GAAP total comprehensive income (loss) attributable to Freddie Mac.

NOTE 15: REGULATORY CAPITAL

On October 9, 2008, FHFA announced that it was suspending capital classification of us during conservatorship in light of the Purchase Agreement. FHFA continues to closely monitor our capital levels, but the existing statutory and FHFA-directed regulatory capital requirements are not binding during conservatorship. We continue to provide our submission to FHFA on minimum capital, however we no longer provide our submission of risk-based capital to FHFA.

Our regulatory minimum capital is a leverage-based measure that is generally calculated based on GAAP and reflects a 2.50% capital requirement for on-balance sheet assets and 0.45% capital requirement for off-balance sheet obligations. Based upon our adoption of amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs, we determined that, under the new consolidation guidance, we are the primary beneficiary of trusts that issue our single-family PCs and certain Other Guarantee Transactions and, therefore, effective January 1, 2010, we consolidated on our balance sheet the assets and liabilities of these trusts. Pursuant to regulatory guidance from FHFA, our minimum capital requirement was not automatically affected by adoption of these amendments. Specifically, upon adoption of these amendments, FHFA directed us, for purposes of minimum capital, to continue reporting single-family PCs and certain Other Guarantee Transactions held by third parties using a 0.45% capital requirement. FHFA reserves the authority under the GSE Act to raise the minimum capital requirement for any of our assets or activities. On March 3, 2011, FHFA issued a final rule setting forth procedures and standards in the event FHFA were to make such a temporary increase in minimum capital levels.

Regulatory Capital Standards

The GSE Act established minimum, critical, and risk-based capital standards for us, however per guidance received from FHFA we no longer are required to submit risk-based capital reports to FHFA.

Prior to our entry into conservatorship, those standards determined the amounts of core capital that we were to maintain to meet regulatory capital requirements. Core capital consisted of the par value of outstanding common stock (common stock issued less common stock held in treasury), the par value of outstanding non-cumulative, perpetual preferred stock, additional paid-in capital and retained earnings (accumulated deficit), as determined in accordance with GAAP.

Minimum Capital

The minimum capital standard required us to hold an amount of core capital that was generally equal to the sum of 2.50% of aggregate on-balance sheet assets and approximately 0.45% of the sum of our PCs held by third parties and other aggregate off-balance sheet obligations.

Critical Capital

The critical capital standard required us to hold an amount of core capital that was generally equal to the sum of 1.25% of aggregate on-balance sheet assets and approximately 0.25% of the sum of our PCs held by third parties and other aggregate off-balance sheet obligations.

Performance Against Regulatory Capital Standards

The table below summarizes our minimum capital requirements and deficits and net worth.

Table 15.1 — Net Worth and Minimum Capital

	December 31, 2011	December 31, 2010
	(in millions)	
GAAP net worth[1]	$ (146)	$ (401)
Core capital (deficit)[2][3]	$(64,322)	$(52,570)
Less: Minimum capital requirement[2]	24,405	25,987
Minimum capital surplus (deficit)[2]	$(88,727)	$(78,557)

(1) Net worth (deficit) represents the difference between our assets and liabilities under GAAP.
(2) Core capital and minimum capital figures for December 31, 2011 are estimates. FHFA is the authoritative source for our regulatory capital.
(3) Core capital excludes certain components of GAAP total equity (deficit) (*i.e.*, AOCI, liquidation preference of the senior preferred stock) as these items do not meet the statutory definition of core capital.

Following our entry into conservatorship, we have focused our risk and capital management, consistent with the objectives of conservatorship, on, among other things, maintaining a positive balance of GAAP equity in order to reduce the likelihood that we will need to make additional draws on the Purchase Agreement with Treasury. The Purchase Agreement provides that, if FHFA determines as of quarter end that our liabilities have exceeded our assets under GAAP, Treasury will contribute funds to us in an amount equal to the difference between such liabilities and assets.

Under the GSE Act, FHFA must place us into receivership if FHFA determines in writing that our assets are and have been less than our obligations for a period of 60 days. FHFA has notified us that the measurement period for any mandatory receivership determination with respect to our assets and obligations would commence no earlier than the SEC public filing deadline for our quarterly or annual financial statements and would continue for 60 calendar days after that date. FHFA has advised us that, if, during that 60-day period, we receive funds from Treasury in an amount at least equal to the deficiency amount under the Purchase Agreement, the Director of FHFA will not make a mandatory receivership determination. If funding has been requested under the Purchase Agreement to address a deficit in our net worth, and Treasury is unable to provide us with such funding within the 60-day period specified by FHFA, FHFA would be required to place us into receivership if our assets remain less than our obligations during that 60-day period.

To address our net worth deficit of $146 million at December 31, 2011, FHFA will submit a draw request on our behalf to Treasury under the Purchase Agreement in the amount of $146 million, and will request that we receive these funds by March 31, 2012. Our draw request represents our net worth deficit at quarter-end rounded up to the nearest $1 million. Upon funding of this draw request, our aggregate funding received from Treasury under the Purchase Agreement will increase to $71.3 billion. This aggregate funding amount does not include the initial $1.0 billion liquidation preference of senior preferred stock that we issued to Treasury in September 2008 as an initial commitment fee and for which no cash was received. As a result of the additional $146 million draw request, the aggregate liquidation preference on the senior preferred stock owned by Treasury will increase from $72.2 billion at December 31, 2011 to $72.3 billion. We paid a quarterly dividend of $1.6 billion, $1.6 billion, $1.6 billion, and $1.7 billion on the senior preferred stock in cash on March 31, 2011, June 30, 2011, September 30, 2011, and December 30, 2011, respectively, at the direction of the Conservator. Following funding of the draw request related to our net worth deficit at December 31, 2011, our annual cash dividend obligation to Treasury on the senior preferred stock will increase from $7.22 billion to $7.23 billion, which exceeds our annual historical earnings in all but one period.

Subordinated Debt Commitment

In October 2000, we announced our adoption of a series of commitments designed to enhance market discipline, liquidity and capital. In September 2005, we entered into a written agreement with FHFA that updated those commitments and set forth a process for implementing them. FHFA, as Conservator of Freddie Mac, has suspended the requirements in the September 2005 agreement with respect to issuance, maintenance and reporting and disclosure of Freddie Mac subordinated debt during the term of conservatorship and thereafter until directed otherwise.

NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS

Single-family Credit Guarantee Portfolio

Our business activity is to participate in and support the residential mortgage market in the United States, which we pursue by both issuing guaranteed mortgage securities and investing in mortgage loans and mortgage-related securities.

The table below summarizes the concentration by year of origination and geographical area of the approximately $1.7 trillion and $1.8 trillion UPB of our single-family credit guarantee portfolio at December 31, 2011 and 2010, respectively. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES" and "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" and "NOTE 7: INVESTMENTS IN SECURITIES" for more information about credit risk associated with loans and mortgage-related securities that we hold.

Table 16.1 — Concentration of Credit Risk — Single-Family Credit Guarantee Portfolio

	December 31, 2011		December 31, 2010		Percent of Credit Losses[1] Year Ended	
	Percentage of Portfolio[2]	Serious Delinquency Rate[3]	Percentage of Portfolio[2]	Serious Delinquency Rate[3]	December 31, 2011	December 31, 2010
Year of Origination						
2011	14%	0.1%	N/A	N/A	—	N/A
2010	19	0.3	18%	0.1%	<1%	—
2009	18	0.5	21	0.3	1	<1%
2008	7	5.7	9	4.9	8	7
2007	10	11.6	11	11.6	36	34
2006	7	10.8	9	10.5	28	30
2005	8	6.5	10	6.0	18	20
2004 and prior	17	2.8	22	2.5	9	9
Total	100%	3.6%	100%	3.8%	100%	100%
Region[4]						
West	28%	3.6%	27%	4.7%	53%	48%
Northeast	25	3.4	25	3.2	7	8
North Central	18	2.9	18	3.1	16	15
Southeast	17	5.5	18	5.6	20	25
Southwest	12	1.8	12	2.1	4	4
Total	100%	3.6%	100%	3.8%	100%	100%
State[5]						
California	16%	3.4%	16%	4.9%	29%	26%
Florida	6	10.9	6	10.5	13	19
Illinois	5	4.7	5	4.6	5	5
Georgia	3	3.3	3	4.1	4	3
Michigan	3	2.3	3	3.0	4	5
Arizona	2	4.3	3	6.1	11	11
Nevada	1	9.8	1	11.9	7	6
All other	64	2.8	63	2.8	27	25
Total	100%	3.6%	100%	3.8%	100%	100%

(1) Credit losses consist of the aggregate amount of charge-offs, net of recoveries, and REO operations expense in each of the respective periods and exclude foregone interest on non-performing loans and other market-based losses recognized on our consolidated statements of income and comprehensive income.
(2) Based on the UPB of our single-family credit guarantee portfolio, which includes unsecuritized single-family mortgage loans held by us on our consolidated balance sheets and those underlying Freddie Mac mortgage-related securities, or covered by our other guarantee commitments.
(3) Serious delinquencies on mortgage loans underlying certain REMICs and Other Structured Securities, Other Guarantee Transactions, and other guarantee commitments may be reported on a different schedule due to variances in industry practice.
(4) Region designation: West (AK, AZ, CA, GU, HI, ID, MT, NV, OR, UT, WA); Northeast (CT, DE, DC, MA, ME, MD, NH, NJ, NY, PA, RI, VT, VA, WV); North Central (IL, IN, IA, MI, MN, ND, OH, SD, WI); Southeast (AL, FL, GA, KY, MS, NC, PR, SC, TN, VI); Southwest (AR, CO, KS, LA, MO, NE, NM, OK, TX, WY).
(5) States presented based on those with the highest percentage of credit losses during the year ended December 31, 2011. Our top seven states based on the highest percentage of UPB as of December 31, 2011 are: California (16%), Florida (6%), Illinois (5%), New York (5%), Texas (4%), New Jersey (4%), and Virginia (4%), and comprised 44% of our single-family credit guarantee portfolio as of December 31, 2011.

Credit Performance of Certain Higher Risk Single-Family Loan Categories

Participants in the mortgage market often characterize single-family loans based upon their overall credit quality at the time of origination, generally considering them to be prime or subprime. Many mortgage market participants classify single-family loans with credit characteristics that range between their prime and subprime categories as Alt-A because these loans have a combination of characteristics of each category, may be underwritten with lower or alternative income or asset documentation requirements compared to a full documentation mortgage loan, or both. However, there is no universally accepted definition of subprime or Alt-A. Although we discontinued new purchases of mortgage loans with lower documentation standards for assets or income beginning March 1, 2009 (or later, as our customers' contracts permitted), we continued to purchase certain amounts of these mortgages in cases where the loan was either: (a) purchased pursuant to a previously issued other guarantee commitment; (b) part of our relief refinance mortgage initiative; or (c) in another refinance mortgage initiative and the pre-existing mortgage (including Alt-A loans) was originated under less than full documentation standards. In the event we purchase a refinance mortgage in either our relief refinance mortgage initiative or in another mortgage refinance initiative and the original loan had been previously identified as Alt-A, such refinance loan may no longer be categorized or reported as Alt-A in the table below because the new refinance loan replacing the original loan would not be identified by the seller/servicer as an Alt-A loan. As a result, our reported Alt-A balances may be lower than would otherwise be the case had such refinancing not occurred.

Although we do not categorize single-family mortgage loans we purchase or guarantee as prime or subprime, we recognize that there are a number of mortgage loan types with certain characteristics that indicate a higher degree of credit risk. For example, a borrower's credit score is a useful measure for assessing the credit quality of the borrower.

Statistically, borrowers with higher credit scores are more likely to repay or have the ability to refinance than those with lower scores.

Presented below is a summary of the serious delinquency rates of certain higher-risk categories of single-family loans in our single-family credit guarantee portfolio. The table includes a presentation of each higher risk category in isolation. A single loan may fall within more than one category (for example, an interest-only loan may also have an original LTV ratio greater than 90%). Loans with a combination of these attributes will have an even higher risk of delinquency than those with isolated characteristics.

Table 16.2 — Certain Higher-Risk Categories in the Single-Family Credit Guarantee Portfolio[1]

	Percentage of Portfolio[1]		Serious Delinquency Rate	
	December 31, 2011	December 31, 2010	December 31, 2011	December 31, 2010
Interest-only	4%	5%	17.6%	18.4%
Option ARM	<1	1	20.5	21.2
Alt-A[2]	5	6	11.9	12.2
Original LTV ratio greater than 90%[3]	10	9	6.7	7.8
Lower FICO scores at origination (less than 620)	3	3	12.9	13.9

(1) Based on UPB.
(2) Alt-A loans may not include those loans that were previously classified as Alt-A and that have been refinanced as either a relief refinance mortgage or in another refinance mortgage initiative.
(3) Based on our first lien exposure on the property. Includes the credit-enhanced portion of the loan and excludes any secondary financing by third parties. The existence of a second lien reduces the borrower's equity in the property and, therefore, increases the risk of default.

The percentage of borrowers in our single-family credit guarantee portfolio, based on UPB, with estimated current LTV ratios greater than 100% was 20% and 18% at December 31, 2011 and December 31, 2010, respectively. As estimated current LTV ratios increase, the borrower's equity in the home decreases, which negatively affects the borrower's ability to refinance or to sell the property for an amount at or above the balance of the outstanding mortgage loan. If a borrower has an estimated current LTV ratio greater than 100%, the borrower is "underwater" and is more likely to default than other borrowers. The serious delinquency rate for single-family loans with estimated current LTV ratios greater than 100% was 12.8% and 14.9% as of December 31, 2011 and December 31, 2010, respectively.

We categorize our investments in non-agency mortgage-related securities as subprime, option ARM, or Alt-A if the securities were identified as such based on information provided to us when we entered into these transactions. We have not identified option ARM, CMBS, obligations of states and political subdivisions, and manufactured housing securities as either subprime or Alt-A securities. See "NOTE 7: INVESTMENTS IN SECURITIES" for further information on these categories and other concentrations in our investments in securities.

Multifamily Mortgage Portfolio

The table below summarizes the concentration of multifamily mortgages in our multifamily mortgage portfolio by certain attributes. Information presented for multifamily mortgage loans includes certain categories based on loan or borrower characteristics present at origination. The table includes a presentation of each category in isolation. A single loan may fall within more than one category (for example, a non-credit enhanced loan may also have an original LTV ratio greater than 80%).

Table 16.3 — Concentration of Credit Risk — Multifamily Mortgage Portfolio

	December 31, 2011		December 31, 2010	
	UPB[1]	Delinquency Rate[2]	UPB[1]	Delinquency Rate[2]
	(in billions)			
State[3]				
California	$ 20.2	0.02%	$ 19.3	0.06%
Texas	14.0	0.46	12.7	0.52
New York	9.6	—	9.2	—
Florida	7.1	0.05	6.4	0.56
Virginia	6.3	—	5.6	—
Maryland	5.7	—	5.3	—
All other states	53.2	0.35	49.9	0.35
Total	$116.1	0.22%	$108.4	0.26%
Region[4]				
Northeast	$ 33.1	0.01%	$ 31.1	—%
West	29.9	0.07	28.3	0.07
Southwest	22.4	0.44	20.2	0.61
Southeast	20.7	0.65	19.2	0.59
North Central	10.0	0.01	9.6	0.30
Total	$116.1	0.22%	$108.4	0.26%
Category[5]				
Original LTV ratio greater than 80%	$ 6.4	2.34%	$ 6.6	2.30%
Original DSCR below 1.10	2.8	2.58	3.2	1.22
Non-credit enhanced loans	84.5	0.11	87.5	0.12

(1) Beginning in the second quarter of 2011, we exclude non-consolidated mortgage-related securities for which we do not provide our guarantee. The prior period has been revised to conform to the current period presentation.
(2) Based on the UPB of multifamily mortgages two monthly payments or more delinquent or in foreclosure.
(3) Represents the six states with the highest geographic concentration by UPB at December 31, 2011.
(4) See endnote (4) to "Table 16.1 — Concentration of Credit Risk — Single-family Credit Guarantee Portfolio" for a description of these regions.
(5) These categories are not mutually exclusive and a loan in one category may also be included within another.

One indicator of risk for mortgage loans in our multifamily mortgage portfolio is the amount of a borrower's equity in the underlying property. A borrower's equity in a property decreases as the LTV ratio increases. Higher LTV ratios negatively affect a borrower's ability to refinance or sell a property for an amount at or above the balance of the outstanding mortgage. The DSCR is another indicator of future credit performance. The DSCR estimates a multifamily borrower's ability to service its mortgage obligation using the secured property's cash flow, after deducting non-mortgage expenses from income. The higher the DSCR, the more likely a multifamily borrower will be able to continue servicing its mortgage obligation.

Our multifamily mortgage portfolio includes certain loans for which we have credit enhancement. Credit enhancement significantly reduces our exposure to a potential credit loss. As of December 31, 2011, more than one-half of the multifamily loans that were two monthly payments or more past due, measured both in terms of number of loans and on a UPB basis, had credit enhancements that we currently believe will mitigate our expected losses on those loans. See "NOTE 4: MORTGAGE LOANS AND LOAN LOSS RESERVES" for additional information about credit enhancements on multifamily loans.

We estimate that the percentage of loans in our multifamily mortgage portfolio with a current LTV ratio of greater than 100% was approximately 5% and 8% at December 31, 2011 and December 31, 2010, respectively, and our estimate of the current average DSCR for these loans was 1.1 at both December 31, 2011 and December 31, 2010. We estimate that the percentage of loans in our multifamily mortgage portfolio with a current DSCR less than 1.0 was 5% and 7% at December 31, 2011 and December 31, 2010, respectively, and the average current LTV ratio of these loans was 107% and 108%, respectively. Our estimates of current DSCRs are based on the latest available income information for these properties and our assessments of market conditions. Our estimates of the current LTV ratios for multifamily loans are based on values we receive from a third-party service provider as well as our internal estimates of property value, for which we may use changes in tax assessments, market vacancy rates, rent growth and comparable property sales in local areas as well as third-party appraisals for a portion of the portfolio. We periodically perform our own valuations or obtain third-party appraisals in cases where a significant deterioration in a borrower's financial condition has occurred, the borrower has applied for refinancing, or in certain other circumstances where we deem it appropriate to reassess the property value. Although we use the most recently available results of our multifamily borrowers to estimate a property's value, there may be a significant lag in reporting, which could be six months or more, as they complete their results in the normal course of business. Our internal estimates of property valuation are derived using techniques that include income capitalization, discounted cash flows, sales comparables, or replacement costs.

Seller/Servicers

We acquire a significant portion of our single-family mortgage purchase volume from several large seller/servicers with whom we have entered into mortgage purchase volume commitments that provide for the lenders to deliver us up to a certain volume of mortgages during a specified period of time. Our top 10 single-family seller/servicers provided approximately 82% of our single-family purchase volume during the year ended December 31, 2011. Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A., accounted for 28%, and 13%, respectively, of our single-family mortgage purchase volume and were the only single-family seller/servicers that comprised 10% or more of our purchase volume during the year ended December 31, 2011. We are exposed to the risk that we could lose purchase volume to the extent these arrangements are terminated without replacement from other lenders.

We are exposed to institutional credit risk arising from the potential insolvency or non-performance by our seller/servicers of their obligations to repurchase mortgages or (at our option) indemnify us in the event of: (a) breaches of the representations and warranties they made when they sold the mortgages to us; or (b) failure to comply with our servicing requirements. Our contracts require that a seller/servicer repurchase a mortgage after we issue a repurchase request, unless the seller/servicer avails itself of an appeals process provided for in our contracts. As of December 31, 2011 and 2010, the UPB of loans subject to our repurchase requests issued to our single-family seller/servicers was approximately $2.7 billion and $3.8 billion, and approximately 39% and 34% of these requests, respectively, were outstanding for more than four months since issuance of our initial repurchase request as measured by the UPB of the loans subject to the requests (these figures included repurchase requests for which appeals were pending). As of December 31, 2011, two of our largest seller/servicers had aggregate repurchase requests outstanding, based on UPB, of $1.4 billion, and approximately 48% of these requests were outstanding for four months or more since issuance of the initial request. During 2011 and 2010, we recovered amounts that covered losses with respect to $4.4 billion and $6.4 billion, respectively, of UPB on loans subject to our repurchase requests.

GMAC Mortgage, LLC and Residential Funding Company, LLC (collectively GMAC), indirect subsidiaries of Ally Financial Inc. (formerly, GMAC Inc.), are seller/servicers that together serviced and subserviced for an affiliated entity approximately 4% of the single-family loans in our single-family credit guarantee portfolio as of December 31, 2011. In March 2010, we entered into an agreement with GMAC, under which they made a one-time payment to us for the partial release of repurchase obligations relating to loans sold to us prior to January 1, 2009. The partial release does not affect any of GMAC's potential repurchase obligations for loans sold to us by GMAC after January 1, 2009, nor does it affect the ability to recover amounts associated with failure to comply with our servicing requirements. The agreement did not have a material impact on our 2011 or 2010 consolidated statements of income and comprehensive income.

On December 31, 2010, we entered into an agreement with Bank of America, N.A., and two of its affiliates, BAC Home Loans Servicing, LP and Countrywide Home Loans, Inc., to resolve our currently outstanding and future claims for repurchases arising from the breach of representations and warranties on certain loans purchased by us from Countrywide Home Loans, Inc. and Countrywide Bank FSB. Under the terms of the agreement, we received a $1.28 billion cash payment in consideration for releasing Bank of America and its two affiliates from current and future repurchase requests arising from loans sold to us by the Countrywide entities for which the first regularly scheduled monthly payments were due on or before December 31, 2008. The UPB of the loans in this portfolio, as of December 31, 2010, was approximately $114 billion. The agreement applies only to certain claims for repurchase based on breaches of representations and warranties and the agreement contains specified limitations and does not cover loans sold to us or serviced for us by other Bank of America entities. This agreement did not have a material impact on our 2011 or 2010 consolidated statements of income and comprehensive income.

On August 24, 2009, one of our single-family seller/servicers, Taylor, Bean & Whitaker Mortgage Corp., or TBW, filed for bankruptcy and announced its plan to wind down its operations. We had exposure to TBW with respect to its loan repurchase obligations. We also had exposure with respect to certain borrower funds that TBW held for the benefit of Freddie Mac. TBW received and processed such funds in its capacity as a servicer of loans owned or guaranteed by Freddie Mac. TBW maintained certain bank accounts, primarily at Colonial Bank, to deposit such borrower funds and to provide remittance to Freddie Mac. Colonial Bank was placed into receivership by the FDIC in August 2009.

With the approval of FHFA, as Conservator, we entered into a settlement with TBW and the creditors' committee appointed in the TBW bankruptcy proceeding to represent the interests of the unsecured trade creditors of TBW. The settlement was filed with the bankruptcy court on June 22, 2011. The court approved the settlement and confirmed TBW's proposed plan of liquidation on July 21, 2011, which became effective on August 10, 2011. See "NOTE 18: LEGAL CONTINGENCIES" for additional information on the settlement, our claims arising from TBW's bankruptcy, and potential claims by Ocala Funding, LLC, which is a wholly-owned subsidiary of TBW, or Ocala's creditors.

As previously disclosed, we joined an investor group that delivered a notice of non-performance in 2010 to The Bank of New York Mellon, as Trustee, and Countrywide Home Loans Servicing LP (now known as BAC Home Loans Servicing, LP), related to the possibility that certain mortgage pools backing certain mortgage-related securities issued by Countrywide Financial Corporation and related entities include mortgages that may have been ineligible for inclusion in the pools due to breaches of representations or warranties.

On June 29, 2011, Bank of America Corporation announced that it, BAC Home Loans Servicing, LP, Countrywide Financial Corporation and Countrywide Home Loans, Inc. entered into a settlement agreement with The Bank of New York Mellon, as trustee, to resolve all outstanding and potential claims related to alleged breaches of representations and warranties (including repurchase claims), substantially all historical loan servicing claims and certain other historical claims with respect to 530 Countrywide first-lien and second-lien residential mortgage-related securitization trusts. Bank of America indicated that the settlement is subject to final court approval and certain other conditions, including the receipt of a private letter ruling from the IRS. There can be no assurance that final court approval of the settlement will be obtained or that all conditions will be satisfied. Bank of America noted that, given the number of investors and the complexity of the settlement, it is not possible to predict the timing or ultimate outcome of the court approval process, which could take a substantial period of time. We have investments in certain of these Countrywide securitization trusts and would expect to benefit from this settlement, if final court approval is obtained.

In connection with the settlement, Bank of America Corporation entered into an agreement with the investor group. Under this agreement, the investor group agreed, among other things, to use reasonable best efforts and to cooperate in good faith to effectuate the settlement, including to obtain final court approval. Freddie Mac was not a party to this agreement, but agreed to retract any previously delivered notices of non-performance upon final court approval of the settlement.

The Bank of New York Mellon, as trustee, filed the settlement in state court in New York and planned to seek approval at a hearing, which approval would bind all investors in the related trusts. The court directed that any objections to the settlement be filed no later than August 30, 2011. On August 30, 2011, FHFA announced that, in its capacity as conservator, it had filed an appearance and conditional objection regarding the settlement, in order to obtain any additional pertinent information developed in the matter. In the announcement, FHFA, as conservator, stated that it is aware of no basis upon which it would raise a substantive objection to the settlement at this time, but that it believes it prudent not only to receive additional information as it continues its due diligence of the settlement, but also to reserve its capability to voice a substantive objection in the unlikely event that necessity should arise.

On August 26, 2011, the case was removed to Federal court. The trustee filed a motion to remand the case back to state court. On October 19, 2011, the Federal court denied the trustee's motion to remand. The trustee appealed this decision. On February 27, 2012, the federal appellate court reversed the district court and ordered the case to be remanded back to state court.

On September 2, 2011, FHFA announced that, as Conservator for Freddie Mac and Fannie Mae, it had filed lawsuits against 17 financial institutions and related defendants alleging: (a) violations of federal securities laws; and (b) in certain lawsuits, common law fraud in the sale of residential non-agency mortgage-related securities to Freddie Mac and Fannie Mae. FHFA, as Conservator, filed a similar lawsuit against UBS Americas, Inc. and related defendants on July 27, 2011. FHFA seeks to recover losses and damages sustained by Freddie Mac and Fannie Mae as a result of their investments in certain residential non-agency mortgage-related securities issued by these financial institutions.

The ultimate amounts of recovery payments we receive from seller/servicers may be significantly less than the amount of our estimates of potential exposure to losses related to their obligations. Our estimate of probable incurred losses for exposure to seller/servicers for their repurchase obligations is considered in our allowance for loan losses as of December 31, 2011 and 2010. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Allowance for Loan Losses and Reserve for Guarantee Losses" for further information. We believe we have appropriately provided for these exposures, based upon our estimates of incurred losses, in our loan loss reserves at December 31, 2011 and 2010; however, our actual losses may exceed our estimates.

We also are exposed to the risk that seller/servicers might fail to service mortgages in accordance with our contractual requirements, resulting in increased credit losses. For example, our seller/servicers have an active role in our loss mitigation efforts, including under the servicing alignment initiative and the MHA Program, and therefore, we have exposure to them to the extent a decline in their performance results in a failure to realize the anticipated benefits of our loss mitigation plans.

A significant portion of our single-family mortgage loans are serviced by several large seller/servicers. Our top three single-family loan servicers, Wells Fargo Bank N.A., JPMorgan Chase Bank, N.A., and Bank of America N.A., together

serviced approximately 49% of our single-family mortgage loans as of December 31, 2011. Wells Fargo Bank N.A., JPMorgan Chase Bank, N.A., and Bank of America N.A. serviced approximately 26%, 12%, and 11%, respectively, of our single-family mortgage loans, as of December 31, 2011. Since we do not have our own servicing operation, if our servicers lack appropriate process controls, experience a failure in their controls, or experience an operating disruption in their ability to service mortgage loans, it could have an adverse impact on our business and financial results.

During the second half of 2010, a number of our seller/servicers, including several of our largest ones, temporarily suspended foreclosure proceedings in some or all states in which they do business. These seller/servicers announced these suspensions were necessary while they evaluated and addressed issues relating to the improper preparation and execution of certain documents used in foreclosure proceedings, including affidavits. While these servicers generally resumed foreclosure proceedings in the first quarter of 2011, the rate at which they are effecting foreclosures has been slower than prior to the suspensions. See "NOTE 6: REAL ESTATE OWNED" for additional information.

As of December 31, 2011 our top three multifamily servicers, Berkadia Commercial Mortgage LLC, CBRE Capital Markets, Inc., and Wells Fargo Bank, N.A., each serviced more than 10% of our multifamily mortgage portfolio and together serviced approximately 40% of our multifamily mortgage portfolio.

In our multifamily business, we are exposed to the risk that multifamily seller/servicers could come under financial pressure, which could potentially cause degradation in the quality of the servicing they provide us, including their monitoring of each property's financial performance and physical condition. This could also, in certain cases, reduce the likelihood that we could recover losses through lender repurchases, recourse agreements, or other credit enhancements, where applicable. This risk primarily relates to multifamily loans that we hold on our consolidated balance sheets where we retain all of the related credit risk. We monitor the status of all our multifamily seller/servicers in accordance with our counterparty credit risk management framework.

Mortgage Insurers

We have institutional credit risk relating to the potential insolvency of or non-performance by mortgage insurers that insure single-family mortgages we purchase or guarantee. We evaluate the recovery and collectability from insurance policies for mortgage loans that we hold for investment as well as loans underlying our non-consolidated Freddie Mac mortgage-related securities or covered by other guarantee commitments as part of the estimate of our loan loss reserves. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Allowance for Loan Losses and Reserve for Guarantee Losses" for additional information. As of December 31, 2011, these insurers provided coverage, with maximum loss limits of $50.6 billion, for $238.3 billion of UPB, in connection with our single-family credit guarantee portfolio. Our top five mortgage insurer counterparties, Mortgage Guaranty Insurance Corporation (or MGIC), Radian Guaranty Inc., Genworth Mortgage Insurance Corporation, United Guaranty Residential Insurance Co., and PMI Mortgage Insurance Co. (or PMI) each accounted for more than 10% and collectively represented approximately 84% of our overall mortgage insurance coverage at December 31, 2011. All our mortgage insurance counterparties are rated BBB or below as of February 27, 2012, based on the lower of the S&P or Moody's rating scales and stated in terms of the S&P equivalent.

We received proceeds of $2.5 billion and $1.8 billion during 2011 and 2010, respectively, from our primary and pool mortgage insurance policies for recovery of losses on our single-family loans. We had outstanding receivables from mortgage insurers of $1.8 billion and $2.3 billion as of December 31, 2011 and 2010, respectively. The balance of our outstanding accounts receivable from mortgage insurers, net of associated reserves, was approximately $1.0 billion and $1.5 billion as of December 31, 2011 and 2010, respectively.

In August 2011, we suspended RMIC and its affiliates, and PMI and its affiliates, as approved mortgage insurers for Freddie Mac loans, making loans insured by either company ineligible for sale to Freddie Mac. Both of these companies ceased writing new business during the third quarter of 2011, and have been put under state supervision. PMI instituted a partial claim payment plan in October 2011, under which claim payments will be made 50% in cash, with the remaining amount deferred as a policyholder claim. RMIC instituted a partial claim payment plan in January 2012, under which claim payments will be made 50% in cash and 50% in deferred payment obligations for an initial period not to exceed one year. We and FHFA are in discussions with the state regulators of PMI and RMIC concerning future payments of our claims. It is not yet clear how the state regulators of PMI and RMIC will administer their respective deferred payment plans. In the future, our mortgage insurance exposure will likely be concentrated among a smaller number of mortgage insurer counterparties.

Triad Guaranty Insurance Corp., or Triad, is continuing to pay claims 60% in cash and 40% in deferred payment obligations under orders of its state regulator. To date, the state regulator has not allowed Triad to begin paying its deferred payment obligations and it is uncertain when or if Triad will be permitted to do so.

Bond Insurers

Bond insurance, which may be either primary or secondary policies, is a credit enhancement covering some of the non-agency mortgage-related securities we hold. Primary policies are acquired by the securitization trust issuing the securities we purchase, while secondary policies are acquired by us. At December 31, 2011, we had coverage, including secondary policies, on non-agency mortgage-related securities totaling $9.7 billion of UPB. At December 31, 2011, our top five bond insurers, Ambac Assurance Corporation (or Ambac), Financial Guaranty Insurance Company (or FGIC), MBIA Insurance Corp., Assured Guaranty Municipal Corp., and National Public Finance Guarantee Corp., each accounted for more than 10% of our overall bond insurance coverage and collectively represented approximately 99% of our total coverage.

We evaluate the expected recovery from primary bond insurance policies as part of our impairment analysis for our investments in securities. FGIC and Ambac are currently not paying any claims. In addition, if a bond insurer fails to meet its obligations on our investments in securities, then the fair values of our securities may further decline, which could have a material adverse effect on our results and financial condition. We recognized other-than-temporary impairment losses during 2011 and 2010 related to investments in mortgage-related securities covered by bond insurance as a result of our uncertainty over whether or not certain insurers will meet our future claims in the event of a loss on the securities. See "NOTE 7: INVESTMENTS IN SECURITIES" for further information on our evaluation of impairment on securities covered by bond insurance.

Cash and Other Investments Counterparties

We are exposed to institutional credit risk arising from the potential insolvency or non-performance of counterparties of non-mortgage-related investment agreements and cash equivalent transactions, including those entered into on behalf of our securitization trusts. These financial instruments are investment grade at the time of purchase and primarily short-term in nature, which mitigates institutional credit risk for these instruments.

Our cash and other investment counterparties are primarily financial institutions and the Federal Reserve Bank. As of December 31, 2011 and 2010, including amounts related to our consolidated VIEs, there were $68.5 billion and $91.6 billion, respectively, of cash and other non- mortgage assets invested in financial instruments with institutional counterparties or deposited with the Federal Reserve Bank. As of December 31, 2011, these included:

- $3.6 billion of cash equivalents invested in 16 counterparties that had short-term credit ratings of A-1 or above on the S&P or equivalent scale;
- $12.0 billion of securities purchased under agreements to resell with three counterparties that had short-term S&P ratings of A-1 or above; and
- $52.3 billion of cash deposited with the Federal Reserve Bank (as a non-interest-bearing deposit).

Derivative Portfolio

Derivative Counterparties

Our use of OTC derivatives and exchange-traded derivatives exposes us to institutional credit risk. The requirement that we post initial and maintenance margin with our clearing firm in connection with exchange-traded derivatives such as futures contracts exposes us to institutional credit risk in the event that our clearing firm or the exchange's clearinghouse fail to meet their obligations. However, the use of exchange-traded derivatives lessens our institutional credit risk exposure to individual counterparties, because a central counterparty is substituted for individual counterparties and changes in the value of open exchange-traded contracts are settled daily via payments through the financial clearinghouse established by each exchange. OTC derivatives, however, expose us to institutional credit risk to individual counterparties because transactions are executed and settled between us and each counterparty, exposing us to potential losses if a counterparty fails to meet its contractual obligations.

Our use of OTC interest-rate swaps, option-based derivatives, and foreign-currency swaps is subject to rigorous internal credit and legal reviews. All of our OTC derivatives counterparties are major financial institutions and are experienced participants in the OTC derivatives market.

On an ongoing basis, we review the credit fundamentals of all of our OTC derivative counterparties to confirm that they continue to meet our internal standards. We assign internal ratings, credit capital, and exposure limits to each counterparty based on quantitative and qualitative analysis, which we update and monitor on a regular basis. We conduct additional reviews when market conditions dictate or certain events affecting an individual counterparty occur.

Master Netting and Collateral Agreements

We use master netting and collateral agreements to reduce our credit risk exposure to our active OTC derivative counterparties for interest-rate swaps, option-based derivatives, and foreign-currency swaps. Master netting agreements provide for the netting of amounts receivable and payable from an individual counterparty, which reduces our exposure to a single counterparty in the event of default. On a daily basis, the market value of each counterparty's derivatives outstanding is calculated to determine the amount of our net credit exposure, which is equal to derivatives in a net gain position by counterparty after giving consideration to collateral posted. Our collateral agreements require most counterparties to post collateral for the amount of our net exposure to them above the applicable threshold. Bilateral collateral agreements are in place for all of our active OTC derivative counterparties. Collateral posting thresholds are tied to a counterparty's credit rating. Derivative exposures and collateral amounts are monitored on a daily basis using both internal pricing models and dealer price quotes. Collateral is typically transferred within one business day based on the values of the related derivatives. This time lag in posting collateral can affect our net uncollateralized exposure to derivative counterparties.

Collateral posted by a derivative counterparty is typically in the form of cash, although U.S. Treasury securities, Freddie Mac mortgage-related securities, or our debt securities may also be posted. In the event a counterparty defaults on its obligations under the derivatives agreement and the default is not remedied in the manner prescribed in the agreement, we have the right under the agreement to direct the custodian bank to transfer the collateral to us or, in the case of non-cash collateral, to sell the collateral and transfer the proceeds to us.

Our uncollateralized exposure to counterparties for OTC interest-rate swaps, option-based derivatives, foreign-currency swaps, and purchased interest-rate caps, after applying netting agreements and collateral, was $71 million and $32 million at December 31, 2011 and 2010, respectively. In the event that all of our counterparties for these derivatives were to have defaulted simultaneously on December 31, 2011, our maximum loss for accounting purposes would have been approximately $71 million. Three counterparties each accounted for greater than 10% and collectively accounted for 97% of our net uncollateralized exposure to derivative counterparties, excluding commitments, at December 31, 2011. These counterparties were HSBC Bank USA, Royal Bank of Scotland, and UBS AG, all of which were rated "A" or above by S&P as of February 27, 2012.

The total exposure on our OTC forward purchase and sale commitments, which are treated as derivatives, was $38 million and $103 million at December 31, 2011 and 2010, respectively. These commitments are uncollateralized. Because the typical maturity of our forward purchase and sale commitments is less than 60 days and they are generally settled through a clearinghouse, we do not require master netting and collateral agreements for the counterparties of these commitments. However, we monitor the credit fundamentals of the counterparties to our forward purchase and sale commitments on an ongoing basis to ensure that they continue to meet our internal risk-management standards.

NOTE 17: FAIR VALUE DISCLOSURES

Fair Value Hierarchy

The accounting guidance for fair value measurements and disclosures establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Observable inputs reflect market data obtained from independent sources. Unobservable inputs reflect assumptions based on the best information available under the circumstances. We use valuation techniques that seek to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs.

The three levels of the fair value hierarchy are described below:

- Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for identical assets or liabilities;
- Level 2: Quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; inputs other than quoted market prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data for substantially the full term of the assets; and
- Level 3: Unobservable inputs for the asset or liability that are supported by little or no market activity and that are significant to the fair values.

Assets and liabilities are classified in their entirety within the fair value hierarchy based on the lowest level input that is significant to the fair value measurement. The table below sets forth by level within the fair value hierarchy assets and liabilities measured and reported at fair value on a recurring basis in our consolidated balance sheets at December 31, 2011 and 2010.

Table 17.1 — Assets and Liabilities Measured at Fair Value on a Recurring Basis

	Fair Value at December 31, 2011				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Netting Adjustment[1]	Total
	(in millions)				
Assets:					
Investments in securities:					
Available-for-sale, at fair value:					
Mortgage-related securities:					
Freddie Mac	$ —	$ 79,044	$ 2,048	$ —	$ 81,092
Subprime	—	—	27,999	—	27,999
CMBS	—	51,907	3,756	—	55,663
Option ARM	—	—	5,865	—	5,865
Alt-A and other	—	11	10,868	—	10,879
Fannie Mae	—	20,150	172	—	20,322
Obligations of states and political subdivisions	—	—	7,824	—	7,824
Manufactured housing	—	—	766	—	766
Ginnie Mae	—	237	12	—	249
Total available-for-sale securities, at fair value	—	151,349	59,310	—	210,659
Trading, at fair value:					
Mortgage-related securities:					
Freddie Mac	—	14,181	1,866	—	16,047
Fannie Mae	—	14,627	538	—	15,165
Ginnie Mae	—	134	22	—	156
Other	—	74	90	—	164
Total mortgage-related securities	—	29,016	2,516	—	31,532
Non-mortgage-related securities:					
Asset-backed securities	—	302	—	—	302
Treasury bills	100	—	—	—	100
Treasury notes	24,712	—	—	—	24,712
FDIC-guaranteed corporate medium-term notes	—	2,184	—	—	2,184
Total non-mortgage-related securities	24,812	2,486	—	—	27,298
Total trading securities, at fair value	24,812	31,502	2,516	—	58,830
Total investments in securities	24,812	182,851	61,826	—	269,489
Mortgage loans:					
Held-for-sale, at fair value	—	—	9,710	—	9,710
Derivative assets, net:					
Interest-rate swaps	—	12,976	46	—	13,022
Option-based derivatives	1	15,868	—	—	15,869
Other	5	110	35	—	150
Subtotal, before netting adjustments	6	28,954	81	—	29,041
Netting adjustments[1]	—	—	—	(28,923)	(28,923)
Total derivative assets, net	6	28,954	81	(28,923)	118
Other assets:					
Guarantee asset, at fair value	—	—	752	—	752
All other, at fair value	—	—	151	—	151
Total other assets	—	—	903	—	903
Total assets carried at fair value on a recurring basis	$24,818	$211,805	$72,520	$(28,923)	$280,220
Liabilities:					
Debt securities recorded at fair value	$ —	$ 3,015	$ —	$ —	$ 3,015
Derivative liabilities, net:					
Interest-rate swaps	—	34,601	21	—	34,622
Option-based derivatives	1	2,934	1	—	2,936
Other	—	103	42	—	145
Subtotal, before netting adjustments	1	37,638	64	—	37,703
Netting adjustments[1]	—	—	—	(37,268)	(37,268)
Total derivative liabilities, net	1	37,638	64	(37,268)	435
Total liabilities carried at fair value on a recurring basis	$ 1	$ 40,653	$ 64	$(37,268)	$ 3,450

	Fair Value at December 31, 2010				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Netting Adjustment[1]	Total
	(in millions)				
Assets:					
Investments in securities:					
Available-for-sale, at fair value:					
Mortgage-related securities:					
Freddie Mac	$ —	$ 83,652	$ 2,037	$ —	$ 85,689
Subprime	—	—	33,861	—	33,861
CMBS	—	54,972	3,115	—	58,087
Option ARM	—	—	6,889	—	6,889
Alt-A and other	—	13	13,155	—	13,168
Fannie Mae	—	24,158	212	—	24,370
Obligations of states and political subdivisions	—	—	9,377	—	9,377
Manufactured housing	—	—	897	—	897
Ginnie Mae	—	280	16	—	296
Total available-for-sale securities, at fair value	—	163,075	69,559	—	232,634
Trading, at fair value:					
Mortgage-related securities:					
Freddie Mac	—	11,138	2,299	—	13,437
Fannie Mae	—	17,872	854	—	18,726
Ginnie Mae	—	145	27	—	172
Other	—	11	20	—	31
Total mortgage-related securities	—	29,166	3,200	—	32,366
Non-mortgage-related securities:					
Asset-backed securities	—	44	—	—	44
Treasury bills	17,289	—	—	—	17,289
Treasury notes	10,122	—	—	—	10,122
FDIC-guaranteed corporate medium-term notes	—	441	—	—	441
Total non-mortgage-related securities	27,411	485	—	—	27,896
Total trading securities, at fair value	27,411	29,651	3,200	—	60,262
Total investments in securities	27,411	192,726	72,759	—	292,896
Mortgage loans:					
Held-for-sale, at fair value	—	—	6,413	—	6,413
Derivative assets, net:					
Interest-rate swaps	—	9,921	49	—	9,970
Option-based derivatives	—	11,255	—	—	11,255
Other	3	266	21	—	290
Subtotal, before netting adjustments	3	21,442	70	—	21,515
Netting adjustments[1]	—	—	—	(21,372)	(21,372)
Total derivative assets, net	3	21,442	70	(21,372)	143
Other assets:					
Guarantee asset, at fair value	—	—	541	—	541
All other, at fair value	—	—	235	—	235
Total other assets	—	—	776	—	776
Total assets carried at fair value on a recurring basis	$27,414	$214,168	$80,018	$(21,372)	$300,228
Liabilities:					
Debt securities recorded at fair value	$ —	$ 4,443	$ —	$ —	$ 4,443
Derivative liabilities, net:					
Interest-rate swaps	—	26,856	623	—	27,479
Option-based derivatives	8	252	2	—	262
Other	170	28	136	—	334
Subtotal, before netting adjustments	178	27,136	761	—	28,075
Netting adjustments[1]	—	—	—	(26,866)	(26,866)
Total derivative liabilities, net	178	27,136	761	(26,866)	1,209
Total liabilities carried at fair value on a recurring basis	$ 178	$ 31,579	$ 761	$(26,866)	$ 5,652

(1) Represents counterparty netting, cash collateral netting, net trade/settle receivable or payable and net derivative interest receivable or payable. The net cash collateral posted and net trade/settle receivable were $9.4 billion and $1 million, respectively, at December 31, 2011. The net cash collateral posted and net trade/settle receivable were $6.3 billion and $1 million, respectively, at December 31, 2010. The net interest receivable (payable) of derivative assets and derivative liabilities was approximately $(1.1) billion and $(0.8) billion at December 31, 2011 and 2010, respectively, which was mainly related to interest rate swaps that we have entered into.

Recurring Fair Value Changes

For the year ended December 31, 2011, we did not have any significant transfers between Level 1 and Level 2 assets or liabilities.

Our Level 3 items mainly consist of non-agency mortgage-related securities. Level 3 measurements consist of assets and liabilities that are supported by little or no market activity where observable inputs generally are not available. The fair value of these assets and liabilities is measured using significant inputs that are considered unobservable. Unobservable inputs reflect assumptions based on the best information available under the circumstances. We use valuation techniques that seek to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs. See "Valuation Methods and Assumptions Subject to Fair Value Hierarchy" for additional information about the valuation methods and assumptions used in our fair value measurements.

During 2011, the fair value of our Level 3 assets decreased primarily due to: (a) monthly remittances of principal repayments from the underlying collateral of non-agency mortgage-related securities; and (b) the widening of OAS levels on single-family non-agency mortgage-related securities. During 2011, we had a net transfer into Level 3 assets of $267 million, resulting from a change in valuation method for certain mortgage-related securities due to a lack of relevant price quotes from dealers and third-party pricing services.

During 2010, our Level 3 assets decreased by $81.7 billion primarily due to the transfer of the majority of CMBS from Level 3 to Level 2 and our adoption of new accounting guidance applicable to the accounting for transfers of financial assets and consolidation of VIEs. During 2010, the CMBS market continued to improve and we observed significantly less variability in fair value quotes received from dealers and third-party pricing services. In the fourth quarter of 2010 we determined that these market conditions stabilized to a degree that we believe indicates that unobservable inputs are no longer significant to the fair values of these securities and, as a result, we transferred $51.3 billion of CMBS from Level 3 to Level 2. The adoption of amendments to the accounting guidance applicable to the accounting for transfers of financial assets and the consolidation of VIEs resulted in the elimination of $28.8 billion in our Level 3 assets on January 1, 2010, including: (a) certain mortgage-related securities issued by our consolidated trusts that are held by us; and (b) the guarantee asset for guarantees issued to our consolidated trusts. In addition, we transferred $0.4 billion of other Level 3 assets to Level 2 during 2010, resulting from improved liquidity and availability of price quotes received from dealers and third-party pricing services.

The table below provides a reconciliation of the beginning and ending balances for assets and liabilities measured at fair value using significant unobservable inputs (Level 3).

Table 17.2 — Fair Value Measurements of Assets and Liabilities Using Significant Unobservable Inputs

	For The Year Ended December 31, 2011										
		Realized and unrealized gains (losses)									
	Balance, January 1, 2011	Included in earnings(1)(2)(3)(4)	Included in other comprehensive income(1)	Total	Purchases	Issuances	Sales	Settlements, net(5)	Net transfers in and/or out of Level 3(6)	Balance, December 31, 2011	Unrealized gains (losses) still held(7)
	(in millions)										
Investments in securities:											
Available-for-sale, at fair value:											
Mortgage-related securities:											
Freddie Mac	$ 2,037	$ —	$ 83	$ 83	$ 119	$ —	$ —	$ (92)	$ (99)	$ 2,048	$ —
Subprime	33,861	(1,315)	707	(608)	—	—	—	(5,254)	—	27,999	(1,315)
CMBS	3,115	(152)	802	650	—	—	(67)	(115)	173	3,756	(162)
Option ARM	6,889	(424)	684	260	—	—	—	(1,284)	—	5,865	(424)
Alt-A and other	13,155	(198)	(387)	(585)	—	—	—	(1,702)	—	10,868	(198)
Fannie Mae	212	—	2	2	—	—	—	(37)	(5)	172	—
Obligations of states and political subdivisions	9,377	13	550	563	—	—	(609)	(1,507)	—	7,824	—
Manufactured housing	897	(11)	(6)	(17)	—	—	—	(114)	—	766	(11)
Ginnie Mae	16	—	(1)	(1)	—	—	—	(3)	—	12	—
Total available-for-sale mortgage-related securities	69,559	(2,087)	2,434	347	119	—	(676)	(10,108)	69	59,310	(2,110)
Trading, at fair value:											
Mortgage-related securities:											
Freddie Mac	2,299	(832)	—	(832)	492	25	(92)	(213)	187	1,866	(834)
Fannie Mae	854	(340)	—	(340)	137	—	(81)	(43)	11	538	(340)
Ginnie Mae	27	(1)	—	(1)	—	—	—	(4)	—	22	(1)
Other	20	—	—	—	—	91	(18)	(3)	—	90	—
Total trading mortgage-related securities	3,200	(1,173)	—	(1,173)	629	116	(191)	(263)	198	2,516	(1,175)
Mortgage loans:											
Held-for-sale, at fair value	6,413	828	—	828	16,550	—	(14,027)	(54)	—	9,710	214
Net derivatives(8)	(691)	907	—	907	—	(46)	—	(155)	2	17	165
Other assets:											
Guarantee asset(9)	541	(25)	—	(25)	—	288	—	(52)	—	752	(25)
All other	235	(84)	—	(84)	—	—	—	—	—	151	(84)
Total other assets	776	(109)	—	(109)	—	288	—	(52)	—	903	(109)

	For The Year Ended December 31, 2010									
				Realized and unrealized gains (losses)						
	Balance, December 31, 2009	Cumulative effect of change in accounting principle[10]	Balance, January 1, 2010	Included in earnings[1][2][3][4]	Included in comprehensive income[1]	Total	Purchases, issuances, sales, and settlements, net[5]	Net transfers in and/or out of Level 3[6]	Balance, December 31, 2010	Unrealized gains (losses) still held[7]
	(in millions)									
Investments in securities:										
Available-for-sale, at fair value:										
Mortgage-related securities:										
Freddie Mac	$ 20,807	$(18,775)	$ 2,032	$ —	$ 5	$ 5	$ —	$ —	$ 2,037	$ —
Subprime	35,721	—	35,721	(1,769)	7,046	5,277	(7,137)	—	33,861	(1,769)
CMBS	54,019	—	54,019	—	369	369	—	(51,273)	3,115	—
Option ARM	7,236	—	7,236	(1,402)	2,611	1,209	(1,556)	—	6,889	(1,395)
Alt-A and other	13,391	—	13,391	(1,020)	3,128	2,108	(2,344)	—	13,155	(1,020)
Fannie Mae	338	—	338	—	—	—	(139)	13	212	—
Obligations of states and political subdivisions	11,477	—	11,477	4	(123)	(119)	(1,981)	—	9,377	—
Manufactured housing	911	—	911	(27)	126	99	(113)	—	897	(27)
Ginnie Mae	4	—	4	—	(1)	(1)	(5)	18	16	—
Total available-for-sale mortgage-related securities	143,904	(18,775)	125,129	(4,214)	13,161	8,947	(13,275)	(51,242)	69,559	(4,211)
Trading, at fair value:										
Mortgage-related securities:										
Freddie Mac	2,805	(5)	2,800	(777)	—	(777)	659	(383)	2,299	(799)
Fannie Mae	1,343	—	1,343	(449)	—	(449)	(38)	(2)	854	(449)
Ginnie Mae	27	—	27	1	—	1	(1)	—	27	1
Other	28	(1)	27	(1)	—	(1)	(4)	(2)	20	(1)
Total trading mortgage-related securities	4,203	(6)	4,197	(1,226)	—	(1,226)	616	(387)	3,200	(1,248)
Mortgage loans:										
Held-for-sale, at fair value	2,799	—	2,799	(1)	—	(1)	3,615	—	6,413	(308)
Net derivatives[8]	(430)	—	(430)	(141)	—	(141)	(120)	—	(691)	(619)
Other assets:										
Guarantee asset[9]	10,444	(10,024)	420	(24)	—	(24)	145	—	541	(24)
All other	—	—	—	55	—	55	180	—	235	55
Total other assets	10,444	(10,024)	420	31	—	31	325	—	776	31

(1) Changes in fair value for available-for-sale investments are recorded in AOCI, while gains and losses from sales are recorded in other gains (losses) on investments on our consolidated statements of income and comprehensive income. For mortgage-related securities classified as trading, the realized and unrealized gains (losses) are recorded in other gains (losses) on investments on our consolidated statements of income and comprehensive income.
(2) Changes in fair value of derivatives are recorded in derivative gains (losses) on our consolidated statements of income and comprehensive income for those not designated as accounting hedges.
(3) Changes in fair value of the guarantee asset are recorded in other income on our consolidated statements of income and comprehensive income.
(4) For held-for-sale mortgage loans with fair value option elected, gains (losses) on fair value changes and sale of mortgage loans are recorded in other income on our consolidated statements of income and comprehensive income.
(5) For non-agency mortgage-related securities, primarily represents principal repayments.
(6) Transfer in and/or out of Level 3 during the period is disclosed as if the transfer occurred at the beginning of the period.
(7) Represents the amount of total gains or losses for the period, included in earnings, attributable to the change in unrealized gains (losses) related to assets and liabilities classified as Level 3 that were still held at December 31, 2011 and 2010, respectively. Included in these amounts are credit-related other-than-temporary impairments recorded on available-for-sale securities.
(8) Net derivatives include derivative assets and derivative liabilities prior to counterparty netting, cash collateral netting, net trade/settle receivable or payable and net derivative interest receivable or payable.
(9) We estimate that all amounts recorded for unrealized gains and losses on our guarantee asset relate to those amounts still in position. The amounts reflected as included in earnings represent the periodic fair value changes of our guarantee asset.
(10) Represents adjustment to adopt the amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs.

Non-recurring Fair Value Changes

Certain assets are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances. We consider the fair value measurement related to these assets to be non-recurring. These assets include impaired held-for-investment multifamily mortgage loans and REO, net. These fair value measurements usually result from the write-down of individual assets to current fair value amounts due to impairments.

The fair value of impaired multifamily held-for-investment mortgage loans is generally based on the value of the underlying property. Given the relative illiquidity in the markets for these impaired loans, and differences in contractual terms of each loan, we classified these loans as Level 3 in the fair value hierarchy. See "Valuation Methods and Assumptions Subject to Fair Value Hierarchy — *Mortgage Loans, Held-for-Investment*" for additional details.

REO is initially measured at its fair value less costs to sell. In subsequent periods, REO is reported at the lower of its carrying amount or fair value less costs to sell. Subsequent measurements of fair value less costs to sell are estimated values based on relevant current and historical factors, which are considered to be unobservable inputs. As a result, REO is classified as Level 3 under the fair value hierarchy. See "Valuation Methods and Assumptions Subject to Fair Value Hierarchy — *REO, Net*" for additional details.

The table below presents assets measured and reported at fair value on a non-recurring basis in our consolidated balance sheets by level within the fair value hierarchy at December 31, 2011 and 2010, respectively.

Table 17.3 — Assets Measured at Fair Value on a Non-Recurring Basis

	Fair Value at December 31, 2011				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total	Total Gains (Losses)[3]
	(in millions)				
Assets measured at fair value on a non-recurring basis:					
Mortgage loans:[1]					
Held-for-investment	$—	$—	$1,380	$1,380	$ (16)
REO, net[2]	—	—	3,146	3,146	(118)
Total assets measured at fair value on a non-recurring basis	$—	$—	$4,526	$4,526	$(134)

	Fair Value at December 31, 2010				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total	Total Gains (Losses)[3]
	(in millions)				
Assets measured at fair value on a non-recurring basis:					
Mortgage loans:[1]					
Held-for-investment	$—	$—	$1,560	$1,560	$(183)
REO, net[2]	—	—	5,606	5,606	(290)
Total assets measured at fair value on a non-recurring basis	$—	$—	$7,166	$7,166	$(473)

(1) Represents carrying value and related write-downs of loans for which adjustments are based on the fair value amounts. These loans include impaired multifamily mortgage loans that are classified as held-for-investment and have a related valuation allowance.
(2) Represents the fair value and related losses of foreclosed properties that were measured at fair value subsequent to their initial classification as REO, net. The carrying amount of REO, net was written down to fair value of $3.1 billion, less estimated costs to sell of $221 million (or approximately $2.9 billion) at December 31, 2011. The carrying amount of REO, net was written down to fair value of $5.6 billion, less estimated costs to sell of $406 million (or approximately $5.2 billion) at December 31, 2010.
(3) Represents the total net gains (losses) recorded on items measured at fair value on a non-recurring basis as of December 31, 2011 and 2010, respectively.

Fair Value Election

We elected the fair value option for certain types of securities, multifamily held-for-sale mortgage loans, foreign-currency denominated debt, and certain other debt.

Certain Available-for-Sale Securities with Fair Value Option Elected

We elected the fair value option for certain available-for-sale mortgage-related securities to better reflect the natural offset these securities provide to fair value changes recorded historically on our guarantee asset at the time of our election. In addition, upon adoption of the accounting guidance for the fair value option, we elected this option for available-for-sale securities within the scope of the accounting guidance for investments in beneficial interests in securitized financial assets to better reflect any valuation changes that would occur subsequent to impairment write-downs previously recorded on these instruments. By electing the fair value option for these instruments, we reflect valuation changes through our consolidated statements of income and comprehensive income in the period they occur, including any increases in value.

For mortgage-related securities and investments in securities that were selected for the fair value option and subsequently classified as trading securities, the change in fair value is recorded in other gains (losses) on investment securities recognized in earnings in our consolidated statements of income and comprehensive income. See "NOTE 7: INVESTMENTS IN SECURITIES" for additional information regarding the net unrealized gains (losses) on trading securities, which include gains (losses) for other items that are not selected for the fair value option. Related interest income continues to be reported as interest income in our consolidated statements of income and comprehensive income. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Investments in Securities" for additional information about the measurement and recognition of interest income on investments in securities.

Debt Securities with Fair Value Option Elected

We elected the fair value option for foreign-currency denominated debt and certain other debt securities. In the case of foreign-currency denominated debt, we have entered into derivative transactions that effectively convert these instruments to U.S. dollar denominated floating rate instruments. The fair value changes on these derivatives were recorded in derivative gains (losses) in our consolidated statements of income and comprehensive income. We elected the fair value option on these debt instruments to better reflect the economic offset that naturally results from the debt due to changes in interest rates. We also elected the fair value option for certain other debt securities containing potential embedded derivatives that required bifurcation.

The changes in fair value of debt securities with the fair value option elected were $91 million, $580 million, and $(404) million for the years ended December 31, 2011, 2010, and 2009, respectively, which were recorded in gains (losses) on debt recorded at fair value in our consolidated statements of income and comprehensive income. The changes in fair value related to fluctuations in exchange rates and interest rates were $89 million, $583 million, and $(204) million for the years ended December 31, 2011, 2010, and 2009, respectively. The remaining changes in the fair value of $2 million, $(3) million, and $(200) million were attributable to changes in credit risk for the years ended December 31, 2011, 2010, and 2009 respectively.

The change in fair value attributable to changes in credit risk was primarily determined by comparing the total change in fair value of the debt to the total change in fair value of the interest-rate and foreign-currency derivatives used to hedge the debt. Any difference in the fair value change of the debt compared to the fair value change in the derivatives is attributed to credit risk.

The difference between the aggregate fair value and aggregate UPB for long-term debt securities with fair value option elected was $43 million and $108 million at December 31, 2011 and 2010, respectively. Related interest expense continues to be reported as interest expense in our consolidated statements of income and comprehensive income. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Debt Securities Issued" for additional information about the measurement and recognition of interest expense on debt securities issued.

Multifamily Held-For-Sale Mortgage Loans with Fair Value Option Elected

We elected the fair value option for multifamily mortgage loans that were purchased for securitization. Through this channel, we acquire loans that we intend to securitize and sell to CMBS investors. While this is consistent with our overall strategy to expand our multifamily business, it differs from our previous buy-and-hold strategy with respect to multifamily loans held-for-investment. Therefore, these multifamily mortgage loans were classified as held-for-sale mortgage loans in our consolidated balance sheets to reflect our intent to sell in the future.

We recorded $828 million, $(1) million, and $(81) million from the change in fair value in gains (losses) on mortgage loans recorded at fair value in other income in our consolidated statements of income and comprehensive income for the years ended December 31, 2011, 2010, and 2009 respectively. The changes in fair value of these loans were primarily attributable to changes in interest rates and other non-credit related items such as liquidity. The changes in fair value attributable to credit risk were not material given that these loans were generally originated within the past six to twelve months and have not seen a change in their credit characteristics.

The difference between the aggregate fair value and the aggregate UPB for multifamily held-for-sale loans with the fair value option elected was $195 million and $(311) million at December 31, 2011 and 2010, respectively. Related interest income continues to be reported as interest income in our consolidated statements of income and comprehensive income. See "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES — Mortgage Loans" for additional information about the measurement and recognition of interest income on our mortgage loans.

Valuation Methods and Assumptions Subject to Fair Value Hierarchy

We categorize assets and liabilities that we measure and report at fair value in our consolidated balance sheets within the fair value hierarchy based on the valuation process used to derive the fair value and our judgment regarding the observability of the related inputs.

Investments in Securities

Agency Securities

Fixed-rate agency securities are valued based on dealer-published quotes for a base TBA security, adjusted to reflect the measurement date as opposed to a forward settlement date ("carry") and pay-ups for specified collateral. The base TBA price varies based on agency, term, coupon, and settlement month. The carry adjustment converts forward settlement date prices to spot or same-day settlement date prices such that the fair value is estimated as of the measurement date, and not as of the forward settlement date. The carry adjustment uses our internal prepayment and interest rate models. A pay-up is added to the base TBA price for characteristics that are observed to be trading at a premium versus TBAs; this currently includes seasoning and low-loan balance attributes. Haircuts are applied to a small subset of positions that are less liquid and are observed to trade at a discount relative to TBAs; this includes securities that are not eligible for delivery into TBA trades.

Adjustable-rate agency securities are valued based on the median of prices from multiple pricing services. The key valuation drivers used by the pricing services include the interest rate cap structure, term, agency, remaining term, and months-to-next coupon reset, coupled with prevailing market conditions, namely interest rates.

Because fixed-rate and adjustable-rate agency securities are generally liquid and contain observable pricing in the market, they generally are classified as Level 2.

Multiclass structures are valued using a variety of methods, depending on the product type. The predominant valuation methodology uses the median prices from multiple pricing services. This method is used for structures for which there is typically significant, relevant market activity. Some of the key valuation drivers used by the pricing services are the collateral type, tranche type, weighted average life, and coupon, coupled with interest rates. Other tranche types that are more challenging to price are valued using the median prices from multiple dealers. These include structured interest-only, structured principal-only, inverse floating-rate, and inverse interest-only structures. Some of the key valuation drivers used by the dealers are the collateral type, tranche type, weighted average life, and coupon, coupled with interest rates. In addition, there is a subset of tranches for which there is a lack of relevant market activity that are priced using a proxy relationship where the position is matched to the closest dealer-priced tranche, then valued by calculating an OAS using our proprietary prepayment and interest rate models from the dealer-priced tranche. If necessary, our judgment is applied to estimate the impact of differences in prepayment uncertainty or other unique cash flow characteristics related to that particular security. We then determine the fair values for these securities by using the estimated OAS as an input to the valuation calculation in conjunction with interest-rate and prepayment models to calculate the NPV of the projected cash flows. These positions typically have smaller balances and are more difficult for dealers to value. There is also a subset of positions for which prices are published on a daily basis; these include trust interest-only and trust principal-only strips. These are fairly liquid tranches and are quoted on a regular settlement date basis. In order to align the regular settlement date price with the balance sheet date, the OAS is calculated based on the published prices. Then the tranche is valued using that OAS applied to the balance sheet date.

Multiclass agency securities are classified as Level 2 or 3 depending on the significance of the inputs that are not observable.

Commercial Mortgage-Backed Securities

CMBS are valued based on the median prices from multiple pricing services. Some of the key valuation drivers used by the pricing services include the collateral type, collateral performance, capital structure, issuer, credit enhancement, coupon, and weighted average life, coupled with the observed spread levels on trades of similar securities. The weighted average coupon of the collateral underlying our CMBS investments was 5.7% as of both December 31, 2011 and 2010. The weighted-average life of the collateral underlying our CMBS investments was 3.7 years and 4.3 years, respectively, as of December 31, 2011 and 2010. Many of these securities have significant prepayment lockout periods or penalty periods that limit the window of potential prepayment to a relatively narrow band. These securities are primarily classified as Level 2.

Subprime, Option ARM, and Alt-A and Other (Mortgage-Related)

These private-label investments are valued using either the median of multiple dealer prices or the median prices from multiple pricing services. Some of the key valuation drivers used by the dealers and pricing services include the product type, vintage, collateral performance, capital structure, credit enhancements, and coupon, coupled with interest rates and spreads observed on trades of similar securities, where possible. The market for non-agency mortgage-related securities backed by subprime, option ARM, and Alt-A and other loans is highly illiquid, resulting in wide price ranges as well as wide credit spreads. These securities are primarily classified as Level 3.

The table below presents the fair value of subprime, option ARM, and Alt-A and other investments we held by origination year.

Table 17.4 — Fair Value of Subprime, Option ARM, and Alt-A and Other Investments by Origination Year

Year of Origination	Fair Value at December 31, 2011	Fair Value at December 31, 2010
	(in millions)	
2004 and prior	$ 4,287	$ 4,998
2005	10,411	13,126
2006	16,155	19,333
2007	13,890	16,461
2008 and beyond	—	—
Total	$44,743	$53,918

Obligations of States and Political Subdivisions

These primarily represent housing revenue bonds, which are valued by taking the median prices from multiple pricing services. Some of the key valuation drivers used by the pricing services include the structure of the bond, call terms, cross-collateralization features, and tax-exempt features coupled with municipal bond rates, credit ratings, and spread levels. These securities are unique, resulting in low trading volumes and are classified as Level 3 in the fair value hierarchy.

Manufactured Housing

Securities backed by loans on manufactured housing properties are dealer-priced and we arrive at the fair value by taking the median of multiple dealer prices. Some of the key valuation drivers include the collateral's performance and vintage. These securities are classified as Level 3 in the fair value hierarchy because key inputs are unobservable in the market due to low levels of liquidity.

Asset-Backed Securities (Non-Mortgage-Related)

These private-label non-mortgage-related securities are valued based on prices from pricing services. Some of the key valuation drivers include the discount margin, subordination level, and prepayment speed, coupled with interest rates. They are classified as Level 2 because of their liquidity and tight pricing ranges.

Treasury Bills and Treasury Notes

Treasury bills and Treasury notes are classified as Level 1 in the fair value hierarchy since they are actively traded and price quotes are widely available at the measurement date for the exact security we are valuing.

FDIC-Guaranteed Corporate Medium-Term Notes

Since these securities carry the FDIC guarantee, they are considered to have no credit risk. They are valued based on yield analysis. They are classified as Level 2 because of their high liquidity and tight pricing ranges.

Mortgage Loans, Held-for-Sale

Mortgage loans, held-for-sale represent multifamily mortgage loans with the fair value option elected. Thus, all held-for-sale mortgage loans are measured at fair value on a recurring basis.

The fair value of multifamily mortgage loans is generally based on market prices obtained from a third-party pricing service provider for similar actively traded mortgages, adjusted for differences in loan characteristics and contractual terms. The pricing service aggregates observable price points from two markets: agency and non-agency. The agency market consists of purchases made by the GSEs of loans underwritten by our counterparties in accordance with our guidelines while the non-agency market generally consists of secondary market trades between banks and other financial institutions of loans that were originated and initially held in portfolio by these institutions. The pricing service blends the

observable price data obtained from these two distinct markets into a final composite price based on the expected probability that a given loan will trade in one of these two markets. This estimated probability is largely a function of the loan's credit quality, as determined by its current LTV ratio and DSCR. The result of this blending technique is that lower credit quality loans receive a lower percentage of agency price weighting and higher credit quality loans receive a higher percentage of agency price weighting.

Given the relative illiquidity in the marketplace for multifamily mortgage loans and differences in contractual terms, these loans are classified as Level 3 in the fair value hierarchy.

Mortgage Loans, Held-for-Investment

Mortgage loans, held-for-investment measured at fair value on a non-recurring basis represent impaired multifamily mortgage loans, which are not measured at fair value on an ongoing basis but have been written down to fair value due to impairment. The valuation technique we use to measure the fair value of impaired multifamily mortgage loans, held-for-investment is based on the value of the underlying property and may include assessment of third-party appraisals, environmental, and engineering reports that we compare with relevant market performance to arrive at a fair value. Our valuation technique incorporates one or more of the following methods: income capitalization, discounted cash flow, sales comparables, and replacement cost. We consider the physical condition of the property, rent levels, and other market drivers, including input from sales brokers and the property manager. We classify impaired multifamily mortgage loans, held-for-investment as Level 3 in the fair value hierarchy as their valuation includes significant unobservable inputs.

Derivative Assets, Net

Derivative assets largely consist of interest-rate swaps, option-based derivatives, futures, and forward purchase and sale commitments that we account for as derivatives. The carrying value of our derivatives on our consolidated balance sheets is equal to their fair value, including net derivative interest receivable or payable, trade/settle receivable or payable and is net of cash collateral held or posted, where allowable by a master netting agreement. Derivatives in a net unrealized gain position are reported as derivative assets, net. Similarly, derivatives in a net unrealized loss position are reported as derivative liabilities, net.

Interest-Rate Swaps and Option-Based Derivatives

The fair values of interest-rate swaps are determined by using the appropriate yield curves to discount the expected cash flows of both the fixed and variable rate components of the swap contracts. In doing so, we first observe publicly available market spot interest rates, such as money market rates, Eurodollar futures contracts and LIBOR swap rates. The spot curves are translated to forward curves using internal models. From the forward curves, the periodic cash flows are calculated on the pay and receive side of the swap and discounted back at the relevant forward rates to arrive at the fair value of the swap. Since the fair values of the swaps are determined by using observable inputs from active markets, these are generally classified as Level 2 under the fair value hierarchy.

Option-based derivatives include call and put swaptions and other option-based derivatives, the majority of which are European options. The fair values of the European call and put swaptions are calculated by using market observable interest rates and dealer-supplied interest rate volatility grids as inputs to our option-pricing models. Within each grid, prices are determined based on the option term of the underlying swap and the strike rate of the swap. Derivatives with embedded American options are valued using dealer-provided pricing grids. The grids contain prices corresponding to specified option terms of the underlying swaps and the strike rate of the swaps. Interpolation is used to calculate prices for positions for which specific grid points are not provided. Derivatives with embedded Bermudan options are valued based on prices provided directly by counterparties. Swaptions are classified as Level 2 under the fair value hierarchy. Other option-based derivatives include exchange-traded options that are valued by exchange-published daily closing prices. Therefore, exchange-traded options are classified as Level 1 under the fair value hierarchy. Other option-based derivatives also include purchased interest-rate cap and floor contracts that are valued by using observable market interest rates and cap and floor rate volatility grids obtained from dealers, and cancellable interest rate swaps that are valued by using dealer prices. Cap and floor contracts are classified as Level 2 and cancellable interest rate swaps with fair values using significant unobservable inputs are classified as Level 3 under the fair value hierarchy.

The table below shows the fair value, prior to counterparty and cash collateral netting adjustments, for our interest-rate swaps and option-based derivatives and the maturity profile of our derivative positions. It also provides the weighted-average fixed rates of our pay-fixed and receive-fixed swaps. As of December 31, 2011 and 2010 our option-based derivatives had a remaining weighted-average life of 5.0 years and 4.5 years, respectively.

Table 17.5 — Fair Values and Maturities for Interest-Rate Swaps and Option-Based Derivatives

	December 31, 2011					
			Fair Value[1]			
	Notional or Contractual Amount	Total Fair Value[2]	Less than 1 Year	1 to 3 Years	Greater than 3 and up to 5 Years	In Excess of 5 Years
	(dollars in millions)					
Interest-rate swaps:						
Receive-fixed:						
Swaps	$195,716	$ 10,651	$ 22	$ 390	$ 2,054	$ 8,185
Weighted average fixed rate[3]			1.17%	1.03%	2.26%	3.35%
Forward-starting swaps[4]	16,092	2,239	—	—	—	2,239
Weighted average fixed rate[3]			—	—	—	3.96%
Basis (floating to floating)	2,750	(2)	—	(6)	4	—
Pay-fixed:						
Swaps	276,564	(31,565)	(62)	(1,319)	(6,108)	(24,076)
Weighted-average fixed rate[3]			1.59%	2.20%	3.13%	3.84%
Forward-starting swaps[4]	12,771	(2,923)	—	—	—	(2,923)
Weighted-average fixed rate[3]			—	—	—	5.16%
Total interest-rate swaps	$503,893	$(21,600)	$ (40)	$ (935)	$(4,050)	$(16,575)
Option-based derivatives:						
Call swaptions	$103,800	$ 10,043	$5,230	$ 1,339	$ 558	$ 2,916
Put swaptions	70,875	636	22	49	166	399
Other option-based derivatives[5]	38,549	2,254	—	—	—	2,254
Total option-based	$213,224	$ 12,933	$5,252	$ 1,388	$ 724	$ 5,569

	December 31, 2010					
			Fair Value[1]			
	Notional or Contractual Amount	Total Fair Value[2]	Less than 1 Year	1 to 3 Years	Greater than 3 and up to 5 Years	In Excess of 5 Years
	(dollars in millions)					
Interest-rate swaps:						
Receive-fixed:						
Swaps	$302,178	$ 3,314	$ 137	$ 534	$ 1,269	$ 1,374
Weighted-average fixed rate[3]			1.54%	1.12%	2.39%	3.66%
Forward-starting swaps[4]	22,412	371	—	123	(9)	257
Weighted-average fixed rate[3]			—	3.47%	1.88%	4.19%
Basis (floating to floating)	2,375	4	—	—	4	—
Pay-fixed:						
Swaps	338,035	(17,189)	(273)	(1,275)	(3,297)	(12,344)
Weighted average fixed rate[3]			3.11%	2.21%	3.04%	4.02%
Forward-starting swaps[4]	56,259	(4,009)	—	—	—	(4,009)
Weighted average fixed rate[3]			—	—	—	4.54%
Total interest-rate swaps	$721,259	$(17,509)	$ (136)	$ (618)	$(2,033)	$(14,722)
Option-based derivatives:						
Call swaptions	$125,885	$ 8,147	$2,754	$ 2,661	$ 1,246	$ 1,486
Put swaptions	65,975	1,396	136	451	226	583
Other option-based derivatives[5]	47,234	1,450	(8)	—	(1)	1,459
Total option-based	$239,094	$ 10,993	$2,882	$ 3,112	$ 1,471	$ 3,528

(1) Fair value is categorized based on the period from December 31, 2011 and 2010, respectively, until the contractual maturity of the derivatives.
(2) Represents fair value for each product type, prior to counterparty netting, cash collateral netting, net trade/settle receivable or payable, and net derivative interest receivable or payable adjustments.
(3) Represents the notional weighted average rate for the fixed leg of the swaps.
(4) Represents interest-rate swap agreements that are scheduled to begin on future dates ranging from less than one year to thirteen years.
(5) Primarily includes purchased interest rate caps and floors.

Other Derivatives

Other derivatives mainly consist of exchange-traded futures, foreign-currency swaps, certain forward purchase and sale commitments, and credit derivatives. The fair value of exchange-traded futures is based on end-of-day observed closing prices obtained from third-party pricing services; therefore, they are classified as Level 1 under the fair value hierarchy. The fair value of foreign-currency swaps is determined by using the appropriate yield curves to calculate and discount the expected cash flows for the swap contracts; therefore, they are classified as Level 2 under the fair value hierarchy since the fair values are determined through models that use observable inputs from active markets.

Certain purchase and sale commitments are also considered to be derivatives and are classified as Level 2 or Level 3 under the fair value hierarchy, depending on the fair value hierarchy classification of the purchased or sold item, whether a security or loan. Such valuation techniques are further discussed in the *"Investments in Securities"* section above and "Valuation Methods and Assumptions Not Subject to Fair Value Hierarchy — *Mortgage Loans*."

Credit derivatives primarily include purchased credit default swaps and certain short-term default guarantee commitments, which are valued using prices from the respective counterparty and verified using third-party dealer credit default spreads at the measurement date. We classify credit derivatives as Level 3 under the fair value hierarchy due to the inactive market and significant divergence among prices obtained from the dealers.

Consideration of Credit Risk in Our Valuation of Derivatives

The fair value of derivative assets considers the impact of institutional credit risk in the event that the counterparty does not honor its payment obligation. Additionally, the fair value of derivative liabilities considers the impact of our institutional credit risk. Based on this evaluation, and because we obtain collateral from, or post collateral to, most counterparties, typically within one business day of the daily market value calculation, our fair value of derivatives is not adjusted for credit risk. Substantially all of our credit risk arises from counterparties with investment-grade credit ratings of A or above. See "NOTE 16: CONCENTRATION OF CREDIT AND OTHER RISKS" for a discussion of our counterparty credit risk.

Other Assets, Guarantee Asset

Our guarantee asset is valued either through obtaining dealer quotes on similar securities or through an expected cash flow approach. Because of the broad range of liquidity discounts applied by dealers to these similar securities and because the expected cash flow valuation approach uses significant unobservable inputs, we classified the guarantee asset as Level 3.

REO, Net

REO is carried at the lower of its carrying amount or fair value less costs to sell. The fair value of REO is calculated using an internal model that considers state and collateral level data to produce an estimate of fair value based on REO dispositions in the most recent three months. We use the actual disposition prices on REO and the current loan UPB to estimate the current fair value of REO. Certain adjustments, such as state specific adjustments, are made to the estimated fair value, as applicable. Due to the use of unobservable inputs, REO is classified as Level 3 under the fair value hierarchy.

Debt Securities Recorded at Fair Value

We elected the fair value option for foreign-currency denominated debt instruments and certain other debt securities. See "Fair Value Election — *Debt Securities with Fair Value Option Elected"* for additional information. We determine the fair value of these instruments by obtaining multiple quotes from dealers. Since the prices provided by the dealers consider only observable data such as interest rates and exchange rates, these fair values are classified as Level 2 under the fair value hierarchy.

Derivative Liabilities, Net

See discussion under *"Derivative Assets, Net"* above.

Consolidated Fair Value Balance Sheets

The supplemental consolidated fair value balance sheets in the table below present our estimates of the fair value of our financial assets and liabilities at December 31, 2011 and 2010. The valuations of financial instruments on our consolidated fair value balance sheets are in accordance with the accounting guidance for fair value measurements and disclosures and the accounting guidance for financial instruments. The consolidated fair value balance sheets do not purport to present our net realizable, liquidation, or market value as a whole. Furthermore, amounts we ultimately realize from the disposition of assets or settlement of liabilities may vary significantly from the fair values presented.

During the fourth quarter of 2011, our fair value results as presented in our consolidated fair value balance sheets were affected by a change in estimate which increased the implied capital costs included in our valuation of single-family mortgage loans due to a change in the estimation of a risk premium assumption embedded in our modeled valuation of such loans. This change in estimate led to a $14.2 billion decrease in our fair value measurement of mortgage loans.

During the second quarter of 2010, our fair value results as presented in our consolidated fair value balance sheets were affected by a change in the estimation of a risk premium assumption embedded in our model to apply credit costs, which led to a $6.9 billion decrease in our fair value measurement of mortgage loans. For more information concerning our approach to valuation related to our mortgage loans, see "Valuation Methods and Assumptions Not Subject to Fair Value Hierarchy — *Mortgage Loans.*"

Table 17.6 — Consolidated Fair Value Balance Sheets

	December 31, 2011		December 31, 2010	
	Carrying Amount(1)	Fair Value	Carrying Amount(1)	Fair Value
	(in billions)			
Assets				
Cash and cash equivalents	$ 28.4	$ 28.4	$ 37.0	$ 37.0
Restricted cash and cash equivalents	28.1	28.1	8.1	8.1
Federal funds sold and securities purchased under agreements to resell	12.0	12.0	46.5	46.5
Investments in securities:				
Available-for-sale, at fair value	210.7	210.7	232.6	232.6
Trading, at fair value	58.8	58.8	60.3	60.3
Total investments in securities	269.5	269.5	292.9	292.9
Mortgage loans:				
Mortgage loans held by consolidated trusts	1,564.2	1,598.2	1,646.2	1,667.5
Unsecuritized mortgage loans	217.1	205.9	198.7	191.5
Total mortgage loans	1,781.3	1,804.1	1,844.9	1,859.0
Derivative assets, net	0.1	0.1	0.1	0.1
Other assets	27.8	28.5	32.3	37.2
Total assets	$2,147.2	$2,170.7	$2,261.8	$2,280.8
Liabilities				
Debt, net:				
Debt securities of consolidated trusts held by third parties	$1,471.4	$1,552.5	$1,528.7	$1,589.5
Other debt	660.6	681.2	713.9	729.7
Total debt, net	2,132.0	2,233.7	2,242.6	2,319.2
Derivative liabilities, net	0.4	0.4	1.2	1.2
Other liabilities	14.9	15.0	18.4	19.0
Total liabilities	2,147.3	2,249.1	2,262.2	2,339.4
Net assets				
Senior preferred stockholders	72.2	72.2	64.2	64.2
Preferred stockholders	14.1	0.6	14.1	0.3
Common stockholders	(86.4)	(151.2)	(78.7)	(123.1)
Total net assets	(0.1)	(78.4)	(0.4)	(58.6)
Total liabilities and net assets	$2,147.2	$2,170.7	$2,261.8	$2,280.8

(1) Equals the amount reported on our GAAP consolidated balance sheets.

Limitations

Our consolidated fair value balance sheets do not capture all elements of value that are implicit in our operations as a going concern because our consolidated fair value balance sheets only capture the values of the current investment and securitization portfolios as of the dates presented. For example, our consolidated fair value balance sheets do not capture the value of new investment and securitization business that would likely replace prepayments as they occur, nor do they include any estimation of intangible or goodwill values. Thus, the fair value of net assets attributable to stockholders presented on our consolidated fair value balance sheets does not represent an estimate of our net realizable, liquidation or market value as a whole.

The fair value of certain financial instruments is based on our assumed current principal exit market as of the dates presented. As new markets are developed, our assumed principal exit market may change. The use of different assumptions and methodologies to determine the fair values of certain financial instruments, including the use of different principal exit markets, could have a material impact on the fair value of net assets attributable to stockholders presented on our consolidated fair value balance sheets.

We report certain assets and liabilities that are not financial instruments (such as property and equipment and REO), as well as certain financial instruments that are not covered by the disclosure requirements in the accounting guidance for financial instruments, such as pension liabilities, at their carrying amounts in accordance with GAAP on our consolidated fair value balance sheets. We believe these items do not have a significant impact on our overall fair value results. Other non-financial assets and liabilities on our GAAP consolidated balance sheets represent deferrals of costs and revenues that are amortized in accordance with GAAP, such as deferred debt issuance costs and deferred fees. Cash receipts and payments related to these items are generally recognized in the fair value of net assets when received or paid, with no basis reflected on our fair value balance sheets.

Valuation Methods and Assumptions Not Subject to Fair Value Hierarchy

The following are valuation assumptions and methods for items not subject to the fair value hierarchy either because they are not measured at fair value other than on the fair value balance sheet or are only measured at fair value at inception.

Cash and Cash Equivalents

Cash and cash equivalents largely consist of highly liquid investment securities with an original maturity of three months or less used for cash management purposes, as well as cash held at financial institutions and cash collateral posted by our derivative counterparties. Given that these assets are short-term in nature with limited market value volatility, the carrying amount on our GAAP consolidated balance sheets is deemed to be a reasonable approximation of fair value.

Federal Funds Sold and Securities Purchased Under Agreements to Resell

Federal funds sold and securities purchased under agreements to resell principally consist of short-term contractual agreements such as reverse repurchase agreements involving Treasury and agency securities and federal funds sold. Given that these assets are short-term in nature, the carrying amount on our GAAP consolidated balance sheets is deemed to be a reasonable approximation of fair value.

Mortgage Loans

Single-family mortgage loans are not subject to the fair value hierarchy since they are classified as held-for-investment and recorded at amortized cost. Certain multifamily mortgage loans are subject to the fair value hierarchy since these are either recorded at fair value with the fair value option elected or they are held for investment and recorded at fair value upon impairment, which is based upon the fair value of the collateral as multifamily loans are collateral-dependent.

Single-Family Loans

We determine the fair value of single-family mortgage loans as an estimate of the price we would receive if we were to securitize those loans, as we believe this represents the principal market for such loans. This principal market assumption applies to both loans held by consolidated trusts and unsecuritized loans and excludes single-family loans for which a contractual modification has been completed. Our estimate of fair value is based on comparisons to actively traded mortgage-related securities with similar characteristics. We adjust to reflect the excess coupon (implied management and guarantee fee) and credit obligation related to performing our guarantee.

To calculate the fair value, we begin with a security price derived from benchmark security pricing for similar actively traded mortgage-related securities, adjusted for yield, credit, and liquidity differences. This security pricing process is consistent with our approach for valuing similar securities retained in our investment portfolio or issued to third parties. See "Valuation Methods and Assumptions Subject to Fair Value Hierarchy — *Investments in Securities*."

We estimate the present value of the additional cash flows, which consist of the implied management and guarantee fees in excess of the coupon on the mortgage-related securities. Our approach for estimating the fair value of the implied management and guarantee fees at December 31, 2011 used third-party market data as practicable. The valuation approach for the majority of implied management and guarantee fees relates to fixed-rate loan products with coupons at or near current market rates and involves obtaining dealer quotes on hypothetical securities constructed with collateral characteristics from our single-family credit guarantee portfolio. The remaining portion of the implied management and guarantee fees relates to underlying loan products for which comparable market prices were not readily available. These relate specifically to ARM products, highly seasoned loans, and fixed-rate loans with coupons that are not consistent with current market rates. For this portion of the single-family credit guarantee portfolio, the implied management and guarantee fees are valued using an expected cash flow approach, leveraging the market information received on the more liquid portion of the population and including only those cash flows expected to result from our contractual right to receive management and guarantee fees.

The implied management and guarantee fee for single-family mortgage loans is also net of the related credit and other costs (such as general and administrative expense) and benefits (such as credit enhancements) inherent in our guarantee obligation. We use delivery and guarantee fees charged by us as a market benchmark for all guaranteed loans that would qualify for purchase under current underwriting standards (used for the majority of the guaranteed loans, but accounts for a small share of the overall fair value of the guarantee obligation). For loans that do not qualify for purchase based on current underwriting standards, we use our internal credit models, which incorporate factors such as loan characteristics, loan performance status information, expected losses, and risk premiums without further adjustment (used

for less than a majority of the guaranteed loans, but accounts for the largest share of the overall fair value of the guarantee obligation).

For single-family mortgage loans for which a contractual modification has been approved, we estimate fair value based on our estimate of prices we would receive if we were to sell these loans in the whole loan market, as this represents our current principal market for modified loans. These prices are obtained from multiple dealers who reference market activity, where available, for modified loans and use internal models and their judgment to determine default rates, severity rates, and risk premiums.

The fair value of single-family mortgage loans is a fair value measurement with limited market benchmarks and significant unobservable inputs. In determining the fair value of single-family mortgage loans, valuation outcomes can vary widely based on management judgments and decisions used in determining: (a) a principal exit market; (b) modeling assumptions; and (c) inputs used to determine variables including risk premiums, credit costs, security pricing, and implied management and guarantee fees. Specifically, the valuation of single-family mortgage loans could change significantly based on changes in our assumptions about the probability of default, severity, home prices, and risk premium.

Multifamily Loans

For a discussion of the techniques used to determine the fair value of held-for-sale, and both impaired and non-impaired held-for-investment multifamily loans, see "Valuation Methods and Assumptions Subject to Fair Value Hierarchy — *Mortgage Loans, Held-for-Investment"* and *"— Mortgage Loans, Held-for-Sale,"* respectively.

Other Assets

Most of our other assets are not financial instruments required to be valued at fair value under the accounting guidance for disclosures about the fair value of financial instruments, such as property and equipment. For most of these non-financial instruments in other assets, we use the carrying amounts from our GAAP consolidated balance sheets as the reported values on our consolidated fair value balance sheets, without any adjustment. These assets represent an insignificant portion of our GAAP consolidated balance sheets.

We adjust the GAAP-basis deferred taxes reflected on our consolidated fair value balance sheets to include estimated income taxes on the difference between our consolidated fair value balance sheets net assets attributable to common stockholders, including deferred taxes from our GAAP consolidated balance sheets, and our GAAP consolidated balance sheets equity attributable to common stockholders. To the extent the adjusted deferred taxes are a net asset, this amount is included in other assets. In addition, if our net deferred tax assets on our consolidated fair value balance sheets, calculated as described above, exceed our net deferred tax assets on our GAAP consolidated balance sheets that have been reduced by a valuation allowance, our net deferred tax assets on our consolidated fair value balance sheets are limited to the amount of our net deferred tax assets on our GAAP consolidated balance sheets. If the adjusted deferred taxes are a net liability, this amount is included in other liabilities.

Accrued interest receivable is one of the components included within other assets on our consolidated fair value balance sheets. On our GAAP consolidated balance sheets, we reverse accrued but uncollected interest income when a loan is placed on non-accrual status. There is no such reversal performed for the fair value of accrued interest receivable disclosed on our consolidated fair value balance sheets. Rather, we include in our fair value disclosure the amount we deem to be collectible. As a result, there is a difference between the accrued interest receivable GAAP-basis carrying amount and its fair value disclosed on our consolidated fair value balance sheets.

Total Debt, Net

Total debt, net represents debt securities of consolidated trusts held by third parties and other debt that we issued to finance our assets. On our consolidated GAAP balance sheets, total debt, net, excluding debt securities for which the fair value option has been elected, is reported at amortized cost, which is net of deferred items, including premiums, discounts, and hedging-related basis adjustments.

For fair value balance sheet purposes, we use the dealer-published quotes for a base TBA security, adjusted for the carry and pay-up price adjustments, to determine the fair value of the debt securities of consolidated trusts held by third parties. The valuation techniques we use are similar to the approach we use to value our investments in agency securities for GAAP purposes. See "Valuation Methods and Assumptions Subject to Fair Value Hierarchy — *Investments in Securities — Agency Securities"* for additional information regarding the valuation techniques we use.

Other debt includes both non-callable and callable debt, as well as short-term zero-coupon discount notes. The fair value of the short-term zero-coupon discount notes is based on a discounted cash flow model with market inputs. The valuation of other debt securities represents the proceeds that we would receive from the issuance of debt and is generally based on market prices obtained from broker/dealers or reliable third-party pricing service providers. We elected the fair value option for foreign-currency denominated debt and certain other debt securities and reported them at fair value on our GAAP consolidated balance sheets. See "Valuation Methods and Assumptions Subject to Fair Value Hierarchy — *Debt Securities Recorded at Fair Value"* for additional information.

Other Liabilities

Other liabilities consist of accrued interest payable on debt securities, the guarantee obligation for our other guarantee commitments and guarantees issued to non-consolidated entities, the reserve for guarantee losses on non-consolidated trusts, servicer advanced interest payable and certain other servicer liabilities, accounts payable and accrued expenses, payables related to securities, and other miscellaneous liabilities. We believe the carrying amount of these liabilities is a reasonable approximation of their fair value, except for the guarantee obligation for our other guarantee commitments and guarantees issued to non-consolidated entities. The technique for estimating the fair value of our guarantee obligation related to the credit component of the loan's fair value is described in the "Mortgage Loans — Single-Family Loans" section.

As discussed in "Other Assets," other liabilities may include a deferred tax liability adjusted for fair value balance sheet purposes.

Net Assets Attributable to Senior Preferred Stockholders

Our senior preferred stock held by Treasury in connection with the Purchase Agreement is recorded at the stated liquidation preference for purposes of the consolidated fair value balance sheets. As the senior preferred stock is restricted as to its redemption, we consider the liquidation preference to be the most appropriate measure for purposes of the consolidated fair value balance sheets.

Net Assets Attributable to Preferred Stockholders

To determine the preferred stock fair value, we use a market-based approach incorporating quoted dealer prices.

Net Assets Attributable to Common Stockholders

Net assets attributable to common stockholders is equal to the difference between the fair value of total assets and the sum of total liabilities reported on our consolidated fair value balance sheets, less the value of net assets attributable to senior preferred stockholders and the fair value attributable to preferred stockholders.

NOTE 18: LEGAL CONTINGENCIES

We are involved as a party in a variety of legal and regulatory proceedings arising from time to time in the ordinary course of business including, among other things, contractual disputes, personal injury claims, employment-related litigation and other legal proceedings incidental to our business. We are frequently involved, directly or indirectly, in litigation involving mortgage foreclosures. From time to time, we are also involved in proceedings arising from our termination of a seller/servicer's eligibility to sell mortgages to, and/or service mortgages for, us. In these cases, the former seller/servicer sometimes seeks damages against us for wrongful termination under a variety of legal theories. In addition, we are sometimes sued in connection with the origination or servicing of mortgages. These suits typically involve claims alleging wrongful actions of seller/servicers. Our contracts with our seller/servicers generally provide for indemnification against liability arising from their wrongful actions with respect to mortgages sold to or serviced for Freddie Mac.

Litigation and claims resolution are subject to many uncertainties and are not susceptible to accurate prediction. In accordance with the accounting guidance for contingencies, we reserve for litigation claims and assessments asserted or threatened against us when a loss is probable and the amount of the loss can be reasonably estimated.

In 2011, we paid approximately $8 million for the advancement of legal fees and expenses of current and former officers and directors pursuant to our indemnification obligations to them. These fees and expenses related to some of the matters described below and to certain shareholder derivative lawsuits that were dismissed in April and May 2011. This figure does not include certain administrative support costs and certain costs related to document production and storage.

Putative Securities Class Action Lawsuits

Ohio Public Employees Retirement System ("OPERS") vs. Freddie Mac, Syron, et al. This putative securities class action lawsuit was filed against Freddie Mac and certain former officers on January 18, 2008 in the U.S. District Court for the Northern District of Ohio purportedly on behalf of a class of purchasers of Freddie Mac stock from August 1, 2006 through November 20, 2007. The plaintiff alleges that the defendants violated federal securities laws by making false and misleading statements concerning our business, risk management and the procedures we put into place to protect the company from problems in the mortgage industry. On April 10, 2008, the Court appointed OPERS as lead plaintiff and approved its choice of counsel. On September 2, 2008, defendants filed motions to dismiss plaintiff's amended complaint. On November 7, 2008, the plaintiff filed a second amended complaint, which removed certain allegations against Richard Syron, Anthony Piszel, and Eugene McQuade, thereby leaving insider-trading allegations against only Patricia Cook. The second amended complaint also extends the damages period, but not the class period. The plaintiff seeks unspecified damages and interest, and reasonable costs and expenses, including attorney and expert fees. On November 19, 2008, the Court granted FHFA's motion to intervene in its capacity as Conservator. On April 6, 2009, defendants filed motions to dismiss the second amended complaint. On December 21, 2011, the plaintiff filed a notice advising the Court of a non-prosecution agreement entered into between Freddie Mac and the SEC on December 15, 2011 (discussed below in "Government Investigations and Inquiries"), and stating its intention to file a motion for leave to amend its complaint. On January 23, 2012, the Court denied defendants' motions to dismiss and set a briefing schedule for plaintiff's motion for leave to amend its complaint. On February 13, 2012, plaintiff filed motion for leave to amend, which seeks leave to file a third amended complaint.

At present, it is not possible for us to predict the probable outcome of this lawsuit or any potential impact on our business, financial condition, or results of operations. In addition, we are unable to reasonably estimate the possible loss or range of possible loss in the event of an adverse judgment in the foregoing matter due to the following factors, among others: the inherent uncertainty of pre-trial litigation; and the fact that the parties have not yet briefed and the Court has not yet ruled upon motions for class certification or summary judgment. In particular, absent the certification of a class, the identification of a class period, and the identification of the alleged statement or statements that survive dispositive motions, we cannot reasonably estimate any possible loss or range of possible loss.

Kuriakose vs. Freddie Mac, Syron, Piszel and Cook. Another putative class action lawsuit was filed against Freddie Mac and certain former officers on August 15, 2008 in the U.S. District Court for the Southern District of New York for alleged violations of federal securities laws purportedly on behalf of a class of purchasers of Freddie Mac stock from November 21, 2007 through August 5, 2008. The plaintiffs claim that defendants made false and misleading statements about Freddie Mac's business that artificially inflated the price of Freddie Mac's common stock, and seek unspecified damages, costs, and attorneys' fees. On February 6, 2009, the Court granted FHFA's motion to intervene in its capacity as Conservator. On May 19, 2009, plaintiffs filed an amended consolidated complaint, purportedly on behalf of a class of purchasers of Freddie Mac stock from November 20, 2007 through September 7, 2008. Freddie Mac filed a motion to dismiss the complaint on February 24, 2010. On March 30, 2011, the Court granted without prejudice Freddie Mac's motion to dismiss all claims, and allowed the plaintiffs the option to file a new complaint, which they did on July 15, 2011. The defendants have filed motions to dismiss the second amended consolidated complaint. On February 17, 2012, plaintiff served a motion seeking leave to file a third amended consolidated complaint based on the non-prosecution agreement entered into between Freddie Mac and the SEC on December 15, 2011.

At present, it is not possible for us to predict the probable outcome of this lawsuit or any potential impact on our business, financial condition, or results of operations. In addition, we are unable to reasonably estimate the possible loss or range of possible loss in the event of an adverse judgment in the foregoing matter due to the following factors, among others: the inherent uncertainty of pre-trial litigation; the fact that the Court has not yet ruled upon the defendants' motions to dismiss the second amended complaint or plaintiffs' motion seeking leave to file a third amended complaint; and the fact that the parties have not yet briefed and the Court has not yet ruled upon motions for class certification or summary judgment. In particular, absent the certification of a class, the identification of a class period, and the identification of the alleged statement or statements that survive dispositive motions, we cannot reasonably estimate any possible loss or range of possible loss.

Energy Lien Litigation

On July 14, 2010, the State of California filed a lawsuit against Freddie Mac, Fannie Mae, FHFA, and others in the U.S. District Court for the Northern District of California, alleging that Freddie Mac and Fannie Mae committed unfair business practices in violation of California law by asserting that property liens arising from government-sponsored energy initiatives such as California's Property Assessed Clean Energy, or PACE, program cannot take priority over a mortgage to

be sold to Freddie Mac or Fannie Mae. The lawsuit contends that the PACE programs create liens superior to such mortgages and that, by affirming Freddie Mac and Fannie Mae's positions, FHFA has violated the National Environmental Policy Act, or NEPA, and the Administrative Procedure Act, or APA. The complaint seeks declaratory and injunctive relief, costs and such other relief as the court deems proper.

Similar complaints have been filed by other parties. On July 26, 2010, the County of Sonoma filed a lawsuit against Fannie Mae, Freddie Mac, FHFA, and others in the U.S. District Court for the Northern District of California, alleging similar violations of California law, NEPA, and the APA. In a filing dated September 23, 2010, the County of Placer moved to intervene in the Sonoma County lawsuit as a party plaintiff seeking to assert similar claims, which motion was granted on November 1, 2010. On October 1, 2010, the City of Palm Desert filed a similar complaint against Fannie Mae, Freddie Mac, and FHFA in the Northern District of California. On October 8, 2010, Leon County and the Leon County Energy Improvement District filed a similar complaint against Fannie Mae, Freddie Mac, FHFA, and others in the Northern District of Florida. On October 12, 2010, FHFA filed a motion before the Judicial Panel on Multi-District Litigation seeking an order transferring these cases as well as a related case filed only against FHFA, for coordination or consolidation of pretrial proceedings. This motion was denied on February 8, 2011. On October 14, 2010, the defendants filed a motion to dismiss the lawsuits pending in the Northern District of California. Also on October 14, 2010, the County of Sonoma filed a motion for preliminary injunction seeking to enjoin the defendants from giving any force or effect in Sonoma County to certain directives by FHFA regarding energy retrofit loan programs and other related relief. On October 26, 2010, the Town of Babylon filed a similar complaint against Fannie Mae, Freddie Mac, and FHFA, as well as the Office of the Comptroller of the Currency, in the U.S. District Court for the Eastern District of New York.

The defendants filed motions to dismiss these lawsuits. The courts have entered stipulated orders dismissing the individual officers of Freddie Mac and Fannie Mae from the cases. On December 17, 2010, the judge handling the cases in the Northern District of California requested a position statement from the United States, which was filed on February 8, 2011. On June 13, 2011, the complaint filed by the Town of Babylon was dismissed. On August 11, 2011, the Town of Babylon filed a notice of appeal to the U.S. Court of Appeals for the Second Circuit. On August 26, 2011, the California federal court granted in part defendants' motion to dismiss, leaving only plaintiffs' APA and NEPA claims against FHFA. The California federal district court cases were thereafter consolidated and the plaintiffs in those cases filed a joint motion for summary judgment on January 23, 2012. FHFA cross-moved for summary judgment on February 27, 2012.

Sonoma County's motion for preliminary injunction was granted in part, requiring FHFA to provide a notice and comment period with regard to its directives. FHFA filed an appeal of the injunction on September 15, 2011, and the District Court granted FHFA a 10-day stay of the injunction to allow FHFA to request a further stay from the U.S. Court of Appeals for the Ninth Circuit, which occurred on October 11, 2011. By order dated December 20, 2011, the Ninth Circuit denied the request for a stay with respect to the notice and comment period. Accordingly, on January 26, 2012, FHFA issued an advance notice of proposed rulemaking and notice of intent to prepare an environmental impact statement.

On October 17, 2011 the City of Palm Desert voluntarily dismissed any remaining claims it might have had against Freddie Mac. The complaint filed by Leon County was dismissed by the Court on September 30, 2011. Leon County filed a notice of appeal to the U.S. Court of Appeals for the Eleventh Circuit on November 28, 2011.

At present, it is not possible for us to predict the probable outcome of these lawsuits or any potential impact on our business, financial condition or results of operations. In addition, we are unable to reasonably estimate the possible loss or range of possible loss in the event of an adverse judgment in the foregoing matters due to the following factors, among others: the inherent uncertainty of pre-trial litigation; and the fact that the appeals filed by the Town of Babylon and Leon County are still pending.

Government Investigations and Inquiries

On December 15, 2011, the SEC and Freddie Mac entered into a non-prosecution agreement related to an investigation by the SEC's Division of Enforcement into possible violations of the federal securities laws by Freddie Mac and others that occurred prior to Freddie Mac's entry into conservatorship, arising from, among other things, public statements concerning Freddie Mac's exposure to subprime and Alt-A mortgages.

Under the non-prosecution agreement, without admitting or denying liability, Freddie Mac has agreed to accept responsibility for its conduct and to not dispute, contest, or contradict a set of factual statements in the non-prosecution agreement, except in legal proceedings in which the SEC is not a party. Freddie Mac also has agreed to cooperate fully and truthfully in the SEC's investigation and any other related enforcement litigation or proceeding to which the SEC is a

party. In addition, Freddie Mac agreed to cooperate fully and truthfully in any other related official investigation or proceeding by any U.S. federal agency.

The non-prosecution agreement provides that, subject to the full, truthful, and continuing cooperation of Freddie Mac and its compliance with all obligations, prohibitions and undertakings in the non-prosecution agreement, the SEC agrees not to bring any enforcement action or proceeding against Freddie Mac arising from the SEC's investigation.

The non-prosecution agreement does not require Freddie Mac to pay any monetary penalty or other amount. The agreement indicates that, in entering into the non-prosecution agreement, the SEC recognizes the unique circumstances presented by Freddie Mac's current status, including the financial support provided to Freddie Mac by Treasury, the role of FHFA as Freddie Mac's conservator, and the costs that may be imposed on U.S. taxpayers.

On December 16, 2011, the SEC announced that it had charged three former executives of Freddie Mac with securities laws violations. These executives are former Chairman of the Board and CEO Richard F. Syron, former Executive Vice President and Chief Business Officer Patricia L. Cook, and former Executive Vice President for the single-family guarantee business Donald J. Bisenius.

Related Third Party Litigation and Indemnification Requests

On December 15, 2008, a plaintiff filed a putative class action lawsuit in the U.S. District Court for the Southern District of New York against certain former Freddie Mac officers and others styled *Jacoby vs. Syron, Cook, Piszel, Banc of America Securities LLC, JP Morgan Chase & Co., and FTN Financial Markets.* The complaint, as amended on December 17, 2008, contends that the defendants made material false and misleading statements in connection with Freddie Mac's September 2007 offering of non-cumulative, non-convertible, perpetual fixed-rate preferred stock, and that such statements "grossly overstated Freddie Mac's capitalization" and "failed to disclose Freddie Mac's exposure to mortgage-related losses, poor underwriting standards and risk management procedures." The complaint further alleges that Syron, Cook, and Piszel made additional false statements following the offering. Freddie Mac is not named as a defendant in this lawsuit, but the underwriters previously gave notice to Freddie Mac of their intention to seek full indemnity and contribution under the Underwriting Agreement in this case, including reimbursement of fees and disbursements of their legal counsel. The case is currently dormant and we believe plaintiff may have abandoned it.

By letter dated October 17, 2008, Freddie Mac received formal notification of a putative class action securities lawsuit, *Mark vs. Goldman, Sachs & Co., J.P. Morgan Chase & Co., and Citigroup Global Markets Inc.,* filed on September 23, 2008, in the U.S. District Court for the Southern District of New York, regarding the company's November 29, 2007 public offering of $6 billion of 8.375% Fixed to Floating Rate Non-Cumulative Perpetual Preferred Stock.

On January 29, 2009, a plaintiff filed a putative class action lawsuit in the U.S. District Court for the Southern District of New York styled *Kreysar vs. Syron, et al.* On April 30, 2009, the Court consolidated the Mark case with the Kreysar case, and the plaintiffs filed a consolidated class action complaint on July 2, 2009. The consolidated complaint alleged that three former Freddie Mac officers, certain underwriters and Freddie Mac's auditor violated federal securities laws by making material false and misleading statements in connection with the company's November 29, 2007 public offering of $6 billion of 8.375% Fixed to Floating Rate Non-Cumulative Perpetual Preferred Stock. The complaint further alleged that certain defendants and others made additional false statements following the offering. The complaint named as defendants Syron, Piszel, Cook, Goldman, Sachs & Co., JPMorgan Securities Inc., Banc of America Securities LLC, Citigroup Global Markets Inc., Credit Suisse Securities (USA) LLC, Deutsche Bank Securities Inc., Morgan Stanley & Co. Incorporated, UBS Securities LLC and PricewaterhouseCoopers LLP.

After the Court dismissed, without prejudice, the plaintiffs' consolidated complaint, amended consolidated complaint, and second consolidated complaint, the plaintiffs filed a third amended consolidated complaint against PricewaterhouseCoopers LLP, Syron and Piszel, omitting Cook and the underwriter defendants, on November 14, 2010. On January 11, 2011, the Court granted the remaining defendants' motion to dismiss the complaint with respect to PricewaterhouseCoopers LLP, but denied the motion with respect to Syron and Piszel. On April 4, 2011, Piszel filed a motion for partial judgment on the pleadings. The Court granted that motion on April 28, 2011. The plaintiffs moved for class certification on June 30, 2011, but withdrew this motion on July 5, 2011. The plaintiffs again moved for class certification on August 30, 2011, which motion remains pending.

Freddie Mac is not named as a defendant in the consolidated lawsuit, but the underwriters previously gave notice to Freddie Mac of their intention to seek full indemnity and contribution under the underwriting agreement in this case, including reimbursement of fees and disbursements of their legal counsel. At present, it is not possible for us to predict the probable outcome of the lawsuit or any potential impact on our business, financial condition or results of operations.

In addition, we are unable to reasonably estimate the possible loss or range of possible loss in the event of an adverse judgment in the foregoing matter due to the inherent uncertainty of pre-trial litigation and the fact that the Court has not yet ruled upon motions for class certification or summary judgment. In particular, absent the certification of a class, the identification of a class period, and the identification of the alleged statement or statements that survive dispositive motions, we cannot reasonably estimate any possible loss or range of possible loss.

On July 6, 2011, plaintiffs filed a lawsuit in the U.S. District Court for Massachusetts styled *Liberty Mutual Insurance Company, Peerless Insurance Company, Employers Insurance Company of Wausau, Safeco Corporation and Liberty Life Assurance Company of Boston vs. Goldman, Sachs & Co*. The complaint alleges that Goldman, Sachs & Co. made materially misleading statements and omissions in connection with Freddie Mac's November 29, 2007 public offering of $6 billion of 8.375% Fixed to Floating Rate Non-Cumulative Perpetual Preferred Stock. Freddie Mac is not named as a defendant in this lawsuit.

In an amended complaint dated February 17, 2012, Western and Southern Life Insurance Company and others asserted claims against GS Mortgage Securities Corp., Goldman Sachs Mortgage Company and Goldman Sachs & Co. in the Court of Common Pleas, Hamilton County, Ohio. The amended complaint asserts, among other things, that "Goldman Sachs" is liable to plaintiffs under the Ohio Securities Act for alleged misstatements and omissions in connection with $6 billion of preferred stock issued by Freddie Mac on December 4, 2007. Freddie Mac is not named as a defendant in this lawsuit.

Lehman Bankruptcy

On September 15, 2008, Lehman filed a chapter 11 bankruptcy petition in the Bankruptcy Court for the Southern District of New York. Thereafter, many of Lehman's U.S. subsidiaries and affiliates also filed bankruptcy petitions (collectively, the "Lehman Entities"). Freddie Mac had numerous relationships with the Lehman Entities which give rise to several claims. On September 22, 2009, Freddie Mac filed proofs of claim in the Lehman bankruptcies aggregating approximately $2.1 billion. On April 14, 2010, Lehman filed its chapter 11 plan of liquidation and disclosure statement, providing for the liquidation of the bankruptcy estate's assets over the next three years. The plan and disclosure statement were subsequently modified several times. Hearings to consider confirmation of the plan were conducted on December 6, 2011 and, on that date, the plan was confirmed by the court. The plan sets aside $1.2 billion to be available for payment in full of our priority claim relating to losses incurred on short-term lending transactions with certain Lehman Entities if it is ultimately allowed as a priority claim, but leaves open for subsequent litigation whether our claim of priority status is proper. In the event that this claim is not ultimately accorded priority status, it will be treated as a senior unsecured claim under the plan, pursuant to which Freddie Mac would be entitled to receive an estimated distribution of approximately 21% (or approximately $250 million) over the next three years. The plan also provides that general unsecured claims, such as our claim relating to repurchase obligations of $868 million, will be entitled to a distribution of approximately 19.9% of the allowed amount, if any. The plan does not adjudge or allow our unsecured repurchase obligations claim, but permits claims allowance proceedings to continue. Finally, the plan entitles Freddie Mac to a distribution of approximately 39% (or about $6.4 million) payable over the next three years on our allowed claim exceeding $16 million relating to losses on derivative transactions.

Taylor, Bean & Whitaker Bankruptcy

On August 24, 2009, TBW filed for bankruptcy in the Bankruptcy Court for the Middle District of Florida. Prior to that date, Freddie Mac had terminated TBW's status as a seller/servicer of loans. On or about June 14, 2010, Freddie Mac filed a proof of claim in the TBW bankruptcy aggregating $1.78 billion. Of this amount, about $1.15 billion related to current and projected repurchase obligations and about $440 million related to funds deposited with Colonial Bank, or with the FDIC as its receiver, which were attributable to mortgage loans owned or guaranteed by us and previously serviced by TBW. The remaining $190 million represented miscellaneous costs and expenses incurred in connection with the termination of TBW's status as a seller/servicer.

With the approval of FHFA, as Conservator, we entered into a settlement with TBW and the creditors' committee appointed in the TBW bankruptcy proceeding to represent the interests of the unsecured trade creditors of TBW. The settlement, which is discussed below, was filed with the bankruptcy court on June 22, 2011. The court approved the settlement and confirmed TBW's proposed plan of liquidation on July 21, 2011, which became effective on August 10, 2011.

Under the terms of the settlement, we have been granted an unsecured claim in the TBW bankruptcy estate in the amount of $1.022 billion, largely representing our claims to past and future loan repurchase exposures. We estimate that this claim may result in a distribution to us of approximately $40-45 million, which is based on the plan of liquidation

and disclosure statement filed with the court by TBW indicating that general unsecured creditors are likely to receive a distribution of 3.3 to 4.4 cents on the dollar. The settlement provides that $6 million of this amount is to be paid to certain creditors of TBW. In addition, pursuant to the settlement, we have received net proceeds of $156 million through December 31, 2011 relating to various funds on deposit, net of amounts we were required to assign or pay to other parties. The settlement also allows for our sale of TBW-related mortgage servicing rights and provides a formula for determining the amount of the proceeds, if any, to be allocated to third parties that have asserted interests in those rights. During the year ended December 31, 2011, we recognized a $0.2 billion gain, primarily representing the difference between the amounts we assigned, or paid, to TBW and their creditors and the liability recorded on our consolidated balance sheet.

At the time of settlement, we estimated our uncompensated loss exposure to TBW to be approximately $0.7 billion. This estimated exposure largely relates to outstanding repurchase claims that have already been substantially provided for in our financial statements through our provision for loan losses. Our ultimate losses could exceed our recorded estimate. Potential changes in our estimate of uncompensated loss exposure or the potential for additional claims as discussed below could cause us to record additional losses in the future.

We understand that Ocala Funding, LLC, or Ocala, which is a wholly owned subsidiary of TBW, or its creditors, may file an action to recover certain funds paid to us prior to the TBW bankruptcy. However, no actions against Freddie Mac related to Ocala have been initiated in bankruptcy court or elsewhere to recover assets. Based on court filings and other information, we understand that Ocala or its creditors may attempt to assert fraudulent transfer and other possible claims totaling approximately $840 million against us related to funds that were allegedly transferred from Ocala to Freddie Mac custodial accounts. We also understood that Ocala might attempt to make claims against us asserting ownership of a large number of loans that we purchased from TBW. The order approving the settlement provides that nothing in the settlement shall be construed to limit, waive or release Ocala's claims against Freddie Mac, except for TBW's claims and claims arising from the allocation of the loans discussed above to Freddie Mac.

On or about May 14, 2010, certain underwriters at Lloyds, London and London Market Insurance Companies brought an adversary proceeding in bankruptcy court against TBW, Freddie Mac and other parties seeking a declaration rescinding mortgage bankers bonds providing fidelity and errors and omissions insurance coverage. Several excess insurers on the bonds thereafter filed similar claims in that action. Freddie Mac has filed a proof of loss under the bonds, but we are unable at this time to estimate our potential recovery, if any, thereunder. Discovery is proceeding.

IRS Litigation

We received Statutory Notices from the IRS assessing $3.0 billion of additional income taxes and penalties for the 1998 to 2007 tax years. We filed a petition with the U.S. Tax Court on October 22, 2010 in response to the Statutory Notices for the 1998 to 2005 tax years. We paid the tax assessed in the Statutory Notice received for the years 2006 to 2007 of $36 million and will seek a refund through the administrative process, which could include filing suit in Federal District Court. We believe appropriate reserves have been provided for settlement on reasonable terms. For information on this matter, see "NOTE 13: INCOME TAXES."

NOTE 19: SELECTED FINANCIAL STATEMENT LINE ITEMS

As discussed in "NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES," we adopted amendments to the accounting guidance for transfers of financial assets and consolidation of VIEs effective January 1, 2010. As a result of this change in accounting principles, certain line items on our consolidated statements of income and comprehensive income, consolidated balance sheets, and consolidated statements of cash flows are no longer material to our 2011 and 2010 consolidated results of operations, financial position, and cash flows.

As this change in accounting principles was applied prospectively, the results of operations for the years ended December 31, 2011 and 2010 reflect the consolidation of our single-family PC trusts and certain Other Guarantee Transactions while the results of operations for the year ended December 31, 2009 reflect the accounting policies in effect at that time, *i.e.*, these securitization entities were accounted for off-balance sheet.

Impacts on Consolidated Statements of Income and Comprehensive Income

Prospective adoption of these changes in accounting principles also significantly impacted the presentation of our consolidated statements of income and comprehensive income. These impacts are discussed below:

Line Items No Longer Separately Presented

Line items that are no longer separately presented on our consolidated statements of income and comprehensive income include:

- Management and guarantee income — we no longer recognize management and guarantee income on PCs and Other Guarantee Transactions issued by trusts that we have consolidated; rather, the portion of the interest collected on the underlying loans that represents our management and guarantee fee is recognized as part of interest income on mortgage loans. We continue to recognize management and guarantee income related to our other guarantee commitments and guarantees issued to non-consolidated entities in other income;
- Gains (losses) on guarantee asset and income on guarantee obligation — we no longer recognize a guarantee asset and a guarantee obligation for guarantees issued to trusts that we have consolidated; therefore, we also no longer recognize gains (losses) on guarantee asset and income on guarantee obligation for such trusts. However, we continue to recognize a guarantee asset and a guarantee obligation for our other guarantee commitments and guarantees issued to non-consolidated entities and the corresponding gains (losses) on guarantee asset and income on guarantee obligation, which are recorded in other income;
- Losses on loans purchased — we no longer recognize the acquisition of loans from PC trusts that we have consolidated as a purchase with an associated loss, as these loans are already reflected on our consolidated balance sheet. Instead, when we acquire a loan from these entities, we reclassify the loan from mortgage loans held-for-investment by consolidated trusts to unsecuritized mortgage loans held-for-investment and record the cash tendered as an extinguishment of the related PC debt within debt securities of consolidated trusts held by third parties. We continue to recognize losses on loans purchased related to our other guarantee commitments and losses from purchases of loans from non-consolidated entities in other expenses;
- Recoveries of loans impaired upon purchase — as these acquisitions of loans from PC trusts that we have consolidated are no longer treated as purchases for accounting purposes, there will be no recoveries of such loans related to consolidated VIEs that require recognition in our consolidated statements of income and comprehensive income; and
- Trust management income — we no longer recognize trust management income from the single-family PC trusts that we consolidate; rather, such amounts are now recognized in net interest income.

Line Items Significantly Impacted and Still Separately Presented

Line items that were significantly impacted and that continue to be separately presented on our consolidated statements of income and comprehensive income include:

- Interest income on mortgage loans — we now recognize interest income on the mortgage loans underlying PCs and Other Guarantee Transactions issued by trusts that we consolidate, which includes the portion of interest that was historically recognized as management and guarantee income. Upfront credit-related and other fees received in connection with such loans historically were treated as a component of the related guarantee obligation; prospectively, these fees are treated as basis adjustments to the loans to be amortized over their respective lives as a component of interest income on mortgage loans;
- Interest income on investments in securities — we no longer recognize interest income on our investments in the PCs and Other Guarantee Transactions issued by trusts that we consolidate, as we now recognize interest income on the mortgage loans underlying PCs and Other Guarantee Transactions issued by trusts that we consolidate;
- Interest expense — we now recognize interest expense on PCs and Other Guarantee Transactions that were issued by trusts that we consolidate and are held by third parties; and
- Other gains (losses) on investments — we no longer recognize other gains (losses) on investments for single-family PCs and certain Other Guarantee Transactions because those securities are no longer accounted for as investments by us as a result of our consolidation of the related trusts.

Impacts on Consolidated Statements of Cash Flows

The adoption of these changes in accounting principles also significantly impacted the presentation of our consolidated statements of cash flows. At transition when we consolidated our single-family PCs and certain Other Guarantee Transactions, there was significant non-cash activity.

The table below highlights the significant line items that are no longer disclosed separately on our consolidated statements of income and comprehensive income.

Table 19.1 — Line Items No Longer Disclosed Separately on Our Consolidated Statements of Income and Comprehensive Income

	For The Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Other income:			
Management and guarantee income	$ 170	$ 143	$ 3,033
Gains (losses) on guarantee asset	(78)	(61)	3,299
Income on guarantee obligation	153	135	3,479
Gains (losses) on sale of mortgage loans	411	267	745
Lower-of-cost-or-fair-value adjustments on held-for-sale mortgage loans	—	—	(679)
Gains (losses) on mortgage loans recorded at fair value	418	(249)	(190)
Recoveries on loans impaired upon purchase	473	806	379
Low-income housing tax credit partnerships	—	—	(4,155)
Trust management income (expense)	—	—	(761)
All other	608	819	222
Total other income per consolidated statements of income and comprehensive income	$2,155	$1,860	$ 5,372
Other expenses:			
Losses on loans purchased	$ 10	$ 25	$ 4,754
All other	382	637	449
Total other expenses per consolidated statements of income and comprehensive income	$ 392	$ 662	$ 5,203

The table below highlights the significant line items that are no longer disclosed separately on our consolidated balance sheets.

Table 19.2 — Line Items No Longer Disclosed Separately on Our Consolidated Balance Sheets

	December 31, 2011	December 31, 2010
	(in millions)	
Other assets:		
Guarantee asset	$ 752	$ 541
Accounts and other receivables	8,350	8,734
All other	1,411	1,600
Total other assets	$10,513	$10,875
Other liabilities:		
Guarantee obligation	$ 787	$ 625
Servicer liabilities	3,600	4,456
Accounts payable and accrued expenses	845	1,760
All other	814	1,257
Total other liabilities	$ 6,046	$ 8,098

The table below highlights the significant line items that are no longer disclosed separately on our consolidated statements of cash flows.

Table 19.3 — Line Items No Longer Disclosed Separately on Our Consolidated Statements of Cash Flows

	For The Year Ended December 31,		
	2011	2010	2009
	(in millions)		
Adjustments to reconcile net loss to net cash from operating activities:			
Low-income housing tax credit partnerships	$ —	$ —	$ 4,155
Losses on loans purchased	10	25	4,754
Change in:			
Due to PCs and REMICs and Other Structured Securities trusts	8	14	250
Guarantee asset, at fair value	(210)	(121)	(5,597)
Guarantee obligation	158	(17)	(183)
Other, net	(2,771)	(134)	(461)
Total other, net	$(2,805)	$(233)	$ 2,918

END OF CONSOLIDATED FINANCIAL STATEMENTS AND ACCOMPANYING NOTES

QUARTERLY SELECTED FINANCIAL DATA (UNAUDITED)

	2011				
	1Q	2Q	3Q	4Q	Full-Year
	(in millions, except share-related amounts)				
Net interest income	$ 4,540	$ 4,561	$ 4,613	$ 4,683	$ 18,397
Provision for credit losses	(1,989)	(2,529)	(3,606)	(2,578)	(10,702)
Non-interest income (loss)	(1,252)	(3,857)	(4,798)	(971)	(10,878)
Non-interest expense	(697)	(546)	(687)	(553)	(2,483)
Income tax benefit (expense)	74	232	56	38	400
Net income (loss) attributable to Freddie Mac	$ 676	$(2,139)	$(4,422)	$ 619	$ (5,266)
Net loss attributable to common stockholders	$ (929)	$(3,756)	$(6,040)	$(1,039)	$(11,764)
Net loss per common share:[1]					
Basic	$ (0.29)	$ (1.16)	$ (1.86)	$ (0.32)	$ (3.63)
Diluted	$ (0.29)	$ (1.16)	$ (1.86)	$ (0.32)	$ (3.63)

	2010				
	1Q	2Q[2]	3Q	4Q	Full-Year
	(in millions, except share-related amounts)				
Net interest income	$ 4,125	$ 4,136	$ 4,279	$ 4,316	$ 16,856
Provision for credit losses	(5,396)	(5,029)	(3,727)	(3,066)	(17,218)
Non-interest income (loss)	(4,854)	(3,627)	(2,646)	(461)	(11,588)
Non-interest expense	(667)	(479)	(828)	(958)	(2,932)
Income tax benefit (expense)	103	286	411	56	856
Net (income) loss attributable to noncontrolling interests	1	—	—	—	1
Net loss attributable to Freddie Mac	$(6,688)	$(4,713)	$(2,511)	$ (113)	$(14,025)
Net loss attributable to common stockholders	$(7,980)	$(6,009)	$(4,069)	$(1,716)	$(19,774)
Net loss per common share:[1]					
Basic	$ (2.45)	$ (1.85)	$ (1.25)	$ (0.53)	$ (6.09)
Diluted	$ (2.45)	$ (1.85)	$ (1.25)	$ (0.53)	$ (6.09)

(1) Earnings (loss) per common share is computed independently for each of the quarters presented. Due to the use of weighted average common shares outstanding when calculating earnings (loss) per share, the sum of the four quarters may not equal the full-year amount. Earnings (loss) per common share amounts may not recalculate using the amounts shown in this table due to rounding.
(2) For a discussion of an error identified during the three months ended June 30, 2010, see "MD&A — CONSOLIDATED RESULTS OF OPERATIONS — Provision for Credit Losses."

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that the information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms and that such information is accumulated and communicated to management of the company, including the company's Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing our disclosure controls and procedures, we recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and we must apply judgment in implementing possible controls and procedures.

Management, including the company's Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures as of December 31, 2011. As a result of management's evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of December 31, 2011, at a reasonable level of assurance due to the two material weaknesses in our internal control over financial reporting discussed below. For additional information related to these material weaknesses, see "Management's Report on Internal Control Over Financial Reporting."

Our disclosure controls and procedures did not adequately ensure the accumulation and communication to management of information known to FHFA that is needed to meet our disclosure obligations under the federal securities laws. We have not been able to update our disclosure controls and procedures to provide reasonable assurance that

information known by FHFA on an ongoing basis is communicated from FHFA to Freddie Mac's management in a manner that allows for timely decisions regarding our required disclosure. Based on discussions with FHFA and the structural nature of this continuing weakness, it is likely that we will not remediate this weakness in our disclosure controls and procedures while we are under conservatorship.

In addition, based on our assessment as of December 31, 2011, we identified a material weakness related to our inability to effectively manage information technology changes and maintain adequate controls over information security monitoring, resulting from increased levels of employee turnover.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer and effected by the Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with GAAP.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. It is a process that involves human diligence and compliance and is, therefore, subject to lapses in judgment and breakdowns resulting from human error. It also can be circumvented by collusion or improper management override. Because of its limitations, there is a risk that internal control over financial reporting may not prevent or detect on a timely basis errors that could cause a material misstatement of the financial statements.

We assessed the effectiveness of our internal control over financial reporting as of December 31, 2011. In making our assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in *Internal Control — Integrated Framework.* A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis by a company's internal controls. Based on our assessment, we identified two material weaknesses related to: (a) our inability to update our disclosure controls and procedures in a manner that adequately ensures the accumulation and communication to management of information known to FHFA that is needed to meet our disclosure obligations under the federal securities laws, including disclosures affecting our consolidated financial statements; and (b) our inability to effectively manage information technology changes and maintain adequate controls over information security monitoring, resulting from increased levels of employee turnover.

We have been under conservatorship of FHFA since September 6, 2008. FHFA is an independent agency that currently functions as both our Conservator and our regulator with respect to our safety, soundness and mission. Because we are in conservatorship, some of the information that we may need to meet our disclosure obligations may be solely within the knowledge of FHFA. As our Conservator, FHFA has the power to take actions without our knowledge that could be material to investors and could significantly affect our financial performance. Although we and FHFA have attempted to design and implement disclosure policies and procedures that would account for the conservatorship and accomplish the same objectives as disclosure controls and procedures for a typical reporting company, there are inherent structural limitations on our ability to design, implement, test or operate effective disclosure controls and procedures under the current circumstances. As our Conservator and regulator, FHFA is limited in its ability to design and implement a complete set of disclosure controls and procedures relating to us, particularly with respect to current reporting pursuant to Form 8-K. Similarly, as a regulated entity, we are limited in our ability to design, implement, operate and test the controls and procedures for which FHFA is responsible. For example, FHFA may formulate certain intentions with respect to the conduct of our business that, if known to management, would require consideration for disclosure or reflection in our financial statements, but that FHFA, for regulatory reasons, may be constrained from communicating to management. As a result, we have concluded that this control deficiency constitutes a material weakness in our internal control over financial reporting.

We are finding it difficult to retain and engage critical employees and attract people with the skills and experience we need. In most areas, we have been able to leverage succession plans and reassign responsibilities to maintain sound internal control over financial reporting. However, in the fourth quarter of 2011, we experienced a significant increase in the number of control breakdowns within certain areas of our information technology division, specifically within groups responsible for information change management and information security. We identified deficiencies in the following areas: (a) approval and monitoring of changes to certain technology applications and infrastructure; (b) monitoring of select privileged user activities; and (c) monitoring user activities performed on certain technology hardware systems. These control breakdowns could have impacted applications which support our financial reporting processes. Increased

levels of employee turnover contributed to ineffective management oversight of controls in these areas resulting in these deficiencies. We believe that these issues aggregate to a material weakness in our internal control over financial reporting.

Because of these material weaknesses, we have concluded that our internal control over financial reporting was not effective as of December 31, 2011 based on the COSO criteria. PricewaterhouseCoopers LLP, an independent registered public accounting firm, audited the effectiveness of our internal control over financial reporting as of December 31, 2011 and also determined that our internal control over financial reporting was not effective. PricewaterhouseCoopers LLP's report appears in "FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA — REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM."

Mitigating Actions Related to the Material Weaknesses in Internal Control Over Financial Reporting

As described under "Management's Report on Internal Control Over Financial Reporting," we have two material weaknesses in internal control over financial reporting as of December 31, 2011.

Given the structural nature of the material weakness related to our inability to update our disclosure controls and procedures in a manner that adequately ensures the accumulation and communication to management of information known to FHFA that is needed to meet our disclosure obligations under the federal securities laws, we believe it is likely that we will not remediate this material weakness while we are under conservatorship. However, both we and FHFA have continued to engage in activities and employ procedures and practices intended to permit accumulation and communication to management of information needed to meet our disclosure obligations under the federal securities laws. These include the following:

- FHFA has established the Office of Conservatorship Operations, which is intended to facilitate operation of the company with the oversight of the Conservator.
- We provide drafts of our SEC filings to FHFA personnel for their review and comment prior to filing. We also provide drafts of external press releases, statements and speeches to FHFA personnel for their review and comment prior to release.
- FHFA personnel, including senior officials, review our SEC filings prior to filing, including this annual report on Form 10-K, and engage in discussions regarding issues associated with the information contained in those filings. Prior to filing this annual report on Form 10-K, FHFA provided us with a written acknowledgement that it had reviewed the annual report on Form 10-K, was not aware of any material misstatements or omissions in the annual report on Form 10-K, and had no objection to our filing the annual report on Form 10-K.
- The Acting Director of FHFA is in frequent communication with our Chief Executive Officer, typically meeting (in person or by phone) on a weekly basis.
- FHFA representatives hold frequent meetings, typically weekly, with various groups within the company to enhance the flow of information and to provide oversight on a variety of matters, including accounting, capital markets management, external communications, and legal matters.
- Senior officials within FHFA's accounting group meet frequently, typically weekly, with our senior financial executives regarding our accounting policies, practices, and procedures.

We have performed the following mitigating actions regarding the material weakness related to our inability to effectively manage information technology changes and maintain adequate controls over information security monitoring, resulting from increased levels of employee turnover:

- Reviewed potential unauthorized changes to applications supporting our financial statements for proper approvals.
- Reviewed and approved user access capabilities for applications supporting our financial reporting processes.
- Maintained effective business process controls over financial reporting.
- Filled the vacant positions or reassigned responsibilities within the information change management and information security monitoring groups.

We also intend to take the following remediation actions related to this material weakness:

- Take select actions targeted to reduce employee attrition in key control areas.
- Assess staffing requirements to ensure appropriate staffing over information security controls and develop cross-training programs within these areas to mitigate the risk to the internal control environment should we continue to experience high levels of employee turnover.
- Improve automation capabilities for the identification and resolution of potential unauthorized system changes.

- Update our policies and procedures to document control processes.
- Provide additional training to IT individuals that execute or manage security controls.
- Explore options to enter into various strategic arrangements with outside firms to provide operational capability and staffing for these functions, if needed.

In view of our mitigating actions related to these material weaknesses, we believe that our consolidated financial statements for the year ended December 31, 2011 have been prepared in conformity with GAAP.

Changes in Internal Control Over Financial Reporting During the Quarter Ended December 31, 2011

We evaluated the changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2011 and concluded that the following matters have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Raymond G. Romano, Executive Vice President — Chief Credit Officer and John R. Dye, Senior Vice President — Interim General Counsel & Corporate Secretary, left the company during the fourth quarter of 2011. On October 26, 2011, FHFA announced that Charles E. Haldeman Jr., Chief Executive Officer, has expressed his desire to step down in 2012, and that the Board and FHFA will be developing a succession plan.

In addition, a number of senior officers left the company in earlier periods. We maintain succession plans for our senior management positions, which has enabled us to fill some of our vacant senior management positions quickly. However, we may not be able to continue to do so in the future. We have eliminated other vacant senior management positions through reorganizations. In addition, we have experienced elevated levels of voluntary turnover in the fourth quarter of 2011 and earlier periods, and expect this trend to continue as the public debate regarding the future role of the GSEs continues. We continue to have concerns about staffing inadequacies, management depth, and employee engagement. Disruptive levels of turnover at both the executive and employee levels could lead to breakdowns in any of our operations, affect our execution capabilities, cause delays in the implementation of critical technology and other projects, and erode our business, modeling, internal audit, risk management, information security, financial reporting, legal, compliance, and other capabilities.

Based on our assessment as of December 31, 2011, we identified a material weakness related to our inability to effectively manage information technology changes and maintain adequate controls over information security monitoring, resulting from increased levels of employee turnover. For additional information related to this material weakness, see "Management's Report on Internal Control Over Financial Reporting."

FHFA also announced on October 26, 2011, that two Board members, John A. Koskinen (Chairman) and Robert R. Glauber (Chairman, Governance and Nominating Committee), have reached the company's mandatory retirement age and would be stepping down from the Board. This occurred at the end of their then-current terms in March 2012. In order to promote a smooth transition, per FHFA's announcement, Christopher Lynch, previously the Chairman of the Audit Committee, assumed the position of Non-Executive Chairman of the Board effective at the December 2011 Board meeting. A third Board member, Laurence E. Hirsch, notified the company on October 18, 2011 that he would not seek re-election to the Board when his term expires. Mr. Hirsch's term expired in March 2012. In addition, on March 7, 2012, Clayton Rose (Chairman of the Audit Committee) notified the company that he will resign from the Board of Directors effective as of 6:00 pm Eastern Standard Time on March 9, 2012.

ITEM 9B. OTHER INFORMATION

Election of Directors

Upon the appointment of FHFA as our Conservator on September 6, 2008, the Conservator immediately succeeded to all rights, titles, powers and privileges of Freddie Mac, and of any stockholder, officer or director thereof, with respect to the company and its assets, including, without limitation, the right of holders of our common stock to vote with respect to the election of directors and any other matter for which stockholder approval is required or deemed advisable.

On March 6, 2012, the Conservator executed a written consent re-electing each of the then-current directors as members of our Board of Directors, other than Messrs. Glauber, Hirsch, and Koskinen, effective as of that date. The individuals elected by the Conservator for another term as directors are listed below.

Linda B. Bammann
Carolyn H. Byrd
Charles E. Haldeman, Jr.
Christopher S. Lynch
Nicolas P. Retsinas
Clayton S. Rose
Eugene B. Shanks, Jr.
Anthony A. Williams

The terms of the directors elected under the March 6, 2012 consent will continue until the date of the next annual meeting of stockholders or the Conservator next elects directors by written consent, whichever occurs first.

On March 7, 2012, Clayton Rose notified the company that he will resign from the Board of Directors effective as of 6:00 pm Eastern Standard Time on March 9, 2012.

2012 Executive Management Compensation Program

On March 8, 2012, FHFA approved a new compensation structure for our Covered Officers with limited input from Freddie Mac's management and Compensation Committee. The 2012 Executive Management Compensation Program, or the 2012 Executive Compensation Program, is effective January 1, 2012. Compensation under the 2012 Executive Compensation Program consists solely of salary paid in cash, with two components — Base Salary and Deferred Salary — which are described in the table below. No portion of the 2012 Executive Compensation Program includes a bonus component.

Element of Compensation	Description	Primary Compensation Objectives	Key Features
Base Salary	Earned and paid on a semi-monthly basis	To provide a fixed level of compensation to each Covered Officer for the responsibility level of his/her position	Cannot exceed $500,000 per year, except for the CEO and CFO, or other exceptions as approved by FHFA.
Deferred Salary	*Fixed Portion*. The fixed portion of Deferred Salary is earned semi-monthly during each quarter and paid on the last business day of the corresponding quarter of the following year	To encourage executive retention	The portion earned during 2012 but unpaid as of the date of termination is paid as described below.
	At-Risk Portion. The at-risk portion of Deferred Salary is earned and paid in the same manner as the fixed portion of Deferred Salary, but is subject to reduction based on corporate and individual performance	To encourage achievement of corporate and individual performance goals	The portion earned during 2012 but unpaid as of the date of termination is paid as described below. The 2012 corporate objectives against which corporate performance will be measured for the named executives' 2012 at-risk deferred salary are described below under "2012 Conservatorship Scorecard." Equal to 30% of Target TDC, half of which may be reduced based on corporate performance and half of which may be reduced based on individual performance.

Effect of Termination of Employment. Base Salary ceases upon a Covered Officer's termination of employment. The treatment of Deferred Salary upon the termination of a Covered Officer for any reason other than for cause is as described below.

- *Deferred Salary — Fixed Portion.* The portion earned during 2012 but unpaid as of the date of termination is reduced by 2% for each full or partial month by which the Covered Officer's termination precedes January 31, 2014.
- *Deferred Salary — At-Risk Portion.* The portion earned during 2012 but unpaid as of the date of termination is paid in full, but remains subject to reduction for corporate and individual performance.

All Deferred Salary paid following a Covered Officer's termination of employment will be paid on the same quarterly schedule as if the Covered Officer had not terminated employment.

2012 Target Total Direct Compensation

In establishing each Named Executive Officer's 2012 Target TDC, the Compensation Committee reviewed 2011 data from the Comparator Group and two alternative survey sources. Specifically, for the positions of CEO, CFO, EVP — Single-Family Business, Operations and Technology and EVP — Chief Enterprise Risk Officer, the Compensation Committee, at the recommendation of Meridian Compensation Partners, LLC, or Meridian, reviewed competitive market compensation data from the Comparator Group. For the position of EVP — Chief Administrative Officer, the Compensation Committee, also at the recommendation of Meridian, reviewed competitive market data from surveys published by Aon Hewitt and McLagan, because no reasonable match was available in the Comparator Group.

In December 2011, the Compensation Committee applied the criteria described below under "EXECUTIVE COMPENSATION — Compensation Discussion and Analysis — Executive Management Compensation Program — *Elements of Compensation and Total Direct Compensation — Establishing Target TDC*" to either develop 2012 TDC recommendations for each of the Named Executive Officers or review recommendations presented by senior management.

The 2012 Target TDC recommendation for each of the Named Executive Officers was reviewed by FHFA. While the Compensation Committee's 2012 Target TDC recommendations for our Named Executive Officers, in the aggregate, were below the 25th percentile of the competitive market, FHFA instructed the Compensation Committee to reduce the Target TDC for each of the Named Executive Officers by 10%, with the exception of Ms. Wisdom. For Ms. Wisdom, 2012 Target TDC is unchanged from 2011 in consideration of the expansion in the scope of her responsibilities during 2011 resulting from the integration of the credit risk management function in her division. For Mr. Weiss and Ms. Wisdom, the Compensation Committee increased Base Salary by 10%, with an equal decrease in Deferred Salary, to create more consistent Base Salary levels for EVPs who have comparable levels of responsibility.

The following table sets forth the components of compensation on an annual basis for each of our Named Executive Officers.

Table 75 — 2012 Program Target Compensation Amounts

			2012 Deferred Salary		
Named Executive Officer	Title	2012 Base Salary	Fixed Portion	At-Risk Portion	Target TDC
Charles E. Haldeman, Jr.	CEO	$900,000	$2,880,000	$1,620,000	$5,400,000
Ross J. Kari	EVP — CFO	675,000	1,530,000	945,000	3,150,000
Anthony N. Renzi	EVP — Single-Family Business, Operations and Technology	500,000	1,232,500	742,500	2,475,000
Jerry Weiss	EVP — Chief Administrative Officer	495,000	891,000	594,000	1,980,000
Paige H. Wisdom	EVP — Chief Enterprise Risk Officer	467,500	757,500	525,000	1,750,000

2012 Conservatorship Scorecard

On March 8, 2012, FHFA instituted a scorecard for use in the new compensation program. The scorecard is applicable to both Freddie Mac and Fannie Mae and establishes the following objectives and performance targets/ measures for 2012. These objectives and performance targets/measures will be used in determining the amount payable to Covered Officers with respect to one-half of the at-risk portion of 2012 Deferred Salary.

The scorecard scoring will be based not only on the ultimate accomplishment of results but also our cooperation, relative contribution and collaboration with the Board of Directors, FHFA, Fannie Mae, and market participants, as appropriate to the particular measure. FHFA will consider our creativity, collaboration, effectiveness, and commitment to the particular matter. Most goals have a target date of completion of December 31, 2012. However, if we are able to accomplish the goal earlier in the year that will be taken into consideration in the scoring to offset shortfalls elsewhere.

Objectives	Weighting	Targets / Measures
1. Build a New Infrastructure	30%	
• Continued progress on, or completion of, mortgage market enhancement activities already underway – Loan-level Disclosure in Mortgage Backed Security (MBS) – Uniform Mortgage Data Program (UMDP) – Seller Servicer Contract Harmonization	15%	• Develop template for enhanced loan-level disclosures for single-family MBS that incorporates market standards and is consistent with maintaining liquidity in the to-be-announced market. Template to be submitted to Federal Housing Finance Agency (FHFA) by June 30, 2012. • Meet articulated Uniform Mortgage Data Program (UMDP) timetables as follows: – Uniform Collateral Data Portal (UCDP) electronic appraisal submission requirement by March 19, 2012. – Uniform Loan Delivery Data (ULDD) format loan delivery data by July 23, 2012. – Deliver new ULDD data point in compliance with SEC Rule 15Ga-1 by November 30, 2012. – Notify market of optional ULDD data points, including those necessary to improve disclosure and for other business uses in 2012. • Notify market of servicing data standard, including data necessary to improve disclosure, and agree on timetable for data collection to begin in 2013 by December 31, 2012. • Develop plans that leverage uniform appraisal data and ULDD for enhanced risk management by December 31, 2012. • Cooperate with FHFA implementation of portal to accept electronic appraisals. • Appropriate resource allocation to seller-servicer contract harmonization and commitment to targeted timetables as outlined in FHFA directive.
• Securitization Platform	10%	• In collaboration with FHFA and the other Enterprise, develop and finalize a plan by December 31, 2012 for the design and build of a single securitization platform that can serve both Enterprises and a post-conservatorship market with multiple future issuers.
• Pooling and Servicing Agreements	5%	• Propose a model pooling and servicing agreement (PSA), collaborate with other Enterprise and FHFA on a specific proposal, seek public comment, and produce final recommendations for standard Enterprise trust documentation by December 31, 2012.
2. Contract the Enterprises dominant presence in the marketplace while simplifying and shrinking certain operations.	30%	
• Work with FHFA to evaluate options for meeting conservatorship goals, including shifting mortgage credit risk to private investors via assessment of: – Multifamily line of business – Investment assets and nonperforming loans	10%	• Undertake a market analysis by December 31, 2012, of the viability of multifamily business operations without government guarantees. Review the likely viability of these models operating on a stand-alone basis after attracting private capital and adjusting pricing if needed. • Perform analysis of investments portfolio as described in the strategic plan by the fourth quarter of 2012 and make preparations for the competitive disposition of a pool of nonperforming assets by September 30, 2012. • Review options with board of directors and FHFA and make appropriate recommendations for future actions. • Implement plan agreed to by board and FHFA.
• Risk Sharing	10%	• Initiate risk sharing transactions by September 30, 2012. • Execute new risk sharing transactions beyond the traditional charter required mortgage insurance coverage. • Propose timeline for continued growth in risk sharing through 2013.
• Pricing – Single-family Guarantee Fee Pricing Increases – Set plan to price for state law effects on mortgage credit losses given default	10%	• Develop and begin implementing plan to increase guarantee fee pricing to more closely approximate the private sector. • Set uniform pricing across loan sellers to extent practicable. • Work with FHFA to develop appropriate risk-based pricing by state. State-level pricing grid to be completed by August 31, 2012.
3. Maintain foreclosure prevention activities and credit availability for new and refinanced mortgages.	20%	
• Loss Mitigation through continued implementation and enhancement of Servicer Alignment Initiative **• Short Sales** **• Deeds-in-Lieu and Deeds-for-Lease**	10%	• Enhance transparency of servicer requirements around foreclosure timelines and compensatory fees and publish applicable announcements by September 30, 2012. • Enhance short sales programs that include efforts to identify program obstacles that impact utilization by June 30, 2012. Applicable lender announcements to foreclosure alternatives by September 30, 2012. • Design, develop or enhance deed-in-lieu and deed-for-lease programs that include efforts to identify and resolve program obstacles that impact utilization by September 30, 2012. Applicable lender announcements to foreclosure alternatives by December 31, 2012.
• Real Estate Owned Sales	10%	• Implement, as needed, loans to facilitate real estate owned (REO) sales program by June 30, 2012. • Expand financing for small investors in REO properties by June 30, 2012. • Initiate disposition pilot, either through financing or bulk sales, by September 30, 2012. • Expand pilot programs and establish ongoing sales program, as agreed to with FHFA, during 2012.
4. Manage Efficiently in Support of Conservatorship Goals	20%	
• Conservatorship / Board Priorities	20%	• Work closely with FHFA toward concluding litigation associated with private label securities and whole loan repurchase claims, as appropriate. • Prioritize and manage Enterprise operations in support of conservatorship goals and board directions. • Adapt to evolving conservatorship requirements. • Collaborate fully with FHFA and, when requested, the other Enterprise. • Actively seek and consider public input on conservatorship-related projects, as requested. • Effectively identify, communicate, and remediate situations that create risk for the conservatorships or avoidable taxpayer losses. • Ensure corporate governance procedures are maintained, including timely reporting to the board and adhering to board mandates and expectations. • Take steps to mitigate key person dependencies and maintain appropriate internal controls and risk management governance. • Achieve milestones agreed to within the year with regard to accounting alignment.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Background

On September 6, 2008, the Director of FHFA appointed FHFA as our Conservator. Upon its appointment as Conservator, FHFA immediately succeeded to, among other things, the right of holders of our common stock to vote with respect to the election of directors. As a result, stockholders no longer have the ability to recommend director nominees or vote for the election of our directors. Accordingly, we will not solicit proxies, distribute a proxy statement to stockholders, or hold an annual meeting of stockholders in 2012. Instead, the Conservator has elected directors by a written consent in lieu of an annual meeting, as it has done in previous years.

Directors

On November 24, 2008, the Conservator reconstituted our Board of Directors and delegated certain powers to the Board while reserving certain powers of approval to itself. See "Authority of the Board and Board Committees." The Conservator determined that the Board is to have a non-executive Chairman, and is to consist of a minimum of nine and not more than 13 directors, with the Chief Executive Officer being the only corporate officer serving as a member of the Board.

On October 26, 2011, FHFA announced that Charles E. Haldeman, Jr. had informed the Board of his desire to step down from his position as CEO and Director of Freddie Mac in the coming year. The Board is conducting a search for a new CEO, in consultation with FHFA. An informal committee consisting of Nominating and Governance Committee members Eugene B. Shanks, Jr. (chair), Nicolas P. Retsinas and Carolyn H. Byrd, along with Non-Executive Chairman Christopher S. Lynch, is conducting the search on behalf of the Board. The executive search firm SpencerStuart has been retained to assist in the search.

FHFA also announced on October 26, 2011 that two members of the Freddie Mac Board of Directors, John A. Koskinen and Robert R. Glauber, have reached the company's mandatory retirement age and will not be eligible for re-election to the Board at the end of their current term. In anticipation of those retirements and to promote a smooth transition, Mr. Lynch, who previously served as chairman of the Board's Audit Committee, assumed the position of Non-Executive Chairman, effective December 2, 2011. A third Board member, Laurence E. Hirsch, notified the company on October 18, 2011 that he would not seek re-election to the Board when his term expired.

The Conservator executed a written consent, effective March 6, 2012, electing all of the then-current directors other than Messrs. Glauber, Hirsch and Koskinen to another term as our directors. The terms of those directors will end: (a) on the date of the next annual meeting of our stockholders; or (b) when the Conservator next elects directors by written consent, whichever occurs first. Currently, we have eight directors. The Board is conducting a search for individuals qualified to fill the remaining seats on the Board that are currently vacant.

Our Board seeks candidates for director who have achieved a high level of stature, success, and respect in their principal occupations. Each of our current directors was selected as a candidate because of his or her character, judgment, experience, and expertise. The qualifications of candidates also were evaluated in light of the requirement in our charter, as amended by the Reform Act, that our Board must at all times have at least one individual from the homebuilding, mortgage lending and real estate industries, and at least one person from an organization representing consumer or community interests or one person who has demonstrated a career commitment to the provision of housing for low-income households. Consistent with the examination guidance for corporate governance issued by FHFA, the factors considered also include the knowledge directors would have, as a group, in the areas of business, finance, accounting, risk management, public policy, mortgage lending, real estate, low-income housing, homebuilding, regulation of financial institutions, and any other areas that may be relevant to our safe and sound operation. Additionally, in accordance with the guidance issued by FHFA, we considered whether a candidate's other commitments, including the number of other board memberships held by the candidate, would permit the candidate to devote sufficient time to the candidate's duties and responsibilities as a director. See "CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE — Board Diversity" for additional information concerning the Board's consideration of diversity in identifying director nominees and candidates.

The following is a brief discussion of: the age and length of Board service of each director; each director's experience, qualifications, attributes, and/or skills that led to his or her selection as a director; and other biographical information about our directors, as of March 6, 2012:

- Linda B. Bammann joined the Board in December 2008. She is 55 years old. She is an experienced finance executive with in-depth knowledge of risk management gained from her previous employment and board memberships. Ms. Bammann's risk management experience enables her to contribute significantly to the Board's oversight of our enterprise risk management.

  Ms. Bammann was Executive Vice President, Deputy Chief Risk Officer for JPMorgan Chase & Co. from July 2004 until her retirement in January 2005. Prior to that, Ms. Bammann held several positions with Bank One Corporation beginning in 2000, including Executive Vice President and Chief Risk Management Officer from 2001 until Bank One's acquisition by JPMorgan Chase & Co. in July 2004. Ms. Bammann also was a member of Bank One's executive planning group. From 1992 to 2000, Ms. Bammann was a Managing Director with UBS Warburg LLC and predecessor firms. Ms. Bammann was a board member of the Risk Management Association, and chairperson of the Loan Syndications and Trading Association. Ms. Bammann currently is a director of Manulife Financial Corporation, where she is a member of the Risk Committee and the Management Resources and Compensation Committee, and of The Manufacturers Life Insurance Company, a subsidiary of Manulife Financial Corporation.

- Carolyn H. Byrd joined the Board in December 2008. She is 63 years old. She is an experienced finance executive who has held a variety of leadership positions. She also has significant public company audit committee experience. Ms. Byrd's internal audit and public company audit committee experience enables her to support the Board's oversight of our internal control over financial reporting and compliance matters.

  Ms. Byrd has been Chairman and Chief Executive Officer of GlobalTech Financial, LLC, a financial services company she founded, since 2000. From 1997 to 2000, Ms. Byrd was President of Coca-Cola Financial Corporation. From 1977 to 1997, Ms. Byrd held a variety of domestic and international positions with The Coca-Cola Company, including Chief of Internal Audits and Director of the Corporate Auditing Department. She is currently a director of AFC Enterprises, Inc., where she is a member of the Audit Committee and the Corporate Governance Committee and of Regions Financial Corporation, where she is a member of the Audit Committee and the Risk Committee. Ms. Byrd is a former member of the board of directors and audit committee member of Circuit City Stores, Inc. and RARE Hospitality International, Inc., and she also served on the board of directors of St. Paul Travelers Companies, Inc.

- Charles E. Haldeman, Jr. joined the Board in August 2009, upon the commencement of his employment as Chief Executive Officer of Freddie Mac. He is 63 years old. He is an experienced finance executive and leader of finance and investment organizations. Mr. Haldeman's experience as a leader of financial organizations enables him to provide valuable business and operating perspectives to the Board.

  Prior to joining Freddie Mac, Mr. Haldeman served as Chairman of Putnam Investment Management, LLC, the investment advisor for the Putnam Funds, from July 2008 through June 2009. He joined Putnam Investments in 2002 as Senior Managing Director and Co-Head of the investment division, was appointed President and Chief Executive Officer in November 2003, and served in that capacity until June 2008. He was a member of Putnam Funds' Board of Trustees from 2004 until July 2009, and was named President of the Putnam Funds in 2007. He served as a member of Putnam Investments' Board of Trustees from November 2003 until June 2009, where he served as a member of the audit committee. Prior to joining Putnam, Mr. Haldeman served as Chief Executive Officer of Delaware Investments from 2000 to 2002, and as chairman from 2001 to 2002. He was the President and Chief Operating Officer of United Asset Management Corporation from 1998 to 1999. Mr. Haldeman served as chairman of Dartmouth College's Board of Trustees from 2007 until 2010.

- Christopher S. Lynch joined the Board in December 2008. He is 54 years old. He is an experienced senior accounting executive who served as the lead audit signing partner and account executive for several large financial institutions with mortgage lending businesses. He also has significant public company audit committee experience and risk management experience. Mr. Lynch's extensive experience in finance, accounting and risk management enables him to provide valuable guidance to the Board on complex accounting and risk management issues, including in his roles as Non-Executive Chairman and member of our Audit Committee.

  Mr. Lynch has served as Non-Executive Chairman of Freddie Mac since December 2011. Mr. Lynch is an independent consultant providing a variety of services to financial intermediaries, including risk management, strategy, governance, financial and regulatory reporting and troubled-asset management. Prior to retiring from

KPMG LLP in May 2007, Mr. Lynch held a variety of leadership positions at KPMG, including National Partner in Charge — Financial Services, the U.S. firm's largest industry division. Mr. Lynch chaired KPMG's Americas Financial Services Leadership team, was a member of the Global Financial Services Leadership and the U.S. Industries Leadership teams and led the Banking & Finance practice. Mr. Lynch also served as a partner in KPMG's Department of Professional Practice and as a Practice Fellow at the Financial Accounting Standards Board. Mr. Lynch was the lead and audit signing partner for some of KPMG's largest financial services clients. Mr. Lynch also is a director of American International Group, Inc., where he is the Chair of the Audit Committee and a member of the Finance and Risk Management Committee. In addition, Mr. Lynch serves on the National Audit Committee Chair Advisory Council of the National Association of Corporate Directors.

- Nicolas P. Retsinas joined the Board in 2007. He is 65 years old. He is an experienced leader in the governmental and educational sectors, with in-depth knowledge of the mortgage lending and real estate industries. He also has represented consumer and community interests and has demonstrated a career commitment to the provision of housing for low-income households. Mr. Retsinas' public, private and academic experience, including his service on the boards of several not-for-profit organizations, enables him to bring to the Board broad knowledge and understanding of housing and consumer and community issues.

  Mr. Retsinas is a senior lecturer in Real Estate at the Harvard Business School and is Director Emeritus of Harvard University's Joint Center for Housing Studies, where he served as Director from 1998 to 2010. He is also a lecturer in Housing Studies at the Graduate School of Design. Prior to his Harvard appointment, Mr. Retsinas served as Assistant Secretary for Housing — Federal Housing Commissioner at the United States Department of Housing and Urban Development from 1993 to 1998 and as Director of the Office of Thrift Supervision from 1996 to 1997. He served on the Board of the Federal Deposit Insurance Corporation from 1996 to 1997, the Federal Housing Finance Board from 1993 to 1998 and the Neighborhood Reinvestment Corporation from 1993 to 1998. Mr. Retsinas also formerly served on the Board of Trustees for the National Housing Endowment. Currently, Mr. Retsinas serves on the Board of Trustees for Enterprise Community Partners, on the Board of Directors of the Center for Responsible Lending, and as a member of the Bipartisan Policy Center's Housing Commission.

- Clayton S. Rose joined the Board in October 2010. He is 53 years old. He is a finance executive with leadership experience in finance and investment organizations, experience serving on and chairing public company audit committees, and academic experience focused on financial services and managerial ethics. Mr. Rose's leadership, operating and academic experience enables him to provide the Board with valuable guidance regarding business execution, corporate finance and capital markets, as well as financial reporting and controls oversight.

  Mr. Rose is Professor of Management Practice at the Harvard Business School, and has been a member of its faculty since July 2007. He was awarded a PhD in sociology (with distinction) from the University of Pennsylvania in the same year. He was an adjunct professor at the Stern School of Business at New York University from 2002 to 2004, and at the Graduate School of Business at Columbia University from 2002 to 2006. In 2001, Mr. Rose served as Vice Chairman and Chief Operating Officer of JP Morgan, the investment bank of J.P. Morgan Chase & Co. Previously, he worked at J.P. Morgan & Co. Incorporated from 1981 to 2000, where, among other positions, he was head of the Global Investment Banking and the Global Equities Divisions and served as a member of the firm's executive committee. Mr. Rose is a member of the board of directors of XL Group plc, where he is a member of the Nominating, Governance and External Affairs Committee and the Risk and Finance Committee. He is a trustee of the Howard Hughes Medical Institute, where he has chaired the audit and compensation committee since March 2009, and is a director of Public/Private Ventures, where he has chaired the audit committee since October 2011. From November 2007 to March 2010, he served as Chairman of the board of managers of Highbridge Capital Management, an alternative investment management firm owned by JPMorgan Chase & Co. Mr. Rose previously served as a member of the boards of directors of Mercantile Bankshares Corporation from September 2003 to April 2007, where he served on the audit committee, and of Lexicon Pharmaceuticals, Inc. from July 2004 through September 2007, where he chaired the audit committee from March 2005 through September 2007. From October 2006 to October 2011, he was a trustee of the National Opinion Research Center at the University of Chicago, and chaired its audit committee.

- Eugene B. Shanks, Jr. joined the Board in December 2008. He is 64 years old. He is an experienced finance executive with leadership and risk management expertise. Mr. Shanks' leadership and risk management experience enables him to provide the Board with valuable guidance on risk management issues and our strategic direction.

  Mr. Shanks is a Trustee of Vanderbilt University, a member of the Advisory Board of the Stanford Institute for Economic Policy Research, a director of ACE Limited, where he serves as a member of the Risk and Finance

Committee, a Senior Advisor to Bain and Company, and a founding director at The Posse Foundation. From November 2007 until August 2008, Mr. Shanks was a senior consultant to Trinsum Group, Incorporated, a strategic consulting and asset management company. From 1997 until its sale in 2002, Mr. Shanks was President and Chief Executive Officer of NetRisk, Inc., a risk management software and advisory services company he founded. From 1973 to 1978 and from 1980 to 1995, Mr. Shanks held a variety of positions with Bankers Trust New York Corporation, including head of Global Markets from 1986 to 1992 and President and Director from 1992 to 1995. From 1978 to 1980, he was Treasurer of Commerce Union Bank in Nashville, Tennessee.

- Anthony A. Williams joined the Board in December 2008. He is 60 years old. He is an experienced leader of state and local governments, with extensive knowledge concerning real estate and housing for low-income individuals. He also has significant experience in financial matters and is an experienced academic focusing on public management issues. Mr. Williams' leadership and operating experience in the public sector allows him to provide a unique perspective on state and local housing issues.

  Mr. Williams is a Lecturer in Public Management at Harvard's Kennedy School of Government. Since January 2012 he has served as a Senior Fellow of the Government Practice at The Corporate Executive Board Company, and from January 2010 through December 2011, he served as the Executive Director of the Government Practice. Since September 2011, Mr. Williams has been affiliated with McKenna, Long & Aldridge, LLP, a law firm. From May 2009 until September 2011, Mr. Williams was affiliated with the law firm Arent Fox LLP. Prior to this, Mr. Williams served as the Chief Executive Officer of Primum Public Realty Trust, beginning in January 2007. Mr. Williams served as the Mayor of Washington, D.C. from 1999 to January 2007, and as its Chief Financial Officer from 1995 to 1998. In 2005, Mr. Williams served as Vice Chair of the Metropolitan Washington Council of Governments, and in 2004, Mr. Williams served as President of the National League of Cities. From 1993 to 1995, Mr. Williams was the first Chief Financial Officer for the U.S. Department of Agriculture. From 1991 to 1993, Mr. Williams was the Deputy State Comptroller of Connecticut. From 1989 to 1991, Mr. Williams was the Executive Director of the Community Development Agency of St. Louis, Missouri. From 1988 to 1989, Mr. Williams was an Assistant Director with the Boston Redevelopment Authority where he led the Department of Neighborhood Housing and Development, one of the Authority's four primary divisions. Mr. Williams also previously served as a director of Meruelo Maddux Properties, Inc., where he was a member of the Audit Committee and the Nominating and Corporate Governance Committee. Mr. Williams also is a member of the Board of Trustees of the Calvert Sage Fund and of each fund comprising the Calvert Multiple Funds.

Authority of the Board and Board Committees

The directors serve on behalf of, and exercise authority as directed by, the Conservator. The Conservator has delegated to the Board and its committees authority to function in accordance with the duties and authorities set forth in applicable statutes, regulations and regulatory examination and policy guidance, and our Bylaws and Board committee charters, as such duties or authorities may be modified by the Conservator. The Conservator has instructed the Board that it should consult with and obtain the approval of the Conservator before taking action in the following areas:

- actions involving capital stock, dividends, the Purchase Agreement between us and Treasury, increases in risk limits, material changes in accounting policy, and reasonably foreseeable material increases in operational risk;
- creation of any subsidiary or affiliate or any substantial transaction between us and any of our subsidiaries or affiliates, except for transactions undertaken in the ordinary course (*e.g.*, the creation of a trust, REMIC, REIT, or similar vehicle);
- matters that relate to conservatorship, such as, but not limited to, the initiation of, and material actions in connection with, significant litigation addressing the actions or authority of the Conservator, repudiation of contracts, qualified financial contracts in dispute due to our conservatorship, and counterparties attempting to nullify or amend contracts due to our conservatorship;
- actions involving hiring, compensation, and termination benefits of directors and officers at the executive vice president level and above (including, regardless of title, executive positions with the functions of chief operating officer, chief financial officer, general counsel, chief business officer, chief investment officer, treasurer, chief compliance officer, chief risk officer, and chief/general/internal auditor);
- actions involving the retention and termination of external auditors and law firms serving as consultants to the Board;
- settlements in excess of $50 million of litigation, claims, regulatory proceedings, or tax-related matters;

- any merger with or purchase or acquisition of a business involving consideration in excess of $50 million; and
- any action that, in the reasonable business judgment of the Board at the time that the action is taken, is likely to cause significant reputation risk.

The Board has five standing committees: Audit; Business and Risk; Compensation; Coordinating; and Nominating and Governance. All standing committees other than the Coordinating Committee meet regularly. The membership of each committee as of March 6, 2012 is shown in the table below.

Table 76 — Board of Directors Committee Membership

Director	Audit	Business and Risk	Compensation	Coordinating	Nominating and Governance
L. Bammann		C	√	√	
C. Byrd	√				√
C. Haldeman					
C. Lynch	√		√	C	
N. Retsinas		√			√
C. Rose	C		√	√	
E. Shanks		√		√	C
A. Williams	√		C	√	

√ = Member of the Committee
C = Chairman of the Committee

Charters reflecting the duties of the committees have been adopted by the Board and approved by the Conservator. All of the charters of the standing committees are available on our website at www.freddiemac.com/governance/bd_committees.html.

Our Board has an independent Non-Executive Chairman, whose responsibilities include presiding over meetings of the Board, regularly scheduled executive sessions of the non-employee directors, and executive sessions including only the independent directors that occur at least once annually if any of the non-employee directors are not independent. Mr. Koskinen was initially appointed to the position of Non-Executive Chairman by the Conservator in September 2008. Mr. Koskinen served in that role in 2011 until Mr. Lynch was appointed Non-Executive Chairman on December 2, 2011.

Communications with Directors

Interested parties wishing to communicate any concerns or questions about Freddie Mac to the Non-Executive Chairman of the Board or to our non-employee directors as a group may do so by U.S. mail, addressed to the Corporate Secretary, Freddie Mac, Mail Stop 200, 8200 Jones Branch Drive, McLean, VA 22102-3110. Communications may be addressed to a specific director or directors or to groups of directors, such as the independent or non-employee directors.

Executive Officers

As of March 6, 2012, our executive officers are as follows:

Name	Age	Year of Affiliation	Position
Charles E. Haldeman, Jr.	63	2009	Chief Executive Officer
Ross J. Kari	53	2009	Executive Vice President — Chief Financial Officer
Anthony N. Renzi	48	2010	Executive Vice President — Single-Family Business, Operations and Technology
Jerry Weiss	54	2003	Executive Vice President — Chief Administrative Officer
Paige H. Wisdom	50	2008	Executive Vice President — Chief Enterprise Risk Officer
David M. Brickman	46	1999	Senior Vice President — Multifamily
Devajyoti Ghose	60	1997	Senior Vice President — Investments and Capital Markets, and Treasurer
Timothy F. Kenny	50	2007	Senior Vice President — General Auditor
Robert D. Mailloux	44	2002	Senior Vice President — Corporate Controller & Principal Accounting Officer
Alicia S. Myara	47	2008	Vice President — Interim General Counsel & Corporate Secretary
Carol A. Wambeke	52	1997	Senior Vice President — Chief Compliance Officer

The following is a brief biographical description of each executive officer who is not also a member of the Board.

Ross J. Kari was appointed Executive Vice President — Chief Financial Officer in October 2009. Mr. Kari joined us from Fifth Third Bancorp, a financial services firm, where he served as Executive Vice President and Chief Financial Officer beginning in November 2008. Previously, he served as Executive Vice President and Chief Financial Officer of Safeco Corporation, an insurance firm, from June 2006 to October 2008. Prior to that, Mr. Kari served as Executive Vice President and Chief Operating Officer of the Federal Home Loan Bank of San Francisco, a government sponsored enterprise and part of the Federal Home Loan Bank System, from February 2002 to June 2006. Mr. Kari is a member of the board of directors of KKR Financial Holdings LLC where he is the Chairman of the Audit Committee.

Anthony Renzi was appointed Executive Vice President — Single-Family Business, Operations and Technology in April 2011. In this position, Mr. Renzi has broad responsibilities over the single-family line of business, including the

administration, relationship and performance management of Freddie Mac Seller/Servicers; performance of Freddie Mac's guarantee book of business; sourcing, servicing and REO operations; and pricing and securitization operations. In addition, he is responsible for the management of the firm's enterprise technology. He joined us as Executive Vice President — Single-Family Portfolio Management in April 2010. Prior to joining us, Mr. Renzi served as chief operating officer of GMAC Residential Capital and president of GMAC Mortgage Corporation since 2008, and managed their operational and financial activities. From 2006 to 2008, he was chief operating officer of the Residential Finance Group, where he led servicing operations, risk management, and strategic sourcing. Prior to that, Mr. Renzi held a number of key executive positions at GMAC Mortgage.

Jerry Weiss was appointed Executive Vice President — Chief Administrative Officer in August 2010. In this role, Mr. Weiss manages the services and operations of Freddie Mac's Strategy; External Relations, including Government and Industry Relations; Public Relations and Corporate Marketing; Internal Communications; Human Resources; Models, Mission and Research; and Making Home Affordable — Compliance organizations. For a period subsequent to his appointment as Executive Vice President — Chief Administrative Officer, he also served as our Chief Compliance Officer from August 2010 until June 2011. Prior to August 2010, Mr. Weiss served as our Senior Vice President and Chief Compliance Officer and in various other senior management capacities since joining us in October 2003. Prior to joining us, Mr. Weiss worked from 1990 at Merrill Lynch Investment Managers, most recently as First Vice President and Global Head of Compliance. From 1982 to 1990, Mr. Weiss was with a national law practice in Washington, D.C., where he specialized in securities regulation and corporate finance matters.

Paige H. Wisdom was appointed Executive Vice President — Chief Enterprise Risk Officer in October 2010. In this role, Ms. Wisdom is responsible for providing overall leadership and direction for enterprise risk management and leads an integrated framework for managing credit risk, market risk, operational risk and all other aspects of risk across the organization. Prior to this, she served as our Senior Vice President — Chief Enterprise Risk Officer from April 2010 until October 2010. Prior to this appointment, she served as the Senior Vice President — Business Unit Chief Financial Officer from January 2008 until April 2010. From August 2004 until December 2007, Ms. Wisdom served as a Business Unit Chief Financial Officer at Bank of America for key businesses including Global Business and Financial Services; Business Lending; and Global Technology, Service and Fulfillment. Prior to joining Bank of America, Ms. Wisdom served at Bank One Corporation/JP Morgan from June 2000 until July 2004, as the Chief Financial Officer, Corporate Bank and Co-Head Credit Portfolio Management. Prior to that she served in capital markets positions at UBS/Warburg Dillon Read, Citibank Salomon Smith Barney, and Swiss Bank Corporation.

David M. Brickman was appointed Senior Vice President — Multifamily in July 2011. In this role, he is responsible for overall management of the Multifamily Division's business operations. From December 2008 until July 2011, he served as Vice President in charge of various units responsible for Multifamily Capital Markets operations. In his previous roles at Freddie Mac, Mr. Brickman led the multifamily pricing, costing and research teams, was responsible for the development and implementation of new quantitative pricing models and financial risk analysis frameworks for all multifamily programs, and helped design several of Freddie Mac's multifamily financing products, including the Capital Markets Execution. Prior to joining Freddie Mac in 1999, Mr. Brickman co-led the Mortgage Finance and Credit Analysis group in the consulting practice at Pricewaterhouse Coopers LLP.

Devajyoti Ghose was appointed Senior Vice President — Investments and Capital Markets, and Treasurer in May 2011. Prior to this, he served as Vice President — Asset Liability Management and Deputy Treasurer from October 2010 until May 2011. From December 2008 until October 2010, he served as Vice President in charge of various units responsible for Debt and Liquidity Management, Debt Portfolio Management and Single-Family Pricing and Analytics. From February 2005 until December 2008, Mr. Ghose served as Vice President — Convexity Management. Before that, he held various senior positions at Freddie Mac in which he was responsible for evaluating the risks and returns of Freddie Mac's guarantee fee business and developing valuation models for various fixed income securities including mortgage-related products, debentures and interest-rate derivatives. Prior to joining Freddie Mac in 1997, Mr. Ghose was an assistant professor in econometrics at the University of Arizona.

Timothy F. Kenny was appointed Senior Vice President — General Auditor in July 2008. Prior to this appointment, Mr. Kenny served as Vice President and Interim General Auditor starting in May 2008. Before that, he served as our Vice President — Assistant General Auditor from September 2007 to May 2008. From 2001 to 2007, Mr. Kenny was a Managing Director with BearingPoint, Inc. (formerly KPMG Consulting, Inc.) where he directed a large team of financial professionals on a variety of financial risk management consulting projects with Ginnie Mae, the Federal Housing Administration, private sector mortgage bankers and other federal credit agencies. He joined KPMG LLP, the predecessor organization to KPMG Consulting, in 1986, was promoted to a KPMG Audit Partner in 1997, and served in that position until the separation of KPMG Consulting from KPMG LLP in February 2001. From 2004 until 2008, Mr. Kenny was a

member of the board of directors of Farmer Mac, a government sponsored enterprise that has established a secondary market for agricultural loans.

Robert D. Mailloux was appointed Senior Vice President — Corporate Controller & Principal Accounting Officer in April 2010. Prior to holding his current position, Mr. Mailloux served as our Vice President — Acting Corporate Controller beginning in October 2008. Prior to that appointment, he served as Vice President — Multifamily & Corporate Segment Controller, from May 2008 until October 2008, and as Vice President — Corporate Financial Accounting from September 2004 until May 2008. Before that, Mr. Mailloux held the position of Director — Corporate Reporting and Analysis from March 2002 until September 2004. Before joining us, Mr. Mailloux served for 12 years at a leading accounting firm, where he managed a variety of large audit and consulting engagements in the financial services and real estate industries.

Alicia S. Myara was appointed Vice President — Interim General Counsel & Corporate Secretary in November 2011. In this role, Ms. Myara is responsible for managing the corporate governance, litigation, real estate, securities and other legal aspects of the company's business operations. She joined Freddie Mac in January 2008 as Vice President/Deputy General Counsel — Corporate Governance. She also serves as General Counsel and Secretary of the Freddie Mac Foundation. Prior to joining Freddie Mac, she spent ten years with Amtrak, a government-owned corporation providing intercity passenger rail service in the United States, serving as its General Counsel and Corporate Secretary from 2002 until 2006.

Carol A. Wambeke was appointed Senior Vice President — Chief Compliance Officer in June 2011. In this position, she manages Freddie Mac's compliance with legal and regulatory requirements and related controls that govern the company's business activities. Prior to this, Ms. Wambeke served as Vice President of Compliance & Regulatory Affairs from June 2008 until June 2011. In this role, she was responsible for coordinating regulatory-related activities across the company and advising management on regulatory concerns and initiatives. Prior to transferring to the Compliance Division, she was Vice President — Regulatory Reporting & Analysis from February 2005 to June 2008 and Vice President — Regulatory Capital Operations from March 2004 to February 2005. She joined Freddie Mac in 1997 as a senior economist and served in various positions prior to 2004 with responsibility for financial and housing economics and regulatory capital management.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires the directors and executive officers of a reporting company and persons who own more than 10% of a registered class of such company's equity securities to file reports of ownership and changes in ownership with the SEC. Based solely on a review of such reports, we believe that during 2011 all of our directors and executive officers complied with such reporting obligations.

Codes of Conduct

We have separate codes of conduct applicable to all employees and to Board members that outline the principles, policies, and laws governing their activities. Upon joining us or our Board, all employees and directors, respectively, are required to sign acknowledgements that they have read the applicable code and agree to abide by it. In addition, all employees and directors must respond to an annual questionnaire concerning code compliance. The employee code also serves as the code of ethics for senior executives and financial officers required by the Sarbanes-Oxley Act and SEC regulations. Copies of our employee and director codes of conduct are available, and any amendments or waivers that would be required to be disclosed are posted, on our website at www.freddiemac.com.

Audit Committee Financial Expert

We have a standing Audit Committee that satisfies the "audit committee" definition under Section 3(a)(58)(A) of the Exchange Act and the requirements of Rule 10A-3 under the Exchange Act. Although our stock was delisted from the NYSE in July 2010, certain of the corporate governance requirements of the NYSE Listed Company Manual, including those relating to audit committees, continue to apply to us because they are incorporated by reference in the FHFA corporate governance regulations. Our Audit Committee satisfies the "audit committee" requirements set forth in Sections 303A.06 and 303A.07 of the NYSE Listed Company Manual. The current members of the Audit Committee are Carolyn H. Byrd, Christopher S. Lynch, Clayton S. Rose and Anthony A. Williams, all of whom the Board determined in February 2012 are independent within the meaning of Rule 10A-3 under the Exchange Act and Section 303A.02 of the NYSE Listed Company Manual.

Mr. Rose has been a member of the Audit Committee since November 2011 and is currently its chairman. The Board determined in November 2011 and again in February 2012 that Mr. Rose meets the definition of an "audit committee financial expert" under SEC regulations.

ITEM 11. EXECUTIVE COMPENSATION

Executive Summary

Our principal goal under conservatorship has been to keep the company functioning so we can continue to carry out our housing mission. We are particularly concerned about our ability to fulfill our mission if we are unable to attract and retain competent and experienced executives — a very real concern given the uncertainty surrounding our future business model, organizational structure, and compensation structure, which is adversely impacting our internal control environment. We believe these factors are also contributing to increased levels of voluntary employee turnover, including 17% voluntary turnover at our Senior and Executive Vice President levels in 2011. Additionally, the Conservator directed us to maintain individual salaries and wage rates for all employees at 2010 levels for 2011 and 2012 (except in the case of promotions or significant changes in responsibilities). In 2011, we made certain significant reorganizations which included targeted divisional staff reductions in an effort to manage general and administrative expenses. All of these activities impact our ability to retain our employees and compensate them for their work. Disruptive levels of turnover at both the executive and employee levels could lead to breakdowns in many of our operations that impact our ability to: (a) serve our mission and meet our objectives; (b) manage credit and other risks related to our $2.1 trillion total mortgage portfolio (including interest rate and other market risks related to our $653 billion mortgage-related investment portfolio); (c) reduce the need to draw funds from Treasury; and (d) issue timely financial statements.

We are finding it difficult to retain and engage critical employees and attract people with the skills and experience we need. Because we maintain succession plans for our senior management positions, we were able to quickly fill some of these positions vacated in 2011, or eliminate them through reorganizations. However, such alternatives are limited and may not be available to address future senior management departures. While we update our succession plans regularly, in many areas we have already executed these plans and we may need to search outside the company for replacements to fill these senior positions. We face increased difficulty filling senior positions given the uncertainty around compensation. We operate in an environment in which business decisions are closely scrutinized and subject to public criticism and review by various government authorities. Many executives are unwilling to work in such an environment for potentially significantly less than what they could earn elsewhere. Accordingly, we may not be able to retain or replace executives or other employees with the requisite institutional knowledge and the technical, operational, risk management, and other key skills needed to conduct our business effectively. A recovering economy is likely to put additional pressures on turnover in 2012, as other attractive opportunities may become available to people who we want to retain.

Also contributing to our concerns regarding executive retention risk is the aggregate level of compensation paid to our Section 16 executive officers, which for 2011 performance was significantly below the 25th percentile of market-based compensation. Any compensation changes that appear excessive, abrupt or arbitrary are likely to create heightened levels of operational risk. We anticipate that any significant adverse changes in executive compensation levels will result in numerous vacancies in senior positions that are important for our sound operation, since the incumbents in these positions possess significant business and leadership skills that are in demand elsewhere in the market at substantially higher levels of compensation. Filling vacancies at further reduced compensation levels with equally capable and experienced individuals is not likely — especially given the uncertainty and criticism surrounding the GSEs. In this environment, increased uncertainty and instability in the top ranks would likely cascade down to other officers and employees. The resulting loss of talent and institutional knowledge would cause an appreciable increase in the operational risk of the company.

In evaluating the potential impact of legislation to further reduce the pay of our executives and employees, the Acting Director of FHFA stated in his testimony to the U.S. Senate Committee on Banking, Housing and Urban Affairs on November 15, 2011 that:

> ***"a sudden and sharp change in pay would certainly risk a substantial exodus of talent, the best leaving first in many instances. [The GSEs] likely would suffer a rapidly growing vacancy list and replacements with lesser skills and no experience in their specific jobs. A significant increase in safety and soundness risks and in costly operational failures would, in my opinion, be highly likely."***

As a result of the increasing risk of employee turnover, we are exploring options to enter into various strategic arrangements with outside firms to provide operational capability and staffing for key functions, if needed. Should we experience significant turnover in key areas, we may need to exercise these strategic arrangements and significantly increase the number of outside firms and consultants used in our business operations, limit certain business activities, and/or increase our operational costs. However, these or other efforts to manage the risks to the enterprise may not be successful.

Compensation Discussion and Analysis

This section contains information regarding our compensation programs and policies, as modified by direction we received from FHFA as Conservator. These programs and policies were applicable to the following individuals, who were determined to be our Named Executive Officers for the year ended December 31, 2011 under SEC rules.

- Charles E. Haldeman, Jr., Chief Executive Officer
- Ross J. Kari, Executive Vice President — Chief Financial Officer
- Anthony N. Renzi, Executive Vice President — Single-Family Business, Operations and Technology
- Jerry Weiss, Executive Vice President — Chief Administrative Officer
- Paige H. Wisdom, Executive Vice President — Chief Enterprise Risk Officer

Executive Management Compensation Program

Overview of Program Structure

The Executive Management Compensation Program, or the Executive Compensation Program, covers the compensation of Freddie Mac executives in the following positions, each a Covered Officer:

- Chief Executive Officer (CEO), Chief Operating Officer (COO), and Chief Financial Officer (CFO);
- All Executive Vice Presidents (EVPs); and
- All Senior Vice Presidents (SVPs).

Each Named Executive Officer is a Covered Officer.

The Executive Compensation Program is a result of collaboration and compromise with FHFA that reflects the principles established by Treasury's executive compensation guidelines for companies receiving federal assistance. Specifically, the Executive Compensation Program was designed to align executive pay with achievement of our mission of providing liquidity, stability, and affordability to a troubled mortgage market and with certain financial, infrastructure development and other corporate performance objectives established annually by our Board and approved by FHFA. These objectives reflect our responsibilities both under our charter and in conservatorship as determined by the Conservator. The Executive Compensation Program establishes strict recapture provisions that protect the interests of taxpayers. The Executive Compensation Program attempts to balance our need to retain critical executives and attract new executive talent while continuing to support the nation's housing recovery amidst the uncertainties regarding our future.

One key element of the Executive Compensation Program that differs from Treasury's executive compensation guidelines is that all compensation is delivered exclusively in cash. We cannot provide equity-based compensation to our employees under the terms of the Purchase Agreement with Treasury, unless such grants are approved by Treasury. In addition, uncertainty regarding our future status makes our common stock ineffective as a vehicle for delivering incentive compensation.

Participation in the Executive Compensation Program is contingent upon a Covered Officer agreeing to be bound by the terms of a recapture arrangement that has been approved by both the Compensation Committee and FHFA. A further discussion of the recapture arrangement is set forth below in "Other Executive Compensation Considerations — Recapture Policy."

Finally, although the Compensation Committee takes the lead role in considering and recommending executive compensation, FHFA has become increasingly involved in the process and has limited the Compensation Committee's flexibility in certain respects, as previously discussed. In addition, the following circumstances limit the Compensation Committee's authority during conservatorship:

- FHFA issued a directive on December 16, 2010 requiring the Compensation Committee to set 2011 Target TDC at a level that was either the same as or lower than each Named Executive Officer's 2010 Target TDC, absent a promotion or a significant change in responsibilities. On December 13, 2011, FHFA extended this directive for setting 2012 Target TDC and subsequently instructed the Compensation Committee to further reduce the compensation levels of senior management.
- When FHFA was appointed as our Conservator in September 2008, it assumed all of the rights, titles, powers, and privileges of the company and its stockholders, directors and management, including the authority to set executive compensation. Under the terms of the Purchase Agreement, FHFA is required to consult with Treasury on any increases in compensation or new compensation arrangements for our executive officers.

- Our directors serve on behalf of FHFA and exercise their authority as directed by FHFA. More information about the role of our directors is provided above in "Directors, Executive Officers, and Corporate Governance — Authority of the Board and Board Committees."
- FHFA has directed that our Board consult with and obtain FHFA's approval before taking any action involving compensation or termination benefits for any officer at the level of executive vice president and above and, regardless of title, executives who hold positions with the functions of chief operating officer, chief financial officer, general counsel, chief business officer, chief investment officer, treasurer, chief compliance officer, chief risk officer, and chief/general internal auditor.
- FHFA retains the authority not only to approve both the terms and amount of any compensation prior to payment to any of our executive officers, but also to modify any existing compensation arrangements.

Elements of Compensation and Total Direct Compensation

Under the Executive Compensation Program in effect for 2011, a Covered Officer's Target TDC consists of three elements — Semi-Monthly Base Salary, Deferred Base Salary, and a Target Incentive Opportunity. The Target TDC is established for each annual performance cycle, as explained in the next section. Under the 2011 Executive Compensation Program, two-thirds of a Covered Officer's Target TDC consists of the sum of the Semi-Monthly and Deferred Base Salaries, and one-third consists of the Target Incentive Opportunity. More information on the three elements of the Target TDC is provided below.

- Semi-Monthly Base Salary is paid in cash on a semi-monthly basis and provides a fixed level of compensation designed to fairly compensate each Named Executive Officer for the responsibility level of his/her position. Semi-Monthly Base Salary cannot exceed $500,000 per year, except for the CEO and CFO, or other exceptions as approved from time to time by FHFA.
- Deferred Base Salary is earned during one year but not paid until the corresponding quarter of the following year to provide an incentive for executive retention. Deferred Base Salary is provided in two portions:

  1. The fixed portion provides certainty as to amount and is not subject to increase or decrease on the basis of company performance; and
  2. The performance-based portion is subject to adjustment and provides incentives to the Covered Officers to achieve specific company performance measures.

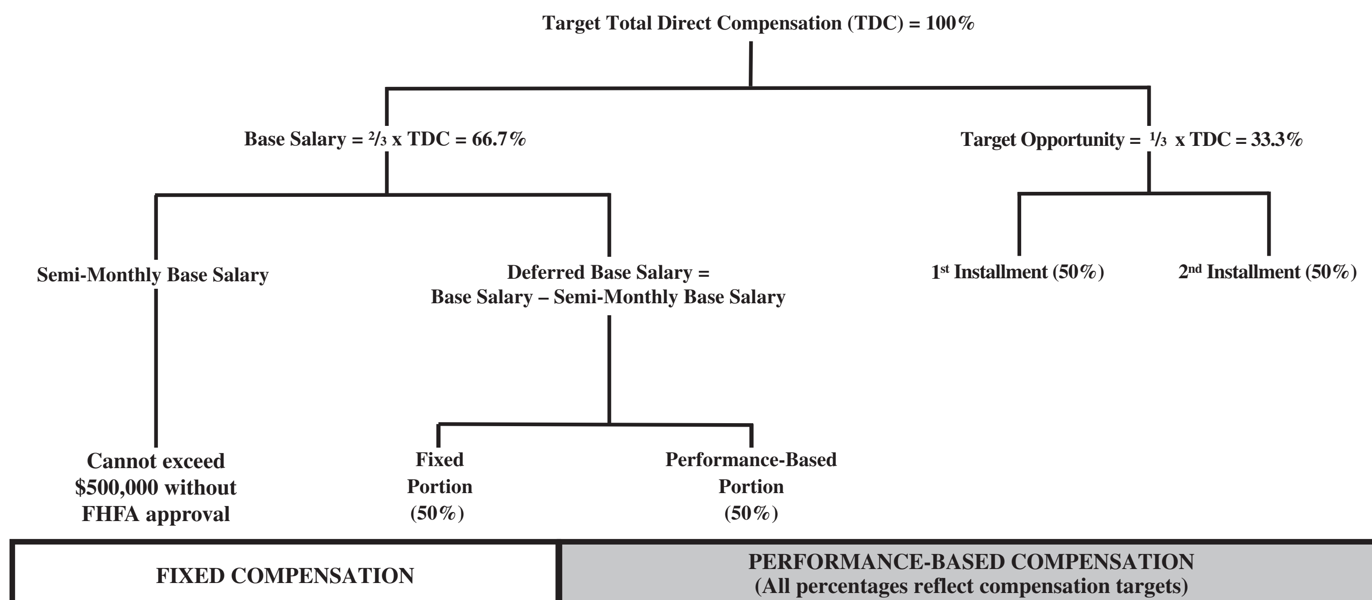
  Each Named Executive Officer's Deferred Base Salary was initially divided equally between the fixed and performance-based portions. The fixed portion was earned during each quarter and paid in a fixed amount on the last business day of the corresponding quarter of the following calendar year. The performance-based portion is earned and paid on the same timetable as the fixed portion, but the Executive Compensation Program permits the amount actually paid to range from 0% to 125% based on the performance-based Deferred Base Salary funding level determined by the Compensation Committee with the approval of FHFA. Each Covered Officer's payment is equal to his or her target multiplied by the funding level and there is no individual differentiation. While the Executive Compensation Program allowed for an approved funding level for performance-based Deferred Base Salary greater than 100%, it was the intention of the Compensation Committee not to approve a funding level in excess of 100% while the company was in conservatorship.

- The Target Incentive Opportunity (Target Opportunity or TO) is a performance-based, long-term incentive award designed to provide incentives to the Covered Officers to achieve specific corporate performance measures. Each Covered Officer's target award is equal to one-third of his or her annual Target TDC. The TO is granted annually and earned over a two-year period based on the considerations discussed below. Half of each award is earned in the year granted, with the other half earned in the following year. Payment will occur no later than March 15 of the year following the year to which the annual performance measures are applicable. While the Executive Compensation Program allows for an approved funding level that exceeds 100%, it is the current intention of the Compensation Committee not to approve a funding level in excess of 100% while the company is in conservatorship. Each Named Executive Officer's TO payments, however, may range from 0% to 150% of target, based on an assessment of division and/or individual performance as determined by the Chief Executive Officer or, in the case of the Chief Executive Officer, the Board of Directors. The amount of each Named Executive Officer's TO payment is subject to the approval of both the Compensation Committee and FHFA. The individual differentiation of TO payments is discussed further in, "— Determination of Actual Target Opportunity."

Except in the limited circumstances described below (see "Potential Payments Upon Termination of Employment or Change-in-Control"), we will pay installments of TO and Deferred Base Salary awards only if the Named Executive Officer is employed by Freddie Mac on the scheduled payment date.

Effective January 1, 2012, FHFA approved a new compensation structure for our executives, the 2012 Executive Compensation Program. See "OTHER INFORMATION — 2012 Executive Management Compensation Program" above for additional information. It may be amended or replaced by FHFA or the Compensation Committee, subject to approval by FHFA after consulting with Treasury.

The following diagram depicts Target TDC, including each of the three elements of compensation, under the Executive Compensation Program in effect for 2011.



Performance Measures for the Performance-Based Elements of Compensation

The performance measures for the performance-based portion of Deferred Base Salary, the first installment of the 2011 TO grant, and the second installment of the 2010 TO grant, together with a description of the assessment of actual performance against such measures, are presented below in "— Determination of the Performance-Based Portion of 2011 Deferred Base Salary" and "— Determination of Actual Target Opportunity." These performance measures, which were developed by management, the Compensation Committee, and FHFA, were chosen because we believe they reflect our priorities under conservatorship. They also generally require the participation and support of employees throughout the company.

Determination of 2011 Target TDC for Named Executive Officers

Role of Compensation Consultants

As part of the annual process to determine the Target TDC for each of the Named Executive Officers, the Compensation Committee receives guidance from an independent compensation consultant that is selected by the Compensation Committee. In addition to the annual process to determine the Target TDC, the compensation consultant provides guidance during the course of the year on executive compensation matters and can be engaged for special projects, as needed, by either the Compensation Committee or the full Board.

The Compensation Committee has engaged Meridian Compensation Partners, LLC (Meridian) as its consultant since September 2010. Meridian was selected by the Compensation Committee without any recommendation by management. Meridian has not provided the Compensation Committee with any non-executive compensation services, nor has the firm provided any consulting services to our management.

Gathering Comparative Market Compensation Data

As part of its process to establish each Named Executive Officer's Target TDC under the Executive Compensation Program, the Compensation Committee reviewed the compensation of executives in comparable positions at companies that are either in a similar line of business or are otherwise comparable for purposes of recruiting and retaining

individuals with the requisite skills and capabilities. We refer to this group of companies as the Comparator Group. In September 2011, the Compensation Committee reviewed and discussed the composition of the Comparator Group with Meridian and determined that the following companies should be included in the Comparator Group used to establish target compensation levels for 2012:

Allstate	The Hartford	Prudential
American Express	JPMorgan Chase*	State Street
Bank of America*	MasterCard	SunTrust
Bank of New York Mellon	MetLife	U.S. Bancorp
Capital One	Northern Trust	Visa
Citigroup*	PNC	Wells Fargo*
Fannie Mae		

* Compensation data to be used from these diversified banking firms is taken only from their mortgage or real estate divisions.

While the 2012 Comparator Group continues to include 19 companies, the Committee did make two changes to the composition of the Comparator Group in September 2011, adding Capital One and removing BlackRock. In both cases, these changes were made after considering several factors, including whether each company's business is in the same or a similar industry, whether we compete for executive talent and whether the company participates in the compensation survey we use to benchmark competitive market data for our senior executives.

In the event there is insufficient data from the Comparator Group for any of the Named Executive Officer positions, or if Meridian believes that additional data sources would strengthen the analysis of competitive market compensation levels, the Compensation Committee can use alternative survey sources to make these assessments. For 2011 and 2012 compensation, the alternative survey sources used by the Compensation Committee were compensation surveys published by McLagan and Aon Hewitt. In order to preserve confidentiality and encourage continuing participation, these consulting firms do not attribute the data in their surveys to the companies that participate in their surveys.

Establishing Target TDC

In establishing Target TDC levels for our Named Executive Officers, the Compensation Committee used as a guideline the market median, or 50th percentile, of the total direct compensation, consisting of base salary, annual incentive, and long-term incentive awards, paid to comparable positions at Comparator Group companies or in the alternative survey sources. The Compensation Committee's authority was limited to setting 2011 Target TDC at a level that was either the same as or lower than each Named Executive Officer's 2010 Target TDC, based on FHFA's directive that the company maintain individual salaries and wage rates at 2010 levels for 2011, absent a promotion or a significant change in responsibilities.

In establishing the Named Executive Officers' 2011 Target TDC, the Compensation Committee reviewed 2010 data from the Comparator Group and the alternative survey source. Specifically, for the positions of CEO, CFO and EVP — Chief Enterprise Risk Officer, the Compensation Committee reviewed competitive market data from the Comparator Group. For the EVP — Single-Family Business, Operations and Technology, the Compensation Committee reviewed competitive market data from a survey published by McLagan. For the EVP — Chief Administrative Officer, no reasonable match was available in either the Comparator Group or the alternative survey source and therefore the competitiveness of this position's Target TDC was evaluated by comparing the scope and breadth of the position's responsibilities with those of other executive-level positions within the company.

In December 2010, the Compensation Committee applied the criteria described above to either develop 2011 TDC recommendations for each of the Named Executive Officers or review recommendations presented by senior management and management's compensation consultant, Aon Hewitt. For Mr. Renzi, the December 2010 review related to his role as EVP — Single-Family Portfolio Management and the process was repeated at the time of his promotion into his current role in June 2011, at which time the Compensation Committee reviewed 2010 data from both the Comparator Group and a survey published by Aon Hewitt.

The 2011 Target TDC for each of the Named Executive Officers was reviewed and approved by FHFA.

The table below sets forth the approved 2011 Semi-Monthly Base Salary, Deferred Base Salary, TO, and Target TDC for our Named Executive Officers. These amounts represent compensation targets, not the actual amount of compensation paid for performance during 2011. As a result of FHFA's directive to freeze Semi-Monthly Base Salary and Target TDC at 2010 levels, the aggregate Target TDC for our Named Executive Officers is in the lowest quartile of total direct compensation paid to comparable positions at Comparator Group companies or, where applicable, in the alternative survey

sources. Information about the amounts actually paid during or with respect to performance during 2011 to these executives is set forth in Table 85.

Table 77 — 2011 Semi-Monthly Base Salary, Deferred Base Salary, Target Opportunity, and Target TDC

		2011 Target TDC (Annualized)			
Named Executive Officer	Title	Semi-Monthly Base Salary	Deferred Base Salary	Target Opportunity	Target TDC
Charles E. Haldeman, Jr.	CEO	$900,000	$3,100,000	$2,000,000	$6,000,000
Ross J. Kari	EVP — CFO	675,000	1,658,333	1,166,667	3,500,000
Anthony N. Renzi	EVP — Single-Family Business, Operations and Technology	500,000	1,333,333	916,667	2,750,000
Jerry Weiss	EVP — Chief Administrative Officer	450,000	1,016,667	733,333	2,200,000
Paige H. Wisdom	EVP — Chief Enterprise Risk Officer	425,000	741,667	583,333	1,750,000

(1) As discussed further in "Determination of Actual Target Opportunity," Mr. Haldeman will not receive the Target Opportunity installments applicable to his performance during 2011.

Determination of the Performance-Based Portion of 2011 Deferred Base Salary

Over the course of 2011, the Compensation Committee received updates from management on our achievement against the performance objectives used to determine the funding level for the performance-based portion of Deferred Base Salary. In the fourth quarter of 2011, management presented the Compensation Committee with a final assessment against the performance objectives and concluded that we achieved most, but not all, of the performance objectives.

The table below presents the performance measures and management's assessment of our achievement against those performance objectives.

Table 78 — Achievement of Performance Measures for the Performance-Based Portion of Deferred Base Salary

Performance Measure	Weighting	Key Factors Impacting Achievement Assessment
Mission • Support loss mitigation and foreclosure prevention activities, including the Obama Administration's Making Home Affordable Program, as measured by the number of completed modifications and workouts of 60-day delinquencies; • Provide a "satisfactory" Duty to Serve underserved markets and achieve an "in compliance" execution rating. Additionally, meet the 2011 affordable goals and subgoals (if feasible, as determined by FHFA); and • Provide market support through Single-Family cash and guarantee purchases	30%	• We completed over 109,000 HAMP and non-HAMP modifications, at the high end of the target range of 80,000 - 120,000. Additionally, we achieved the borrower outreach measure, which measures the number of workouts each month for 60-day delinquencies as a percent of the total 60-day delinquent population. We entered into workouts for 3.2% of such mortgages, above the high end of the target range of 2.5%-3.0%. • With respect to the 2011 affordable goals, based on preliminary information, we believe we met the single-family refinance low-income goal and both multifamily goals. We did not meet the FHFA benchmark level for single-family purchase-money goals or subgoals for 2011. • Single-family purchases as a percentage of agency volume were 28%, which was above plan (the target range was 23%-27%) due in part to increased refinance volumes during the low interest rate environment that existed throughout 2011. Our share of purchase volume tends to increase during periods when refinancing activity is high.
Financial and Risk Meet targets for: • Segment Earnings or Total Comprehensive Income; • Internal return on economic capital on all new purchases; • Underwriting quality on new single-family and multifamily purchases; • Volume of short sales and deeds-in lieu of foreclosure; and • Efficiency/administrative expenses	30%	• For the segment earnings objective: – Single-Family: The loss of just under $10.0 billion for 2011 was within the target range of losses of $4 billion to $10 billion due to higher than anticipated credit-related expenses – Multifamily: Segment earnings of $1.3 billion were above the high end of the target range of $0.6 billion to $1.0 billion – Investments: Segment total comprehensive income of $6.5 billion was below the target range of $8 billion to $10 billion due primarily to higher than forecast mark-to-market losses on derivatives and available-for-sale mortgage securities; • For the internal return on economic capital on new purchase objective: – Single-Family: The 17% internal return on economic capital exceeded the target range of 10%-14% – Multifamily: The 17% internal return on economic capital was within the target range of 16%-20% – Investments: Internal return on economic capital of 6% was below the target range of 10%-14% due to purchases made to improve PC performance; • For the underwriting quality on new purchases: – Single-Family: Performance against this objective is measured using the cumulative default rate for the worst quintile of new purchases, which was 1.45%, easily achieving the target of 5% or less. – Multifamily: The weighted average amortizing debt coverage ratio on the worst 10% of new multifamily purchases of 1.25x slightly exceeded the target range of 1.20x-1.23x. • We completed over 46,000 short sales and deeds-in-lieu of foreclosure during 2011, within the target range of 35,000-50,000. • We met the objective of limiting 2011 administrative expenses - excluding costs associated with special policy and housing initiatives such as the Making Home Affordable program — to no more than $1.4 billion. Administrative expenses measured on this basis totaled $1.34 billion.
Business Infrastructure • Maintain normal service and quality standards for existing technology and operations infrastructure; • Complete deployment of all planned business infrastructure enhancements; and • Complete all other planned information technology initiatives	30%	• Performance indicators used to monitor service and quality standards demonstrate that those standards were met throughout 2011. • All work was completed as planned for projects involving multifamily and finance transaction accounting. For single-family, many projects were completed as planned, but some were either canceled or were not completed during 2011. The high-cost, high-risk Single-Family Master Servicing projects were canceled to enable resources to address the Servicing Alignment Initiative. • Achieved milestones and/or completed all other planned information technology initiatives.
Accounting and Controls • Complete all planned controls remediation activities; • Execute the 2011 internal audit plan; and • Maintain effective controls over financial reporting (excluding the material weakness related to our disclosure controls and procedures)	10%	• Many planned remediation activities were completed. Indicators of the progress made during 2011 include remediation of all Significant Deficiencies targeted at the beginning of the performance year, and reliance being placed on the work of our Internal Audit organization by our Conservator and our external auditors. • Successfully completed 11 of the 12 objectives - including the three highest weighted objectives - in the annual internal audit plan. • See the discussion below for information about events that occurred subsequent to the initial assessments by management and the Compensation Committee.

During its presentation of our achievement against the performance measures, management presented additional considerations that the Compensation Committee might want to take into account when determining an appropriate funding level. These additional considerations were:

- Implementation of a new governance process for technology projects that management believes will significantly improve the company's ability to deliver critical projects and also resulted in the cancellation or deferral of a significant number of previously planned projects;
- Execution of the Servicing Alignment Initiative, a significant new FHFA directive that aligns GSE loss mitigation requirements and is intended to bring more consistency to the servicing industry and help more distressed homeowners avoid foreclosure;
- Implementation of the Servicing Success Program, which seeks to improve the company's management of servicer performance through defined metrics, benchmarks, requirements, financial incentives, and compensatory fees;
- Favorable results from a June 2011 survey of Multifamily Production and Asset Management customers (the results of a similar survey of Single-Family customers were not available in time to be considered by the Compensation Committee);
- Unfavorable impact on the Investments Segment's internal return on economic capital of purchases made during 2011 to support the performance of Freddie Mac PCs;
- Delay in developing a corporate investigations policy and procedure;
- Deficiencies in the company's business continuity strategy in the event of a regional business disruption; and
- The adverse effects of significant turnover among the company's senior executives during 2011.

Management then proposed a funding range for the performance-based portion of the Deferred Base Salary that it believed reflected our performance against the goals, taking into account the additional considerations. After reviewing and discussing management's final assessment against the performance goals, the Compensation Committee then discussed the additional considerations and determined that these should also be evaluated in determining the appropriate funding level for the performance-based portion of Deferred Base Salary. The Compensation Committee then developed a preliminary recommended funding level for the performance-based portion of Deferred Base Salary, which was then submitted to FHFA for review.

After the Compensation Committee's submission of its initial recommendation to FHFA, FHFA advised the company that certain mortgages preliminarily included in the company's calculation are not eligible to be counted toward affordable housing goals compliance. Consequently, we failed to meet the FHFA benchmark level for the single-family affordable purchase-money goals and subgoals for 2011.

In addition, subsequent to management's assessment of our achievement against the performance measures and the Compensation Committee's submission of its initial recommendation to FHFA, management determined that we did not maintain effective internal control over financial reporting and identified one new material weakness related to information technology. See "CONTROLS AND PROCEDURES" above. The Compensation Committee assessed 2011 performance against this and other performance measures based on the best information available at the time of the assessment.

Following FHFA's review of our performance, it instructed the Compensation Committee to reduce its recommended funding level in light of the required revisions to the affordable housing goal counting process, and indicated the maximum funding level it would approve. In accordance with FHFA's instruction, the Compensation Committee, without concurring with FHFA's determination, directed management to proceed using a funding level for the performance-based portion of the Deferred Base Salary of 87%, the maximum funding level that FHFA indicated it would approve.

The following chart compares the target and actual amounts of 2011 Deferred Base Salary for each Named Executive Officer. The actual amount earned, which is based exclusively on corporate performance and for which there is no individual differentiation, is scheduled to be paid in equal quarterly installments on the last business day of each calendar quarter of 2012.

Table 79 — 2011 Deferred Base Salary

Named Executive Officer	Target 2011 Deferred Base Salary			Actual 2011 Deferred Base Salary		
	Fixed Portion	Performance-Based Portion	Total Target Deferred Base Salary	Fixed Portion	Performance-Based Portion	Total Actual Deferred Base Salary
Mr. Haldeman	$1,550,000	$1,550,000	$3,100,000	$1,550,000	$1,348,500	$2,898,500
Mr. Kari	829,167	829,166	1,658,333	829,167	721,375	1,550,542
Mr. Renzi	592,614	592,613	1,185,227	592,614	515,574	1,108,188
Mr. Weiss	508,334	508,333	1,016,667	508,334	442,249	950,583
Ms. Wisdom	370,834	370,833	741,667	370,834	322,624	693,458

In order to receive the Deferred Base Salary that was earned during 2011, the Covered Officer must be employed by us on the payment date, subject to certain exceptions. If a Covered Officer is involuntarily terminated, any unpaid Deferred Base Salary will be forfeited unless the Compensation Committee recommends that the Covered Officer receive either all or a portion of the unpaid Deferred Base Salary and the Compensation Committee's recommendation is approved by FHFA after consulting with Treasury, as appropriate. Further, if a Covered Officer voluntarily terminates employment, any unpaid Deferred Base Salary will be forfeited.

Determination of Actual Target Opportunity

Over the course of 2011, the Compensation Committee received updates from management on our achievement against the performance objectives used to determine the funding level for the two TO installments. In the fourth quarter of 2011, management presented the Compensation Committee with a final assessment against the performance objectives used in determining the funding level for the two installments for which payment is based on performance during 2011.

For the first installment of the 2011 TO, management concluded that we would achieve most, but not all of the performance objectives. The table below presents the performance measures and management's assessment of our achievement against those performance measures for the first installment of the 2011 TO.

Table 80 — Achievement of Performance Measures for First Installment of 2011 Target Opportunity

Performance Measure	Weighting	Key Factors Impacting Achievement Assessment
Business Infrastructure • Transition greater than 95% of customers from legacy mortgage delivery and servicing systems; and, • Achieve the 2011 goals associated with remediation of the identified deficiencies in the company's information technology infrastructure.	40%	• 100% of customers were transitioned from the legacy servicing system two months prior to the year-end deadline. All customers also ended their use of the legacy mortgage delivery system during 2011; and, • All 2011 information technology infrastructure goals were achieved by year-end.
Financial Execution Conserve capital by limiting the 2011 draw from Treasury to no more than $8 billion.	40%	The 2011 draw request from Treasury was $7.6 billion, at the high end of the target range of $0 to $8 billion.
Mission Same as for the performance-based element of Deferred Base Salary.	20%	Same as for the performance-based element of Deferred Base Salary.

During its presentation of our achievement against the performance measures, management presented two additional considerations for the Compensation Committee to take into account when determining an appropriate funding level. These additional considerations were:

- The cancellation of certain key business infrastructure projects resulting from the implementation of the new governance process for technology projects; and
- Execution of the Servicing Alignment Initiative.

Management then proposed a funding range for the first installment of the 2011 TO that it believed reflected our performance, taking into account the additional considerations.

After reviewing and discussing management's final performance assessment against the specific performance goals, the Compensation Committee concurred with management's assessment. The Compensation Committee then discussed the

additional considerations and determined that these should also be included in determining the appropriate funding level for the first installment of the 2011 TO. The Compensation Committee then developed a preliminary recommended funding level for the 2011 TO first installment, which was then submitted to FHFA for review.

Following FHFA's review of our achievement against the performance objectives, it instructed the Compensation Committee to substantially reduce its recommended funding level in light of the following:

- The 2011 draw from Treasury was at the high end of the target range established at the beginning of the year; and
- As discussed above, required revisions in the affordable housing goal counting process, of which the company received notice after management's assessment and the Compensation Committee's original recommendation, resulted in our failure to meet the FHFA benchmark level for the single-family affordable purchase-money goals or subgoals for 2011.

FHFA informed the Compensation Committee of the maximum funding level that it would approve. In accordance with FHFA's instruction, the Compensation Committee, without concurring, directed management to implement a funding level for the 2011 TO first installment of 79%, the maximum funding level that FHFA indicated it would approve.

For the second installment of the 2010 TO, management concluded that we would achieve most, but not all, of the performance objectives. The table below presents the performance measures and management's assessment of our achievement against those performance measures for the second installment of the 2010 TO.

Table 81 — Achievement of Performance Measures for Second Installment of 2010 Target Opportunity

Performance Measure	Weighting	Key Factors Impacting Achievement Assessment
Mission Same as for performance-based element of Deferred Base Salary.	35%	Same as for the performance-based element of Deferred Base Salary.
Controls Remediation Strengthen the control environment, taking into consideration progress in remediating Significant Deficiencies, Material Weaknesses, Internal Audit critical and major issues and FHFA Matters Requiring Attention scheduled to be remediated during 2011.	20%	Many planned remediation activities were completed. Indicators of the progress made during 2011 include remediation of all Significant Deficiencies targeted at the beginning of the performance year, and reliance being placed on the work of our internal audit organization by the Conservator and our external auditors. There also were fewer repeat controls findings.
Financial Execution Same as for the new purchase financial execution objective applicable to the performance-based element of Deferred Base Salary and the Conserve Capital objective applicable to the first installment of the 2011 TO.	20%	Same as for the new purchase financial execution objective applicable to the performance-based element of Deferred Base Salary and the Conserve Capital objective applicable to the first installment of the 2011 TO.
Business Infrastructure • Complete the 2011 elements of the business infrastructure plan developed in 2010; and, • Maintain normal service and quality standards for existing technology and operations infrastructure.	25%	• All work was completed as planned for projects involving multifamily and finance transaction accounting. For single-family, many projects were completed as planned, but some were either cancelled or were not completed during 2011. The high-cost, high-risk Single-Family Master Servicing projects were canceled to enable resources to address the Servicing Alignment Initiative; and, • Performance indicators used to monitor service and quality standards demonstrate that those standards were met throughout 2011.

Management presented the same two additional considerations applicable to the first installment of the 2011 TO for the Compensation Committee's consideration when determining an appropriate funding level.

Management then proposed a funding range for the second installment of the 2010 TO that it believed reflected our performance, taking into account the additional considerations.

After reviewing and discussing management's final performance assessment against the specified performance measures, the Compensation Committee concurred with management's assessment. The Compensation Committee then

discussed the additional considerations and determined that these should also be included in determining the appropriate funding level for the second installment of the 2010 TO. The Compensation Committee then developed a preliminary recommended funding level for the second installment of the 2010 TO, which was then submitted to FHFA for review.

Following FHFA's review of our performance, it instructed the Compensation Committee to reduce its recommended funding level in light of revisions to the affordable housing goal counting process discussed above and informed the Compensation Committee of the maximum funding level that it would approve. In accordance with FHFA's instruction, the Compensation Committee, without concurring with FHFA's determination, directed management to proceed using a funding level for the 2010 TO second installment of 84%, the maximum level that FHFA indicated it would approve.

For both TO installments, a portion of the available funds has been allocated to provide a cash award to approximately 500 employees in either administrative or professional staff roles who do not participate in our annual short-term incentive program. This decision was made to recognize the contributions of these employees who provide valuable core services to the company. In addition, these employees are generally in lower-paid roles with limited advancement opportunities and are thus more adversely impacted by FHFA's continuation of the directive to freeze salaries and wage rates at 2010 levels. This allocation reduced the funding level available for distribution for the first 2011 TO installment and the second 2010 TO installment to approximately 78% and 83%, respectively.

For both the second 2010 and first 2011 TO installments, the Compensation Committee concurred with the CEO's recommendations regarding how the remaining available TO funds should be allocated among the Covered Officers under the Executive Compensation Program, including the Named Executive Officers other than himself. The recommended allocation was made after considering the factors listed below.

- Each officer's performance against his/her individual 2011 performance objectives in terms of both business results and leadership effectiveness;
- The relative contributions of each officer in relation to the contributions of the other officers;
- Each of the Named Executive Officers either achieved or exceeded his/her 2011 individual performance objectives. The relatively narrow spread of the individual differentiation between the largest and smallest TO awards (expressed as a percentage of each Named Executive Officer's target) supports our continued emphasis of the need for highly coordinated, cross-functional collaboration; and
- The entire senior officer team accomplished a great deal in an extraordinarily difficult operating environment during 2011 and these accomplishments are especially significant considering the number of senior management departures during the year.

Mr. Haldeman informed the Compensation Committee that the company's best interests would be served if he was not a participant in the February 2012 TO allocation process, which would result in him not receiving payment of either TO installment. While the Committee felt that Mr. Haldeman's performance during 2011 merited payment of the TO installments, it also accepted his request that it should exclude him from the TO allocation process. After considering these and other factors, the Compensation Committee determined that Mr. Haldeman should not receive either TO installment. Mr. Haldeman will forfeit the remaining 2011 TO installment and any 2011 earned but unpaid Deferred Base Salary upon his planned departure from the company later this year.

The following chart summarizes the TO applicable to performance during 2011 for each of the Named Executive Officers and the amount that was approved by the Compensation Committee and FHFA and paid on February 16, 2012.

Table 82 — 2011 Target Opportunity

	2011 First Installment		2010 Second Installment	
Named Executive Officer	Target	Actual	Target	Actual
Mr. Haldeman	$1,000,000	$ —	$1,000,000	$ —
Mr. Kari	583,334	480,125	583,333	508,646
Mr. Renzi	414,773	308,416	176,136	138,807
Mr. Weiss	366,667	316,367	329,166	302,365
Ms. Wisdom	291,667	251,656	253,181	232,567

The 2010 second installment amount for Mr. Renzi reflects a pro-ration of his annual TO based on his date of hire in 2010.

2011 Target TDC Compared to 2011 Actual TDC

The following table shows 2011 Target TDC compared to the approved 2011 actual TDC for each of the Named Executive Officers. The amounts displayed in both the "Total Target" and "Total Actual" columns include the sum of

Semi- Monthly Base Salary, Deferred Base Salary and those amounts associated with the first installment of the 2011 TO and the second installment of the 2010 TO.

Table 83 — 2011 Target TDC Compared to the Approved 2011 Actual TDC

Named Executive Officer	2011 Semi-Monthly Base Salary	2011 Deferred Base Salary		Target Opportunity (2011 1st Installment and 2010 2nd Installment)		Total[1]	
		Target	Actual	Target	Actual	Target	Actual
Mr. Haldeman	$900,000	$3,100,000	$2,898,500[2]	$2,000,000	$ —	$6,000,000	$3,798,500
Mr. Kari	675,000	1,658,333	1,550,542	1,166,667	988,771	3,500,000	3,214,313
Mr. Renzi	473,864	1,185,227	1,108,188	590,909	447,223	2,250,000	2,029,275
Mr. Weiss	450,000	1,016,667	950,583	695,833	618,732	2,162,500	2,019,315
Ms. Wisdom	425,000	741,667	693,458	544,848	484,223	1,711,515	1,602,681

(1) The table does not include the second installment of each Named Executive Officer's 2011 TO that is scheduled to be paid in March 2013.
(2) Mr. Haldeman will forfeit any earned but unpaid Deferred Base Salary when he leaves the company.

Named Executive Officer Individual Performance Objectives

Each Named Executive Officer is a member of the Management Committee, a group of our senior-most officers. In addition to shared corporate objectives, each Named Executive Officer also had individual performance objectives which are generally established at the beginning of the year by Mr. Haldeman or, in the case of Mr. Haldeman, the Board. The chart below describes those individual performance objectives, as well as the level of achievement against those objectives. Certain of the individual performance objectives were either corporate performance objectives or supported achievement of one or more of the corporate performance objectives. Achievement against the corporate performance objectives is discussed above in "Determination of the Performance-Based Portion of Deferred Base Salary" and "Determination of Actual Target Opportunity." The level of achievement against each Named Executive Officer's individual performance objectives is evaluated using two considerations — business results and leadership effectiveness — which are given equal weight.

Table 84 — Named Executive Officer Individual Performance Summaries

Individual Performance Measures	Assessment of Performance
Mr. Haldeman: • Lead the execution of objectives included in the corporate scorecard; • Assist the Conservator's consideration of alternatives for the future of the U.S. housing and mortgage markets; • Strengthen critical talent management processes, including development of the senior leadership team and completion of initiatives designed to increase employee engagement; and, • Foster a risk management culture throughout the company, including providing visible support for risk management	During 2011, Mr. Haldeman continued to build strong and collaborative relationships, both within the company and with our Conservator. His leadership style has supported achievement of our business objectives as well as our Conservator's efforts to assess alternative future structures for the housing finance system. Under Mr. Haldeman's leadership during 2011, the company achieved most, but not all, of the corporate scorecard objectives. The company strengthened the talent management process by initiating a best-in-class leadership development program for all mid- and senior-level leaders, focusing the company on developing stronger leaders at multiple levels. Mr. Haldeman has continued to strengthen the risk management function by supporting a strategy to elevate the risk management processes and by fostering a risk-aware culture where every employee is a risk manager.
Mr. Kari: • Maintain effective internal controls over financial reporting and complete the remediation of five separate significant deficiencies; • Improve the readability and quality of public disclosures and earnings releases; • Complete all finance-related business infrastructure deliverables included in the 2011 corporate scorecard; • Identify and implement process improvements to make company processes more efficient and manage administrative expenses to achieve G&A expense targets; and, • Improve engagement of finance division employees, with a specific focus on the division's leadership team.	Mr. Kari was a stabilizing leadership presence for employees in his division as well as his fellow Management Committee members during what was an especially challenging year at the company. He displays an openness for tackling difficult issues and consistently strives to improve support and partnership with the business units. Under his leadership during 2011, business results for the finance organization were above plan and included enhancements to the readability and quality of the company's financial disclosures, and completing all of the finance-related business infrastructure deliverables not dependent on projects cancelled or delayed as part of implementing the new technology governance model. He also implemented improvements to internal processes, and eliminated redundancies that reduced expenses. Accounting efficiency continues to improve and the close and reporting processes have been streamlined. He demonstrated leadership capabilities by fostering an environment that values teamwork and collaboration over individual accomplishment and by implementing initiatives designed to improve employee engagement. While certain controls over financial reporting were strengthened during the year as a result of the remediation of several significant deficiencies, the company identified one new material weakness as of December 31, 2011.
Mr. Renzi: Mr. Renzi was promoted to lead the single-family business, operations and technology functions in April 2011. Accordingly, individual performance objectives for his new role were not established for him prior to the beginning of the year. In addition to his ongoing responsibilities associated with the sourcing and servicing of our single-family loan portfolio and management of our information technology operations and infrastructure, his areas of focus during 2011 included: • Making organizational changes to enable us to become an industry-leading operation; • Transforming our information technology organization, including implementing a process to more effectively manage maintenance of and enhancements to our technology infrastructure; • Improving servicer performance management and loss mitigation activities; • Effectively utilizing foreclosure alternatives to minimize losses on delinquent mortgages; • Reducing REO vendor concentration risk; and • Establishing a clear operating business plan that guides the business over the course of the next one to three years.	Mr. Renzi assumed a broadened role beginning in April 2011, which included being responsible for the single-family business, operations and technology organization. He assumed this role just as the FHFA-directed Servicing Alignment Initiative began. His leadership skill, mortgage finance industry expertise and focus on execution enabled him to drive the implementation of the policy and process changes related to that FHFA initiative. He has established a positive and motivating leadership presence within his new organization that has facilitated significant progress in the company's production sourcing and loss mitigation efforts. Upon assuming his current role, Mr. Renzi also identified critical changes needed to better support our mission. This led to, among other things, a reorganization of our largest division that has resulted in the realignment of groups previously spread across multiple organizations to improve business execution, better meet the needs of our customers and establish a clear operating business plan to help guide our business through the next 12 to 36 months. Under Mr. Renzi's leadership, a new servicing scorecard was developed to monitor servicer performance and a new framework for managing servicer performance was developed and implemented, both of which were instrumental in developing the Servicing Alignment Initiative. He also led the development of a new technology governance model, under which information technology was centralized and a new structure was established to identify, prioritize and develop critical information technology solutions to meet evolving business needs. He worked to reduce vendor concentration risk by adding two new REO sales vendors to improve marketing efforts, enhance pricing precision, reduce inventory cycle times and, in turn, loss severity levels.
Mr. Weiss: • Develop a cohesive and efficient Chief Administrative Officer team that serves as a resource to both internal and external stakeholders on a variety of operational and policy issues; • Integrate the Models division and enhance model governance; • Oversee servicer compliance with the provisions of the Administration's Home Affordable Modification Program (HAMP); • Make human resources processes more efficient and reduce costs where appropriate; • Enhance talent development by launching a leadership development program for mid- and senior-level leaders; and • Serve as a key liaison to FHFA.	Mr. Weiss's knowledge of the company, leadership skills and ability to manage multiple business initiatives led to a further increase in the scope of his responsibilities in 2011. He added the financial modeling organization to the other functions he leads, which now include MHA-C; human resources; external relations; government and industry relations; and corporate strategy and mission. Under his leadership during 2011, the strategy, public policy, government relations and communications teams worked together effectively to provide expertise, information and data to management, the Board and other parties on a variety of policy and procedural issues. Under Mr. Weiss' leadership, model governance, development, documentation, performance monitoring and prioritization have become more robust. He also successfully led the team responsible for overseeing servicers' compliance with the requirements of HAMP, as a financial agent of the U.S. Treasury. With respect to human resources matters, the company achieved significant business results, including implementing major changes to our employee benefits programs that will significantly reduce the future cost of those programs while still providing market-competitive benefits to employees, accelerating the compensation planning process to create efficiencies, and establishing a leadership development program for all mid- and senior-level leaders. Throughout the year, Mr. Weiss successfully guided the company's relationship with FHFA during a very challenging period. He served as both a liaison on a variety of sensitive matters that pertain to our unique current operating environment and a reliable resource on GSE policy and future state issues.
Ms. Wisdom: • Strengthen the company's risk management capabilities; • Lead the rebuilding of the corporate model oversight process and related model governance capabilities; • Implement an enhanced new business initiative process; and, • Improve engagement of enterprise risk management division employees, with a specific focus on the division's leadership team.	During 2011, Ms. Wisdom successfully led the enterprise risk function during a period of great change and has taken steps to significantly strengthen the function. She provides strong leadership and has proven capable at driving change across the organization while establishing collaborative relationships with key stakeholders. During 2011, she strengthened our risk management governance by simplifying and streamlining oversight and decision-making. As part of this effort, she integrated the credit risk management function into the enterprise risk management organization, establishing a unified risk management function. As a result, alignment with business units across the company was substantially improved, and the company's credit risk oversight was strengthened. Ms. Wisdom also successfully led an effort to rebuild the corporate model process and related governance, a cross-divisional effort involving stakeholders throughout the company. She redesigned and implemented a new governance structure associated with the execution of corporate new business initiatives that engages executive management earlier in the process, provides consistent communication, delivers comprehensive enterprise-wide risk assessments, and provides increased transparency. From an employee engagement perspective, she has provided numerous leadership and skills development opportunities for all levels of staff in her division and has increased her visibility — and thus the visibility of the risk management function — both internally and externally.

Written Agreements Relating to Employment of CEO and CFO

We have entered into: (a) a Memorandum Agreement; and (b) a recapture agreement with each of Messrs. Haldeman and Kari in connection with their employment as our executive officers. Copies of the Memorandum Agreement and the recapture agreement regarding Messrs. Haldeman and Kari were filed as Exhibits 10.1 and 10.2, respectively, to our Current Reports on Form 8-K filed on July 21 and September 24, 2009 with respect to each executive's employment with us.

The compensation provisions of each executive's Memorandum Agreement, in combination with provisions of the Executive Compensation Program, are summarized separately below. Additional information about the components of executive compensation is discussed above in "— Elements of Compensation and Total Direct Compensation."

Mr. Haldeman's compensation, as provided in his Memorandum Agreement, is as follows:

- A Semi-Monthly Base Salary of $900,000 per year;
- Deferred Base Salary in the amount of $3.1 million for each of 2009 and 2010, payable as described above; and
- A Target Opportunity in the amount of $2.0 million for each of 2009 and 2010, payable as described above.

Mr. Kari's compensation, as provided in his Memorandum Agreement, is as follows:

- A Semi-Monthly Base Salary of no less than $675,000 per year;
- Deferred Base Salary of $1,658,333 for each of 2009 and 2010, payable as described above;
- A Target Opportunity of $1,166,667 for each of 2009 and 2010, payable as described above; and
- A cash sign-on award of $1,950,000 in recognition of the annual incentive opportunity and unvested equity that Mr. Kari forfeited by leaving his previous employer. This award was paid in installments during Mr. Kari's first year of employment with us.

Their Memorandum Agreements provide that Messrs. Haldeman and Kari will receive the following additional forms of compensation during their employment with us:

- The opportunity to participate in all employee benefit plans offered to our senior executive officers, including our SERP, pursuant to the terms of these plans. For a description of these plans see "Compensation Tables" below; and
- If we terminate the employment of Mr. Haldeman or Mr. Kari for any reason other than cause (as defined in the Memorandum Agreement), he will be eligible to receive termination benefits pursuant to the terms of any then-applicable severance plan or policy, subject to the approval of FHFA. Executive Compensation Program participants, including Messrs. Haldeman and Kari, are not currently entitled to a guaranteed level of severance benefits upon any type of termination event other than death or disability. For additional information on compensation and benefits payable in the event of a termination of employment, see "Potential Payments Upon Termination of Employment or Change-in-Control" below.

We have also entered into recapture and restrictive covenant agreements with each of the executives. The recapture requirements included in these agreements, and the similar recapture requirements applicable to all other Covered Officers under the Recapture Policy, are described below under "Recapture Policy." The non-competition and non-solicitation provisions included in the restrictive covenant agreement are described in "Potential Payments Upon Termination of Employment or Change-in-Control."

We have also entered into indemnification agreements with certain of our current directors and executive officers, each, an indemnitee, including Messrs. Haldeman and Kari. With respect to indemnification agreements entered into with executive officers in or after August 2011, the form of agreement has been revised to provide that indemnification rights under the agreement would terminate if and when the executive officer remained with Freddie Mac after ceasing to report directly to the CEO with respect to any claims arising from matters occurring after the officer was no longer a direct CEO report. Similar indemnification rights would continue to be available to such executive officers under the Bylaws going forward.

The indemnification agreements provide that we will indemnify the indemnitee to the fullest extent permitted by our Bylaws and Virginia law. This obligation includes, subject to certain terms and conditions, indemnification against all liabilities and expenses (including attorneys' fees) actually and reasonably incurred by the indemnitee in connection with any threatened or pending action, suit or proceeding, except such liabilities and expenses as are incurred because of the indemnitee's willful misconduct or knowing violation of criminal law. The indemnification agreements provide that if requested by the indemnitee, we will advance expenses, subject to repayment by the indemnitee of any funds advanced if it is ultimately determined that the indemnitee is not entitled to indemnification. The rights to indemnification under the indemnification agreements are not exclusive of any other right the indemnitee may have under any statute, agreement or otherwise. Our obligations under the indemnification agreements will continue after the indemnitee is no longer a director or officer of the company with respect to any possible claims based on the fact that the indemnitee was a director or officer, and the indemnification agreements will remain in effect in the event the conservatorship is terminated. The indemnification agreements also provide that indemnification for actions instituted by FHFA will be governed by the standards set forth in FHFA's Notice of Proposed Rulemaking published in the Federal Register on November 14, 2008,

proposing an amendment to FHFA's interim final golden parachute payments regulation to address prohibited and permissible indemnification payments. In January 2009, FHFA issued final regulations relating to golden parachute payments. Under those final regulations, FHFA may limit golden parachute payments, and the regulations set forth factors to be considered by the Director of FHFA in acting upon his authority to limit these payments. A proposed rule was published by FHFA in June 2009 that has not yet been adopted in final form. In general, this proposal would give FHFA the authority to prohibit indemnification payments in cases involving administrative proceedings before FHFA or civil actions initiated by FHFA.

Other Executive Compensation Considerations

Perquisites

We believe that perquisites should be a minimal part of the compensation package for our Named Executive Officers. We provide certain perquisites because we believe there is a business-related benefit, including that the perquisites assist in attracting and retaining executive talent. None of the perquisites offered provide for a gross-up to cover the taxes due on the perquisite itself. Accordingly, the only perquisite provided to the Named Executive Officers during 2011 was reimbursement for assistance with personal financial planning, tax planning, and/or estate planning, up to an annual maximum benefit that varies by position.

Although available, none of the Named Executive Officers received the following perquisites during 2011:

- *Physical Examination.* Reimbursement of up to $700 of expenses associated with a comprehensive annual physical exam that are not otherwise covered by the Named Executive Officer's medical insurance;
- *Relocation Benefits.* Under our relocation program, we provide assistance in finding and moving into a new home and selling an existing home, temporary lodging, reimbursement of certain travel expenses, and a one-time payment to cover miscellaneous expenses; and,
- *Spousal Travel Expenses.* Reimbursement of business-related spousal travel expenses.

Additionally, total annual perquisites for any Named Executive Officer cannot exceed $25,000 without FHFA approval.

Supplemental Executive Retirement Plan

Our Named Executive Officers are eligible to participate in our Supplemental Executive Retirement Plan, or SERP. The SERP is designed to provide participants with the full amount of benefits to which they would have been entitled under our Pension Plan and Thrift/401(k) Savings Plan if those plans: (a) were not subject to certain limits on compensation that can be taken into account under the Internal Revenue Code; and (b) did not exclude from "compensation" amounts deferred under our Executive Deferred Compensation Plan and the Mandatory Executive Deferred Base Salary Plan.

On June 27, 2011, the SERP was amended, with the approval of FHFA. Under this amendment, which became effective January 1, 2012, eligibility for the "Pension SERP Benefit" (as defined in the SERP) will be limited, and Executives (as defined in the SERP) whose employment with the company commences after December 31, 2011 (or who are rehired after that date) will not be eligible for the Pension SERP Benefit. However, non-Executives employed as of December 31, 2011 who are subsequently promoted to Executive positions will be eligible for the Pension SERP Benefit. The 2011 amendment also revises the "Thrift/401(k) SERP Benefit" (as defined in the SERP). A copy of this amendment, which provides additional information about the changes made to the Thrift/401(k) SERP Benefit, was filed as Exhibit 10.1 to our current report on Form 8-K filed on June 28, 2011.

We provide a SERP because it helps us to remain competitive with the companies with which we compete for talent and thereby assists in attracting and retaining executive talent. For additional information regarding this benefit see "Compensation Tables" below.

Recapture Policy

The Recapture Policy provides that certain compensation paid under the Executive Compensation Program will be subject to recapture if any of the following events occur subsequent to the date that the Named Executive Officer agreed to the terms of the Recapture Policy.

- *Payment Based on Materially Inaccurate Information* — If the Named Executive Officer obtains a bonus or incentive payment based on materially inaccurate financial statements or performance metrics.

- *Termination for Cause* — If the Named Executive Officer's employment is terminated for cause, as defined in the Recapture Policy.
- *Subsequent Determination of Cause* — If, within two years of the termination of the Named Executive Officer's employment, the Board makes a determination in good faith that circumstances existed at the time of the Named Executive Officer's termination that would have justified a termination for cause and that actions taken by the Named Executive Officer resulted in material business or reputational harm to us.

The additional event listed below is applicable only to Messrs. Haldeman and Kari.

- *Accounting Restatement Resulting from the Executive's Misconduct* — If misconduct by the CEO and/or the CFO necessitates the preparation of an accounting restatement due to material non-compliance with financial reporting requirements.

If any of these triggering events occur, the Board will determine whether more compensation was paid to the Named Executive Officer than would otherwise have been paid had we been aware of the triggering event or events at the time the compensation was paid or awarded. If a determination is made that we paid or awarded a Named Executive Officer more compensation than he or she otherwise would have received, the following elements of compensation will be subject to recapture: (a) Deferred Base Salary; (b) Target Opportunity; (c) any equity awards that vest after the adoption of the Executive Compensation Program; and (d) any termination benefits paid. Only compensation paid up to two years prior to the triggering event or the date of termination or compensation paid at the time of termination, as applicable, will be subject to recapture. Additionally, the occurrence of a triggering event may result in cancellation of any future payment obligations and/or any outstanding equity awards.

The amount of compensation recaptured will be determined by the Board, subject to the guidelines described above. Additional details are included in the Recapture Policy, which was filed as Exhibit 10.4 to our Current Report on Form 8-K filed on December 31, 2009. For the triggering event applicable only to Messrs. Haldeman and Kari, the compensation subject to recapture will be determined in accordance with Section 304 of the Sarbanes-Oxley Act.

Stock Ownership and Hedging Policies

In November 2008, FHFA approved the suspension of our stock ownership guidelines because we had ceased paying our executives stock-based compensation. Also, the Purchase Agreement prohibits us from issuing any shares of our equity securities without the prior written consent of Treasury. The suspension of stock ownership requirements is expected to continue through the conservatorship and until we resume granting stock-based compensation.

All employees, including our Named Executive Officers, are prohibited from purchasing and selling derivative securities related to our equity securities, including warrants, puts and calls, or from dealing in any derivative securities other than pursuant to our stock-based benefit plans. All directors and employees (including the Named Executive Officers) are prohibited from transacting in options (other than options granted by us) or other hedging instruments as specified in our Insider Trading Policy. In addition, all directors and employees (including our Named Executive Officers) are prohibited from holding our securities in a margin account or pledging our securities as collateral for a loan.

Section 162(m) Limits on the Tax Deductibility of Our Compensation Expenses

Section 162(m) of the Internal Revenue Code imposes a $1 million limit on the amount that a company may annually deduct for compensation to its CEO and certain other Named Executive Officers, unless, among other things, the compensation is "performance-based," as defined in section 162(m). Given the conservatorship and the desire to maintain flexibility to promote our corporate goals, the performance-based element of Deferred Base Salary and the Target Opportunity applicable to performance during 2011 are not structured to qualify as performance-based compensation under section 162(m).

Compensation Committee Interlocks and Insider Participation

None of the members of the Board of Directors who served on the Compensation Committee during fiscal year 2011 were our officers or employees or had any relationship with us that would be required to be disclosed by us under Item 407(e)(4) of Regulation S-K.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis with management and, based on such review and discussion, has recommended to the Board that the Compensation Discussion and Analysis be included in this Annual Report on Form 10-K.

This report is respectfully submitted by the members of the Compensation Committee of the Board.

Anthony A. Williams, Chairman
Linda B. Bammann
Christopher S. Lynch
Clayton S. Rose

Compensation and Risk

With respect to 2011, our management conducted an assessment of our compensation plans and programs that were in place during the year and that were applicable to employees at all levels, including the Executive Compensation Program in which our executives participate. The purpose of the assessment was to determine whether the design and operation of our compensation plans create incentives for employees to take inappropriate risks that are reasonably likely to have a material adverse effect on us. The assessment was conducted by members of our enterprise risk management and human resources teams, as well as by Aon Hewitt, management's compensation consultant.

The review included an evaluation of the mix of fixed and variable compensation; eligibility for participation in incentive programs, the process by which target compensation levels are established, the process for establishing performance objectives and for evaluating performance against those objectives, the methodology used to allocate the incentive funding among divisions, departments, and individual employees (including maximum individual payout levels); and the involvement of the Compensation Committee and FHFA in the compensation process. An evaluation was also made of the linkage between corporate and divisional performance objectives.

The assessment was discussed with the Compensation Committee in February 2012. Management's conclusion, with which the Compensation Committee concurred, is that our compensation policies and practices applicable during 2011 do not create risks that are reasonably likely to have a material adverse effect on us.

In March 2012, FHFA adopted a new Executive Compensation Program effective January 1, 2012. Management does not believe that this program will create inappropriate risk-taking incentives for employees. However, the Compensation Committee and management are concerned that this program may have an adverse effect on the company in future periods. Significant adverse changes in compensation levels could result in increased vacancies in positions that are important for our sound operation, since the incumbents in these positions possess significant business and leadership skills that are in demand elsewhere in the market at substantially higher levels of compensation. Resulting loss of talent and institutional knowledge would cause an appreciable increase in the operational risk of the company. See "EXECUTIVE COMPENSATION — Executive Summary" and "RISK FACTORS— ***The conservatorship and uncertainty concerning our future has had, and will likely continue to have, an adverse effect on the retention, recruitment, and engagement of management and other employees, which could have a material adverse effect on our ability to operate our business.***" We are finding it difficult to retain and engage critical employees and attract people with the skills and experience we need. Voluntary attrition rates for high performing employees, those with specialized skill sets, and those responsible for controls over financial reporting have risen markedly since we were placed into conservatorship. This has led to concerns about staffing inadequacies, management depth, and employee engagement. Attracting qualified senior executives is particularly difficult.

Compensation Tables

The following tables set forth compensation information for our Named Executive Officers: our Chief Executive Officer, our Chief Financial Officer, and our three other most highly compensated executive officers who were serving as executive officers as of December 31, 2011.

Table 85 — Summary Compensation Table — 2011

		Salary			Non-Equity Incentive Plan Compensation[4]				
	Year	Paid During Year[1]	Deferred[2]	Bonus[3]	Performance-Based Deferred Base Salary	Target Opportunity	Change in Pension Value and Nonqualified Deferred Compensation Earnings[5]	All Other Compensation[6]	Total
Charles E. Haldeman, Jr.	2011	$900,000	$1,550,000	$ —	$1,348,500	$ —	$239,255	$ 72,915	$4,110,670
Chief Executive Officer	2010	900,000	1,550,000	—	1,362,450	1,322,250	214,460	104,374	5,453,534
	2009	356,250	1,227,083	—	—	395,833	—	56,489	2,035,655
Ross J. Kari	2011	675,000	829,167	—	721,375	988,771	118,428	55,292	3,388,033
EVP — Chief Financial Officer	2010	675,000	829,167	1,462,500	728,838	676,133	69,742	391,276	4,832,656
	2009	151,010	370,999	487,500	—	130,502	—	69,290	1,209,301
Anthony N. Renzi EVP — Single-Family Business, Operations and Technology	2011	473,864	592,614	—	515,574	447,223	86,379	32,993	2,148,647
Jerry Weiss EVP — Chief Administrative Officer	2011	450,000	508,334	—	442,249	618,732	164,482	73,735	2,257,532
Paige H. Wisdom EVP — Chief Enterprise Risk Officer	2011	425,000	370,834	—	322,624	484,223	102,074	48,129	1,752,884

(1) The amounts shown represent Semi-Monthly Base Salary under the Executive Compensation Program as described in "Compensation Discussion and Analysis — Executive Management Compensation Program."

(2) The amounts shown represent the fixed portion of Deferred Base Salary earned under the terms of the Executive Compensation Program. The fixed portion of the 2011 Deferred Base Salary earned during each calendar quarter in 2011 will be paid in cash on the last business day of the corresponding quarter in 2012, provided the Named Executive Officer is employed by us on such payment date or in the event such officer dies, retires or has a long-term disability in 2012. The remaining portion of the 2011 Deferred Base Salary is reported in "Non-Equity Incentive Plan Compensation" because it is performance-based and the amount that is paid is variable.

Amounts shown as 2010 and 2009 Deferred Base Salary were earned during each calendar quarter in 2010 and 2009, respectively, and paid in cash on the last business day of the corresponding quarter in 2011 and 2010, respectively. The 2009 amount reported in this column for Mr. Haldeman has been revised to correct an error in the amount previously reported ($1,277,083).

(3) The amounts shown for Mr. Kari represent the portion of the cash sign-on bonus paid in 2010 and 2009, which he received in recognition of the forfeited annual incentive opportunity and unvested equity at his previous employer. See "Compensation Discussion and Analysis — Written Agreements Relating to Employment of CEO and CFO."

(4) The 2011 amounts reported reflect the portion of the 2011 and 2010 Target Opportunities that were earned for 2011 and paid on February 16, 2012 and the performance-based portion of the 2011 Deferred Base Salary earned during each calendar quarter in 2011, which is scheduled to be paid on the last business day of the corresponding quarter in 2012. See "Compensation Discussion and Analysis — Executive Management Compensation Program — Performance Measures for the Performance-Based Elements of Compensation."

As discussed further in "Compensation Discussion and Analysis — Determination of Actual Target Opportunity," Mr. Haldeman will not receive the TO installments applicable to his performance during 2011.

The 2010 amounts reported reflect the portion of the 2010 and 2009 Target Opportunities that were earned for 2010 and paid on February 18, 2011 and the performance-based portion of the 2010 Deferred Base Salary earned during each calendar quarter in 2010 and paid on the last business day of the corresponding quarter in 2011.

The 2009 amounts reported reflect the portion of the 2009 Target Opportunity that was earned for 2009 and paid on March 12, 2010.

(5) The amounts reported in this column reflect the actuarial increase in the present value of each Named Executive Officer's accrued benefits under our Pension Plan and the Pension SERP Benefit determined using the time periods and assumptions applied in our consolidated financial statements for the years ended December 31, 2009, 2010, and 2011, respectively.

With the exception of Mr. Weiss, the values reported include amounts that the Named Executive Officers are not currently entitled to receive because such amounts are not yet vested. The amounts reported do not include values associated with retiree medical benefits, which are generally available on the same terms to all employees. Deferred Base Salary under the Executive Compensation Program is not considered compensation eligible for deferral in accordance with the Executive Deferred Compensation Plan, or EDCP. The Executive Compensation Program does not provide for interest on Deferred Base Salary.

(6) Amounts reflect (i) matching contributions we made to our tax-qualified Thrift/401(k) Savings Plan; (ii) accruals we made pursuant to the Thrift/401(k) SERP Benefit; (iii) FlexDollars (described below); and (iv) perquisites and other personal benefits received. These amounts for 2011 are as follows:

	Thrift/401(k) Savings Plan Contributions	Thrift/401(k) SERP Benefit Accruals	Total Flex Dollars	Perquisites
Mr. Haldeman	$ 6,750	$47,250	$18,915	$—
Mr. Kari	6,750	33,750	14,792	—
Mr. Renzi	4,350	18,082	10,561	—
Mr. Weiss	13,500	40,500	19,735	—
Ms. Wisdom	9,562	28,688	9,879	—

Employer contributions to the Thrift/401(k) Savings Plan are available on the same terms to all of our employees. We match up to the first 6% of eligible compensation at 100% of the employee's contributions, with the percentage matched dependent upon the employee's length of service. Employee contributions and our matching contributions are invested in accordance with the employee's investment elections and are immediately

vested. In addition, on a discretionary basis, we may make an additional contribution to our Thrift/401(k) Savings Plan, referred to as the "Basic Contribution," that is allocated on behalf of each eligible employee, based on a stated percentage of each employee's eligible compensation. When we make a Basic Contribution, it occurs after the end of the calendar year to which it relates. The formula for the contribution is 2% of pay up to the Social Security wage base, which was $106,800 for 2011, and 4% of pay above the Social Security wage base. Basic Contributions were approved and posted to employees' accounts in 2009 and 2010, but not in 2011. Basic Contributions received on or after January 1, 2008 are subject to a graded vesting schedule such that employees with less than five years of service are not fully vested in the Basic Contribution on the contribution date, but become vested at the rate of 20% per year over their first five years of service.

For additional information regarding the Thrift/401(k) SERP Benefit, see "Non-qualified Deferred Compensation" below. Amounts for the Thrift/401(k) Savings Plan contributions and Thrift/401(k) SERP Benefit accruals are presented without regard to vesting status. To be eligible for the portion of the Thrift/401(k) SERP Benefit attributable to matching contributions, the Named Executive Officer must contribute the maximum amount permitted under the terms of the Thrift/401(k) Savings Plan on a pre-tax basis throughout the entire period of the year in which the Named Executive Officer is eligible to make such contributions.

FlexDollars are provided under our Flexible Benefits Plan and are generally available on the same basis to all employees to offset costs related to medical, dental and vision coverage, group term life insurance, accidental death and personal loss insurance, and vacation purchase. FlexDollars can be used to offset the cost of other benefits and any unused FlexDollars are payable as taxable income.

Perquisites are valued at their aggregate incremental cost to us. During the years reported, the aggregate value of perquisites received by all Named Executive Officers other than Messrs. Haldeman and Kari was less than $10,000. In accordance with SEC rules, amounts shown under "All Other Compensation" do not include perquisites or personal benefits for a Named Executive Officer that, in the aggregate, amount to less than $10,000.

The amount shown in the "All Other Compensation" column for 2010 for Mr. Haldeman consists entirely of relocation expenses paid as part of the relocation benefit we agreed to provide when we hired him. The amount shown in the "All Other Compensation" column for 2010 for Mr. Kari consists of (a) relocation expenses of $369,484 paid as part of the relocation benefit we agreed to provide when we hired him; and (b) financial planning services. As part of our standard executive relocation program, we purchased Mr. Kari's former home at a price equal to the average of two independent appraisals, while the price at which the home ultimately sold was significantly lower because of a decline in the home's value between our purchase and the sale. SEC rules require that we include this difference as fiscal year 2010 compensation.

We calculated the incremental cost to us of providing each of Mr. Haldeman's and Mr. Kari's relocation expenses based on actual cost; that is, the total amount of expenses incurred by us in providing the benefit.

Grants of Plan-Based Awards — 2011

The following table contains information concerning grants of plan-based awards to each of the Named Executive Officers during 2011. We are prohibited from issuing equity securities without Treasury's consent under the terms of the Purchase Agreement. Accordingly, no stock awards were granted during 2011. For a description of the performance and other measures used to determine payouts, see "Compensation Discussion & Analysis — Executive Management Compensation Program — Elements of Compensation and Total Direct Compensation — Deferred Base Salary," "Target Opportunity," "Performance Measures for the Performance-Based Elements of Compensation," "Determination of the Performance-Based Portion of 2011 Deferred Base Salary," and "Determination of Actual Target Opportunity."

Table 86 — Grants of Plan-Based Awards — 2011

		Estimated Future Payouts Under Non-Equity Incentive Plan Awards[1]		
Name	**Award**	**Threshold**	**Target**	**Maximum**
Mr. Haldeman	Target Opportunity[2]	$—	$2,000,000	$3,000,000
	Performance-Based Deferred Base Salary	—	1,550,000	1,937,500
	Total	—	3,550,000	4,937,500
Mr. Kari	Target Opportunity	—	1,166,667	1,750,000
	Performance-Based Deferred Base Salary	—	829,166	1,036,458
	Total	—	1,995,833	2,786,458
Mr. Renzi	Target Opportunity	—	829,545	1,244,318
	Performance-Based Deferred Base Salary	—	592,613	740,766
	Total	—	1,422,158	1,985,084
Mr. Weiss	Target Opportunity	—	733,333	1,100,000
	Performance-Based Deferred Base Salary	—	508,333	635,416
	Total	—	1,241,666	1,735,416
Ms. Wisdom	Target Opportunity	—	583,333	875,000
	Performance-Based Deferred Base Salary	—	370,833	463,541
	Total	—	954,166	1,338,541

(1) The amounts reported reflect the Target Opportunity and the performance-based portion of the Deferred Base Salary granted in 2011. The Target Opportunity actually earned can range from 0% of target (reported in the Threshold column) up to a maximum of 150% of target (reported in the Maximum column). The performance-based portion of the Deferred Base Salary actually earned can range from 0% of target (reported in the Threshold column) up to a maximum of 125% of target (reported in the Maximum column). However, while the Executive Compensation Program allows for an approved funding level greater than 100%, it is the current intention of the Compensation Committee not to approve a funding level in excess of 100% while the company is in conservatorship. Actual amounts earned are reported in the "Non-Equity Incentive Plan Compensation" column of "Table 85 — Summary Compensation Table — 2011".

The 2011 Target Opportunity is scheduled to be paid in two installments, the first of which occurred on February 16, 2012, and the second of which is scheduled to occur no later than March 15, 2013. The performance-based portion of the 2011 Deferred Base Salary is payable in equal quarterly installments on the last business day of each quarter in 2012.

(2) As discussed further in "Compensation Discussion and Analysis — Determination of Actual Target Opportunity," Mr. Haldeman will not receive the TO installments applicable to his performance during 2011.

Outstanding Equity Awards at Fiscal Year-End — 2011

The following table shows outstanding equity awards held by the Named Executive Officers as of December 31, 2011.

Table 87 — Outstanding Equity Awards at Fiscal Year-End — 2011

			Option Awards[3]				Stock Awards[3]	
Name	Award Type[1]	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($)[2]	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)[4]
Mr. Haldeman	—		—	—	$ —	—	—	$ —
Mr. Kari	—		—	—	—	—	—	—
Mr. Renzi	—		—	—	—	—	—	—
Mr. Weiss	SO	08/09/04	4,970	—	64.36	8/8/2014	—	—
	SO	05/06/05	5,640	—	62.69	5/5/2015	—	—
	SO	06/05/06	5,980	—	60.45	06/04/16	—	—
	RSU	03/07/08	—	—	—	—	5,726	1,214
Ms. Wisdom	RSU	03/07/08	—	—	—	—	8,270	1,753

(1) The rows labeled "SO" indicate stock options and the rows labeled "RSU" indicate restricted stock units.
(2) Consistent with the terms of our 2004 Employee Plan, the option exercise price was set at a price equal to the fair market value of our common stock on the grant date.
(3) Amounts reported in this table for RSUs represent the unvested portion of awards, while amounts reported in this table for options represent the unexercised portion of awards. The vesting schedules for the option and stock awards reported in this table are as follows:
- Stock options granted on August 9, 2004 vested at a rate of 25% beginning on the first anniversary of the grant date, and 25% on April 1, 2006, April 1, 2007, and April 1, 2008.
- Stock options granted on May 6, 2005 and June 5, 2006 vested at a rate of 25% annually beginning on the anniversary of the grant dates.
- RSUs granted on March 7, 2008 vest at a rate of 25% annually beginning on the anniversary of the grant date.

(4) Market value is calculated by multiplying the number of RSUs held by each Named Executive Officer on December 31, 2011 by the closing price of our common stock on December 30, 2011 ($0.212), the last trading day of the year.

For information on alternative settlement provisions of RSU and stock option grants in the event of certain terminations, see "Table 91 — Potential Payments Upon Termination of Employment or Change-in-Control as of December 31, 2011" below.

Option Exercises and Stock Vested — 2011

The following table sets forth information concerning value realized upon the vesting of RSUs during 2011 by each of the Named Executive Officers. No Named Executive Officer exercised options in 2011.

Table 88 — Option Exercises and Stock Vested — 2011

	Stock Awards	
Name	Number of shares Acquired on Vesting (#)[1]	Value Realized on Vesting ($)[2]
Mr. Haldeman	—	$ —
Mr. Kari	—	—
Mr. Renzi	—	—
Mr. Weiss	9,114	4,212
Ms. Wisdom	9,949	5,002

(1) Amounts reported reflect the number of RSUs that vested during 2011 prior to our withholding of shares to satisfy applicable taxes.
(2) Amounts reported are calculated by multiplying the number of RSUs that vested during 2011 by the fair market value of our common stock on the date of vesting.

Pension Benefits — 2011

The following table shows the actuarial present value of the accumulated retirement benefits payable to each of the Named Executive Officers under our Pension Plan and the Pension SERP Benefit (the component of the SERP that relates

to the Pension Plan), computed as of December 31, 2011. A summary of the material terms of each plan follows the table, including information on early retirement.

Table 89 — Pension Benefits — 2011

Name	Plan Name	Number of Years Credited Service(#)(1)	Present value of Accumulated Benefit ($)(2)	Payments During Last Fiscal Year ($)
Mr. Haldeman	Pension Plan	2.3	$ 66,196	$—
	Pension SERP Benefit	2.3	387,519	—
Mr. Kari	Pension Plan	2.2	39,779	—
	Pension SERP Benefit	2.2	148,391	—
Mr. Renzi	Pension Plan	2	33,661	—
	Pension SERP Benefit	2	52,718	—
Mr. Weiss	Pension Plan	8.2	184,141	—
	Pension SERP Benefit	8.2	386,583	—
Ms. Wisdom	Pension Plan	4	74,916	—
	Pension SERP Benefit	4	136,130	—

(1) Amounts reported represent the credited years of service for each Named Executive Officer as of December 31, 2011, under the Pension Plan and the Pension SERP Benefit, respectively.

(2) Amounts reported reflect the present value, expressed as a lump sum as of December 31, 2011, of each Named Executive Officer's benefits under the Pension Plan and the Pension SERP Benefit, respectively. Amounts reported are calculated assuming payment at the earliest unreduced retirement date, as specified in the Plans. For benefits earned through December 31, 2010, the Pension Plan provides an unreduced early retirement benefit at the earlier of: (a) age 62 and 15 years of service; and (b) age 65. The Pension SERP Benefit does not provide an early retirement benefit, therefore age 65 is the assumed commencement date. For Messrs. Haldeman, Kari and Renzi and Ms. Wisdom, the amounts shown include amounts, if any, in which the Named Executive Officers are not yet vested. Pension Plan and Pension SERP Benefits do not vest until the participant attains five years of vesting service, at which time the participant vests fully.

Pension Plan

The Pension Plan is a tax-qualified, defined benefit pension plan that we maintain, covering substantially all employees who have attained age 21 and completed one year of service with us. Amendments were made to the Pension Plan, effective January 1, 2012, that limit participation in the Pension Plan to those individuals who were hired (or rehired) prior to January 1, 2012. Each of the current Named Executive Officers is eligible to participate in the Pension Plan. Pension Plan benefits are based on an employee's years of service and compensation, up to limits imposed by law. Specifically, the normal retirement benefit under the Pension Plan for service after December 31, 1988 is a monthly payment commencing at age 65 calculated as follows:

- 1% of the participant's highest average monthly compensation for the 36-consecutive month period during which the participant's compensation was the highest;
- multiplied by the participant's full and partial years of credited service under the Pension Plan.

For purposes of the Pension Plan, compensation includes the non-deferred base salary paid to each employee (which includes Semi-Monthly Base Salary under our Executive Compensation Program), as well as overtime pay, shift differentials, non-deferred bonuses paid under our corporate-wide annual bonus program or pursuant to a functional incentive plan (excluding the value of any stock options or cash equivalents), commissions and salary reductions under the Thrift/401(k) Savings Plan and the Flexible Benefits Plan, and qualified transportation benefits under Internal Revenue Code Section 132(f)(4). Compensation does not include, among other things, supplemental compensation plans providing temporary pay, deferrals under the Executive Compensation Program, or amounts paid after termination of employment other than amounts included in a final paycheck.

Notwithstanding the lump sum nature of the disclosure in the preceding table, for 2011 lump sum payments were not permitted under the Pension Plan if the present value of the accrued benefit would equal or exceed $25,000. The normal form of benefit under the Pension Plan is an annuity providing monthly payments for the life of the participant (and a survivor annuity for the participant's spouse if applicable). Optional forms of benefit payment are available. A benefit with an actuarial present value equal to or less than $5,000 may only be paid as a lump sum.

Throughout 2011, participants under the Pension Plan who terminate employment before age 55 with at least five years of service are considered "terminated vested" participants. Such participants may commence their benefit under the Pension Plan as early as age 55. The benefit is equal to the vested portion of the participant's accrued benefit, reduced by 1/180th for each of the first 60 months, and by 1/360th for each of the next 60 months, by which the commencement of such benefits precedes age 65.

An early retirement benefit is available to a participant who terminates employment on or after age 55 with at least five years of service. For service before January 1, 2011, this early retirement benefit is reduced by 3% for each year (prorated monthly for partial years) by which the commencement of such benefits precedes the earlier of: (a) the

participant's attainment of age 65; or (b) the participant's attainment of age 62 or later with at least 15 years of service. For service after December 31, 2010, the reduction is 5% for each year (prorated monthly for partial years) by which the commencement of benefits precedes the participant's attainment of age 65. For participants with service prior to January 1, 2011 and after December 31, 2010, the reductions are separately calculated, and the early retirement benefit is the sum of the two calculations. Death benefits are available provided the participant completed at least five years of service prior to death.

Supplemental Executive Retirement Plan — Pension SERP Benefit

The Pension SERP Benefit component of the SERP is designed to provide participants with the full amount of benefits to which they would have been entitled under the Pension Plan if that plan: (a) was not subject to certain limits on compensation that can be taken into account under the Internal Revenue Code; and (b) did not exclude from "compensation" Deferred Base Salary and amounts deferred under our EDCP. For example, the Pension Plan is only permitted under the Internal Revenue Code to consider the first $245,000 of an employee's compensation during 2011 for the purpose of determining the participant's compensation-based normal retirement benefit. Effective January 1, 2010, the SERP was amended to provide that the maximum covered compensation for purposes of the SERP, relative to a Covered Officer, may not exceed two times the Covered Officer's Semi-Monthly Base Salary. We believe the Pension SERP Benefit is an appropriate benefit because offering such a benefit helps us remain competitive with companies in the Comparator Group.

The Pension SERP Benefit is calculated as the participant's accrued annual benefit payable at age 65 (or current age, if greater) under the Pension Plan without application of the limits described in the preceding paragraph, less the participant's actual accrued benefit under the Pension Plan. The Pension SERP Benefit is vested for each participant to the same extent that the participant is vested in the corresponding benefit under the Pension Plan.

To be eligible for the Pension SERP Benefit for any year, the Named Executive Officer must be eligible to participate in the Pension Plan. Each of the Named Executive Officers is eligible to participate in the Pension Plan. Eligibility for the Pension SERP Benefit and the Pension Plan has been eliminated for employees (including executive officers) hired or rehired after January 1, 2012. See "Other Executive Compensation Considerations — Supplemental Executive Retirement Plan" above.

Pension SERP Benefits that vest on or after January 1, 2005 are generally distributed in a lump sum after separation from service and are payable 90 days after the end of the calendar year in which separation occurs. Subject to plan limitations and restrictions under Internal Revenue Code Section 409A, employees may elect that this portion of the Pension SERP Benefit be paid upon separation in the form of a single life annuity at age 65 or in reasonably equal annual installments over five, 10 or 15 years (including interest). Under IRS rules, distributions to so-called "key employees" (as defined by the IRS in regulations concerning Internal Revenue Code Section 409A) on account of separation from service may not commence earlier than six months from the key employee's separation from service. Payments under the SERP will be delayed if necessary to meet this requirement. In the case of death, the Pension SERP Benefit is distributed as a lump sum within 90 days of such event.

Pension SERP Benefits that vested prior to January 1, 2005 are generally distributed after separation from service (other than retirement) in the form of a single life annuity commencing at age 65. In the case of retirement, the vested pre-2005 Pension SERP Benefit is combined with the vested pre-2005 Thrift/401(k) SERP Benefit and is paid out in the form of a single life annuity payable at age 65 (or in a series of reasonably equal installments over 15 years commencing with retirement if actuarial estimates indicate that payment form would yield a longer period of payment). In the case of death, the vested pre-2005 Pension SERP Benefit is paid in the form of a lump sum within 90 days of such event.

Non-qualified Deferred Compensation

Executive Deferred Compensation Plan

The EDCP is a non-qualified plan and is unfunded (benefits are paid from our general assets). The EDCP has, in the past, allowed the Named Executive Officers to defer receipt of a portion of their annual base pay and cash bonus (and to defer settlement of RSUs granted between 2002 and 2007). In both December 2010 and December 2011, we advised participants in the EDCP that we are suspending deferrals of pay under the EDCP during calendar year 2011 and 2012. We will review future deferral options during the fourth quarter of 2012. None of the Named Executive Officers has a balance under the EDCP.

Supplemental Executive Retirement Plan — Thrift/401(k) SERP Benefit

The Thrift/401(k) SERP Benefit component of the SERP is an unfunded, nonqualified defined contribution plan designed to provide participants with the full amount of benefits that they would have been entitled to under the Thrift/401(k) Savings Plan if that plan: (a) was not subject to certain limits on compensation that can be taken into account under the Internal Revenue Code; and (b) did not exclude from compensation Deferred Base Salary and amounts deferred under our EDCP. For example, in 2011 under the Internal Revenue Code, only the first $245,000 of an employee's compensation is considered when determining our percentage-based matching contribution and the basic contribution for any participant in the Thrift/401(k) Savings Plan. Effective January 1, 2010, the SERP was amended to provide that the maximum covered compensation for purposes of the SERP, relative to a Covered Officer, may not exceed two times the Covered Officer's Semi-Monthly Base Salary. We believe the Thrift/401(k) SERP Benefit is an appropriate benefit because offering such a benefit helps us remain competitive with companies in the Comparator Group.

The Thrift/401(k) SERP Benefit equals the amount of the employer matching contributions and basic contribution for each Named Executive Officer that would have been made to the Thrift/401(k) Savings Plan during the year, based upon the participant's eligible compensation, without application of the above limits, less the amount of the matching contributions and basic contribution actually made to the Thrift/401(k) Savings Plan during the year. Participants are credited with earnings or losses in their Thrift/401(k) SERP Benefit accounts based upon each participant's individual direction of the investment of such notional amounts among the virtual investment funds available under the SERP. Such investment options are based upon and mirror the performance of the investment options available under the Thrift/401(k) Savings Plan. As of December 31, 2011, there were 21 investment options in which participants' notional amounts could be deemed invested.

To be eligible for the Thrift/401(k) SERP Benefit, the Named Executive Officer must be eligible for matching contributions and basic contributions under the Thrift/401(k) Savings Plan for part of the year. In addition, to be eligible for the portion of the Thrift/401(k) SERP Benefit attributable to employer matching contributions, the Named Executive Officer must contribute the maximum amount permitted under the terms of the Thrift/401(k) Savings Plan on a pre-tax basis throughout the entire portion of the year in which the Named Executive Officer is eligible to make such contributions. The portion of the Thrift/401(k) SERP Benefit that is attributable to employer matching contributions is vested when accrued, while the accrual relating to the basic contribution paid prior to 2008 is subject to five-year cliff vesting, the accrual relating to the basic contribution attributable to calendar years 2008-2011 is subject to five-year graded vesting of 20% per year, and the accrual relating to the new employer discretionary contribution (which will replace the basic contribution for 2012) will be subject to three-year cliff vesting. The Thrift/401(k) SERP Benefits that vest on or after January 1, 2005 are generally distributed in a lump sum payable 90 days after the end of the calendar year in which separation from service occurs. A six-month delay in commencement of distributions on account of separation from service applies to key employees, in accordance with Internal Revenue Code Section 409A. If the Named Executive Officer dies, the vested Thrift/401(k) SERP Benefit is paid in the form of a lump sum within 90 days of death.

Thrift/401(k) SERP Benefits that vested prior to January 1, 2005 are generally distributed after separation from service (other than retirement) in the form of three reasonably equal annual installments, starting in the first quarter of the calendar year following the year in which the separation from service occurs. In the case of retirement, the vested pre-2005 Thrift/401(k) SERP Benefit is combined with the vested pre-2005 Pension SERP Benefit and is payable in the form of a single life annuity at age 65 (or in a series of reasonably equal installments over 15 years commencing with retirement if actuarial estimates indicate that this payment form would yield a longer period of payment). In the case of death, the vested pre-2005 Thrift/401(k) SERP Benefit is paid in the form of a lump sum within 90 days of such event.

The following table shows the contributions, earnings, withdrawals and distributions, and accumulated balances under the Thrift/401(k) SERP Benefit for each Named Executive Officer. As of December 31, 2011, none of the Named Executive Officers was a participant in the EDCP.

Table 90 — Non-Qualified Deferred Compensation

Name	Executive Contribution in Last FY ($)[1]	Freddie Mac Accruals in Last FY ($)[2]	Aggregate Earnings in Last FY ($)[3]	Aggregate Withdrawals/ Distributions ($)	Aggregate Balance at Last FYE ($)[4]
Mr. Haldeman					
Thrift/401(k) SERP Benefit	$—	$47,250	$ 38	$—	$ 69,793
Mr. Kari					
Thrift/401(k) SERP Benefit	—	33,750	4	—	33,754
Mr. Renzi					
Thrift/401(k) SERP Benefit	—	18,082	2	—	18,084
Mr. Weiss					
Thrift/401(k) SERP Benefit	—	40,500	(13,175)	—	344,818
Ms. Wisdom					
Thrift/401(k) SERP Benefit	—	28,688	64	—	74,717

(1) The SERP does not allow for employee contributions.
(2) Amounts reported reflect our accruals under the Thrift/401(k) SERP Benefit during 2011. These amounts are also reported in the "All Other Compensation" column in "Table 85 — Summary Compensation Table — 2011".
(3) Amounts reported represent the total interest and other earnings credited to each Named Executive Officer under the Thrift/401(k) SERP Benefit.
(4) Amounts reported reflect the accumulated balances under the Thrift/401(k) SERP Benefit for each Named Executive Officer. Under the Thrift/401(k) SERP Benefit, matching contribution accruals vest immediately, whereas the basic contribution accruals relating to the basic contribution paid prior to 2008 are subject to cliff vesting of 100% at the end of five years and the accruals relating to the basic contribution paid in 2008 and later years are subject to five-year graded vesting of 20% per year. Messrs. Haldeman, Kari, and Renzi, and Ms. Wisdom have not met the five-year vesting requirement for the basic contribution. Mr. Weiss is fully vested in his account. The difference in the aggregate balance above and the vested balance is equal to the non-vested basic contribution plus earnings. The vested and non-vested components under the Thrift/401(k) SERP Benefit for each Named Executive Officer are as follows: (i) Mr. Haldeman: vested balance: $69,793; non-vested balance: $0; (ii) Mr. Kari: vested balance: $33,754; non-vested balance: $0; (iii) Mr. Renzi: vested balance: $18,084; non-vested balance: $0; (iv) Mr. Weiss: vested balance: $344,818; non-vested balance: $0; (v) Ms. Wisdom: vested balance: $71,469; non-vested balance: $3,248. Messrs. Haldeman, Kari and Renzi do not have an unvested balance since no basic contributions have been made since they joined the company. For a more detailed discussion of the matching contribution accruals and basic contribution accruals, see "Supplemental Executive Retirement Plan — Thrift/401(k) SERP Benefit" above.

The following 2010 Thrift/401(k) SERP Benefit accrual amounts were reported in the column "All Other Compensation" in the 2010 Summary Compensation Table as compensation for each Named Executive Officer for whom such accruals were made and reported during 2010 as follows: (a) Mr. Haldeman: $22,500; and (b) Mr. Kari: $0. See our Form 10-K filed on February 24, 2011. Messrs. Haldeman and Kari both had accruals of $0 during 2009 because, based on their hire dates, they were not eligible for Thrift/401(k) SERP Benefit accruals. See Amendment No. 2 to our Form 10-K filed on April 12, 2010. In addition, Messrs. Renzi and Weiss and Ms. Wisdom had Thrift/401(k) SERP Benefit accrual amounts of $0, $57,300 and $33,529 respectively for 2010, although this was not reported in the Summary Compensation Table because they were not Named Executive Officers for 2010.

Potential Payments Upon Termination of Employment or Change-in-Control

We have entered into certain agreements and maintain certain plans that call for us to pay compensation to our Named Executive Officers in the event of a termination of employment with us. The compensation and benefits potentially payable to each Named Executive Officer if the officer had terminated his employment under various circumstances as of December 31, 2011 are described in the discussion and reported in the table below. For more information, see "Employment and Separation Agreements" below. FHFA reviewed the terms of the employment agreements for Messrs. Haldeman and Kari and approved the termination benefits set forth therein. The actual payment of any level of termination benefits is subject to FHFA review and approval.

We are not obligated to provide any additional compensation to our Named Executive Officers in connection with a change in control.

Each of our Named Executive Officers is subject to a restrictive covenant agreement with us. Each agreement provides that the Named Executive Officer will not seek employment with designated competitors for a specified period immediately following termination of employment, regardless of whether the executive's employment is terminated by the executive, by us, or by mutual agreement. The specified period is 24 months for Messrs. Haldeman and Kari and 12 months for Messrs. Renzi and Weiss and Ms. Wisdom. During the 12-month period immediately following termination, each executive also agrees not to: (a) solicit or recruit any of our managerial employees; (b) compete against us in any of our business activities; or (c) make disparaging remarks about us. The agreement also provides for confidentiality of information that constitutes trade secrets or proprietary or other confidential information.

As of December 31, 2011, Mr. Weiss had vested in his benefits under the Thrift/401(k) SERP Benefit and the Pension SERP Benefit, while Messrs. Haldeman, Kari and Renzi and Ms. Wisdom had not. The amounts presented in the table below do not include vested balances in the Thrift/401(k) SERP Benefit or vested benefits in the Pension SERP Benefit, because such vesting was not in connection with a termination or change-in-control. Amounts shown in the tables also do not include certain items available to all employees generally upon a termination event.

For RSUs, the value shown in the table is calculated on a grant-by-grant basis by multiplying the number of unvested RSUs by the closing price of our common stock on December 30, 2011. No value is included in the tables for stock options because the exercise prices for all such options held by Named Executive Officers are substantially higher than the closing price of our common stock on December 30, 2011.

Potential Payments to Current Named Executive Officers

The Executive Compensation Program addresses the treatment of Semi-Monthly Base Salary, Deferred Base Salary, and the Target Opportunity upon various termination events. In order to be eligible to receive any portion of a Target Opportunity installment payment, a Covered Officer must have been employed for a minimum of four whole calendar months during the performance year to which the award applies.

Additionally, none of the Covered Officers are guaranteed termination benefits upon any type of termination event other than death or disability and the actual payment of any level of termination benefits is subject to FHFA review and approval at the time of payment. The discussion that follows describes the termination benefits, if any, provided upon various types of termination events.

- ***Death.*** Any earned but unpaid Deferred Base Salary or Target Opportunity installments will be paid as soon as administratively possible in the event of death. If, at the time of death, the funding level has not been determined, the award will remain outstanding until such determination is made. Payment will occur as soon as administratively possible following the determination of the funding level.
- ***Disability.*** Treatment upon a Long-Term Disability (as defined in the Executive Compensation Program) is the same as upon death, except that payment of any Deferred Base Salary will occur in accordance with the approved payment schedule and not as soon as administratively possible following termination of employment.
- ***Retirement.*** Treatment upon an eligible Retirement (as defined in the Executive Compensation Program) is the same as upon Long-Term Disability, except that only a pro-rata portion of a Target Opportunity installment payment will occur based on the number of whole months worked in the performance year during which the officer retires. No information is provided in the table below with respect to a termination of employment on account of a retirement because none of the Named Executive Officers was retirement-eligible under the Executive Compensation Program as of December 31, 2011.
- ***Voluntary or For Cause.*** The Named Executive Officers are not entitled to any termination benefits in the event of a voluntary termination or a termination for cause and all earned but unpaid Deferred Base Salary and the unpaid portion of any outstanding Target Opportunity awards are forfeited.
- ***Involuntary Termination Without Cause.*** The Named Executive Officers are not entitled to any termination benefits in the event of an involuntary termination without cause unless the Compensation Committee recommends that the Named Executive Officer receive termination benefits and the Committee's recommendation is approved by FHFA after consulting with Treasury, as appropriate. In determining whether to recommend payment of termination benefits and the amount of such benefits, the Compensation Committee will take into account one or more factors that it determines are relevant, including:
  - The facts and circumstances associated with the termination;
  - The performance and contributions of the Named Executive Officer during his or her tenure with us;
  - The amount of earned but unpaid Deferred Base Salary as of the date of termination; and
  - Our need to provide reasonable and competitive termination benefits in order to attract and retain high caliber executives during conservatorship.

Under interim guidance from FHFA, the amount of any termination benefits recommended by the Compensation Committee in the event of an involuntary termination without cause may not exceed $1 million and must also be limited to the greater of:

- 100% of the Named Executive Officer's earned but unpaid Deferred Base Salary as of the date of termination; or,
- 2/3rds of the Named Executive Officer's earned but unpaid Deferred Base Salary as of the date of termination plus a supplemental amount not to exceed 2/3rds of the Named Executive Officer's Semi-Monthly Base Salary.

The following table describes the potential payments as of December 31, 2011 upon termination of the Named Executive Officers employed as of that date that results from death or disability. There are no payments or benefits

payable upon termination of employment for other reasons or upon a change-in-control. Additionally, Semi-Monthly Base Salary is only payable through the date of death or a termination resulting from disability. The amounts presented in this table do not include vested balances in the Thrift/401(k) SERP Benefit, or vested benefits in the Pension SERP Benefit as of December 31, 2011, because such vesting was not in connection with a termination or change- in-control. Amounts shown in the table also do not include certain items available to all employees generally upon a termination event. Additional information is provided in the footnotes following the table.

Table 91 — Potential Payments Upon Termination of Employment or Change-in-Control as of December 31, 2011

	Death	Disability
Charles E. Haldeman, Jr.		
Compensation:		
Deferred Base Salary[1]	$2,898,500	$2,898,500
Target Opportunity[2]	—	—
Benefits:		
Non-Qualified Pension[3]	—	387,519
Total	$2,898,500	$3,286,019
Ross J. Kari		
Compensation:		
Deferred Base Salary[1]	$1,550,542	$1,550,542
Target Opportunity[2]	988,771	988,771
Benefits:		
Non-Qualified Pension[3]	—	148,391
Total	$2,539,313	$2,687,704
Anthony N. Renzi		
Compensation:		
Deferred Base Salary[1]	$1,108,188	$1,108,188
Target Opportunity[2]	447,223	447,223
Benefits:		
Non-Qualified Pension[3]	—	52,718
Total	$1,555,411	$1,608,129
Jerry Weiss		
Compensation:		
Deferred Base Salary[1]	$ 950,584	$ 950,584
Target Opportunity[2]	618,732	618,732
Equity Awards[4]	1,214	1,214
Total	$1,570,530	$1,570,530
Paige H. Wisdom		
Compensation:		
Deferred Base Salary[1]	$ 693,459	$ 693,459
Target Opportunity[2]	484,223	484,223
Equity Awards(4)	1,753	1,753
Benefits:		
Non-Qualified Pension[3]	—	136,130
Non-Qualified Deferred Compensation[3]	—	3,248
Total	$1,179,435	$1,318,813

(1) The amount reported as Deferred Base Salary is equal to any earned but unpaid Deferred Base Salary, adjusted to reflect the approved funding level.
(2) The amounts reported under Target Opportunity are equal to the first installment associated with the 2011 Target Opportunity and the second installment associated with the 2010 Target Opportunity. Both amounts have been adjusted to reflect the approved funding levels and the individual differentiation based on division and/or individual performance.
(3) The amounts reported under Non-Qualified Pension and Non-Qualified Deferred Compensation reflect the non-vested Pension SERP Benefit and the non-vested Thrift/401(k) SERP Benefit, respectively, as of December 31, 2011. Under the terms of the SERP, a participant continues to accrue service while disabled (as defined in the SERP).
(4) The amount reported under Equity Awards reflects the immediate vesting of the Named Executive Officer's outstanding RSU grants in the event of death or disability. Death also results in the immediate settlement of the outstanding RSUs, while a Disability event results in continued vesting of all grants in accordance with the vesting schedule outlined in the award agreement as if termination had not occurred. The values shown were calculated by multiplying the number of RSUs that will continue to vest by the closing price or our common stock on December 30, 2011 ($0.212), the last trading day of the year.

Alternative Settlement Provisions for Equity Awards in the Event of Certain Terminations

RSUs

The RSUs awarded to our employees, including our Named Executive Officers, contain alternative settlement provisions in the event of certain terminations, as follows:

- ***Death.*** Immediate vesting and settlement occurs in the event of death.

- ***Disability and Retirement.*** In the event of disability, normal retirement, or a retirement other than a normal retirement (all as defined in the 2004 Employee Plan), RSUs will vest immediately and will be settled in accordance with the vesting schedule outlined in the award agreement as if termination had not occurred. This treatment is subject to the executive's signing an agreement containing certain restrictive covenants to protect our business interests. Violation of any of the covenants results in the forfeiture of unsettled shares and the requirement to repay any after-tax gain realized from the settlement of shares within 12 months of the forfeiture event.
- ***Involuntary Termination Without Cause.*** In the event of an involuntary termination other than for cause, the Compensation Committee may, contingent on approval from FHFA, provide for RSUs to vest immediately and settle in accordance with the vesting schedule outlined in the award agreement as if termination had not occurred. Under interim guidance provided by FHFA, this provision is limited to awards scheduled to vest within 12 months of the executive's termination date.
- ***All Other Terminations.*** If the Named Executive Officer's employment is terminated for any reason other than those described above, all RSUs unvested as of the date of termination are forfeited.

Stock Options

The stock options granted to our employees, including our Named Executive Officers, all of which were exercisable as of December 31, 2011, include alternative settlement provisions in the event of certain terminations which are similar to the provisions for RSUs, with the following modifications:

- ***Death.*** The stock options remain exercisable until the earlier of the original expiration date or three years after the date of termination in the event of death.
- ***Disability.*** The stock options remain exercisable for the full balance of their term in the event of disability.
- ***Retirement.*** In the event of retirement, as defined in the 2004 Employee Plan, stock options will remain exercisable for the full balance of their term, subject to the executive's signing an agreement containing the same restrictive covenants as described above for RSUs.
- ***All Other Terminations.*** If the individual's employment is terminated for any reason other than those described above, the stock options remain exercisable until the earlier of the original expiration date or 90 days following termination.

Employment and Separation Agreements

Messrs. Haldeman and Kari

The various agreements entered into in connection with the employment of Messrs. Haldeman and Kari are summarized above. See "— Written Agreements Relating to Employment of CEO and CFO."

Messrs. Renzi and Weiss and Ms. Wisdom

We do not have any continuing obligations under the letter agreements that were entered into with Mr. Renzi, Mr. Weiss and Ms. Wisdom at the time of their employment.

Director Compensation

After we entered conservatorship, FHFA approved compensation for Board members in the form of cash retainers only, paid on a quarterly basis. Under the terms of the Purchase Agreement, without Treasury's consent, we are prohibited from making stock grants to directors while this agreement remains in effect. We do not maintain any pension or retirement plans for directors. Non-employee directors are reimbursed for reasonable out-of-pocket costs for attending each meeting of the Board or a Board committee of which they are a member.

The reasons for this shift toward compensation delivered entirely in cash were similar, in the case of director compensation, to some of those described above regarding the structural change in executive compensation (see "Overview — Executive Management Compensation Program — Overview of Program Structure"). However, the considerations underlying director and executive compensation differed in one key respect. There is no provision in the director compensation program for pay that varies depending on business results. While such incentive compensation is deemed appropriate to give management strong incentives to devise and execute business plans and achieve positive financial results, it is viewed in the case of directors as inconsistent with their oversight role.

Board compensation levels during conservatorship are shown in the table below.

Table 92 — Board Compensation — 2011 Non-Employee Director Compensation Levels

Board Service	
Cash Compensation	
Annual Retainer	$160,000
Annual Retainer for Non-Executive Chairman	290,000
Committee Service (Cash)	
Annual Retainer for Audit Committee Chair	$ 25,000
Annual Retainer for Business and Risk Committee Chair	15,000
Annual Retainer for Committee Chairs (other than Audit or Business and Risk)	10,000
Annual Retainer for Audit Committee Members	10,000

The following table summarizes the 2011 compensation provided to all persons who served as non-employee directors during 2011.

Table 93 — 2011 Director Compensation

Name	Fees Earned or Paid in Cash	Change in Pension Value and Nonqualified Deferred Compensation Earnings[5]	All Other Compensation[6]	Total
C. Lynch[1]	$193,356	$	$ —	$193,356
J. Koskinen[2]	290,000		19,150	309,150
L. Bammann	175,000		2,500	177,500
C. Byrd	170,000		1,370	171,370
R. Glauber[2][3][4]	180,000		20,000	200,000
L. Hirsch	160,000		20,000	180,000
N. Retsinas[3]	160,000		3,450	163,450
C. Rose[1]	163,736		—	163,736
E. Shanks, Jr.[1]	170,000		20,000	190,000
A. Williams[1]	171,495		—	171,495

(1) Amounts include additional compensation earned by the designated directors in their new roles on the Board beginning on the effective date of their appointments. Mr. Lynch's appointment was effective as of December 2, 2011; the appointments of the new Committee chairs were effective as of November 7, 2011. Their roles and additional compensation during 2011 are as follows: Mr. Lynch (Non-Executive Chairman) — $8,356; Mr. Rose (Audit Committee chair) — $3,736; and Mr. Williams (Compensation Committee chair) — $1,495. Mr. Shanks' 2011 compensation was not affected by the change in his responsibilities from Compensation Committee chair to chair of the Nominating and Governance Committee.

(2) Amounts shown reflect compensation actually paid to Messrs. Koskinen and Glauber during 2011. In accordance with established practice for payment of director compensation, annual retainers and committee fees are paid in advance at the beginning of each quarter. As a result of the changes in board assignments and responsibilities described in Note 1 above, the compensation earned by Messrs. Koskinen and Glauber during the fourth quarter of 2011 was less than the amounts paid to them at the beginning of the quarter. The overpayments were deducted from the amounts paid to those directors in January 2012, for the first quarter of 2012, as follows: Mr. Koskinen — $10,598; Mr. Glauber — $1,495.

(3) At December 31, 2011, the aggregate number of common shares underlying the outstanding RSU awards that had not vested and were held by each non-employee director was as follows: Mr. Glauber — 1,253 shares; and Mr. Retsinas — 1,253 shares.

(4) At December 31, 2011, the aggregate number of common shares underlying outstanding option awards, exercisable and unexercisable, held by each non-employee director was as follows: Mr. Glauber — 1,822 shares.

(5) We do not have any pension or retirement plans for our non-employee directors.

(6) In 2011, the Freddie Mac Foundation provided a dollar-for-dollar match to eligible organizations and institutions, up to an aggregate amount of $20,000 per director per calendar year. Matching contributions made to charities designated by the non-employee directors were as follows: Mr. Koskinen, $19,150; Ms. Bammann, $2,500; Ms. Byrd, $1,370; Mr. Glauber, $20,000; Mr. Hirsch, $20,000; Mr. Retsinas, $3,450; and Mr. Shanks, Jr., $20,000.

Indemnification. We have also made arrangements to indemnify our directors against certain liabilities which are similar to the terms on which our executive officers are indemnified. For a description of such terms, see "— Written Agreements Relating to Employment of CEO and CFO."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Security Ownership

Our only class of voting stock is our common stock. (Upon its appointment as Conservator, FHFA immediately succeeded to the voting rights of holders of our common stock.) The following table shows the beneficial ownership of our common stock as of March 6, 2012 by our current directors, our Named Executive Officers, all of our directors and executive officers as a group, and holders of more than 5% of our common stock. Beneficial ownership is determined in accordance with SEC rules for computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person. As of March 6, 2012, each director and Named Executive Officer, and all of our directors and executive officers as a group, owned less than 1% of our outstanding common stock. The information presented below is based on information provided to us by the individuals or entities specified in the table.

Table 94 — Stock Ownership by Directors, Executive Officers, and Greater-Than-5% Holders

Name	Position	Common Stock Beneficially Owned Excluding Stock Options(1)	Stock Options Exercisable Within 60 Days of March 6, 2012	Total Common Stock Beneficially Owned
Linda B. Bammann	Director	—	—	—
Carolyn H. Byrd	Director	—	—	—
Christopher S. Lynch	Director	—	—	—
Nicolas P. Retsinas	Director	9,552(2)	—	9,552
Clayton S. Rose	Director	—	—	—
Eugene B. Shanks, Jr.	Director	—	—	—
Anthony A. Williams	Director	—	—	—
Charles E. Haldeman, Jr.	Chief Executive Officer	—	—	—
Ross J. Kari	EVP — Chief Financial Officer	—	—	—
Anthony N. Renzi	EVP — Single Family Business, Ops. and Tech.	—	—	—
Jerry Weiss	EVP — Chief Administrative Officer	37,842(3)	16,590	54,432
Paige H. Wisdom	EVP — Chief Enterprise Risk Officer	25,458(4)	—	25,458
All directors and executive officers as a group (18 persons)		123,984(5)	35,548	159,532

5% Holder	Common Stock Beneficially Owned	Percent of Class
U.S. Department of the Treasury 1500 Pennsylvania Avenue, NW Washington, D.C. 20220	Variable(6)	79.9%

(1) Includes shares of stock beneficially owned as of March 6, 2012. Also includes RSUs vesting within 60 days of March 6, 2012. An RSU represents a conditional contractual right to receive one share of our common stock at a specified future date. See "Executive Compensation — Compensation Discussion and Analysis" above for more information.
(2) Includes 5,613 RSUs and 150 dividend equivalents on RSUs.
(3) Includes 5,276 RSUs.
(4) Includes 8,270 RSUs.
(5) Includes 30,299 RSUs and 150 dividend equivalents on RSUs.
(6) In September 2008, we issued to Treasury a warrant to purchase, for one one-thousandth of a cent ($0.00001) per share, shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding on a fully diluted basis at the time the warrant is exercised. The warrant may be exercised in whole or in part at any time until September 7, 2028. As of the date of this filing, Treasury has not exercised the warrant. The information above assumes Treasury beneficially owns no other shares of our common stock.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information about our common stock that may be issued upon the exercise of options, warrants, and rights under our existing equity compensation plans at December 31, 2011. Our stockholders have approved the ESPP, the 2004 Employee Plan, the 1995 Employee Plan, and the Directors' Plan. We suspended the operation of these plans following our entry into conservatorship and are no longer granting awards under such plans.

Table 95 — Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by stockholders	2,554,155[1]	$47.63[2]	34,931,333[3]
Equity compensation plans not approved by stockholders	None	N/A	None

(1) Includes 532,523 restricted stock units and shares of restricted stock issued under the Directors' Plan and the Employee Plans.
(2) For the purpose of calculating this amount, the restricted stock units and shares of restricted stock are assigned a value of zero.
(3) Includes 27,466,099 shares, 5,845,739 shares, and 1,619,495 shares available for issuance under the 2004 Employee Plan, the ESPP and the Directors' Plan, respectively. No shares are available for issuance under the 1995 Employee Plan.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Policy Governing Related Person Transactions

The Board has adopted a written policy governing the approval of related person transactions. This policy sets forth procedures for the review and approval or ratification of transactions involving related persons, which consist of any person who is, or was at any time since the beginning of our last completed fiscal year, a director, a director nominee, an executive officer, or an immediate family member of any of the foregoing persons.

Under authority delegated by the Board, our General Counsel and the Nominating and Governance Committee (or its Chair under certain circumstances), each, an Authorized Approver, are responsible for applying the Related Person Transactions Policy. Transactions covered by the Related Person Transactions Policy consist of any transaction, arrangement or relationship or series of similar transactions, arrangements or relationships, in which: (a) the aggregate amount involved exceeded or is expected to exceed $120,000; (b) we were or are expected to be a participant; and (c) any related person had or will have a direct or indirect material interest. The Related Person Transactions Policy includes a list of categories of transactions identified by the Board as having no significant potential for an actual conflict of interest or the appearance of a conflict or improper benefit to a related person, and thus not subject to review.

Our Legal Division assesses whether any proposed transaction involving a related person is covered by the Related Person Transactions Policy. If so, the transaction is reviewed by the appropriate Authorized Approver. In consultation with the Chair of the Nominating and Governance Committee, the General Counsel may refer any proposed transaction to the Nominating and Governance Committee for review and approval.

If possible, approval of a related person transaction is obtained prior to the effectiveness or consummation of the transaction. If advance approval of a related person transaction by the appropriate Authorized Approver is not feasible or otherwise not obtained, then the transaction is considered promptly by the appropriate Authorized Approver to determine whether ratification is warranted.

In determining whether to approve or ratify a related person transaction covered by the Related Person Transactions Policy, the appropriate Authorized Approver reviews and considers all relevant information which may include: (a) the nature of the related person's interest in the transaction; (b) the approximate total dollar value of, and extent of the related person's interest in, the transaction; (c) whether the transaction was or would be undertaken in the ordinary course of our business; (d) whether the transaction is proposed to be, or was, entered into on terms no less favorable to us than terms that could have been reached with an unrelated third party; and (e) the purpose, and potential benefits to us, of the transaction.

Corporate Governance Guidelines

In June 2011, the Board adopted our amended Corporate Governance Guidelines, or our Guidelines, which are available on our website at www.freddiemac.com/governance/pdf/gov_guidelines.pdf.

Director Independence

The non-employee members of the Board evaluated the independence, as defined in both Sections 4 and 5 of our Guidelines and in Section 303A.02 of the NYSE Listed Company Manual, of the members of our Board who have served in 2012, each of whom also served on our Board in 2011. In connection with that evaluation, the non-employee members of the Board determined that all current members of our Board (other than Charles E. Haldeman, Jr., our CEO) were independent during their service in 2011 and 2012. Mr. Haldeman is not considered an independent director because he is our CEO.

The non-employee members of the Board also concluded that all current members of the Audit Committee, the Compensation Committee, and the Nominating and Governance Committee are independent within the meaning of both Sections 4 and 5 of our Guidelines and Section 303A.02 of the NYSE Listed Company Manual. The non-employee members of the Board also determined that all current members of the Audit Committee are independent within the meaning of Rule 10A-3 promulgated under the Exchange Act, and Section 303A.06 of the NYSE Listed Company Manual.

In determining the independence of each Board member, the non-employee members of the Board reviewed the following categories or types of relationships, in addition to those specifically addressed by the standards contained in Section 5 of our Guidelines, to determine whether those relationships, either individually or when aggregated with other

relationships, would constitute a material relationship between the Director and us that would impair a Director's judgment as a member of the Board or create the perception or appearance of such an impairment:

- *Board Memberships With For-Profit Business Partners.* Mses. Bammann and Byrd and Messrs. Glauber, Lynch, Retsinas, Rose and Shanks serve as directors of other companies that engage or have engaged in business with us resulting in payments between us and such companies during the past three fiscal years. After considering the nature and extent of the specific relationship between each of those companies and us, and the fact that these Board members are directors of these other companies rather than employees, the non-employee members of the Board concluded that those business relationships did not constitute material relationships between any of the Directors and us that would impair their independence as our Directors.

- *Board Memberships With Charitable Organizations To Which We Have Made Contributions.* Mr. Retsinas serves as a board member of a charitable organization that has received monetary contributions from us or the Freddie Mac Foundation. The total annual amount contributed was below the applicable threshold in our Guidelines that would require a specific determination that Mr. Retsinas is independent in spite of the contributions. The non-employee members of the Board considered the contributions and the nature of the organization and concluded that the relationship with the charitable organization did not constitute a material relationship between Mr. Retsinas and us that would impair his independence as our Director.

- *Board Members Who Are Executive Officers Or Employees Of Business Partners.* Mr. Williams was appointed as Executive Director of the Government Practice at The Corporate Executive Board Company in January 2010 and served in that role during 2011. In January 2012, Mr. Williams became a Senior Fellow of the Government Practice of CEB. CEB provides best practices research and analysis and executive education to corporations through memberships in various subject-matter interest groups organized and managed by CEB. Mr. Williams' responsibilities at CEB include contributing to and authoring literature; advising on the development of CEB's state and local government service strategy and its existing federal government service offerings; and promoting future CEB services. In 2009, 2010, 2011 and 2012 year-to-date, we paid CEB $362,100, $515,700, $447,500 and $492,400, respectively, for memberships in certain of CEB's subject-matter interest groups. Currently, we are a member of 14 CEB groups, and in 2009, 2010 and 2011 we were a member of 11, 12 and 13 groups, respectively. The annual amounts of our payments to CEB in 2009 and 2010 were substantially below 2% of CEB's annual revenues for the applicable years and the 2011 and 2012 payments are substantially less than 2% of CEB's 2010 revenues (the latest year for which CEB revenue is publicly available). Therefore, under our Guidelines, those annual payments do not preclude the non-employee members of the Board from concluding that Mr. Williams is independent. The non-employee members of the Board considered those payments and the nature and extent of the relationship between us and CEB and concluded that this business relationship did not constitute a material relationship between Mr. Williams and us that would impair Mr. Williams' independence as our Director.

- *Financial Relationships with For-Profit Business Partners.* Since 2005, Ms. Bammann has owned stock of JPMorgan Chase & Co., or JPMorgan. In the aggregate, this stock represents a material portion of her net worth. JPMorgan conducts significant business with Freddie Mac, including, among other things, as a single-family and multifamily seller/servicer, as an underwriter of our debt and mortgage securities and as a capital markets counterparty. In order to eliminate any potential conflict of interest that might arise as a result of this stock ownership, Ms. Bammann has agreed to recuse herself from discussing and acting upon any matters that are to be considered by the full Board or any of the committees of which she is a member (including the Business and Risk Committee, which she chairs), and that relate directly to JPMorgan, and that therefore might affect the value of her JPMorgan stock. The Audit Committee Chairman, in consultation with the Non-Executive Chairman, will address any questions that may arise regarding whether recusal from a particular discussion or action is appropriate.

In evaluating Ms. Bammann's independence in light of her ownership of JPMorgan stock, the non-employee members of the Board considered the nature and extent of Freddie Mac's business relationship with JPMorgan and any potential impact that her stock ownership might have on her independent judgment as a Freddie Mac director, taking into account the recusal arrangement. The non-employee members of the Board concluded that Ms. Bammann's recusal arrangement concerning JPMorgan would address any actual or potential conflicts of interest that might arise with respect to her ownership of JPMorgan stock. Accordingly, the non-employee members concluded that Ms. Bammann's ownership of JPMorgan stock does not constitute a material relationship between her and Freddie Mac that would impair her independence as a Freddie Mac Director.

Mr. Rose receives an annuity and retiree medical benefits from JPMorgan in connection with his retirement from that firm in 2001. The amount of Mr. Rose's annuity is fixed and does not depend in any way on JPMorgan's revenues or

profits. In evaluating the impact of Mr. Rose's annuity from JPMorgan on his independence, the non-employee members of the Board considered the structure of the annuity, the amount of the annuity as a percentage of Mr. Rose's annual adjusted gross income, the retiree medical benefits and Freddie Mac's business relationship with JPMorgan. The non-employee members of the Board also were informed that Mr. Rose had agreed to recuse himself from discussing or acting upon any matter to be considered by our Board that could threaten the viability of JPMorgan. The non-employee members of the Board concluded that Mr. Rose's JPMorgan annuity and retiree medical benefits do not constitute a material relationship between him and Freddie Mac that would impair his independence as a Freddie Mac Director.

Board Diversity

The Board identifies Director nominees or candidates when the Conservator has requested that the Board identify candidates for the Conservator to consider for election by written consent and when there is a vacancy on the Board, at which time the Board may exercise the authority delegated to it by the Conservator to fill such vacancies, subject to review by the Conservator.

Our charter provides that our Board must at all times have at least one person from the homebuilding, mortgage lending, and real estate industries, and at least one person from an organization representing community or consumer interests or one person who has demonstrated a career commitment to the provision of housing for low-income households. In addition, the examination guidance for corporate governance issued by FHFA provides that in identifying individuals for nomination for election to the Board, the Board should consider the knowledge of such individuals, as a group, in the areas of business, finance, accounting, risk management, public policy, mortgage lending, real estate, low-income housing, homebuilding, regulation of financial institutions, and any other areas that may be relevant to our safe and sound operation.

In addition, the Board has adopted a formal policy (articulated in our Guidelines) with regard to the consideration of diversity in identifying director nominees and candidates. As articulated in the policy, the Board seeks to have a diversity of talent, perspectives, experience and cultures among its members, including minorities, women and individuals with disabilities, and considers such diversity in the candidate solicitation and nomination processes. The policy also states that the Board seeks to have a diversity of talent on the Board and that candidates are selected, in part, for their experience and expertise. The policy also explains that when identifying director nominees, the Nominating and Governance Committee considers, among other factors, our needs, the talents and skills then available on the Board, and, with respect to incumbent directors, their continued involvement in business and professional activities relevant to us, the skills and experience that should be represented on the Board, the availability of other individuals with desirable skills to join the Board, and the desire to maintain a diverse Board.

FHFA also has adopted a final rule regarding minority and women inclusion that became effective on January 28, 2011. The final rule implements section 1116 of HERA and requires us to, among other things, promote diversity and the inclusion of women, minorities, and individuals with disabilities in all activities, including in the election of directors, as required by these regulations.

Board Leadership Structure and Role in Risk Oversight

The positions of Chief Executive Officer and Non-Executive Chairman of the Board are held by different individuals. This leadership structure was established by the Conservator when it appointed separate individuals to hold those two positions in September 2008. The examination guidance for corporate governance issued by FHFA provides that once separated, the functions of the Chief Executive Officer and the Non-Executive Chairman of the Board should remain separated until such time as the Director of FHFA determines otherwise.

The responsibility for risk oversight is shared by two committees of the Board, the Business and Risk Committee and the Audit Committee. The Business and Risk Committee is responsible for assisting the Board in the oversight, on an enterprise-wide basis, of our risk management framework, including management of credit risk (including counterparty risk), market risk (including interest rate and liquidity risk), model risk, operational risk, strategic risk, and reputation risk. The risk oversight responsibilities of the Audit Committee include reviewing: (a) management's guidelines and policies governing the processes for assessing and managing our risks; and (b) our major financial risk exposures (including but not limited to market, credit, and operational risks) and the steps management has taken to monitor and control such exposures.

The Business and Risk Committee and the Audit Committee generally meet in joint session at least quarterly to carry out their respective risk oversight responsibilities on behalf of the Board. The membership of those two committees collectively consists of all members of the Board except Messrs. Koskinen and Haldeman, who generally also have

attended the joint sessions. Copies of the Charters of the Audit Committee and the Business and Risk Committee are available on our website at http://www.freddiemac.com/governance/bd_committees.html.

The Chief Enterprise Risk Officer reports regularly to the joint meetings of the Business and Risk Committee and the Audit Committee. The Chief Enterprise Risk Officer also reports to the full Board as appropriate.

For a discussion of the Compensation Committee's conclusion that our compensation policies and practices do not create risks that are reasonably likely to have a material adverse effect on us, see "Executive Compensation — Compensation and Risk."

Transactions with 5% Shareholders

As a result of our issuance to Treasury of the warrant to purchase shares of our common stock equal to 79.9% of the total number of shares of our common stock outstanding, on a fully diluted basis, we are deemed a related party to the U.S. government. Except for the transactions with Treasury discussed in "BUSINESS — Executive Summary — Government Support for our Business," "BUSINESS - Regulation and Supervision — Legislative and Regulatory Developments — Legislated Increase to Guarantee Fees," "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Related Parties as a Result of Conservatorship" as well as in "NOTE 8: DEBT SECURITIES AND SUBORDINATED BORROWINGS," and "NOTE 12: FREDDIE MAC STOCKHOLDERS' EQUITY (DEFICIT)," no transactions outside of normal business activities have occurred between us and the U.S. government since the beginning of 2011.

FHFA, as conservator, approved the Purchase Agreement and our administrative role in the MHA Program and the Memorandum of Understanding with Treasury, FHFA, and Fannie Mae (see "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Housing Finance Agency Initiative"). The remaining transactions described in the sections referenced above did not require review and approval under any of our policies and procedures relating to transactions with related persons.

In addition, we are deemed related parties with Fannie Mae as both we and Fannie Mae have the same relationships with FHFA and Treasury. All transactions between us and Fannie Mae have occurred in the normal course of business.

Transactions with Institutions Related to Directors

In the ordinary course of business, we were a party during 2011, and expect to continue to be a party during 2012, to certain business transactions with institutions affiliated with members of our Board. Management believes that the terms and conditions of the transactions were no more and no less favorable to us than the terms of similar transactions with unaffiliated institutions to which we are, or expect to be, a party. The only such transaction that is required to be disclosed under SEC rules is described below.

Mr. Williams joined our Board in December 2008. In January of 2010, he was appointed Executive Director of the Government Practice at CEB and since January 2012 he has served as a Senior Fellow. CEB provides best practices research and analysis and executive education to corporations through memberships in various subject-matter interest groups organized and managed by CEB. Mr. Williams' responsibilities at CEB include contributing to and authoring literature; advising on the development of CEB's state and local government service strategy and its existing federal government service offerings; and promoting future CEB services. We purchased memberships in certain membership groups, and paid CEB approximately $447,500 and $492,400 for those memberships, in 2011 and 2012 year-to-date, respectively.

This transaction was not required to be reviewed, approved or ratified under our Related Person Transactions Policy because the Board concluded that our business relationship with CEB did not constitute a material relationship between Mr. Williams and us that would impair Mr. Williams' independence as our director.

Transactions with Institutions Related to Executive Officers

Mr. Renzi joined us in April 2010 and currently serves as our Executive Vice President — Single Family Business, Operations and Technology. Prior to joining Freddie Mac, he served as the Chief Operating Officer of GMAC Residential Capital and as President of GMAC Mortgage Corporation. That employment ended in March 2010.

GMAC Residential Capital, LLC, GMAC Mortgage Corporation, GMAC Mortgage, LLC, and Residential Funding Company, LLC are all affiliated entities, and are now reorganized as subsidiaries of Ally Financial Inc., or Ally.

GMAC Mortgage, LLC, is a seller/servicer that sold mortgages to Freddie Mac with an aggregate unpaid principal balance of approximately $15.8 billion in 2011, and mortgages with an aggregate unpaid principal balance of approximately $1.2 billion through January 31, 2012.

GMAC Mortgage, LLC and Residential Funding Company, LLC (indirect subsidiaries of Ally) are seller/servicers that together serviced and subserviced for an affiliated entity approximately 3.6% of the single-family loans in our single-family credit guarantee portfolio as of December 31, 2011. In 2012, these entities continue to service and subservice our single-family loans in our single-family credit guarantee portfolio.

At the time Mr. Renzi joined us, he was entitled to payments from Ally consisting of unpaid deferred stock units granted during his employment. At that time, the remaining payments had an aggregate grant date value of approximately $860,000. The aggregate amount actually paid may be either higher or lower based on Ally's value. Payments are scheduled to be made in cash semi-monthly and will continue through March 2015.

In order to eliminate any potential conflict of interest, Mr. Renzi, in his capacity as an employee of Freddie Mac, has been, and will continue to be, recused from any transactions with or decisions relating to Ally or its affiliates through such time that he has received his last payment from Ally and its affiliates. Specifically, Mr. Renzi has been recused from serving as the final decision-maker, and from influencing final decisions, relating to: (a) any and all aspects of Freddie Mac's relationship with Ally or its affiliates pertaining to both performing and non-performing loan servicing; (b) any other business transactions with Ally or its affiliates or their status as a counterparty with us; or (c) reviews of Ally or its affiliates by our MHA — Compliance function under the Financial Agency Agreement with Treasury.

Mr. Renzi's relationship with Ally and its affiliates was not required to be reviewed, approved or ratified under our Related Person Transactions Policy because Mr. Renzi, in his capacity as an employee, is recused from any involvement in transactions with or decisions relating to Ally and its affiliates for the period that he is receiving payments on unpaid stock units. For this reason, Mr. Renzi does not have a material interest in our relationship with Ally or its affiliates.

Conservatorship Agreements

Treasury, FHFA, and the Board of Governors of the Federal Reserve System have taken a number of actions to support us during conservatorship, including entering into the Purchase Agreement, described in this Form 10-K. See "BUSINESS — Conservatorship and Related Matters — Treasury Agreements," "BUSINESS — Executive Summary — Government Support for our Business" and "NOTE 2: CONSERVATORSHIP AND RELATED MATTERS — Related Parties as a Result of Conservatorship."

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Description of Fees

The following is a description of fees billed to us by PricewaterhouseCoopers LLP, our independent public accountants, during 2011 and 2010.

Table 96 — Auditor Fees[1]

	2011	2010
Audit Fees[2]	$25,617,867	$29,484,646
Audit-Related Fees[3]	8,725	18,000
Tax Fees[4]	3,040,750	3,050,000
All Other Fees[5]	11,399	148,805
Total	$28,678,741	$32,701,451

(1) These fees represent amounts billed within the designated year and include reimbursable expenses of $283,246 and $436,051 for 2011 and 2010, respectively.
(2) Audit fees include fees and expenses billed by PricewaterhouseCoopers in connection with the SAS 100 quarterly reviews of our interim financial information and the audit of our annual consolidated financial statements. The audit fees billed during 2011 include fees and expenses related to the 2010 ($7,902,260) and 2011 ($17,727,006) audits. In addition to the amounts shown above, approximately $12.3 million of fees and reimbursable expenses will be billed in 2012 for the 2011 audit. The audit fees billed during 2010 include fees and expenses related to the 2009 ($8,839,260) and 2010 ($20,645,386) audits. Audit fees of $83,020 and $95,542 in 2011 and 2010, respectively, related to the Freddie Mac Foundation are excluded because these fees are incurred and paid separately by the Freddie Mac Foundation.
(3) The 2011 and 2010 audit-related fees resulted from renewals of our Comperio subscription ($8,725 and $18,000, respectively).
(4) The tax fees billed in 2011 related to non-audit tax compliance services including the preparation of the company's 2010 tax return. The tax fees billed in 2010 covered services related to the preparation of the company's 2009 tax returns, preparation of quarterly estimated tax calculations and other services related to improving Freddie Mac's annual tax compliance process ($3,000,000), as well as process documentation services and tax accounting method change services ($50,000).
(5) All other fees for 2011 and 2010 resulted from fees and expenses billed by PricewaterhouseCoopers for the performance of non-audit advisory services related to a preliminary assessment of certain aspects of the company's technology implementation ($11,399) and management's reorganization of our Finance Division ($148,805), respectively.

Approval of Independent Auditor Services and Fees

As provided in its charter, the Audit Committee appoints, subject to FHFA approval, our independent public accounting firm and reviews the scope of the annual audit and pre-approves, subject (as required) to FHFA approval, all audit and non-audit services permitted under applicable law to be performed by the independent public accounting firm.

The Sarbanes-Oxley Act and related rules adopted by the SEC require that all services provided to companies subject to the reporting requirements of the Exchange Act by their independent auditors be pre-approved by their audit committee or by authorized members of the committee, with certain exceptions. The Audit Committee's charter requires that the Audit Committee pre-approve any audit services, and any non-audit services permitted under applicable law, to be performed by our independent auditors (or to designate one or more members of the Audit Committee to pre-approve such services and report such pre-approval to the Audit Committee).

Audit services that are within the scope of an auditor's engagement approved by the Audit Committee prior to the performance of those services are deemed pre-approved and do not require separate pre-approval. Audit services not within the scope of an Audit Committee-approved engagement, as well as permissible non-audit services, must be separately pre-approved by the Audit Committee.

When the Audit Committee pre-approves a service, the Audit Committee typically sets a dollar limit for such service. Management endeavors to obtain pre-approval of the Audit Committee, or of the Chairman of the Audit Committee (when the Chairman of the Audit Committee has been delegated such authority), before it incurs fees exceeding the dollar limit. If the Chairman of the Audit Committee approves the increase, the Chairman will report such approval at the Audit Committee's next scheduled meeting.

The pre-approval procedure is administered by our senior financial management, which reports throughout the year to the Audit Committee. The Audit Committee pre-approved all audit, audit-related, tax, and other services performed in 2010 and 2011.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report:

(1) Consolidated Financial Statements

The consolidated financial statements required to be filed in this annual report on Form 10-K are included in Part II, Item 8.

(2) Financial Statement Schedules

None.

(3) Exhibits

An Exhibit Index has been filed as part of this annual report on Form 10-K beginning on page E-1 and is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Federal Home Loan Mortgage Corporation

By: /s/ Charles E. Haldeman, Jr.
Charles E. Haldeman, Jr.
Chief Executive Officer

Date: March 9, 2012

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Capacity	Date
/s/ Christopher S. Lynch* Christopher S. Lynch	Non-Executive Chairman of the Board	March 9, 2012
/s/ Charles E. Haldeman, Jr. Charles E. Haldeman, Jr.	Chief Executive Officer and Director (Principal Executive Officer)	March 9, 2012
/s/ Ross J. Kari Ross J. Kari	Executive Vice President — Chief Financial Officer (Principal Financial Officer)	March 9, 2012
/s/ Robert D. Mailloux Robert D. Mailloux	Senior Vice President — Corporate Controller and Principal Accounting Officer (Principal Accounting Officer)	March 9, 2012
/s/ Linda B. Bammann* Linda B. Bammann	Director	March 9, 2012
/s/ Carolyn H. Byrd* Carolyn H. Byrd	Director	March 9, 2012
/s/ Nicolas P. Retsinas* Nicolas P. Retsinas	Director	March 9, 2012
/s/ Clayton S. Rose* Clayton S. Rose	Director	March 9, 2012
/s/ Eugene B. Shanks, Jr.* Eugene B. Shanks, Jr.	Director	March 9, 2012
/s/ Anthony A. Williams* Anthony A. Williams	Director	March 9, 2012

*By: /s/ Ross J. Kari
Ross J. Kari
Attorney-in-Fact

GLOSSARY

This Glossary includes acronyms and defined terms that are used throughout this Form 10-K.

1995 Employee Plan — 1995 Stock Compensation Plan, as amended

2004 Employee Plan — 2004 Stock Compensation Plan, as amended and restated June 6, 2008

Administration — Executive branch of the U.S. Government.

Agency securities — Generally refers to mortgage-related securities issued by the GSEs or government agencies.

Alt-A loan — Although there is no universally accepted definition of Alt-A, many mortgage market participants classify single-family loans with credit characteristics that range between their prime and subprime categories as Alt-A because these loans have a combination of characteristics of each category, may be underwritten with lower or alternative income or asset documentation requirements compared to a full documentation mortgage loan, or both. In determining our Alt-A exposure on loans underlying our single-family credit guarantee portfolio, we classified mortgage loans as Alt-A if the lender that delivers them to us classified the loans as Alt-A, or if the loans had reduced documentation requirements, as well as a combination of certain credit characteristics and expected performance characteristics at acquisition which, when compared to full documentation loans in our portfolio, indicate that the loan should be classified as Alt-A. In the event we purchase a refinance mortgage in either our relief refinance mortgage initiative or in another mortgage refinance initiative and the original loan had been previously identified as Alt-A, such refinance loan may no longer be categorized or reported as an Alt-A mortgage in this Form 10-K and our other financial reports because the new refinance loan replacing the original loan would not be identified by the servicer as an Alt-A loan. As a result, our reported Alt-A balances may be lower than would otherwise be the case had such refinancing not occurred. For non-agency mortgage-related securities that are backed by Alt-A loans, we categorize our investments in non-agency mortgage-related securities as Alt-A if the securities were identified as such based on information provided to us when we entered into these transactions.

AMT — Alternative Minimum Tax

AOCI — Accumulated other comprehensive income (loss), net of taxes

ARM — Adjustable-rate mortgage — A mortgage loan with an interest rate that adjusts periodically over the life of the mortgage loan based on changes in a benchmark index.

Board — Board of Directors

Bond insurers — Companies that provide credit insurance principally covering securitized assets in both the primary issuance and secondary markets.

BPS — Basis points — One one-hundredth of 1%. This term is commonly used to quote the yields of debt instruments or movements in interest rates.

Cash and other investments portfolio — Our cash and other investments portfolio is comprised of our cash and cash equivalents, federal funds sold and securities purchased under agreements to resell, and investments in non-mortgage-related securities.

CD&A — Compensation Discussion and Analysis

CEB — The Corporate Executive Board Company

CEO — Chief Executive Officer

CFO — Chief Financial Officer

Charter — The Federal Home Loan Mortgage Corporation Act, as amended, 12 U.S.C. § 1451 et seq.

CMBS — Commercial mortgage-backed security — A security backed by mortgages on commercial property (often including multifamily rental properties) rather than one-to-four family residential real estate. Although the mortgage pools underlying CMBS can include mortgages financing multifamily properties and commercial properties, such as office buildings and hotels, the classes of CMBS that we hold receive distributions of scheduled cash flows only from multifamily properties. Military housing revenue bonds are included as CMBS within investments-related disclosures. We have not identified CMBS as either subprime or Alt-A securities.

Conforming loan/Conforming jumbo loan/Conforming loan limit — A conventional single-family mortgage loan with an original principal balance that is equal to or less than the applicable conforming loan limit, which is a dollar amount cap on the size of the original principal balance of single-family mortgage loans we are permitted by law to purchase or securitize. The conforming loan limit is determined annually based on changes in FHFA's housing price index. Any decreases in the housing price index are accumulated and used to offset any future increases in the housing price index so that conforming loan limits do not decrease from year-to-year. Since 2006, the base conforming loan limit for a one-family residence has been set at $417,000, and higher limits have been established in certain "high-cost" areas (currently, up to $625,500 for a one-family residence). Higher limits also apply to two- to four-family residences, and for mortgages secured by properties in Alaska, Guam, Hawaii and the U.S. Virgin Islands.

Actual loan limits are set by FHFA for each county (or equivalent), and the loan limit for specific high-cost areas may be lower than the maximum amounts. We refer to loans that we have purchased with UPB exceeding the base conforming loan limit (*i.e.*, $417,000) as conforming jumbo loans.

Beginning in 2008, pursuant to a series of laws, our loan limits in certain high-cost areas were increased temporarily above the limits that otherwise would have been applicable (up to $729,750 for a one-family residence). The latest of these increases expired on September 30, 2011.

Conservator — The Federal Housing Finance Agency, acting in its capacity as conservator of Freddie Mac.

Convexity — A measure of how much a financial instrument's duration changes as interest rates change.

Core spread income — Refers to a fair value estimate of the net current period accrual of income from the spread between mortgage-related investments and debt, calculated on an option-adjusted basis.

Covered Officer — Those executives in the following positions, each of whom are compensated pursuant to the Executive Management Compensation Program: (a) Chief Executive Officer; (b) Chief Operating Officer; (c) Chief Financial Officer; (d) all Executive Vice Presidents; and (e) all Senior Vice Presidents. Each of the Named Executive Officers is a Covered Officer.

Credit enhancement — Any number of different financial arrangements that are designed to reduce credit risk by partially or fully compensating an investor in the event of certain financial losses. Examples of credit enhancements include mortgage insurance, overcollateralization, indemnification agreements, and government guarantees.

Credit losses — Consists of charge-offs and REO operations income (expense).

Credit-related expenses — Consists of our provision for credit losses and REO operations income (expense).

Deed in lieu of foreclosure — An alternative to foreclosure in which the borrower voluntarily conveys title to the property to the lender and the lender accepts such title (sometimes together with an additional payment by the borrower) in full satisfaction of the mortgage indebtedness.

Delinquency — A failure to make timely payments of principal or interest on a mortgage loan. For single-family mortgage loans, we generally report delinquency rate information for loans that are seriously delinquent. For multifamily loans, we report delinquency rate information based on the UPB of loans that are two monthly payments or more past due or in the process of foreclosure.

Derivative — A financial instrument whose value depends upon the characteristics and value of an underlying financial asset or index, such as a security or commodity price, interest or currency rates, or other financial indices.

Directors' Plan — 1995 Directors' Stock Compensation Plan, as amended and restated

Dodd-Frank Act — Dodd-Frank Wall Street Reform and Consumer Protection Act.

DSCR — Debt Service Coverage Ratio — An indicator of future credit performance for multifamily loans. The DSCR estimates a multifamily borrower's ability to service its mortgage obligation using the secured property's cash flow, after deducting non-mortgage expenses from income. The higher the DSCR, the more likely a multifamily borrower will be able to continue servicing its mortgage obligation.

Duration — Duration is a measure of a financial instrument's price sensitivity to changes in interest rates.

Duration gap — One of our primary interest-rate risk measures. Duration gap is a measure of the difference between the estimated durations of our interest rate sensitive assets and liabilities. We present the duration gap of our financial instruments in units expressed as months. A duration gap of zero implies that the change in value of our interest rate

sensitive assets from an instantaneous change in interest rates would be expected to be accompanied by an equal and offsetting change in the value of our debt and derivatives, thus leaving the net fair value of equity unchanged.

EDCP — Executive Deferred Compensation Plan

Effective rent — The average rent actually paid by the tenant over the term of a lease.

ESPP — Employee Stock Purchase Plan

Euribor — Euro Interbank Offered Rate

EVP — Executive Vice President

Exchange Act — Securities and Exchange Act of 1934, as amended

Executive Compensation Program — Executive Management Compensation Program, as amended and restated

Fannie Mae — Federal National Mortgage Association

FASB — Financial Accounting Standards Board

FDIC — Federal Deposit Insurance Corporation

Federal Reserve — Board of Governors of the Federal Reserve System

FHA — Federal Housing Administration

FHFA — Federal Housing Finance Agency — FHFA is an independent agency of the U.S. government established by the Reform Act with responsibility for regulating Freddie Mac, Fannie Mae, and the FHLBs.

FHLB — Federal Home Loan Bank

FICO score — A credit scoring system developed by Fair, Isaac and Co. FICO scores are the most commonly used credit scores today. FICO scores are ranked on a scale of approximately 300 to 850 points with a higher value indicating a lower likelihood of credit default.

Fixed-rate mortgage — Refers to a mortgage originated at a specific rate of interest that remains constant over the life of the loan.

Foreclosure alternative — A workout option pursued when a home retention action is not successful or not possible. A foreclosure alternative is either a short sale or deed in lieu of foreclosure.

Foreclosure transfer — Refers to our completion of a transaction provided for by the foreclosure laws of the applicable state, in which a delinquent borrower's ownership interest in a mortgaged property is terminated and title to the property is transferred to us or to a third party. State foreclosure laws commonly refer to such transactions as foreclosure sales, sheriff's sales, or trustee's sales, among other terms. When we, as mortgage holder, acquire a property in this manner, we pay for it by extinguishing some or all of the mortgage debt.

Freddie Mac mortgage-related securities — Securities we issue and guarantee, including PCs, REMICs and Other Structured Securities, and Other Guarantee Transactions.

GAAP — Generally accepted accounting principles

Ginnie Mae — Government National Mortgage Association

GSE Act — The Federal Housing Enterprises Financial Safety and Soundness Act of 1992, as amended by the Reform Act.

GSEs — Government sponsored enterprises — Refers to certain legal entities created by the U.S. government, including Freddie Mac, Fannie Mae, and the FHLBs.

Guarantee fee — The fee that we receive for guaranteeing the payment of principal and interest to mortgage security investors.

Guidelines — Corporate Governance Guidelines, as revised

HAFA — Home Affordable Foreclosures Alternative program — In 2009, the Treasury Department introduced the HAFA program to provide an option for HAMP-eligible homeowners who are unable to keep their homes. The HAFA program took effect on April 5, 2010 and we implemented it effective August 1, 2010.

HAMP — Home Affordable Modification Program — Refers to the effort under the MHA Program whereby the U.S. government, Freddie Mac and Fannie Mae commit funds to help eligible homeowners avoid foreclosure and keep their homes through mortgage modifications.

HARP — Home Affordable Refinance Program — Refers to the effort under the MHA Program that seeks to help eligible borrowers (whose monthly payments are current) with existing loans that are guaranteed by us or Fannie Mae to refinance into loans with more affordable monthly payments and/or fixed-rate terms. Through December 2011, under HARP, eligible borrowers who had mortgages with current LTV ratios above 80% and up to 125% were allowed to refinance their mortgages without obtaining new mortgage insurance in excess of what is already in place. Beginning December 2011, HARP was expanded to allow eligible borrowers who have mortgages with current LTV ratios above 125% to refinance under the program. The relief refinance initiative, under which we also allow borrowers with LTV ratios of 80% and below to participate, is our implementation of HARP for our loans.

HFA — State or local Housing Finance Agency

HUD — U.S. Department of Housing and Urban Development — Prior to the enactment of the Reform Act, HUD had general regulatory authority over Freddie Mac, including authority over our affordable housing goals and new programs. Under the Reform Act, FHFA now has general regulatory authority over us, though HUD still has authority over Freddie Mac with respect to fair lending.

Implied volatility — A measurement of how the value of a financial instrument changes due to changes in the market's expectation of potential changes in future interest rates. A decrease in implied volatility generally increases the estimated fair value of our mortgage assets and decreases the estimated fair value of our callable debt and options-based derivatives, while an increase in implied volatility generally has the opposite effect.

Interest-only loan — A mortgage loan that allows the borrower to pay only interest (either fixed-rate or adjustable-rate) for a fixed period of time before principal amortization payments are required to begin. After the end of the interest-only period, the borrower can choose to refinance the loan, pay the principal balance in total, or begin paying the monthly scheduled principal due on the loan.

IRS — Internal Revenue Service

LIBOR — London Interbank Offered Rate

LIHTC partnerships — Low-income housing tax credit partnerships — Prior to 2008, we invested as a limited partner in LIHTC partnerships, which are formed for the purpose of providing funding for affordable multifamily rental properties. These LIHTC partnerships invest directly in limited partnerships that own and operate multifamily rental properties that generate federal income tax credits and deductible operating losses.

Liquidation preference — Generally refers to an amount that holders of preferred securities are entitled to receive out of available assets, upon liquidation of a company. The initial liquidation preference of our senior preferred stock was $1.0 billion. The aggregate liquidation preference of our senior preferred stock includes the initial liquidation preference plus amounts funded by Treasury under the Purchase Agreement. In addition, dividends and periodic commitment fees not paid in cash are added to the liquidation preference of the senior preferred stock. We may make payments to reduce the liquidation preference of the senior preferred stock only in limited circumstances.

LTV ratio — Loan-to-value ratio — The ratio of the unpaid principal amount of a mortgage loan to the value of the property that serves as collateral for the loan, expressed as a percentage. Loans with high LTV ratios generally tend to have a higher risk of default and, if a default occurs, a greater risk that the amount of the gross loss will be high compared to loans with lower LTV ratios. We report LTV ratios based solely on the amount of the loan purchased or guaranteed by us, generally excluding any second lien mortgages (unless we own or guarantee the second lien).

MD&A — Management's Discussion and Analysis of Financial Condition and Results of Operations

MHA Program — Making Home Affordable Program — Formerly known as the Housing Affordability and Stability Plan, the MHA Program was announced by the Obama Administration in February 2009. The MHA Program is designed to help in the housing recovery, promote liquidity and housing affordability, expand foreclosure prevention efforts and set market standards. The MHA Program includes HARP and HAMP.

Mortgage assets — Refers to both mortgage loans and the mortgage-related securities we hold in our mortgage-related investments portfolio.

Mortgage-related investments portfolio — Our investment portfolio, which consists principally of mortgage-related securities and single-family and multifamily mortgage loans. The size of our mortgage-related investments portfolio under the Purchase Agreement is determined without giving effect to the January 1, 2010 change in accounting guidance related to transfers of financial assets and consolidation of VIEs. Accordingly, for purposes of the portfolio limit, when PCs and certain Other Guarantee Transactions are purchased into the mortgage-related investments portfolio, this is considered the acquisition of assets rather than the reduction of debt.

Mortgage-to-debt OAS — The net OAS between the mortgage and agency debt sectors. This is an important factor in determining the expected level of net interest yield on a new mortgage asset. Higher mortgage-to-debt OAS means that a newly purchased mortgage asset is expected to provide a greater return relative to the cost of the debt issued to fund the purchase of the asset and, therefore, a higher net interest yield. Mortgage-to-debt OAS tends to be higher when there is weak demand for mortgage assets and lower when there is strong demand for mortgage assets.

MRA — Matter requiring attention

Multifamily mortgage — A mortgage loan secured by a property with five or more residential rental units.

Multifamily mortgage portfolio — Consists of multifamily mortgage loans held by us on our consolidated balance sheets as well as those underlying non-consolidated Freddie Mac mortgage-related securities, and other guarantee commitments, but excluding those underlying our guarantees of HFA bonds under the HFA Initiative.

Net worth (deficit) — The amount by which our total assets exceed (or are less than) our total liabilities as reflected on our consolidated balance sheets prepared in conformity with GAAP.

NIBP — New Issue Bond Program is a component of the Housing Finance Agency Initiative in which we and Fannie Mae issued partially-guaranteed pass-through securities to Treasury that are backed by bonds issued by various state and local HFAs. The program provides financing for HFAs to issue new housing bonds. Treasury is obligated to absorb any losses under the program up to a certain level before we are exposed to any losses.

NPV — Net present value

NYSE — New York Stock Exchange

OAS — Option-adjusted spread — An estimate of the incremental yield spread between a particular financial instrument (*e.g.*, a security, loan or derivative contract) and a benchmark yield curve (*e.g.*, LIBOR or agency or U.S. Treasury securities). This includes consideration of potential variability in the instrument's cash flows resulting from any options embedded in the instrument, such as prepayment options.

OCC — Office of the Comptroller of the Currency

OFHEO — Office of Federal Housing Enterprise Oversight

Option ARM loan — Mortgage loans that permit a variety of repayment options, including minimum, interest-only, fully amortizing 30-year and fully amortizing 15-year payments. The minimum payment alternative for option ARM loans allows the borrower to make monthly payments that may be less than the interest accrued for the period. The unpaid interest, known as negative amortization, is added to the principal balance of the loan, which increases the outstanding loan balance. For our non-agency mortgage-related securities that are backed by option ARM loans, we categorize securities as option ARM if the securities were identified as such based on information provided to us when we entered into these transactions. We have not identified option ARM securities as either subprime or Alt-A securities.

OTC — Over-the-counter

Other guarantee commitments — Mortgage-related assets held by third parties for which we provide our guarantee without our securitization of the related assets.

Other Guarantee Transactions — Transactions in which third parties transfer non-Freddie Mac mortgage-related securities to trusts specifically created for the purpose of issuing mortgage-related securities, or certificates, in the Other Guarantee Transactions.

PCs — Participation Certificates — Securities that we issue as part of a securitization transaction. Typically we purchase mortgage loans from parties who sell mortgage loans, place a pool of loans into a PC trust and issue PCs from that trust.

The PCs are generally transferred to the seller of the mortgage loans in consideration of the loans or are sold to third party investors if we purchased the mortgage loans for cash.

Pension Plan — Employees' Pension Plan

Pension SERP Benefit — The component of the SERP that relates to the Pension Plan.

PMVS — Portfolio Market Value Sensitivity — One of our primary interest-rate risk measures. PMVS measures are estimates of the amount of average potential pre-tax loss in the market value of our net assets due to parallel (PMVS-L) and non-parallel (PMVS-YC) changes in LIBOR.

Primary mortgage market — The market where lenders originate mortgage loans and lend funds to borrowers. We do not lend money directly to homeowners, and do not participate in this market.

Purchase Agreement / Senior Preferred Stock Purchase Agreement — An agreement the Conservator, acting on our behalf, entered into with Treasury on September 7, 2008, which was subsequently amended and restated on September 26, 2008 and further amended on May 6, 2009 and December 24, 2009.

QSPE — Qualifying Special Purpose Entity — A term used within the former accounting guidance on transfers and servicing of financial assets to describe a particular trust or other legal vehicle that was demonstrably distinct from the transferor, had significantly limited permitted activities and could only hold certain types of assets, such as passive financial assets. Prior to January 1, 2010, the securitization trusts that were used for the administration of cash remittances received on the underlying assets of our PCs and REMICs and Other Structured Securities were QSPEs and, as such, they were not consolidated.

Recorded Investment — The dollar amount of a loan recorded on our consolidated balance sheets, excluding any valuation allowance, such as the allowance for loan losses, but which does reflect direct write-downs of the investment. For mortgage loans, direct write-downs consist of valuation allowances associated with recording our initial investment in loans acquired with evidence of credit deterioration at the time of purchase. Recorded investment excludes accrued interest income.

Reform Act — The Federal Housing Finance Regulatory Reform Act of 2008, which, among other things, amended the GSE Act by establishing a single regulator, FHFA, for Freddie Mac, Fannie Mae, and the FHLBs.

REIT — Real estate investment trust — To maintain REIT status under the Internal Revenue Code, a REIT must distribute 90% of its taxable earnings to shareholders annually. During the second quarter of 2010, our majority-owned REIT subsidiaries were eliminated via a merger transaction.

Relief refinance mortgage — A single-family mortgage loan delivered to us for purchase or guarantee that meets the criteria of the Freddie Mac Relief Refinance Mortgage℠ initiative. Part of this initiative is our implementation of HARP for our loans, and relief refinance options are also available for certain non-HARP loans. Although HARP is targeted at borrowers with current LTV ratios above 80%, our initiative also allows borrowers with LTV ratios of 80% and below to participate.

REMIC — Real Estate Mortgage Investment Conduit — A type of multiclass mortgage-related security that divides the cash flows (principal and interest) of the underlying mortgage-related assets into two or more classes that meet the investment criteria and portfolio needs of different investors.

REMICs and Other Structured Securities (or in the case of Multifamily securities, **Other Structured Securities**) — Single- and multiclass securities issued by Freddie Mac that represent beneficial interests in pools of PCs and certain other types of mortgage-related assets. REMICs and Other Structured Securities that are single-class securities pass through the cash flows (principal and interest) on the underlying mortgage-related assets. REMICs and Other Structured Securities that are multiclass securities divide the cash flows of the underlying mortgage-related assets into two or more classes designed to meet the investment criteria and portfolio needs of different investors. Our principal multiclass securities qualify for tax treatment as REMICs.

REO — Real estate owned — Real estate which we have acquired through foreclosure or through a deed in lieu of foreclosure.

RSU — Restricted stock unit

S&P — Standard & Poor's

SEC — Securities and Exchange Commission

Secondary mortgage market — A market consisting of institutions engaged in buying and selling mortgages in the form of whole loans (*i.e.*, mortgages that have not been securitized) and mortgage-related securities. We participate in the secondary mortgage market by purchasing mortgage loans and mortgage-related securities for investment and by issuing guaranteed mortgage-related securities, principally PCs.

Senior preferred stock — The shares of Variable Liquidation Preference Senior Preferred Stock issued to Treasury under the Purchase Agreement.

Seriously delinquent — Single-family mortgage loans that are three monthly payments or more past due or in the process of foreclosure as reported to us by our servicers.

SERP — Supplemental Executive Retirement Plan

Short sale — Typically an alternative to foreclosure consisting of a sale of a mortgaged property in which the homeowner sells the home at market value and the lender accepts proceeds (sometimes together with an additional payment or promissory note from the borrower) that are less than the outstanding mortgage indebtedness in full satisfaction of the loan.

Single-family credit guarantee portfolio — Consists of unsecuritized single-family loans, single-family loans held by consolidated trusts, and single-family loans underlying non-consolidated Other Guarantee Transactions and covered by other guarantee commitments. Excludes our REMICs and Other Structured Securities that are backed by Ginnie Mae Certificates and our guarantees under the HFA Initiative.

Single-family mortgage — A mortgage loan secured by a property containing four or fewer residential dwelling units.

Spread — The difference between the yields of two debt securities, or the difference between the yield of a debt security and a benchmark yield, such as LIBOR.

Strips — Mortgage pass-through securities created by separating the principal and interest payments on a pool of mortgage loans. A principal-only strip entitles the security holder to principal cash flows, but no interest cash flows, from the underlying mortgages. An interest-only strip entitles the security holder to interest cash flows, but no principal cash flows, from the underlying mortgages.

Subprime — Participants in the mortgage market may characterize single-family loans based upon their overall credit quality at the time of origination, generally considering them to be prime or subprime. Subprime generally refers to the credit risk classification of a loan. There is no universally accepted definition of subprime. The subprime segment of the mortgage market primarily serves borrowers with poorer credit payment histories and such loans typically have a mix of credit characteristics that indicate a higher likelihood of default and higher loss severities than prime loans. Such characteristics might include, among other factors, a combination of high LTV ratios, low credit scores or originations using lower underwriting standards, such as limited or no documentation of a borrower's income. While we have not historically characterized the loans in our single-family credit guarantee portfolio as either prime or subprime, we do monitor the amount of loans we have guaranteed with characteristics that indicate a higher degree of credit risk. Notwithstanding our historical characterizations of the single family credit guarantee portfolio, certain security collateral underlying our Other Guarantee Transactions have been identified as subprime based on information provided to Freddie Mac when the transactions were entered into. We also categorize our investments in non-agency mortgage-related securities as subprime if they were identified as such based on information provided to us when we entered into these transactions.

SVP — Senior Vice President

Swaption — An option contract to enter into an interest-rate swap. In exchange for an option premium, a buyer obtains the right but not the obligation to enter into a specified swap agreement with the issuer on a specified future date.

TBA — To be announced

TCLFP — Temporary Credit and Liquidity Facility Program is a component of the Housing Finance Agency Initiative in which we and Fannie Mae issued credit guarantees to holders of variable-rate demand obligations issued by various state and local HFAs. Treasury is obligated to absorb any losses under the program up to a certain level before we are exposed to any losses. The program is scheduled to expire on December 31, 2012; however, Treasury has given participants the option to extend the program facility to December 31, 2015.

TDC — Total direct compensation

TDR — Troubled debt restructuring — A type of loan modification in which the changes to the contractual terms result in concessions to borrowers that are experiencing financial difficulties.

Thrift/401(k) SERP Benefit — The component of the SERP that relates to the Thrift/401(k) Savings Plan.

TO — Target Incentive Opportunity, or Target Opportunity

Total comprehensive income (loss) — Consists of net income (loss) plus total other comprehensive income (loss).

Total other comprehensive income (loss) — Consists of the after-tax changes in: (a) the unrealized gains and losses on available-for-sale securities; (b) the effective portion of derivatives accounted for as cash flow hedge relationships; and (c) defined benefit plans.

Total mortgage portfolio — Includes mortgage loans and mortgage-related securities held on our consolidated balance sheets as well as the balances of our non-consolidated issued and guaranteed single-class and multiclass securities, and other mortgage-related financial guarantees issued to third parties.

Treasury — U.S. Department of the Treasury

UPB — Unpaid principal balance

USDA — U.S. Department of Agriculture

VA — U.S. Department of Veteran Affairs

VIE — Variable Interest Entity — A VIE is an entity: (a) that has a total equity investment at risk that is not sufficient to finance its activities without additional subordinated financial support provided by another party; or (b) where the group of equity holders does not have: (i) the ability to make significant decisions about the entity's activities; (ii) the obligation to absorb the entity's expected losses; or (iii) the right to receive the entity's expected residual returns.

Warrant — Refers to the warrant we issued to Treasury on September 8, 2008 pursuant to the Purchase Agreement. The warrant provides Treasury the ability to purchase shares of our common stock equal to 79.9% of the total number of shares of Freddie Mac common stock outstanding on a fully diluted basis on the date of exercise.

Workout, or loan workout — A workout is either: (a) a home retention action, which is either a loan modification, repayment plan, or forbearance agreement; or (b) a foreclosure alternative, which is either a short sale or a deed in lieu of foreclosure.

XBRL — eXtensible Business Reporting Language

Yield curve — A graphical display of the relationship between yields and maturity dates for bonds of the same credit quality. The slope of the yield curve is an important factor in determining the level of net interest yield on a new mortgage asset, both initially and over time. For example, if a mortgage asset is purchased when the yield curve is inverted, with short-term rates higher than long-term rates, our net interest yield on the asset will tend to be lower initially and then increase over time. Likewise, if a mortgage asset is purchased when the yield curve is steep, with short-term rates lower than long-term rates, our net interest yield on the asset will tend to be higher initially and then decrease over time.

EXHIBIT INDEX

Exhibit No.	Description*
3.1	Federal Home Loan Mortgage Corporation Act (12 U.S.C. §1451 et seq.), as amended through July 21, 2010 (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2010, as filed on August 9, 2010)
3.2	Bylaws of the Federal Home Loan Mortgage Corporation, as amended and restated June 3, 2011 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K as filed on June 7, 2011)
4.1	Eighth Amended and Restated Certificate of Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Voting Common Stock (no par value per share) dated September 10, 2008 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K as filed on September 11, 2008)
4.2	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Preferred Stock (par value $1.00 per share), dated April 23, 1996 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.3	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.81% Non-Cumulative Preferred Stock (par value $1.00 per share), dated October 27, 1997 (incorporated by reference to Exhibit 4.3 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.4	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5% Non-Cumulative Preferred Stock (par value $1.00 per share), dated March 23, 1998 (incorporated by reference to Exhibit 4.4 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.5	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.1% Non-Cumulative Preferred Stock (par value $1.00 per share), dated September 23, 1998 (incorporated by reference to Exhibit 4.5 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.6	Amended and Restated Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Preferred Stock (par value $1.00 per share), dated September 29, 1998 (incorporated by reference to Exhibit 4.6 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.7	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.3% Non-Cumulative Preferred Stock (par value $1.00 per share), dated October 28, 1998 (incorporated by reference to Exhibit 4.7 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.8	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.1% Non-Cumulative Preferred Stock (par value $1.00 per share), dated March 19, 1999 (incorporated by reference to Exhibit 4.8 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.9	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.79% Non-Cumulative Preferred Stock (par value $1.00 per share), dated July 21, 1999 (incorporated by reference to Exhibit 4.9 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.10	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Preferred Stock (par value $1.00 per share), dated November 5, 1999 (incorporated by reference to Exhibit 4.10 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.11	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Preferred Stock (par value $1.00 per share), dated January 26, 2001 (incorporated by reference to Exhibit 4.11 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)

Exhibit No.	Description*
4.12	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Preferred Stock (par value $1.00 per share), dated March 23, 2001 (incorporated by reference to Exhibit 4.12 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.13	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.81% Non-Cumulative Preferred Stock (par value $1.00 per share), dated March 23, 2001 (incorporated by reference to Exhibit 4.13 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.14	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Preferred Stock (par value $1.00 per share), dated May 30, 2001 (incorporated by reference to Exhibit 4.14 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.15	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 6% Non-Cumulative Preferred Stock (par value $1.00 per share), dated May 30, 2001 (incorporated by reference to Exhibit 4.15 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.16	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.7% Non-Cumulative Preferred Stock (par value $1.00 per share), dated October 30, 2001 (incorporated by reference to Exhibit 4.16 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.17	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.81% Non-Cumulative Preferred Stock (par value $1.00 per share), dated January 29, 2002 (incorporated by reference to Exhibit 4.17 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.18	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Rate, Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated July 17, 2006 (incorporated by reference to Exhibit 4.18 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.19	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 6.42% Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated July 17, 2006 (incorporated by reference to Exhibit 4.19 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.20	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.9% Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated October 16, 2006 (incorporated by reference to Exhibit 4.20 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.21	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.57% Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated January 16, 2007 (incorporated by reference to Exhibit 4.21 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.22	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 5.66% Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated April 16, 2007 (incorporated by reference to Exhibit 4.22 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.23	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 6.02% Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated July 24, 2007 (incorporated by reference to Exhibit 4.23 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.24	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of 6.55% Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated September 28, 2007 (incorporated by reference to Exhibit 4.24 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)

Exhibit No.	Description*
4.25	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock (par value $1.00 per share), dated December 4, 2007 (incorporated by reference to Exhibit 4.25 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
4.26	Certificate of Creation, Designation, Powers, Preferences, Rights, Privileges, Qualifications, Limitations, Restrictions, Terms and Conditions of Variable Liquidation Preference Senior Preferred Stock (par value $1.00 per share), dated September 7, 2008 (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K as filed on September 11, 2008)
4.27	Federal Home Loan Mortgage Corporation Global Debt Facility Agreement, dated February 25, 2011 (incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2011, as filed on May 4, 2011)
10.1	Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan (as amended and restated as of June 6, 2008) (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.2	First Amendment to the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.3	Second Amendment to the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, as filed on August 7, 2009)†
10.4	Form of Nonqualified Stock Option Agreement for executive officers under the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan for awards on and after March 4, 2005 but prior to January 1, 2006 (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.5	Form of Nonqualified Stock Option Agreement for executive officers under the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan for awards on and after January 1, 2006 (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.6	Form of Restricted Stock Units Agreement for executive officers under the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan for awards on and after March 4, 2005 (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.7	Form of Restricted Stock Units Agreement for executive officers under the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan for supplemental bonus awards on March 7, 2008 (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.8	Form of Performance Restricted Stock Units Agreement for executive officers under the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan for supplemental bonus awards on March 29, 2007 (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.9	Form of Performance Restricted Stock Units Agreement for executive officers under the Federal Home Loan Mortgage Corporation 2004 Stock Compensation Plan for awards on March 7, 2008 (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.10	Federal Home Loan Mortgage Corporation Global Amendment to Affected Stock Options under Nonqualified Stock Option Agreements and Separate Dividend Equivalent Rights, effective December 31, 2005 (incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.11	Federal Home Loan Mortgage Corporation Amendment to Restricted Stock Units Agreements and Performance Restricted Stock Units Agreements, dated December 31, 2008 (incorporated by reference to Exhibit 10.10 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, as filed on March 11, 2009)†
10.12	Federal Home Loan Mortgage Corporation 1995 Stock Compensation Plan (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†

Exhibit No.	Description*
10.13	First Amendment to the Federal Home Loan Mortgage Corporation 1995 Stock Compensation Plan (incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.14	Second Amendment to the Federal Home Loan Mortgage Corporation 1995 Stock Compensation Plan (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
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10.16	Form of Nonqualified Stock Option Agreement for executive officers under the Federal Home Loan Mortgage Corporation 1995 Stock Compensation Plan (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.17	Form of Restricted Stock Units Agreement for executive officers under the Federal Home Loan Mortgage Corporation 1995 Stock Compensation Plan (incorporated by reference to Exhibit 10.15 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.18	Federal Home Loan Mortgage Corporation Employee Stock Purchase Plan (as amended and restated as of January 1, 2005) (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.19	Federal Home Loan Mortgage Corporation 1995 Directors' Stock Compensation Plan (as amended and restated June 8, 2007) (incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.20	Form of Nonqualified Stock Option Agreement for non-employee directors under the Federal Home Loan Mortgage Corporation 1995 Directors' Stock Compensation Plan for awards in 2006 (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.21	Form of Restricted Stock Units Agreement for non-employee directors under the Federal Home Loan Mortgage Corporation 1995 Directors' Stock Compensation Plan for awards in 2006 (incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.22	Form of Restricted Stock Units Agreement for non-employee directors under the Federal Home Loan Mortgage Corporation 1995 Directors' Stock Compensation Plan for awards since 2006 (incorporated by reference to Exhibit 10.24 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.23	Federal Home Loan Mortgage Corporation Directors' Deferred Compensation Plan (as amended and restated April 3, 1998) (incorporated by reference to Exhibit 10.25 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.24	First Amendment to the Federal Home Loan Mortgage Corporation Directors' Deferred Compensation Plan (as amended and restated April 3, 1998) (incorporated by reference to Exhibit 10.27 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, as filed on March 11, 2009)†
10.25	Federal Home Loan Mortgage Corporation Executive Deferred Compensation Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.28 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.26	First Amendment to the Federal Home Loan Mortgage Corporation Executive Deferred Compensation Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2008, as filed on November 14, 2008)†
10.27	2009 Officer Short-Term Incentive Program (incorporated by reference to Exhibit 10.30 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, as filed on March 11, 2009)†
10.28	2010 Vice President and Non-Officer Long-Term Incentive Award Program (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, as filed on August 9, 2010)†
10.29	Officer Severance Policy, dated April 11, 2011 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2011, as filed on May 4, 2011)†

Exhibit No.	Description*
10.30	Federal Home Loan Mortgage Corporation Severance Plan (as restated and amended effective January 1, 1997) (incorporated by reference to Exhibit 10.31 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.31	First Amendment to the Federal Home Loan Mortgage Corporation Severance Plan (incorporated by reference to Exhibit 10.32 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.32	Federal Home Loan Mortgage Corporation Supplemental Executive Retirement Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.33 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.33	First Amendment to the Federal Home Loan Mortgage Corporation Supplemental Executive Retirement Plan (As Amended and Restated January 1, 2008) (incorporated by reference to Exhibit 10.38 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, as filed on February 24, 2010)†
10.34	Second Amendment to the Federal Home Loan Mortgage Corporation Supplemental Executive Retirement Plan (as Amended and Restated January 1, 2008) (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K as filed on June 28, 2011)†
10.35	Federal Home Loan Mortgage Corporation Long-Term Disability Plan (incorporated by reference to Exhibit 10.34 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.36	First Amendment to the Federal Home Loan Mortgage Corporation Long-Term Disability Plan (incorporated by reference to Exhibit 10.35 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.37	Second Amendment to the Federal Home Loan Mortgage Corporation Long-Term Disability Plan (incorporated by reference to Exhibit 10.36 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)†
10.38	Executive Management Compensation Program (as amended and restated as of June 2, 2011) (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2011, as filed on August 8, 2011)†
10.39	Federal Home Loan Mortgage Corporation Mandatory Executive Deferred Base Salary Plan, Effective as of January 1, 2009 (incorporated by reference to Exhibit 10.45 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, as filed on February 24, 2010)†
10.40	First Amendment To The Federal Home Loan Mortgage Corporation Mandatory Executive Deferred Base Salary Plan (As Effective January 1, 2009) (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2011, as filed on August 8, 2011)†
10.41	Executive Management Compensation Recapture Policy (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K, as filed on December 24, 2009)†
10.42	Memorandum Agreement, dated July 20, 2009, between Freddie Mac and Charles E. Haldeman, Jr. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, as filed on July 21, 2009)†
10.43	Recapture Agreement, dated July 21, 2009, between Freddie Mac and Charles E. Haldeman, Jr. (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, as filed on July 21, 2009)†
10.44	Restrictive Covenant and Confidentiality Agreement, dated July 21, 2009, between Freddie Mac and Charles E. Haldeman, Jr. (incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2009, as filed on November 6, 2009)†
10.45	Memorandum Agreement, dated September 24, 2009, between Freddie Mac and Ross J. Kari (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, as filed on September 24, 2009)†
10.46	Recapture Agreement, dated September 24, 2009, between Freddie Mac and Ross J. Kari (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, as filed on September 24, 2009)†
10.47	Restrictive Covenant and Confidentiality Agreement, dated September 24, 2009, between Freddie Mac and Ross J. Kari (incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2009, as filed on November 6, 2009)†

Exhibit No.	Description*
10.48	Restrictive Covenant and Confidentiality Agreement, dated April 14, 2010, between Freddie Mac and Anthony Renzi†
10.49	Restrictive Covenant and Confidentiality Agreement, dated October 15, 2004, between Freddie Mac and Jerry Weiss†
10.50	Restrictive Covenant and Confidentiality Agreement, dated December 19, 2007, between Freddie Mac and [Paige H. Wisdom]†
10.51	Description of non-employee director compensation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K as filed on December 23, 2008)†
10.52	PC Master Trust Agreement dated January 4, 2012
10.53	Form of Indemnification Agreement between the Federal Home Loan Mortgage Corporation and executive officers (for agreements with officers entered into prior to August 2011) and outside Directors (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K as filed on December 23, 2008)†
10.54	Form of Indemnification Agreement between the Federal Home Loan Mortgage Corporation and executive officers (for agreements with officers entered into beginning in August 2011)†
10.55	Consent of Defendant Federal Home Loan Mortgage Corporation with the Securities and Exchange Commission, dated September 18, 2007 (incorporated by reference to Exhibit 10.65 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
10.56	Letters, dated September 1, 2005, setting forth an agreement between Freddie Mac and FHFA (incorporated by reference to Exhibit 10.67 to the Registrant's Registration Statement on Form 10 as filed on July 18, 2008)
10.57	Amended and Restated Senior Preferred Stock Purchase Agreement dated as of September 26, 2008, between the United States Department of the Treasury and Federal Home Loan Mortgage Corporation, acting through the Federal Housing Finance Agency as its duly appointed Conservator (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2008, as filed on November 14, 2008)
10.58	Amendment to Amended and Restated Senior Preferred Stock Purchase Agreement, dated as of May 6, 2009, between the United States Department of the Treasury and Federal Home Loan Mortgage Corporation, acting through the Federal Housing Finance Agency as its duly appointed Conservator (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2009, as filed on May 12, 2009)
10.59	Second Amendment dated as of December 24, 2009, to the Amended and Restated Senior Preferred Stock Purchase Agreement dated as of September 26, 2008, between the United States Department of the Treasury and Federal Home Loan Mortgage Corporation, acting through the Federal Housing Finance Agency as its duly appointed Conservator (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, as filed on December 29, 2009)
10.60	Warrant to Purchase Common Stock, dated September 7, 2008 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K as filed on September 11, 2008)
10.61	Memorandum of Understanding Among the Department of Treasury, the Federal Housing Finance Agency, the Federal National Mortgage Association, and the Federal Home Loan Mortgage Corporation, dated October 19, 2009 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, as filed on October 23, 2009)
10.62	Omnibus Consent to HFA Initiative Program Modifications, dated November 23, 2011, among the U.S. Department of the Treasury, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and the Federal Housing Finance Agency
12.1	Statement re: computation of ratio of earnings to fixed charges and computation of ratio of earnings to combined fixed charges and preferred stock dividends
24.1	Powers of Attorney
31.1	Certification of Chief Executive Officer pursuant to Securities Exchange Act Rule 13a-14(a)
31.2	Certification of Executive Vice President — Chief Financial Officer pursuant to Securities Exchange Act Rule 13a-14(a)
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350
32.2	Certification of Executive Vice President — Chief Financial Officer pursuant to 18 U.S.C. Section 1350

Exhibit No.	Description*
101.INS	XBRL Instance Document(1)
101.SCH	XBRL Taxonomy Extension Schema(1)
101.CAL	XBRL Taxonomy Extension Calculation(1)
101.LAB	XBRL Taxonomy Extension Labels(1)
101.PRE	XBRL Taxonomy Extension Presentation(1)
101.DEF	XBRL Taxonomy Extension Definition(1)

(1) The financial information contained in these XBRL documents is unaudited. The information in these exhibits shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liabilities of Section 18, nor shall they be deemed incorporated by reference into any disclosure document relating to Freddie Mac, except to the extent, if any, expressly set forth by specific reference in such filing.

* The SEC file numbers for the Registrant's Registration Statement on Form 10, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K are 000-53330 and 001-34139.

† This exhibit is a management contract or compensatory plan or arrangement.

Exhibit 12.1

RATIO OF EARNINGS TO FIXED CHARGES AND RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

	Year Ended December 31,				
	2011	2010	2009	2008	2007
	(dollars in millions)				
Net loss before income tax benefit (expense) and cumulative effect of changes in accounting principles	$ (5,666)	$(14,882)	$(22,384)	$(44,564)	$ (5,989)
Add:					
Low-income housing tax credit partnerships	—	—	4,155	453	469
Total interest expense	79,988	92,131	22,150	33,332	38,482
Interest factor in rental expenses	4	5	7	8	7
Earnings (loss), as adjusted	$74,326	$ 77,254	$ 3,928	$(10,771)	$32,969
Fixed charges:					
Total interest expense	$79,988	$ 92,131	$ 22,150	$ 33,332	$38,482
Interest factor in rental expenses	4	5	7	8	7
Capitalized interest	—	—	—	—	—
Total fixed charges	$79,992	$ 92,136	$ 22,157	$ 33,340	$38,489
Senior preferred stock and preferred stock dividends[1]	6,498	5,749	4,105	675	398
Total fixed charges including preferred stock dividends	$86,490	$ 97,885	$ 26,262	$ 34,015	$38,887
Ratio of earnings to fixed charges[2]	—	—	—	—	—
Ratio of earnings to combined fixed charges and preferred stock dividends[3]	—	—	—	—	—

(1) Senior preferred stock and preferred stock dividends represent pre-tax earnings required to cover any senior preferred stock and preferred stock dividend requirements computed using our effective tax rate, whenever there is an income tax provision, for the relevant periods.

(2) Ratio of earnings to fixed charges is computed by dividing earnings (loss), as adjusted by total fixed charges. For the ratio to equal 1.00, earnings (loss), as adjusted must increase by $5.7 billion, $14.9 billion, $18.2 billion, $44.1 billion, and $5.5 billion for the years ended December 31, 2011, 2010, 2009, 2008, and 2007, respectively.

(3) Ratio of earnings to combined fixed charges and preferred stock dividends is computed by dividing earnings (loss), as adjusted by total fixed charges including preferred stock dividends. For the ratio to equal 1.00, earnings (loss), as adjusted must increase by $12.2 billion, $20.6 billion, $22.3 billion, $44.8 billion, and $5.9 billion for the years ended December 31, 2011, 2010, 2009, 2008, and 2007, respectively.

Exhibit 31.1

CERTIFICATION

PURSUANT TO SECURITIES EXCHANGE ACT RULE 13a-14(a)

I, Charles E. Haldeman, Jr., certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2011 of the Federal Home Loan Mortgage Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 9, 2012

/s/ Charles E. Haldeman, Jr.

Charles E. Haldeman, Jr.
Chief Executive Officer

Exhibit 31.2

CERTIFICATION

PURSUANT TO SECURITIES EXCHANGE ACT RULE 13a-14(a)

I, Ross J. Kari, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2011 of the Federal Home Loan Mortgage Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 9, 2012

/s/ Ross J. Kari

Ross J. Kari
Executive Vice President — Chief Financial Officer

Exhibit 32.1

CERTIFICATION

PURSUANT TO 18 U.S.C. SECTION 1350,

AS ENACTED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the year ended December 31, 2011 of the Federal Home Loan Mortgage Corporation (the "Company"), as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Charles E. Haldeman, Jr., Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 9, 2012

/s/ Charles E. Haldeman, Jr.

Charles E. Haldeman, Jr.
Chief Executive Officer

Exhibit 32.2

CERTIFICATION

PURSUANT TO 18 U.S.C. SECTION 1350,

AS ENACTED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the year ended December 31, 2011 of the Federal Home Loan Mortgage Corporation (the "Company"), as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ross J. Kari, Executive Vice President — Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 9, 2012

/s/ Ross J. Kari

Ross J. Kari
Executive Vice President — Chief Financial Officer

Freddie
Mac

JULY 2012

THE VALUE *of* GREEN LABELS *in the* California Housing Market

An Economic Analysis of the Impact of Green Labeling on the Sales Price of a Home

NILS KOK Maastricht University, Netherlands / University of California, Berkeley, CA
MATTHEW E. KAHN University of California, Los Angeles, CA

NILS KOK

Nils Kok currently holds positions as a visiting scholar at the Goldman School of Public Policy at the University of California at Berkeley, and as associate professor in Finance and Real Estate at Maastricht University, the Netherlands. His research on the intersection of sustainability and finance in the real estate sector has been rewarded with several international grants and prizes, and has appeared in leading academic journals. He communicates his ideas and findings in the global arena as a frequent speaker at academic and industry conferences and actively shares his expertise through workshops with investment practitioners and policy-makers. Nils is also the co-founder of the Global Real Estate Sustainability Benchmark (GRESB), a premier investor-led initiative to assess the environmental and social performance of the global real estate investment industry. More information and blog at www.nilskok.com.

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MATTHEW E. KAHN

Matthew E. Kahn is a professor at the UCLA Institute of the Environment, the Department of Economics, the Department of Public Policy, the UCLA Anderson School of Management and the UCLA School of Law. He is a research associate at the National Bureau of Economic Research. He holds a Ph.D. in economics from the University of Chicago. Before joining the UCLA faculty in January 2007, he taught at Columbia University and the Fletcher School at Tufts University. He has served as a visiting professor at Harvard and Stanford Universities. He is the author of Green Cities: Urban Growth and the Environment (Brookings Institution Press 2006) and the co-author of Heroes and Cowards: The Social Face of War (Princeton University Press 2008). He is the author of Climatopolis: How Our Cities Will Thrive in the Hotter World (Basic Books 2010). His research areas include environmental, urban, energy and real estate economics.

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JULY 2012

THE VALUE *of* GREEN LABELS
in the California Housing Market

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"The Value of Green Labels in the California Housing Market" is the first study to provide statistical evidence that, holding other factors constant, a green label on a single-family home in California provides a market premium compared to a comparable home without the label. The research also indicates that the price premium is influenced by local climate and environmental ideology. To reach these conclusions, researchers conducted an economic analysis of 1.6 million homes sold in California between 2007 and 2012, controlling for other variables known to influence home prices in order to isolate the added value of green home labels.

KEY FINDING: *Green Home Labels Add 9 Percent Price Premium*

This study, conducted by economists at the University of California, Berkeley and University of California, Los Angeles, finds that California homes labeled by Energy Star, LEED for Homes and GreenPoint Rated sell for 9 percent more (±4%) than comparable, non-labeled homes. Because real estate prices depend on a variety of factors, the study controlled for key variables that influence home prices including location, size, vintage, and the presence of major amenities such as swimming pools, views and air conditioning. Considering that the average sales price of a non-labeled home in California is $400,000, the price premium for a certified green home translates into some $34,800 more than the value of a comparable home nearby.

GREEN LABELED HOMES SELL AT HIGHER PRICES

A green label adds an average **9%** price premium to sale price versus other comparable homes.

AVERAGE HOME SALE PRICE IN CALIFORNIA

GREEN LABELS FOR HOMES

Green home labels such as Energy Star, LEED for Homes, and GreenPoint Rated have been established to verify and communicate to consumers that a home is designed and built to use energy efficiently. Green homes also provide benefits beyond energy savings, such as more comfortable and stable indoor temperatures and more healthful indoor air quality. LEED and GreenPoint Rated homes also feature efficient water use; sustainable, non-toxic building materials; and other features that reduce their impact on the environment, such as proximity to parks, shops and transit.

EXPLAINING THE GREEN PREMIUM

This study yields two key insights into the effect of green labels on property values, and why these effects can be so significant. This is especially important in light of the fact that the added value of a green-labeled home far exceeds both the estimated cost of adding energy efficiency features to a home and the utility-bill savings generated by those improvements. Clearly, other factors are in play in producing this premium:

- The results show that the resale premium associated with a green label varies considerably from region to region in California, and is highest in the areas with hotter climates. It is plausible that residents in these areas value green labels more due to the increased cost of keeping a home cool.
- The premium is also positively correlated to the environmental ideology of the area, as measured by the rate of registration of hybrid vehicles. In line with previous evidence on the private value of green product attributes, this correlation suggests that some homeowners may attribute value to intangible qualities associated with owning a green home, such as pride or perceived status.

RESEARCH METHODOLOGY

The study, conducted by Matthew E. Kahn of UCLA and Nils Kok, visiting scholar at UC Berkeley and affiliated with Maastricht University in the Netherlands, examined all of the 1.6 million single-family homes sold between 2007 and 2012 in California. Of those homes, 4,321 were certified under Energy Star Version 2, GreenPoint Rated, or LEED for Homes. Seventy percent of the homes with a green label that were sold during this time period were new construction. The economic approach used, called "hedonic pricing analysis," controlled for a large number of variables that affect real estate pricing, such as vintage, size, location (by zip code) and the presence of major amenities (e.g., pools, views, and air conditioning). The findings of this study echo the results of previous research in the commercial real estate sector, which has found that green labels positively affect rents, vacancy rates and transaction prices for commercial space in office buildings.

RESEARCH QUESTIONS:

- *Commercial real estate investors and tenants value "green" building features. Do homeowners?*
- *How much more value do green homes have?*
- *What factors influence the value homeowners place on green or energy efficient homes? Hotter climate? Higher electricity prices? Environmental ideology?*

1 INTRODUCTION

Increased awareness of energy efficiency and its importance in the built environment have turned public attention to more efficient, green building. Indeed, previous research has documented that the inventory of certified green commercial space in the U.S. has increased dramatically since the introduction of rating schemes that attest to the energy efficiency or sustainability of commercial buildings (based on criteria published by the public and private institutions administering the rating schemes). Importantly, tenants and investors value the green features in such buildings. There is empirical evidence that green labels affect the financial performance of commercial office space: Piet Eichholtz et al. (2010) study commercial office buildings certified under the LEED program of the US Green Building Council (USGBC) and the Energy Star program of the EPA, documenting that these labels positively affect rents, vacancy rates and transaction prices.

Of course, private homeowners may be different from tenants and investors in commercial buildings, especially in the absence of standardized, publicly available information on the energy efficiency of homes. But in recent years, there has been an increase in the number of homes certified as energy efficient or sustainable based on national standards such as Energy Star and LEED and local standards such as GreenPoint Rated in

California. By obtaining verification from a third party that these homes are designed and built to use energy and other resources more efficiently than prescribed by building codes, homes with green labels are claimed to offer lower operational costs than conventional homes. In addition, it is claimed that owners of such homes enjoy ancillary benefits beyond energy savings, such as greater comfort levels and better indoor environmental quality. If consumers observe and capitalize these amenities, hedonic methods can be used to measure the price premium for such attributes, representing the valuation of the marginal buyer (Patrick L. Bajari and Lanier C. Benkard, 2005, Sherwin Rosen, 1974).

In the European Union, the introduction of energy labels, following the 2003 European Performance of Buildings Directive (EPBD), has provided single-family homebuyers with information about how observationally identical homes differ with respect to thermal efficiency. Presumably, heterogeneity in thermal efficiency affects electricity and gas consumption. The EU energy label seems to be quite effective in resolving the information asymmetry in understanding the energy efficiency of dwellings: Dirk Brounen and Nils Kok (2011) estimate hedonic pricing gradients for recently sold homes in the Netherlands and document that homes receiving an "A" grade in terms of energy efficiency sell for a 10 percent price premium. Conversely, dwellings that are labeled as inefficient transact for substantial discounts relative to otherwise comparable, standard homes.

We are not aware of any large sample studies the United States that have investigated the financial performance of green homes. There is some information on the capitalization of solar panels in home prices; one study based in California documents that homes with solar panels sell for roughly 3.5 percent more than comparable homes without solar panels (Samuel R. Dastrup et al., 2012). But unlike findings in previous research on the commercial real estate sector, there is a dearth of systematic evidence on the capitalization of energy efficiency and other sustainability-related amenities in asset prices of the residential building stock, leading to uncertainty among private investors and developers about whether and how much to invest in the construction and redevelopment of more efficient homes.[1]

This paper is the first to systematically address the impact of labels attesting to energy efficiency and other green features of single-family dwellings on the value of these homes as observed in the marketplace, providing evidence on the private returns to the investments in energy-efficient single-family dwellings, an increasingly important topic for the residential market in the U.S.

Using a sample of transactions in California, consisting of some 4,231 buildings certified by the USGBC, EPA, and a statewide rating agency, Build It Green, and a control sample of some 1.6 million non-certified homes, we relate transaction prices of these dwellings to their hedonic characteristics, controlling for geographic location and the time of the sale.

[1] There are some industry-initiated case studies on the financial performance of green homes. An example is a study by the Earth Advantage Institute, which documents for a sample of existing homes in Oregon that those with a sustainable certification sell for 30 percent more than homes without such a designation, based on sales data provided by the Portland Regional Multiple Listing Service. However, the sources of the economic premiums are diverse, not quantified, and not based on rigorous econometric estimations.

The results indicate the importance of a label attesting to the sustainability of a property in affecting the transaction price of recently constructed homes as observed in the marketplace, suggesting that an otherwise comparable dwelling with a green certification will transact for about 9 percent more.

The results are robust to the inclusion of a large set of control variables, such as dwelling vintage, size and the presence of amenities, although we cannot control for "unobservables," such as the prestige of the developer and the relative quality of durables installed in the home.

In addition to estimating the average effect, we test whether the price premium is higher for homes located in hotter climates and in electric utility districts featuring higher average residential electricity prices. Presumably, more efficient homes are more valuable in regions where climatic conditions demand more cooling, and where energy prices are higher. In line with evidence on the capitalization of energy efficiency in commercial buildings (Piet Eichholtz et al., in press), our results suggest that a label appears to add more value in hotter climates, where cooling expenses are likely to be a larger part of total housing expenses. This provides some evidence on the rationality of consumers in appropriately capitalizing the benefits of more efficient homes.

We also test whether the price of certified homes is affected by consumer ideology, as measured by the percentage of hybrid registrations in the neighborhood. A desire to be environmentally conscious may increase the value of green homes because it is a tangible signal of environmental virtue (Steven E. Sexton and Alison L. Sexton, 2011), and an action a person can take in support of their environmental commitment. The results show that the green premium is positively related to the environmental ideology of the neighborhood; green homes located in areas with a higher fraction of hybrid registrations sell for higher prices. Some homeowners seem to attribute non-financial utility to a green label (and its underlying features), which is in line with previous evidence on the private value of green product attributes (Matthew E. Kahn, 2007).

The remainder of this paper is organized as follows: Section 2 describes the empirical framework and the econometric models. Section 3 discusses the data, which represent a unique combination of dwelling-level transaction data with detailed information on green labels that have been assigned to a subsample of the data. In Section 4, we provide the main results of the analysis. Section 5 provides a discussion and policy implications of the findings.

1.6 MILLION HOMES SOLD IN CALIFORNIA DURING THE STUDY PERIOD *(control group)*

4,231 CALIFORNIA HOMES SOLD *with a green label from Energy Star, GreenPoint Rated or LEED for Homes*

*An otherwise comparable home with a green certification transacts for **8.7% more** (+/-4%).*

The green homes in our sample are mostly "production homes" and not high-end custom homes. Many large residential developers, such as KB Homes, are now constructing Energy Star and GreenPoint Rated homes.

2 METHOD AND EMPIRICAL FRAMEWORK

Consider the determinants of the value of a single-family dwelling at a point in time as a bundle of residential services consumed by the household (John F. Kain and John M. Quigley, 1970). It is well-documented in the urban economics literature that the services available in the neighborhood, such as schools, public transport and other amenities, will explain a large fraction of the variation in price (see, for example, Joseph Gyourko et al., 1999). But of course, the dwelling's square footage, architecture and other structural attributes will also influence its value.

In addition to attributes included in standard asset pricing models explaining home prices, the thermal characteristics and other "sustainability" features of the dwelling may have an impact on the transaction price. These characteristics provide input, which combined with energy inputs, provide comfort (John M. Quigley and Daniel L. Rubinfield, 1989). However, the energy efficiency of homes (and their equipment) is often hard to observe, leading to information asymmetry between the seller and the buyer. In fact, homeowners typically have limited information on the efficiency of their own home; it has been documented that the "energy literacy" of resident households is quite low (Dirk Brounen et al., 2011). Indeed, recent evidence shows that providing feedback to private consumers with respect to their energy consumption is a simple, but effective "nudge" to improve their energy efficiency (Hunt Allcott, 2011).

To resolve the information asymmetry in energy efficiency, and also in related green attributes, energy labels and green certificates have been introduced in commercial and residential real estate markets. The labels can be viewed as an additional step to enhance the transparency of resource consumption in the real estate sector. Such information provision may enable private investors to take sustainability into account when making housing decisions, reducing costly economic research (Robert W. Gilmer, 1989). From an economic perspective, the labels should have financial utility for prospective homeowners, as the savings resulting from purchasing a more efficient home may result in lower operating costs during the economic life, or less exposure to utility cost escalation over time.[2] In addition, similar to a high quality "view," various attributes of homes, such as durability or thermal comfort, may not provide a direct cash flow benefit, but may still be monetized in sales transactions.

To empirically test this hypothesis, we relate the logarithm of the transaction price to the hedonic characteristics of single-family homes, controlling precisely for the variations in the measured and unmeasured characteristics of rated buildings and the nearby control dwellings, by estimating:

$$(1)\ \log(R_{ijt}) = \alpha green_{it} + \beta X_i + \gamma_{jt} + \varepsilon_{ijt}$$

In this formulation, R_{ijt} is the home's sales price commanded by dwelling i in cluster j in quarter t; X_i is the set of hedonic characteristics of building i, and ε_{ijt} is an error term. To control more precisely for locational effects, we include a set of dummy variables, one for each of the j zip codes. These zip-code-fixed effects account for cross-area differences in local public goods such as weather, crime, neighborhood demographics and school quality. To capture the time-variance in local price dynamics, we interact zip-code-fixed effects with year/month indicators; the transaction prices of homes are thus allowed to vary by each month during the time period, in each specific location. This rich set of fixed effects allows for local housing market trends and captures the value of time-varying local public goods, such as crime dynamics or the growth or decline of a nearby employment district. $green_i$ is a dummy variable with a value of one if dwelling i is rated by the EPA, USGBC or Build It Green, and zero otherwise. $\alpha, \beta, \gamma_{jt}$ are estimated coefficients. α is thus the average premium, in percent, estimated for a labeled building relative to those observationally similar buildings in its geographic cluster–the zip code. Standard errors are clustered at the zip code level to control for spatial autocorrelation in prices within zip codes.

[2] For the commercial real estate market, a series of papers that study investor and tenant demand for green office space in the U.S. show that buildings with an Energy Star label–indicating that a building belongs to the top 25 percent of the most energy-efficient buildings–or a LEED label have rents that are two to three percent higher as compared to regular office buildings. Transaction prices for energy-efficient office buildings are higher by 13 to 16 percent. Further analyses show that the cross-sectional variation in these premiums has a strong relation to real energy consumption, indicating that tenants and investors in the commercial property sector capitalize energy savings in their investment decisions (Piet Eichholtz *et al.*, 2010; in press).

In a second set of estimates, we include in equation (1) additional interaction terms where we interact “green” with a vector of locational attributes:

$$(2)\ \log(R_{ijt}) = \alpha_0 green_{it} + \alpha_1 N green_{it} + \beta X_i + \gamma_{jt} + \varepsilon_{ijt}$$

We estimate equation (2) to study whether the “green label” premium varies with key observables such as climatic conditions and local electricity prices.[3] We posit that green homes will be more valuable in areas that experience more hot days and areas where electricity prices are high. Presumably, the present value of future energy savings is highest in those regions, which should be reflected in the valve attributed to the “green” indicator.

A second interaction effect addressed in this study is whether the capitalization effect of green labels is larger in communities that reveal a preference for “green products.” A desire to appear environmentally conscious or to act on one’s environmental values may increase the financial value of “green” homes because it is a signal of environmental virtue.[4] Our proxy for environmental idealism is the Toyota Prius share of registered vehicles in the zip code (these data are from the year 2007).[5] Last, we test for whether the green home premium differs over the business cycle. The recent sharp recession offers significant variation in demand for real assets, which may affect the willingness to pay for energy efficiency and other green attributes.

Anecdotally, we know that the green homes in our sample are mostly “production homes” and not high-end custom homes–many large residential developers, such as KB Homes, are now constructing Energy Star and GreenPoint Rated homes. But, it is important to note that we do not have further information on the characteristics of the developers of “green” homes and conventional homes. Therefore, we cannot control for the possibility that some developers choose to systematically bundle green attributes with other amenities, such more valuable appliances in green homes or a higher-quality finishing. We assume that such unobservables are not systematically correlated with green labels. Otherwise, we would overestimate the effects of “green” on housing prices.

[3] In model (2), we replace the zip-code-fixed effects for county fixed effects, as data on Prius registrations, electricity prices and the clustering of green homes is measured at the zip code level. To further control for the quality of the neighborhood and the availability of local public goods, we include a set of demographic variables from the Census bureau, plus distance to the central business district (CBD) and distance to the closest public transportation hub.

[4] This is comparable to private investors’ preference for socially responsible investments (Jeroen Derwall *et al.*, 2011).

[5] See Matthew E. Kahn (2007) for a discussion of Prius registrations as proxy for environmentalism.

3 DATA

A. Green Homes: Measurements and Data Sources

In the U.S., there are multiple programs that encourage the development of energy efficient and sustainable dwellings through systems of ratings to designate and publicize exemplary buildings. These labels are asset ratings: snapshots in time that quantify the thermal and other sustainability characteristics of the building and predict its energy performance through energy modeling. They neither measure actual performance, nor take occupant behavior into account. The Energy Star program, jointly sponsored by the U.S. Environmental Protection Agency and the U.S. Department of Energy, is intended to identify and promote energy-efficient products, appliances, and buildings. The Energy Star label was first offered for residential buildings in 1995.[6]

The Energy Star label is an asset rating touted as a vehicle for reducing operational costs in heating, cooling, and water-delivering in homes, with conservation claims in the range of 20 to 30 percent, or $200 to $400 in annual savings. In addition, it is claimed that the label improves comfort by sealing leaks, reducing indoor humidity and creating a quieter environment. But the Energy Star label is also marketed as a commitment to conservation and environmental stewardship, reducing air pollution.

In a parallel effort, the US Green Building

[6] Under the initial rating system, which lasted until 2006, buildings could receive an Energy Star certification if improvements were made in several key areas of the home, including high-performance windows, tight constructions and ducts, and efficient heating and cooling equipment. An independent third-party verification by a certified Home Energy Rater was required. Homes qualified under Energy Star Version 1 had to meet a predefined energy efficiency score ("HERS") of 86, equating more than 30 percent energy savings as compared to a home built to the 1992 building code. From January 2006 until the end of 2011, homes were qualified under Energy Star Version 2. This version was developed in response to increased mandatory requirements in the national building codes and local regulations, as well as technological progress in construction practices. The updated guidelines included a visual inspection of the insulation installation, a requirement for appropriately sized HVAC systems, and a stronger promotion of incorporating efficient lighting and appliances into qualified homes. An additional "thermal bypass checklist" (TBC) became mandatory in 2007. As of 2012, Energy Star Version 3 has been in place, including further requirements for energy efficiency measures and strict enforcement of checklist completion.

Council, a private non-profit organization, has developed the LEED (Leadership in Energy and Environmental Design) green building rating system to encourage the "adoption of sustainable green building and development practices." Since adoption in 1999, separate standards have been applied to new buildings and to existing structures.

The LEED label requires sustainability performance in areas beyond energy use, and the requirements for certification of LEED buildings are substantially more complex than those for the award of an Energy Star rating. The certification process for homes measures six distinct components of sustainability: sustainable sites, water efficiency, materials and resources, indoor environmental quality, innovation, as well as energy performance. Additional points can be obtained for location and linkages, and awareness and education.[7]

Whereas LEED ratings for commercial (office) space have diffused quite rapidly over the past 10 years (see Nils Kok et al., 2011, for a discussion), the LEED for Homes rating began in pilot form only in 2005, and it was fully balloted as a rating system in January 2008.

It is claimed that LEED-certified dwellings reduce expenses on energy and water, have increased asset values, and that they provide healthier and safer environments for occupants. It is also noted that the award of a LEED designation "demonstrate[s] an owner's commitment to environmental stewardship and social responsibility."

In addition to these national programs intended for designating exemplary performance in the energy efficiency and sustainability of (single-family) homes, some labeling initiatives have emerged at the city or state level. In California, the most widely adopted of these is GreenPoint Rated, developed by Build It Green, a non-profit organization whose mission is to promote healthy, energy- and resource-efficient homes in California.

The GreenPoint Rated scheme is comparable to LEED for Homes, including multiple components of "sustainability" in the rating process, with minimum rating requirements for energy, water, indoor air quality, and resource conservation. Importantly, the GreenPoint Rated scheme is available not just for newly constructed homes, but it is applicable to homes of all vintages. The label is marketed as "a recognizable, independent seal of approval that verifies a home has been built or remodeled according to proven green standards." Comparable to other green rating schemes, proponents claim that a GreenPoint rating can improve property values at the time of sale.

[7] For more information on the rating procedures and measurements for LEED for Homes, see: http://www.usgbc.org/DisplayPage.aspx?CMSPageID=147.

B. Data on Homes Prices and Their Determinants

We obtain information on LEED-rated homes and GreenPoint Rated homes using internal documentation provided by the USGBC and Build It Green, respectively. Energy-Star-rated homes are identified by street address in files available from local Energy Star rating agencies. We focus our analysis on the economically most important state of California, covering the 2007–2012 time period.

The number of homes rated by the green schemes is still rather limited — 4,921 single-family homes rated with GreenPoint Rated and 489 homes rated with LEED for Homes (as of January 2012). The number of homes that obtained an Energy Star label is claimed to be substantially larger, but we note that data on Energy Star Version 1 has not been documented, and information on homes certified under Energy Star Version 2 is not stored in a central database at the federal level. Therefore, we have to rely on information provided by consultants who conduct Energy Star inspections. We obtained details on 4,938 single-family dwellings that have been labeled under the Energy Star Version 2 program.

We matched the addresses of the buildings rated in these three programs as of January 2012 to the single-family residential dwellings identified in the archives maintained by DataQuick. The DataQuick service and the data files maintained by DataQuick are advertised as a "robust national property database and analytic expertise to deliver innovative solutions for any company participating in the real estate market."[8] Our initial match yielded 8,243 certified single-family dwellings for which an assessed value or transaction price, and dwelling characteristics could be identified in the DataQuick files; of those homes, 4,231 transacted during the sample period.[9]

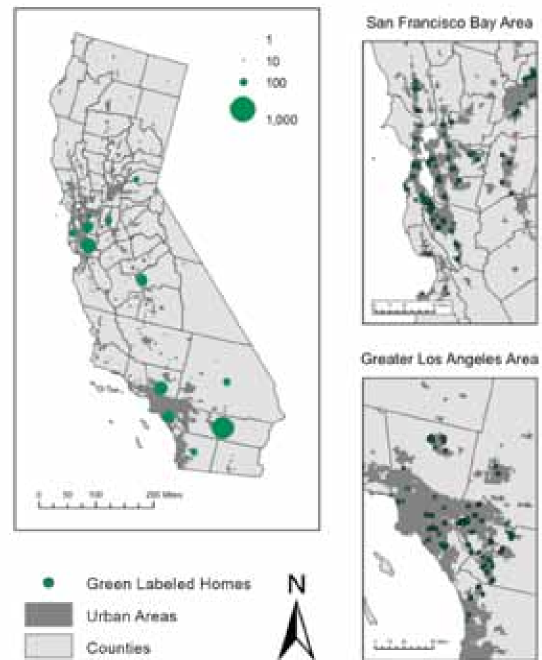
[8] DataQuick maintains an extensive micro database of approximately 120 million properties and 250 million property transactions. The data has been extensively used in previous academic studies. See, for example, Raphael W. Bostic and Kwan Ok Lee (2008) and Fernando Ferreira *et al.* (2010).

[9] We were not able to match the remaining 2,105 certified properties to the DataQuick files. Reasons for the missing observations include, for example, properties that were still under construction, and incomplete information on certified properties.

Figure 1 shows the geographic distribution of the certified homes in our sample. There is a clustering of green rated homes in certain areas, such as the Los Angeles region and the San Francisco region. The geographic distribution is correlated with higher incomes (e.g., in the San Francisco Bay Area), but also with higher levels of construction activity in recent years (e.g., in the Central Valley). As shown by the maps, in the case of Los Angeles, many of the "green label" homes are built in the hotter eastern part of the metropolitan area. It is important to note that there is little new construction in older, richer cities such as Berkeley and Santa Monica (Matthew E. Kahn, 2011). This means that it is likely to be the case that there will be few single-family "green homes" built in such areas.

FIGURE 1.

Certified Homes in California *(2007-2012)*



Sources: Build It Green, EPA, and USGBC

GEOGRAPHIC DISTRIBUTION *of* **GREEN-LABELED HOMES** *is correlated with*

- *Higher incomes (e.g., San Francisco Bay Area)*
- *Higher levels of construction activity (e.g., Central Valley)*
- *Hotter local climate (e.g., inland areas around Los Angeles and Central Valley)*

HEDONIC VARIABLES CONSIDERED:

- *size*
- *quality*
- *number of bedrooms*
- *renovations*
- *garage*
- *swimming pool*
- *air conditioning*
- *view*

To investigate the effect of energy efficiency and sustainability on values of dwellings as observed in the market, we also collect information on all non-certified single-family dwellings that transacted during the same time period, in the same geography. In total, there are nearly 1.6 million dwellings in our sample of green buildings and control buildings with hedonic and financial data.

Besides basic hedonic characteristics, such as vintage, size and presence of amenities, we also have information on the time of sale. Clearly, during the time period that we study, many homes in our geography were sold due to financial distress (i.e., foreclosure or mortgage delinquency). This, of course, has implications for the transaction value of homes (John Y. Campbell et al., 2011). We therefore create an indicator for a "distressed" sale, based on information provided by DataQuick.

We also collect data on environmental ideology, proxied by the registration share of Prius vehicles in each zip code.[10] Local climatic conditions are assessed by the total annual cooling degree days at the nearest weather station (measured by the longitude and latitude of each dwelling and each weather station) during the year of sale.[11] Information on electricity prices is collected at the zip code level.[12]

C. Descriptive Statistics

Table 1 summarizes the information available on the samples of certified and non-certified dwellings. The table reports the means and standard deviations for a number of hedonic characteristics of green buildings and control buildings, including their size, quality, and number of bedrooms, as well as indexes for building renovation, the presence of on-site amenities (such as a garage or carport, swimming pool, or presence of cooling equipment), and the presence of a "good" view.[13]

Simple, non-parametric comparisons between the samples of certified and non-certified homes show that transaction prices of green homes are higher by about $45,000, but of course, this ignores any observable differences between the two samples. Indeed, green homes are much younger—70 percent of the dwellings in the green sample have been constructed during the last five years.

More than two-thirds of the stock of green homes are those certified by Energy Star, but there is substantial overlap among the green certifications—about 20 percent of the green homes have multiple labels.

[10] We calculate the Toyota Prius share of registered vehicles from zip code totals of year 2007 automobile registration data (purchased from R.L. Polk).

[11] Data retrieved from http://www.ncdc.noaa.gov/cdo-web/.

[12] Data retrieved from http://www.energy.ca.gov/maps/serviceareas/electric_service_areas.html. We thank the California Energy Commission for providing a list containing each zip code in California and the corresponding local electric utility provider.

[13] DataQuick classifies the presence and type of view from the property. A "good" view includes the presence of a canyon, water, park, bluff, river, lake or creek

4 RESULTS

Table 2 presents the results of a basic regression model relating transaction prices of single-family dwellings to their observable characteristics and a green rating. Zip-code-fixed effects account for cross-area differences in local public goods, such as weather, crime, neighborhood demographics and school quality. The analysis is based upon more than 1.6 million observations on rated and unrated dwellings. Results are presented for ordinary least squares regression models, with errors clustered at the zip code level. Coefficients for the individual location clusters and the time-fixed effects are not presented.

Column 1 reports a basic model, including some hedonic features: dwelling size in thousands of square feet, the number of bed and bathrooms, and the presence of a garage or carport. We also include zip-year/month fixed effects. The model explains about 85 percent of the variation in the natural logarithm of home prices.

Larger homes command higher prices; 1,000 square feet increase in total dwelling size (corresponding to an increase of about 50 percent in the size of typical home) leads to a 31 percent higher transaction price. Controlling for dwelling size, an additional bathroom adds about 10 percent to the value of a home, and a garage yields about 6 percent, on average.

In column 2, we add a vector of vintage indicators to the model. Relative to homes constructed more than 50 years ago (the omitted variable), recently developed homes fetch significantly higher prices. The relation between vintage and price is negative, but homes constructed during the 1960-1980 period seem to transact at prices similar to very old ("historic") homes. Renovation of dwellings is capitalized in the selling prices, although the effect is small; prices of renovated homes are just one percent higher.[14]

[14] We replace the original "birth year" of a home with the renovation date in the analysis, so that vintage better reflects the "true" state of the home. This may explain the low economic significance of the renovation indicator.

Column 3 includes a selection of dwelling amenities in the model. The results show that homes that were sold as "distressed," for example following mortgage default, transact at a discount of 16 percent, on average. The presence of a swimming pool, cooling system or a "view" contributes significantly to home prices.

Importantly, holding all hedonic characteristics of the dwellings constant, column 4 shows that a single-family dwelling with a LEED, GreenPoint Rated or Energy Star certificate transacts at a premium of 12 percent, on average. This result holds while controlling specifically for all the observable characteristics of dwellings in our sample. The green premium is quite close to what has been documented for properties certified as efficient under the European energy labeling scheme. A sample of 32,000 homes classified with an energy label "A" transacted for about 10 percent more as compared to standard homes (Dirk Brounen and Nils Kok, 2011). In the commercial property market, green premiums have been documented to be slightly higher – about 16 percent (Piet Eichholtz, et al., 2010).

A. Robustness Checks

In Table 3, the green rating is disaggregated into three components: an Energy Star label, a LEED certification, and a GreenPoint Rated label. The (unreported) coefficients of the other variables are unaffected when the green rating is disaggregated into these component categories. The estimated coefficient for the Energy Star rating indicates a premium of 14.5 percent. The GreenPoint Rated and LEED rating are associated with insignificantly higher transaction prices. Energy efficiency is an important underlying determinant of the increased values for green certified dwellings.[15] But of course, sample sizes for homes certified under the alternative rating schemes are quite limited, and just a small fraction of those homes transacted over the past years. An alternative explanation for the lack of significant results for the GreenPoint Rated and LEED schemes is the still limited recognition of those "brands" in the marketplace[16]

The downturn in housing markets and the subsequent decrease in transaction prices may also have an impact on the willingness to pay for more efficient, green homes. It has been documented that prices are more procyclical for durables and luxuries as compared to prices of necessities and nondurables (see Mark Bils and Peter J. Klenow, 1998). To control for the time-variation in the value attributed to green, we include interaction terms of year-fixed effects and the green indicator in column 4. When interaction terms of year-fixed effects are included in the model (the years 2007 and 2012 are omitted due to the lack of a sufficient number of observations in those years), we document substantial variation in the premium for green dwellings over the sample period.

[15] The fundamental energy efficiency requirement is identical across the three different labeling schemes, and the mechanisms for verification are almost entirely similar. The three labels require design for 15 percent energy savings beyond building code requirements and all schemes require various on-site verifications to confirm the delivered home was built to that standard. GreenPoint Rated and LEED offer the highest number of credits for exceeding that minimum requirement. Energy Star rated homes are thus not necessarily better energy performers as compared to the other rating schemes.

[16] The Energy Star label is recognized by more than 80 percent of U.S. households, and 44 percent of households report they knowingly purchased an Energy Star labeled product in the past 12 months (see http://www.cee1.org/eval/00-new-eval-es.php3). Energy Star is one of the most widely recognized brands in the U.S. While similar data is not available for GreenPoint Rated or LEED, both were introduced as building labels much more recently, and do not benefit from near ubiquitous cobranding in consumer products.

In the first years of the sample, labeled homes sold for a discount, albeit insignificantly (which may be related to the lack of demand for newly constructed homes during that time period), whereas the premium is large and significant in later years. The parallel with the business cycle suggests that, among private homeowners, demand for green is lower in recessions, but increases as the economy accelerates. This is contrasting evidence for the commercial market: It has been documented that green-certified office buildings experienced rental decreases similar to conventional office buildings during the most recent downturn in the economy (Eichholtz et al., in press).

As noted in Table 1, most homes certified by one of three rating schemes have been construced quite recently — some 70 percent of the green homes were constructed less than six years ago. Recognizing this point, we seek a similar control sample of non-certified single-family transactions, restricting the analysis to dwellings that are five years old or younger.[17]

Table 4 presents the results of this simple robustness check. Control variables, location-fixed effects and time-fixed effects are again omitted. The results presented in Table 4 are not consistently different from the results in Table 3, but the green premium is slightly lower: On average, green-rated homes that were constructed during the last five years transact at a premium of some 9 percent. The Energy Star label is significantly different from zero. We note that the estimated coefficient for the LEED rating indicates a premium of some 10 percent in transaction prices, but this is not statistically significant at conventional levels.

[17] Quite clearly, this paper mostly deals with labeled developer homes rather than existing homes that went through the labeling process. As noted in Section 2, this raises the possibility of a “developer effect” in explaining the price variation between green and conventional homes. More information on the identity of developers of labeled and non-labeled homes would allow us to further disentangle this effect, but we have information on the developers of green homes only. About one third of the homes in the labeled sample have been constructed by KB Homes. Regressions that exclude homes constructed by KB Homes lead to similar results, with the green premium decreasing to about 6 percent.

B. Testing for Heterogeneity in "Green Label" Capitalization

As demonstrated in the statistical models reported in Tables 2–4, there is a statistically significant and rather large premium in the market value for green-certified homes. The statistical analysis does not identify the source of this premium, or the extent to which the signal about energy efficiency is important relative to the other potential signals provided by a building of sufficient quality to earn a label. Of course, the estimates provide a common percentage premium in value for all rated dwellings. But the value of green certification may be influenced by factors related to the location of homes: Figure 1 suggests that the distribution of green-rated dwellings is not random within urban areas in California, and this may affect the geographic variation in the value increment estimated for green-certified homes. For example, non-financial utility attributed to green certification may be higher for environmentally conscious households (comparable to the choice for solar panels, see Samuel R. Dastrup et al., 2012, for a discussion) or in areas where such homes are clustered (This peer effect is referred to as "conspicuous conservation" in a recent paper by Steven E. Sexton and Alison L. Sexton, 2011).

But, the financial utility of more efficient homes may also be affected by other factors related to the location of a dwelling. The financial benefits of a more efficient home should increase with the temperature of a given location, keeping all other things constant. (Presumably, more energy is needed for the heating of dwellings in areas with more heating degree days, and more energy is needed for the cooling of buildings in areas with more cooling degree days.) To test this hypothesis, we interact the green indicator with information on cooling degree days for each dwelling in the transaction year, based on the nearest weather station in the database of the National Oceanic and Atmospheric Administration (NOAA). Similarly, in areas with higher electricity costs, the return on energy efficiency should be higher. We therefore interact the climate variable with information on the retail price of electricity in the electric utility service area.

KEY FINDING

Homeowners in areas with a hotter climates are willing to pay more for a green, energy-efficient home.

Table 5 presents a set of models that include a proxy for ideology, green home density, climatic conditions and local electricity prices. In this part of the analysis, we seek to (at least partially) distinguish the effects of the energy-saving aspect of the rating from other, intangible effects of the label itself. The results in column 1 show that more efficient homes located in hotter climates (e.g., the Central Valley) are more valuable as compared to labeled homes constructed in more moderate climates (e.g., the coastal region). At the mean temperature level (6,680 cooling degree days), the green premium equals about 10 percent. But for every 1000 cooling degree day increase, the premium for certified homes increases by 1.3 percent, keeping all other things constant. **This result suggests that private homeowners living in areas where cooling loads are higher are willing to pay more for the energy efficiency of their dwellings.**[18]

There is a statistically significant premium in the market value for of green-certified homes.

In column 2, we add an interaction of climatic conditions with local electricity prices. (In models 2-4, we control for location using county-fixed effects.) Presumably, energy savings are more valuable if the price of electricity per kWh is higher. **However, our results do not show a difference in the capitalization of energy savings between consumers paying high rates** (the maximum rate in our sample equals 0.27 cent/kWh) **and those paying lower rates** (the minimum rate in our sample equals 0.07 cent/kWh). This may be because the true driver of consumer behavior is their overall energy outlay rather than the unit cost per kWh.

[18] While we do not have household level data on electricity consumption, the "rebound effect" would predict that such homeowners might respond to the relatively lower price of achieving "cooling" by lowering their thermostat. In such a case, the actual energy performance of the buildings would not necessarily be lower, because of this behavioral response.

Homeowners in environmentally-conscious communities place a higher value on homes with a green label.

In Column 3, we include the share of Prius registrations for each zip code in the sample, interacted with the indicator for green certification. Quite clearly, the capitalization of green varies substantially by heterogeneity in environmental idealism: **In areas with higher concentrations of hybrid vehicle registrations, the value attributed to the green certification is higher.** These results on the larger capitalization effect of green homes in more environmentally conscious communities are consistent with empirical work on solar panels (Samuel R. Dastrup, et al., 2012) and theoretical work on the higher likelihood for the private provision of public goods by environmentalists (Matthew J. Kotchen, 2006).

In column 4, we include a variable for the "density" of green homes in a given street and zip code, and built by the same developer. One could argue that in areas with a larger fraction of green homes, there is a higher value attributed to such amenity by the local residents. Households who purchase a home on this street know that their neighbors also will be living in a green home and this will create a type of Tiebout sorting as those who want to live near other environmentalists will be willing to pay more to live there. In this sense, the "green label" density acts as a co-ordination device. However, competition in the share of green homes in a given neighborhood may also negatively affect the willingness to pay for green, as such feature is becoming a commodity (see Andrea Chegut et al., 2011, for a discussion).

When including the density indicator, the point estimate for green certification does not change significantly, but the coefficient on green home density is pointing to a negative relation between the intensity of local green development and the transaction increment paid for green homes. This finding is not significant, but the sign of the coefficient is in line with evidence on green building competition in the UK. As more labeled homes are constructed, the marginal effect relative to other green homes becomes smaller, even though the average effect, relative to non-green homes, remains positive.

KEY FINDING

No evidence that homeowners in areas with higher electricity prices are willing to pay more for a green, energy-efficient home.

5 DISCUSSION & CONCLUSIONS

The economic significance of the green premium documented for labeled homes is quite substantial. **Considering that the average transaction price of a non-labeled home equals $400,000 (see Table 1), the incremental value of 9 percent for a certified dwelling translates into some $34,800 more than the value of a comparable dwelling nearby.**

Of course, this raises the issue of relative input costs. The increment in construction costs of more efficient, green homes is open to popular debate, and there is a lack of consistent and systematic evidence. Anecdotally, a recent industry report shows that estimated cost to reach a modeled energy efficiency level of 15 percent above California's 2008 energy code is between $1,600 and $2,400 for a typical 2,000 sq. ft. dwelling, depending on the climate zone. To reach a modeled energy efficiency level of some 35 percent above the 2008 code, estimated costs range from $4,100 to $10,000 for a typical 2,000 sq. ft. dwelling, again depending on the climate zone.[19] (Some of these costs are offset by incentives, and it is estimated that about one-third of the costs could be compensated for by rebates.) These admittedly rough estimates suggest that the capitalization of energy efficiency features in the transaction price (about $35,000) far exceeds the input cost for the developer (about $10,000, at most).

[19] Source: Gabel Associates, LLC. (2008). "Codes and Standards: Title 24 Energy-Efficient Local Ordinances."

From the perspective of a homeowner, the benefits of purchasing a labeled home, or of "greening" an existing dwelling, include direct cost savings during tenure in the home. Indeed, we document some consumer rationality in pricing the benefits of more efficient homes, as reflected in the positive relation between cooling degree days in a given geography and the premium rewarded to a certified home. Presumably, the capitalization of the label should at least reflect the present value of future energy savings. Considering that the typical utility bill for single-family homes in California equals approximately $200 per month, and savings in a more efficient home are expected to yield a 30 percent reduction in energy costs, the annual dollar value of savings for a typical consumer is some $720. Compared to the increment for green-labeled homes documented in this paper, that implies a simple payback period of some 48 years.

Quite clearly, there are other (unobservable) features of green homes that add value for consumers. This may include savings on resources other than energy, such as water, but the financial materiality of these savings is relatively small. **However, there are also other, intangible benefits of more efficient homes, such as better insulation, reducing draft, and more advanced ventilation systems, which enhance indoor air quality. These ancillary benefits may be appealing to consumers through the comfort and health benefits they provide.**

The results documented in this paper also show that the premium in transaction price associated with a green label varies considerably across geographies. **The premium is positively related to the environmental ideology of the neighborhood.** In line with previous evidence on the private value of green product attributes, some homeowners seem to attribute non-financial utility to a green label (and its underlying features), explaining part of the premium paid for green homes.

B. Conclusion

Buildings are among the largest consumers of natural resources, and increasing their energy efficiency can thus play a significant role towards achieving cost savings for private consumers and corporate organizations, and can be an important step in realizing global carbon reduction goals. With these objectives in mind, an ongoing effort has sought to certify buildings that have been constructed more efficiently. Considering the lack of "energy literacy" among private consumers, if homebuyers are unaware of a building's steady state (modeled) energy consumption, then they will most likely not appropriately capitalize energy savings in more efficient dwellings.

Comparable to evidence documented for the commercial sector in the U.S., and for the residential sector in Europe, the results in this paper provide the first evidence on the importance of publicly providing information about the energy efficiency and "sustainability" of structures in affecting consumer choice.

Green homes transact for significantly higher prices as compared to other recently constructed homes that lack sustainability attributes. This is important information for residential developers and for private homeowners: Energy efficiency and other green features are capitalized in the selling price of homes.

We note that the green homes in our sample are not high-end, custom homes, but rather "production homes" built by large developers. From the developer's perspective, there are likely to be economies of scale from producing green homes in the same geographic area. If green communities command a price premium and developers enjoy cost savings from producing multiple homes featuring similar attributes, then for-profit developers will be increasingly likely to build such complexes. This has implications for the green premium, as the marginal effect relative to other green homes becomes smaller.

The findings in this paper also have some implications for policy makers. Information on the energy efficiency of homes in the U.S. residential market is currently provided just for exemplary dwellings.[20] The mandatory disclosure of such information for all homes could further consumers' understanding of the energy efficiency of their (prospective) residence, thereby reducing the information asymmetry that is presumably an important explanation for the energy-efficiency gap.

An effective and cheap market signal may trigger investments in the efficiency of the building stock, with positive externality effects as a result.

Of course, we cannot disentangle the energy savings required to obtain a label from the unobserved effects of the label itself, which could serve as a signaling measure of environmental ideology and other non-financial benefits from occupying a green home. Future research should incorporate the *realized* energy consumption in green homes and conventional homes to further disentangle these effects. Reselling of green-labeled homes will also offer an opportunity to further study the value persistence of certified homes, unraveling the effect of developer quality on the green premium documented in this paper.

It also important to note that this paper focuses just on the market for owner-occupied single-family dwellings. While this represents an important fraction of the housing market, the market for rental housing has been growing considerably over the course of the housing crisis, and represents the majority of the housing stock in large U.S. metropolitan areas such as New York and San Francisco. Addressing the signaling effect of green labels for tenants in multi-family buildings should thus be part of a future research agenda.

[20] At the time of writing, the City and County of San Francisco's Office of the Assessor-Recorder is beginning to record and publish the presence or absence of green labels in the county property database. Their stated objective is to increase the incentive to make green upgrades in new and existing properties by using transparency to increase market actors' ability to act upon label information.

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TABLE 1. Comparison of Green-Labeled Buildings and Nearby Control Buildings
(standard deviations in parentheses)

	RATED BUILDINGS	CONTROL BUILDINGS
Sample Size	4,321	1,600,558
Sales Price	445.29	400.51
(thousands of dollars)	(416.58)	(380.47)
Assessed Value	425.95	355.21
(thousands of dollars)	(376.86)	(347.34)
Dwelling Size	2.06	1.80
(thousands of sq. ft.)	(0.69)	(0.86)
Lot Size	8.40	16.94
(thousands of sq. ft.)	(14.01)	(41.23)
Age	1.68	32.23
(years)	(9.49)	(24.39)
VINTAGE:		
Vintage < 6 years	0.70	0.18
(percent)	(0.46)	(0.38)
Vintage > 5 years < 11	0.00	0.08
(percent)	(0.02)	(0.28)
Vintage >10 years < 21	0.00	0.11
(percent)	(0.00)	(0.31)
Vintage > 20 years < 31	0.00	0.14
(percent)	(0.02)	(0.35)
Vintage > 30 years < 41	0.00	0.12
(percent)	(0.02)	(0.33)
Vintage > 40 years < 51	0.00	0.09
(percent)	(0.02)	(0.29)
Vintage > 50 years	0.01	0.20
(percent)	(0.08)	(0.40)
Renovated Building	0.04	0.12
(percent)	(0.19)	(0.33)
Garage	0.15	0.61
(number)	(0.55)	(0.94)
Number of Bedrooms	2.64	2.96
(percent)	(1.63)	(1.18)
Number of Bathrooms	2.03	2.11
(percent)	(1.26)	(0.94)
GREEN LABEL		
Energy Star	0.68	-
(percent)	(0.47)	-
GreenPoint Rated	0.47	-
(percent)	(0.50)	-
LEED for Homes	0.03	0.49
(percent)	(0.16)	(0.50)
Multiple Certifications	0.17	0.39
(percent)	(0.38)	(0.49)
Distressed Sale	0.08	0.11
(1 = yes)	(0.26)	(0.31)
Cooling Equipment	0.45	0.02
(1 = yes)	(0.50)	(0.15)
Swimming Pool	0.01	0.42
(1 = yes)	(0.09)	(0.41)
View	0.00	6.37
(1 = yes)	(0.02)	(4.34)
Prius Registration Share	0.45	14.94
(percent x100)	(0.38)	(1.37)
Cooling Degree Days Per Year	6.86	
(thousands)	(3.86)	
Electricity Price	15.06	
(cents/kWh)	(0.84)	

	RATED BUILDINGS	CONTROL BUILDINGS
TRANSACTION YEAR		
2007	0.01	0.13
(percent)	(0.09)	(0.34)
2008	0.04	0.19
(percent)	(0.20)	(0.39)
2009	0.15	0.23
(percent)	(0.36)	(0.42)
2010	0.55	0.21
(percent)	(0.50)	(0.41)
2011	0.23	0.21
(percent)	(0.42)	(0.41)
2012	0.01	0.02
(percent)	(0.08)	(0.14)

TABLE 2. Regression Results

Dwelling Characteristics, Amenities, and Sales Prices

(California, 2007 – 2012)

	(1)	(2)	(3)	(4)
Green Rating				0.118***
(1 = yes)				[0.023]
Dwelling Size	0.309***	0.289***	0.273***	0.273***
(thousands of sq. ft.)	[0.008]	[0.008]	[0.007]	[0.007]
Number of Bathrooms	0.095***	0.070***	0.066***	0.066***
	[0.005]	[0.005]	[0.005]	[0.005]
Number of Bedrooms	0.015***	0.019***	0.022***	0.022***
	[0.003]	[0.003]	[0.003]	[0.003]
Number of Garages	0.059***	0.062***	0.058***	0.058***
	[0.005]	[0.005]	[0.005]	[0.005]
AGE#				
New Construction		0.248***	0.190***	0.186***
(1 = yes)		[0.017]	[0.016]	[0.016]
1 – 2 years		0.259***	0.209***	0.206***
(1 = yes)		[0.015]	[0.015]	[0.015]
2 – 3 years		0.239***	0.223***	0.221***
(1 = yes)		[0.015]	[0.015]	[0.015]
3 – 4 years		0.207***	0.219***	0.219***
(1 = yes)		[0.014]	[0.014]	[0.014]
4 – 5 years		0.195***	0.213***	0.213***
(1 = yes)		[0.014]	[0.014]	[0.014]
5 – 6 years		0.186***	0.203***	0.203***
(1 = yes)		[0.014]	[0.014]	[0.014]
6 – 10 years		0.191***	0.193***	0.193***
(1 = yes)		[0.014]	[0.014]	[0.014]
10 – 20 years		0.158***	0.149***	0.149***
(1 = yes)		[0.012]	[0.012]	[0.012]
20 – 30 years		0.072***	0.064***	0.064***
(1 = yes)		[0.011]	[0.011]	[0.011]
30 – 40 years		0.009	0.001	0.001
(1 = yes)		[0.010]	[0.010]	[0.010]
40 – 50 years		0.007	-0.002	-0.002
(1 = yes)		[0.008]	[0.007]	[0.007]
Renovated		0.012**	0.011**	0.011**
(1 = yes)		[0.005]	[0.005]	[0.005]
Distressed Sale			-0.161***	-0.161***
(1 = yes)			[0.003]	[0.003]
View			0.063***	0.063***
(1 = yes)			[0.011]	[0.011]
Swimming Pool			0.086***	0.086***
(1 = yes)			[0.005]	[0.005]
Cooling Systems			0.060***	0.060***
(1 = yes)			[0.008]	[0.008]
TIME-ZIP-FIXED EFFECTS	Y	Y	Y	Y
Constant	11.743***	11.651***	11.795***	11.681***
	[0.203]	[0.177]	[0.161]	[0.163]
N	1,609,879	1,609,879	1,609,879	1,609,879
R^2	0.849	0.854	0.864	0.864
Adj R^2	0.856	0.861	0.871	0.871

Notes:

Omitted variable: vintage > 50 years

Regressions include: fixed effects by quarter year, 2007I–2012I, interacted with fixed effects by zip code. (Coefficients are not reported.)

Standard errors, clustered at the zip code level, are in brackets. Significance at the 0.10, 0.05, and 0.01 levels are indicated by *, **, and ***, respectively.

TABLE 3. Regression Results
Green Labeling Schemes and Sales Prices
(Energy Star, GreenPoint Rated and LEED for Homes)

	(1)	(2)	(3)	(4)
Energy Star	0.145***			
(1 = yes)	[0.027]			
GreenPoint Rated		0.024		
(1 = yes)		[0.024]		
LEED for Homes			0.077	
(1 = yes)			[0.082]	
Green*Year 2008				-0.011
(1 = yes)				[0.057]
Green*Year 2009				0.052
(1 = yes)				[0.033]
Green*Year 2010				0.144***
(1 = yes)				[0.024]
Green*Year 2011				0.131***
(1 = yes)				[0.029]
Time-ZIP-Fixed Effects	Y	Y	Y	Y
Control Variables	Y	Y	Y	Y
Constant	11.759***	11.778***	11.795***	11.668***
	[0.162]	[0.162]	[0.161]	[0.165]
N	1,609,879	1,609,879	1,609,879	1,609,879
R^2	0.871	0.871	0.871	0.871
Adj R^2	0.864	0.864	0.864	0.864

Notes:

Regressions include: fixed effects by quarter year, 2007I–2012I, interacted with fixed effects by zip code; as well as vintage, amenities and other measures reported in Table 2 (column 4). (Coefficients are not reported.)

Standard errors, clustered at the zip code level, are in brackets. Significance at the 0.10, 0.05, and 0.01 levels are indicated by *, **, and ***, respectively.

TABLE 4. Regression Results

Robustness Check: Recently Constructed Homes #

	(1)	(2)	(3)	(4)
Green Rating	0.087***			
(1 = yes)	[0.018]			
Energy Star		0.112***		
(1 = yes)		[0.017]		
GreenPoint Rated			-0.016	
(1 = yes)			[0.026]	
LEED for Homes				0.097
(1 = yes)				[0.074]
Time-ZIP-Fixed Effects	Y	Y	Y	Y
Control Variables	Y	Y	Y	Y
Constant	12.044***	12.059***	12.119***	12.114***
	[0.245]	[0.240]	[0.222]	[0.223]
N	314,759	314,759	314,759	314,759
R^2	0.884	0.884	0.883	0.883
Adj R^2	0.899	0.899	0.899	0.899

Notes:

Sample restricted to dwellings constructed during the 2007-2012 period.

Regressions include: fixed effects by quarter year, 2007I–2012I, interacted with fixed effects by zip code; as well as vintage (ranging from 1–5 years), amenities and other measures reported in Table 2 (column 4). (Coefficients are not reported.)

Standard errors, clustered at the zip code level, are in brackets. Significance at the 0.10, 0.05, and 0.01 levels are indicated by *, **, and ***, respectively.

TABLE 5. Regression Results

Green Labels, Climatic Conditions, Electricity Costs, and Sales Prices [#]

	(1)[##]	(2)[###]	(2)[###]	(3)[###]
Green Rating	-0.013	0.098*	-0.057	0.082**
(1 = yes)	[0.026]	[0.054]	[0.039]	[0.033]
Green Rating*Cooling Degree Days	0.014***	0.006		
	[0.003]	[0.075]		
Green Rating*Cooling Degree Days*Electricity Price		-0.001		
		[0.005]		
Green Rating*Prius Registration			21.957***	
			[5.355]	
Green Rating*Green Density				-0.002
				[0.001]
Distance to Closest Rail Station		-0.004***	-0.004***	-0.004***
(in kilometers)		[0.001]	[0.001]	[0.001]
Distance to CBD		-0.001	-0.001	-0.001
(in kilometers)		[0.001]	[0.001]	[0.001]
Time-ZIP-fixed Effects	Y	N	N	N
Time-FIPS-Fixed Effects	N	Y	Y	Y
Control Variables	Y	Y	Y	Y
Constant	12.055***	12.494***	12.378***	12.759***
	[0.023]	[0.067]	[0.161]	[0.240]
N	323,840	238,939	242,678	286,325
R^2	0.877	0.758	0.758	0.747
Adj R^2	0.893	0.760	0.761	0.749

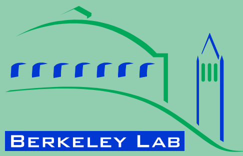
Notes:

[#] Sample restricted to dwellings constructed during the 2007-2012 period.

[##] Regression in column 1 includes fixed effects by quarter year, 2007I–2012I, interacted with fixed effects by zip code; as well as vintage, amenities and other measures reported in Table 2 (column 4). (Coefficients are not reported.)

[###] Regressions in columns 2 - 4 include fixed effects by quarter year, 2007I–2012I interacted with fixed effects by Census tract; the following Census variables at the zip code level: percentage of the population with at least some college education, percentage blacks, and percentage Hispanics, percentage in age categories 18-64, > 64; as well as vintage, amenities and other measures reported in Table 2 (column 4).
(Coefficients are not reported.)

Standard errors, clustered at the zip code level, are in brackets. Significance at the 0.10, 0.05, and 0.01 levels are indicated by *, **, and ***, respectively.



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An Analysis of the Effects of Residential Photovoltaic Energy Systems on Home Sales Prices in California

Ben Hoen, Ryan Wiser, Peter Cappers and Mark Thayer

Environmental Energy Technologies Division

April 2011

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Abstract

An increasing number of homes with existing photovoltaic (PV) energy systems have sold in the U.S., yet relatively little research exists that estimates the marginal impacts of those PV systems on home sales prices. A clearer understanding of these effects might influence the decisions of homeowners considering installing PV on their home or selling their home with PV already installed, of home buyers considering purchasing a home with PV already installed, and of new home builders considering installing PV on their production homes. This research analyzes a large dataset of California homes that sold from 2000 through mid-2009 with PV installed. Across a large number of hedonic and repeat sales model specifications and robustness tests, the analysis finds strong evidence that California homes with PV systems have sold for a premium over comparable homes without PV systems. The effects range, on average, from approximately $3.9 to $6.4 per installed watt (DC) of PV, with most coalescing near $5.5/watt, which corresponds to a home sales price premium of approximately $17,000 for a relatively new 3,100 watt PV system (the average size of PV systems in the study). These average sales price premiums appear to be comparable to the investment that homeowners have made to install PV systems in California, which from 2001 through 2009 averaged approximately $5/watt (DC), and homeowners with PV also benefit from electricity cost savings after PV system installation and prior to home sale. When expressed as a ratio of the sales price premium to estimated annual electricity cost savings associated with PV, an average ratio of 14:1 to 22:1 can be calculated; these results are consistent with those of the more-extensive existing literature on the impact of energy efficiency (and energy cost savings more generally) on home sales prices. The analysis also finds - as expected - that sales price premiums decline as PV systems age. Additionally, when the data are split between *new* and *existing* homes, a large disparity in premiums is discovered: the research finds that *new* homes with PV in California have demonstrated average premiums of $2.3-2.6/watt, while the average premium for *existing* homes with PV has been more than $6/watt. One of several *possible* reasons for the lower premium for new homes is that new home builders may also gain value from PV as a market differentiator, and have therefore often tended to sell PV as a standard (as opposed to an optional) product on their homes and perhaps been willing to accept a lower premium in return for faster sales velocity. Further research is warranted in this area, as well as a number of other areas that are highlighted.

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1. Introduction

In calendar year 2010, approximately 880 megawatts (MW)[1] of grid-connected solar photovoltaic (PV) energy systems were installed in the U.S. (of which approximately 30% were residential), up from 435 MW installed in 2009, yielding a cumulative total of 2,100 MW (SEIA & GTM, 2011). California has been and continues to be the country's largest market for PV, with nearly 1000 MW of cumulative capacity. California is also approaching 100,000 individual PV systems installed, more than 90% of which are residential. An increasing number of these homes with PV have sold, yet to date, relatively little research has been conducted to estimate the existence and level of any premium to sales prices that the PV systems may have generated. One of the primary incentives for homeowners to install a PV system on their home, or for home buyers to purchase a home with a PV system already installed, is to reduce their electricity bills. However, homeowners cannot always predict if they will own their home for enough time to fully recoup their PV system investment through electricity bill savings. The decision to install a PV system or purchase a home with a PV system already installed may therefore be predicated, at least in part, on the assumption that a portion of any incremental investment in PV will be returned at the time of the home's subsequent sale through a higher sales price. Some in the solar industry have recognized this potential premium to home sales prices, and, in the absence of having solid research on PV premiums, have used related literature on the impact of energy efficiency investments and energy bill savings on home prices as a proxy for making the claim that residential PV systems can increase sales prices (e.g., Black, 2010).

The basis for making the claim that an installed PV system may produce higher residential selling prices is grounded in the theory that a reduction in the carrying cost of a home will translate, *ceteris paribus,* into the willingness of a buyer to pay more for that home. Underlying this notion is effectively a present value calculation of a stream of savings associated with the

[1] All references to the size of PV systems in this paper, unless otherwise noted, are reported in terms of direct current (DC) watts under standard test conditions (STC). This convention was used to conform to the most-common reporting conventions used outside of California. In California, PV systems sizes are often referred to using the California Energy Commission Alternating Current (CEC-AC) rating convention, which is approximately a multiple of 0.83 of the DC-STC convention, but depends on a variety of factors including inverter efficiency and realistic operating efficiencies for panels. A discussion of the differences between these two conventions and how conversions can be made between them is offered in Appendix A of Barbose et al., 2010.

reduced electricity bills of PV homes, which can be capitalized into the value of the home. Along these lines, a number of studies have shown that residential selling prices are positively correlated with lower energy bills, most often attributed to energy related home improvements, such as energy efficiency investments (Johnson and Kaserman, 1983; Longstreth et al., 1984; Laquatra, 1986; Dinan and Miranowski, 1989; Horowitz and Haeri, 1990; Nevin and Watson, 1998; Nevin et al., 1999). The increased residential sales prices associated with lower energy bills and energy efficiency measures might be expected to apply to PV as well. Some homeowners have stated as much in surveys (e.g., CEC, 2002; McCabe and Merry, 2010), though the empirical evidence supporting such claims is limited in scope. Farhar et al. (2004a; 2008) tracked repeat sales of 15 "high performance" energy efficient homes with PV installed from one subdivision in San Diego and found evidence of higher appreciation rates, using simple averages, for these homes over comparable homes (*n*=12). More recently, Dastrop et al. (2010) used a hedonic analysis to investigate the selling prices of 279 homes with PV installed in the San Diego, California metropolitan area, finding clear evidence of PV premiums that averaged approximately 3% of the total sales price of non-PV homes, which translates into $4.4 per installed PV watt (DC).

In addition to energy savings, higher selling prices might be correlated with a "cachet value" based on the "green" attributes that come bundled with energy-related improvements (e.g., helping combat global warming, impressing the neighbors, etc.). A number of recent papers have investigated this correlation. Eichholtz et al. (2009, 2011) analyzed commercial green properties in the U.S, and Brounen and Kok (2010) and Griffin et al. (2009) analyzed green labeled homes in the Netherlands and Portland, Oregon, respectively, each finding premiums, which, in some cases, exceeded the energy savings (Eichholtz et al., 2009, 2011; Brounen and Kok, 2010). Specifically related to PV, Dastrop et al. (2010) found higher premiums in communities with a greater share of Toyota Prius owners and college grads, indicating, potentially, the presence of a cachet value to the systems over and above energy savings. It is therefore reasonable to believe that buyers of PV homes might price both the energy savings and the green cachet into their purchase decisions.

Of course there is both a buyer and a seller in any transaction, and the sellers of PV homes might be driven by different motivations than the buyers. Specifically, recouping the *net* installed cost of the PV system (i.e., the cost of PV installation after deducting any available state and federal incentives) might be one driver for sellers. In California, the average net installed cost of residential PV hovered near $5/watt (DC) from 2001 through 2009 (Barbose et al., 2010). Adding slightly to the complexity, the average net installed cost of PV systems has varied to some degree by the type of home, with PV systems installed on *new* homes in California enjoying approximately a $1/watt lower average installed cost than PV systems installed on *existing* homes in retrofit applications (Barbose et al., 2010). Further, sellers of *new* homes with PV (i.e., new home developers) might be reluctant to aggressively increase home sale prices for installed PV systems because of the burgeoning state of the market for PV homes and concern that more aggressive pricing might slow home sales, especially if PV is offered as a standard (not optional) product feature (Farhar and Coburn, 2006). At the same time, the possible *positive* impact of PV on product differentiation and sales velocity may make new home developers willing to sell PV at below the net installed cost of the system. After all, some studies that have investigated whether homes with PV (often coupled with energy efficient features) sell faster than comparable homes without PV have found evidence of increased velocity due to product differentiation (Dakin et al., 2008; SunPower, 2008). Finally, as PV systems age, and sellers (i.e., homeowners) recoup a portion of their initial investment in the form of energy bill savings (and, related, the PV system's lifespan decreases), the need (and ability) to recoup the full initial investment at the time of home sale might decrease. On net, it stands to reason that premiums for PV on *new* homes might be lower than those for *existing* homes, and that older PV systems might garner lower premiums than newer PV systems of the same size.

Though a link between selling prices and some combination of energy cost savings, green cachet, recouping the net installed cost of PV, seller attributes, and PV system age likely exists, the existing empirical literature in this area, as discussed earlier, has largely focused on either energy efficiency in residential and commercial settings, or PV in residential settings but in a limited geographic area (San Diego), with relatively small sample sizes. Therefore, to date, establishing a reliable estimate for the PV premiums that may exist across a wide market of homes has not

been possible. Moreover, establishing premiums for *new* versus *existing* homes with PV has not yet been addressed.

Additionally, research has not investigated whether there are increasing or decreasing returns on larger PV systems, and/or larger homes with the same sized PV systems, nor has research been conducted that investigates whether older PV systems garner lower premiums. In the case of returns to scale on larger PV systems, it is not unreasonable to expect that any increase in value for PV homes may be non-linear as it relates to PV system size. For example, if larger PV systems push residents into lower electricity price tiers[2], energy bill savings could be diminished on the margin as PV system size increases. This, in turn, might translate into smaller percentage increases in residential selling prices as PV systems increase in size, and therefore a decreasing return to scale. Larger PV systems might also enjoy some economies of scale in installation costs, which, in turn, might translate into lower marginal premiums at the time of home sale as systems increase in size – a decreasing return to scale. Additionally, "cachet value", to the degree that it exists, is likely to be somewhat insensitive to system size, and therefore might act as an additional driver to decreasing returns to scale. Somewhat analogously, PV premiums may be related to the number of square feet of living area in the home. Potentially, as homes increase in size, energy use can also be expected to increase, leading homeowners to be subjected to higher priced electricity rate tiers and therefore greater energy bill savings for similarly sized PV systems. Finally, as discussed previously, as PV systems age, and both a portion of the initial investment is recouped and the expected life and operating efficiency of the systems decrease, home sales price premiums might be expected to decline.

To explore these possible relationships, we investigate the residential selling prices across the state of California of approximately 2,000 homes with existing PV systems against a comparable set of approximately 70,000 non-PV homes. The sample is drawn from 31 California counties, with PV home sales transaction dates of 2000 through mid-2009. We apply a variety of hedonic pricing (and repeat sales) models and sample sets to test and bound the possible effects of PV on residential sales prices and to increase the confidence of the findings. Using these tools, we also

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[2] Many California electric utilities provide service under tiered residential rates that charge progressively higher prices for energy as more of it is used.

explore whether the effects of PV systems on home prices are impacted by whether the home is *new* or *existing*, by the size of either the PV system or the home itself, and finally by how old the PV system is when the home sells.[3] It should be stated that this research is not intended to disentangle the specific effects of energy savings, green cachet, recovery of the cost of installation, or seller motivations, but rather to establish credible estimates of aggregate PV residential sales price effects.

The paper begins with a discussion of the data used for the analyses (Section 2). This is followed by a discussion of the empirical basis for the study (Section 3), where the variety of models and sample sets are detailed. The paper then turns to a discussion of the results and their potential implications (Section 4), and finally offers some concluding remarks with recommendations for future research (Section 5).

[3] Due to the limited sample of PV home sales in many individual years, the results presented in this report reflect average impacts over the entire 2000-09 period (after controlling for housing market fluctuations).

2. Data Overview

To estimate the models described later, a dataset of California homes is used that joins the following five different sets of data: (1) PV home addresses and system information from three organizations that have offered financial incentives to PV system owners in the state; (2) real estate information that is matched to those addresses and that also includes the addresses of and information on non-PV homes nearby; (3) home price index data that allow inflation adjustments of sale prices to 2009 dollars; (4) locational data to map the homes with respect to nearby neighborhood/environmental influences; and (5) elevation data to be used as a proxy for "scenic vista." Each of these data sources is described below, as are the data processing steps employed, and the resulting sample dataset.

2.1. Data Sources

The California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the Sacramento Municipal Utility District (SMUD) each provide financial incentives under different programs to encourage the installation of PV systems in residential applications, and therefore have addresses for virtually all of those systems, as well as accompanying data on the PV systems.[4] Through these programs, Berkeley Laboratory was provided information on approximately 42,000 homes where PV was installed, only a fraction of which (approximately 9%) subsequently sold with the PV system in place. The data provided included: address (street, street number, city, state and zip); incentive application and PV system install and operational dates; PV system size; and delineations as to whether the home was *new* or *existing* at the time the PV system was installed (where available).

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[4] The CEC and CPUC have both been collecting data on PV systems installed on homes in the utility service areas of investor owned utilities (e.g., PG&E, SCE, SDG&E) for which they have provided incentives, as have some of California's publicly owned utilities (e.g., SMUD) that offer similar incentives. The CEC began administering its incentive program in 1998, and provided rebates to systems of various sizes for both residential and commercial customers. The CPUC began its program in 2001, initially focusing on commercial systems over 30 kW in size. In January 2007, however, the CEC began concentrating its efforts on new residential construction through its New Solar Home Partnership program, and the CPUC took over the administration of residential retrofit systems through the California Solar Initiative program. Separately, SMUD has operated a long-standing residential solar rebate program, but of smaller size than the efforts of the CEC and CPUC.

These addresses were then matched to addresses as maintained by Core Logic (CL)[5], which they aggregate from both the California county assessment and deed recorder offices. Once matched, CL provided real estate information on each of the California PV homes, as well as similar information on approximately 150,000 non-PV homes that were located in the same (census) block group and/or subdivision as the matched PV homes. The data for both of these sets of homes included:

- address (e.g., street, street number, city, state and zip+4 code);
- most recent ("second") sale date and amount;
- previous ("first") sale date and amount (if applicable);
- home characteristics (where available) (e.g., acres, square feet of living area, bathrooms, and year built);
- assessed value;
- parcel land use (e.g., commercial, residential);
- structure type (e.g., single family residence, condominium, duplex);
- housing subdivision name (if applicable)[6]; and
- census tract and census block group.

These data, along with the PV incentive provider data, allowed us to determine if a home sold after a PV system was installed ("second" sale). 3,657 such homes were identified in total, and these homes, therefore, represent the possible sample of homes on which our analysis focused. A subset of these data for which "first" sale information was available and for which a PV system had not yet been installed as of this "first" sale, were culled out. These "repeat sales" were also used in the analysis, as will be discussed in Section 3.

In addition to the PV and real estate data, Berkeley Laboratory obtained from Fiserv a zip-code-level weighted repeat sales index of housing prices in California from 1970 through mid-2009, by quarter. These indices, where data were available, were differentiated between low, middle,

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[5] More information about this product can be obtained from http://www.corelogic.com/. Note that Core Logic, Inc. was formerly known as First American Core Logic.

[6] In some cases the same subdivisions were referred to using slightly different names (e.g., "Maple Tree Estates" & "Maple Trees Estates"). Therefore, an iterative process of matching based on the names, the zip code, and the census tract were used to create "common" subdivision names, which were then used in the models, as discussed later.

and high home price tiers, to accommodate the different appreciation/depreciation rates of market segments. Using these indices, all sale prices were adjusted to Q1, 2009 prices.[7]

From Sammamish Data, Berkeley Laboratory purchased x/y coordinates for each zip+4 code, which allowed the mapping of addresses to street level accuracy.[8] Additionally, Berkeley Laboratory obtained from the California Natural Resources Agency (via the California Environmental Resources Evaluation System, CERES) a 30 meter level Digital Elevation Map (DEM) for the state of California.[9] Combining these latter two sets of data, a street level elevation could be obtained for each home in the dataset, which allowed the construction of a variable defined as the elevation of a home relative to its (census) block group. This relative elevation served as a proxy for "scenic vista", a variable used in the analysis.

2.2. Data Processing

Data cleaning and preparation for final analysis was a multifaceted process involving selecting transactions where all of the required data fields were fully populated, determining if sales of PV homes occurred after the PV system was installed, matching the homes to the appropriate index, ensuring the populated fields were appropriately coded, and finally, eliminating obviously suspicious observations (e.g., not arms length transactions, outliers, etc.). Initially provided were a total of 150,000 detached single family residential sale records without PV and a total of 3,657 with PV. These totals, however, were substantially reduced (by approximately 65,000 records, 1,400 of which were PV sales) because of missing/erroneous core characteristic data (e.g., sale date, sale price, year built, square feet).[10] Additionally, the final dataset was reduced (by approximately 14,000 records, 300 of which were PV sales) because some sales occurred outside the range of the index that was provided (January 1970 to June 2009). Moreover, to focus our analysis on more-typical California homes and minimize the impact of outliers or potential data-

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[7] The inflation adjustment instrument used for this analysis is the Fiserv Case-Shiller Index. This index is a weighted repeat sales index, accumulated quarterly at, optimally, the zip code level over three home price tiers (e.g., low, middle and high prices). More information can be found at: http://www.caseshiller.fiserv.com/indexes.aspx

[8] More information about this product can be obtained from http://www.sammdata.com/

[9] More information about this product can be obtained from http://www.ceres.ca.gov/

[10] Examples of "erroneous" data might include a year built or sale date that is in the future (e.g., "2109" or "Jan 1, 2015", respectively), or large groups of homes that were listed at the same price in the same year in the same block group that were thought to be "bulk" sales and therefore not valid for our purposes.

entry errors on our results, observations not meeting the following criteria were screened out (see Table 1 for variable descriptions):

- the inflation adjusted most recent (second) sale price (*asp2*) is between $85,000 and $2,500,000;[11]
- the number of square feet (*sqft*) is greater than 750;
- *asp2* divided by *sqft* is between $40 and $1,000;
- the number of acres is less than 25 and greater than *sqft* divided by 43,560 (where one acre equals 43,560 *sqft*);[12]
- the year the home was built (*yrbuilt*) is greater than 1900;
- the age of the home (in years) at the time of the most recent sale (*ages2*) is greater than or equal to negative one;
- the number of bathrooms (*baths*) is greater than zero and less than ten;
- the size of the PV system (*size*) is greater than 0.5 and less than 10 kilowatts (kW);
- each block group contains at least one PV home sale and one non-PV home sale; and
- the total assessed value (*avtotal*), as reported by the county via Core Logic, is less than or equal to the predicted assessed value (*pav*), where *pav* = *sp2**1.02^(2010-year of sale).[13]

In addition, the repeat sales used in the analysis had to meet the following criteria:

- the difference in sale dates (*sddif*) between the most recent (second) sale date (*sd2*) and the previous (first) sale date (*sd1*) is less than 20 years;
- PV is not installed on the home as of *sd1*; and
- the adjusted annual appreciation rate (*adjaar*) is between -0.14 and 0.3 (where *adjaar* = ln(*asp2*/*asp1*)/(*sddif*/365), which corresponds to the 5th and 95th percentile for the distribution of *adjaar*.[14]

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[11] An alternative screen was tested that limited the data to homes under $1 million (leaving 90% of the data) and $600,000 (leaving 75%), with no significant change to the results.

[12] An alternative screen that incorporated the number of stories for the home along with the number of square feet in calculating the "footprint", and therefore allowed smaller parcels to be used, was also explored, with no significant change in results.

[13] This screen was intended to help ensure that homes that had significant improvements since the most recent sale, which would be reflected in a higher assessed value than would otherwise be the maximum allowable under California property tax law, were removed from the dataset. The screen was not applied to homes that sold in 2009, however, because, in those cases, assessed values often had not been updated to reflect the most recent sale.

[14] This final screen was intended to remove homes that had unusually large appreciation or deprecations between sales, after adjusting for inflation, which could indicate that the underlying home characteristics between the two sales changed (e.g., an addition was added, the condition of the home dramatically worsened, etc.), or the data were erroneous.

Table 1: Variable Descriptions

Variable	Description
acre	size of the parcel (in acres)
acregt1	number of acres more than one
acrelt1	number of acres less than one
adjaar	adjusted annual appreciation rate
ages2	age of home as of sd2
ages2sqr	ages2 squared
asp1	inflation adjusted sp1 (in 2009 dollars)
asp2	inflation adjusted sp2 (in 2009 dollars)
avtotal	total assessed value of the home
bath	number of bathrooms
bgre_100	relative elevation to other homes in block group (in 100s of feet)
elev	elevation of home (in feet)
lasp1	natural log of asp1
lasp2	natural log of asp2
pav	predicted assessed value
pvage	age of the PV system at the time of sale
sd1	first sale date
sd2	second sale date
sddif	number of days separating sd1 and sd2
size	size (in STC DC kW) of the PV system
sp1	first sale price (not adjusted for inflation)
sp2	second sale price (not adjusted for inflation)
sqft	size of living area
sqft_1000	size of living area (in 1000s of square feet)
yrbuilt	year the home was built

2.3. Data Summary

The final full dataset includes a total of 72,319 recent sales, 1,894 of which are PV homes and 70,425 of which are non-PV (see Table 2). The homes with PV systems are distributed evenly between *new* (51%) and *existing* (49%) home types, while the non-PV homes are weighted toward *existing* homes (62%) over *new* (38%) (see Table 5). The final repeat sales dataset of homes selling twice total 28,313 homes, of which 394 are PV and 27,919 are non-PV (see Table 3).

As indicated in Table 2, the average non-PV home in the full sample (not the repeat sales sample) sold for $584,740 (unadjusted) in late 2005, which corresponds to $480,862 (adjusted)

in 2009 dollars.[15] This "average" home is built in 1986, is 19 years old at the time of sale, has 2,200 square feet of living space, has 2.6 bathrooms, is situated on a parcel of 0.3 acres, and is located at the mean elevation of the other homes in the block group. On the other hand, the average PV home in the full sample sold for $660,222 in early 2007, which corresponds to $537,442 in 2009 dollars. Therefore, this "average" PV home, as compared to the "average" non-PV home, is higher in value. This difference might be explained, in part, by the fact that the average PV home is slightly younger at the time of sale (by two years), slightly bigger (by 200 square feet), has more bathrooms (by 0.3), is located on a parcel that is slightly larger (by 0.06 acres), and, of course, has a PV system (which is, on average, 3,100 watts and 1.5 years old).[16]

The repeat sale dataset, as summarized in Table 3, shows similar modest disparities between PV and non-PV homes, with the "average" PV homes selling for more (in 2009 $) in both the first and second sales. Potentially more telling, though, non-PV homes show a slight depreciation (of -1.4%) between sales after adjusting for inflation, while PV homes show a modest appreciation (of 3.2%). Average PV homes in the sample are found to be slightly bigger (by 100 square feet), occupy a slightly larger parcel (by 0.2 acres), older (by 10 years), and, of course, have a PV system (which is, on average, 4,030 watts and 2.5 years old).

Focusing on the full dataset geographically (see Table 4 and Figure 1), we find that it spans 31 counties with the total numbers of PV and non-PV sales ranging from as few as nine (Humboldt) to as many as 11,991 (Placer). The dataset spans 835 separate (census) block groups (not shown in the table), though only 162 (18.7%) of these block groups contain subdivisions with at least one PV sale. Within the block groups that contain subdivisions with PV sales there are 497 subdivision-specific delineations. As shown in Table 5, the data on home sales are fairly evenly split between *new* and *existing* home types, are located largely within four utility service areas,

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[15] The adjusted values, which are based on a housing price index, demonstrate the large-scale price collapse in the California housing market post 2005; that is, there has been significant housing price depreciation.

[16] Age of PV system at the time of sale is determined by comparing the sale date and ideally an "installation date", which corresponds to the date the system was operational, but, in some cases, the only date obtained was the "incentive application date", which might precede the installation date by more than one year. For this reason the age of the system reported for this research is lower than the actual age.

with the largest concentration in PG&E's territory, and occurred over eleven years, with the largest concentration of PV sales occurring in 2007 and 2008.

In summary, the full dataset shows higher sales prices for the average PV home than the average non-PV home, while the repeat sales dataset shows positive appreciation between sales for PV homes, but not for non-PV homes. Though these observations seem to indicate that a PV sales price premium exists, these simple comparisons do not take into account the other underlying differences between PV and non-PV homes (e.g., square feet), their neighborhoods, and the market conditions surrounding the sales. The hedonic and difference-in-difference statistical models discussed in the following section are designed to do just that.

Table 2: Summary Statistics of Full Dataset

	Non-PV Homes				
Variable	***n***	**Mean**	**Std. Dev.**	**Min**	**Max**
acre	70425	0.3	0.8	0.0	24.8
acregt1	70425	0.1	0.7	0.0	23.8
acrelt1	70425	0.2	0.2	0.0	1.0
ages2	70425	19	23.3	-1	108
ages2sqr	70425	943	1681	0	11881
asp2	70425	$ 480,862	$ 348,530	$ 85,007	$2,498,106
avtotal	70425	$ 497,513	$ 359,567	$ 10,601	$3,876,000
bath	70425	2.6	0.9	1	9
bgre_100	70425	0.0	1.2	-18.0	19.0
elev	70425	424	598	0	5961
lasp2	70425	12.9	0.6	11.4	14.7
pvage	70425	0	0	0	0
sd2	70425	9/30/2005	793 days	1/7/1999	6/30/2009
size	70425	0	0	0	0
sp2	70425	$ 584,740	$ 369,116	$ 69,000	$4,600,000
sqft_1000	70425	2.2	0.9	0.8	9.3
yrbuilt	70425	1986	23	1901	2009

	PV Homes				
Variable	***n***	**Mean**	**Std. Dev.**	**Min**	**Max**
acre	1894	0.4	1.0	0.0	21.6
acregt1	1894	0.1	0.9	0.0	20.6
acrelt1	1894	0.2	0.2	0.0	1.0
ages2	1894	17.3	24.5	-1	104
ages2sqr	1894	937	1849	0	11025
asp2	1894	$ 537,442	$ 387,023	$ 85,973	$2,419,214
avtotal	1894	$ 552,052	$ 414,574	$ 23,460	$3,433,320
bath	1894	2.9	1	1	7
bgre_100	1894	0.2	1.3	-10.0	17.9
elev	1894	414	584	0	5183
lasp2	1894	13.0	0.6	11.4	14.7
pvage	1894	1.5	2.0	-1.0	9.0
sd2	1894	3/28/2007	622 days	8/1/2000	6/29/2009
size	1894	3.1	1.6	0.6	10.0
sp2	1894	$ 660,222	$ 435,217	$ 100,000	$3,300,000
sqft_1000	1894	2.4	0.9	0.8	11.0
yrbuilt	1894	1989	25	1904	2009

Table 3: Summary Statistics of Repeat Sale Dataset

	Non-PV Homes				
Variable	***n***	**Mean**	**Std. Dev.**	**Min**	**Max**
acre	27919	0.3	0.7	0.0	23.2
acregt1	27919	0.1	0.6	0.0	22.2
acrelt1	27919	0.2	0.2	0.0	1.0
ages2	27919	23.6	22.7	0	108
ages2sqr	27919	1122.0	1775.0	1.0	11881.0
asp1	27919	$ 488,127	$ 355,212	$ 85,398	$ 2,495,044
asp2	27919	$ 481,183	$ 347,762	$ 85,007	$ 2,472,668
avtotal	27919	$ 498,978	$ 360,673	$ 35,804	$ 3,788,511
bath	27919	2.5	0.8	1	9
bgre_100	27919	0.0	1.3	-17.7	19.0
elev	27919	426	588	0	5961
lasp1	27919	12.9	0.6	11.4	14.7
lasp2	27919	12.9	0.6	11.4	14.7
pvage	27919	0	0	0	0
sd1	27919	5/5/2001	1780 days	11/1/1984	12/11/2008
sd2	27919	5/14/2006	786 days	3/11/1999	6/30/2009
sddif	27919	1835	1509	181	7288
size	27919	0	0	0	0
sp1	27919	$ 444,431	$ 287,901	$ 26,500	$ 2,649,000
sp2	27919	$ 577,843	$ 371,157	$ 69,000	$ 3,500,000
sqft_1000	27919	2.1	0.8	0.8	7.7
yrbuilt	27919	1982	23	1901	2008

	PV Homes				
Variable	***n***	**Mean**	**Std. Dev.**	**Min**	**Max**
acre	394	0.5	1.4	0.0	21.6
acregt1	394	0.2	1.3	0.0	20.6
acrelt1	394	0.2	0.2	0.0	1.0
ages2	394	34.6	25.6	1	104
ages2sqr	394	1918.0	2336.0	4.0	11025.0
asp1	394	$ 645,873	$ 417,639	$ 110,106	$ 2,339,804
asp2	394	$ 666,416	$ 438,544	$ 91,446	$ 2,416,498
avtotal	394	$ 682,459	$ 478,768	$ 51,737	$ 3,433,320
bath	394	2.6	0.9	1	7
bgre_100	394	0.1	1.6	-5.5	17.9
elev	394	479	581	3	3687
lasp1	394	13.2	0.6	11.6	14.7
lasp2	394	13.2	0.6	11.4	14.7
pvage	394	2.5	1.6	-1.0	9.0
sd1	394	11/22/1999	1792 days	11/30/1984	1/7/2008
sd2	394	1/9/2007	672 days	8/1/2000	6/29/2009
sddif	394	2605	1686	387	7280
size	394	4.03	1.94	0.89	10
sp1	394	$ 492,368	$ 351,817	$ 81,500	$ 2,500,000
sp2	394	$ 800,359	$ 489,032	$ 121,000	$ 3,300,000
sqft_1000	394	2.2	0.8	0.8	5.3
yrbuilt	394	1972	26	1904	2008

Table 4: Frequency Summary by California County

CA County	Non-PV	PV	Total
Alameda	4,826	153	**4,979**
Butte	457	12	**469**
Contra Costa	5,882	138	**6,020**
El Dorado	938	85	**1,023**
Humboldt	7	2	**9**
Kern	2,498	53	**2,551**
Kings	134	5	**139**
Los Angeles	3,368	82	**3,450**
Marin	1,911	61	**1,972**
Merced	48	2	**50**
Monterey	10	2	**12**
Napa	36	1	**37**
Orange	1,581	44	**1,625**
Placer	11,832	159	**11,991**
Riverside	4,262	87	**4,349**
Sacramento	10,928	483	**11,411**
San Bernardino	2,138	50	**2,188**
San Diego	1,083	30	**1,113**
San Francisco	407	16	**423**
San Joaquin	1,807	20	**1,827**
San Luis Obispo	232	1	**233**
San Mateo	2,647	92	**2,739**
Santa Barbara	224	7	**231**
Santa Clara	6,127	157	**6,284**
Santa Cruz	90	1	**91**
Solano	2,413	39	**2,452**
Sonoma	1,246	32	**1,278**
Tulare	774	14	**788**
Ventura	1,643	42	**1,685**
Yolo	16	1	**17**
Yuba	860	23	**883**
Total	**70,425**	**1,894**	**72,319**

Figure 1: Map of Frequencies of PV Homes by California County

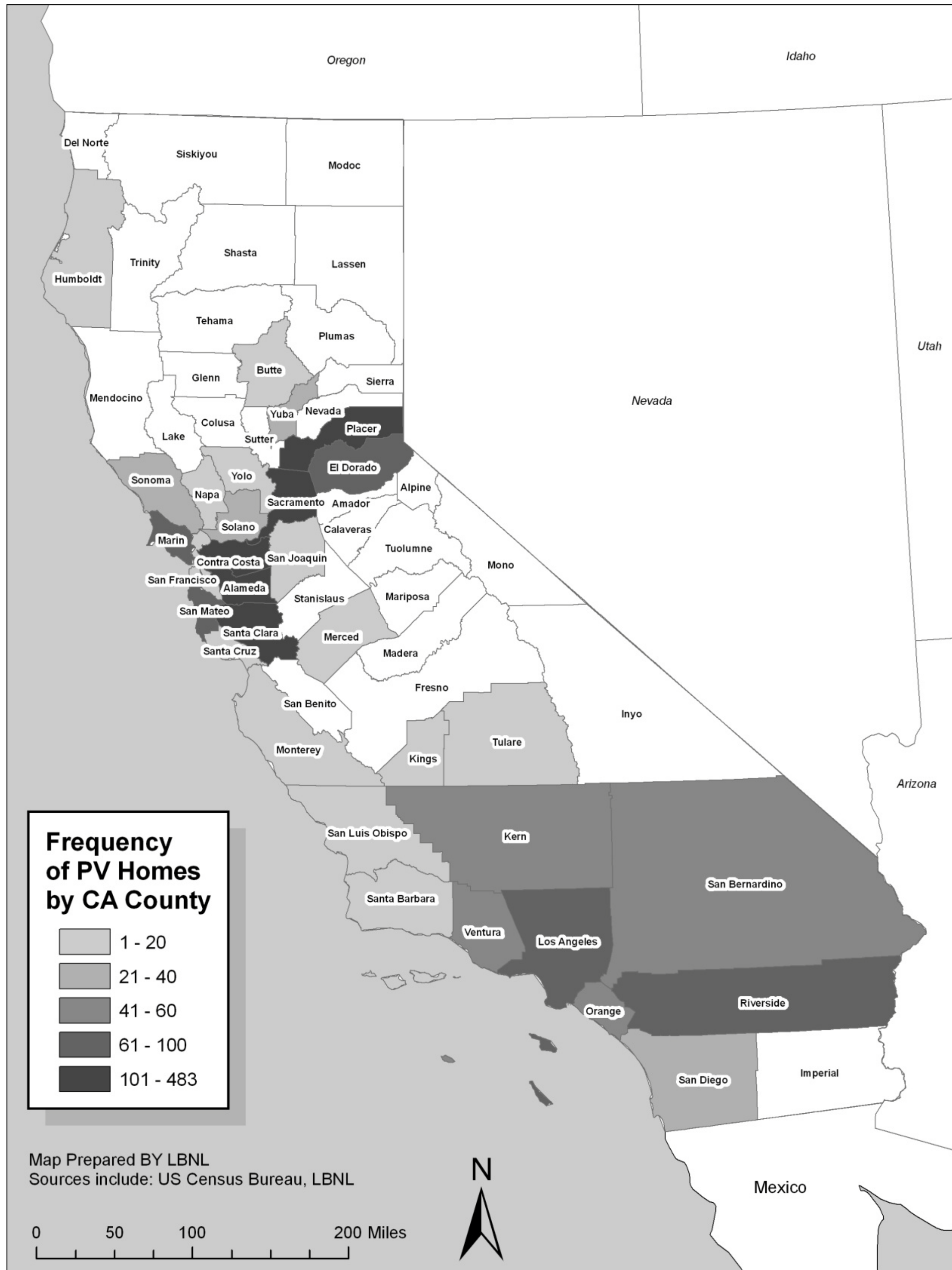

Table 5: Frequency Summary by Home Type, Utility and Sale Year

Home Type *	Non-PV	PV	Total
New Home	26,938	935	27,873
Existing Home	43,487	897	44,384
Utility **	**Non-PV**	**PV**	**Total**
Pacific Gas & Electric (PG&E)	36,137	1,019	37,156
Southern California Edison (SCE)	14,502	337	14,839
San Diego Gas & Electric (SDG&E)	8,191	35	8,226
Sacramento Municipal Utility District (SMUD)	11,393	498	11,891
Other	202	5	207
Sale Year	**Non-PV**	**PV**	**Total**
1999	110	0	110
2000	379	1	380
2001	1,335	10	1,345
2002	6,278	37	6,315
2003	8,783	63	8,846
2004	10,888	153	11,041
2005	10,678	168	10,846
2006	9,072	173	9,245
2007	8,794	472	9,266
2008	9,490	642	10,132
2009	4,618	175	4,793

** A portion of the PV homes could not be classified as either new or existing and therefore are not included in these totals*

*** Non-PV utility frequencies were estimated by mapping block groups to utility service areas, and then attributing the utility to all homes that were located in the block group*

3. Methods and Statistical Models

3.1. Methodological Overview

The data, as outlined above, not only show increased sales values and appreciation for PV homes (in 2009 $) over non-PV homes, but also important differences between PV and non-PV homes as regards other home, site, neighborhood and market characteristics that could, potentially, be driving these differences in value and appreciation. A total of 21 empirical model specifications, with a high reliance on the hedonic pricing model, are used in this paper to disentangle these potentially competing influences in order to determine whether and to what degree PV homes sell for a premium.

The basic theory behind the hedonic pricing model starts with the concept that a house can be thought of as a bundle of characteristics. When a price is agreed upon between a buyer and seller there is an implicit understanding that those characteristics have value. When data from a number of sales transactions are available, the average individual marginal contribution to the sales price of each characteristic can be estimated with a hedonic regression model (Rosen, 1974; Freeman, 1979). This relationship takes the basic form:

Sales price = *f* (home and site, neighborhood, and market characteristics)

"Home and site characteristics" might include, but are not limited to, the number of square feet of living area, the size of the parcel of land, and the presence of a PV system. "Neighborhood" characteristics might include such variables as the crime rate, the quality of the local school district, and the distance to the central business district. Finally, "market characteristics" might include, but are not limited to, temporal effects such as housing market inflation/deflation.

A variant of the hedonic model is a repeat sales model, which holds constant many of the characteristics discussed above, and compares inflation adjusted selling prices of homes that have sold twice, both before a condition exists (e.g., before a PV system is installed on the home) and after the condition exists (e.g., after a PV system is installed on the home), and across PV

and non-PV homes. This repeat sales model, in the form used in this paper, is referred to as a difference-in-difference (DD) model, and is discussed in more detail later.

To test for the impact of PV systems on residential selling prices, a series of "base" hedonic models, a "base" difference-in-difference model, a series of robustness models, and two "other" models are estimated for this research.[17] As discussed later, these models are used to test for fixed (whether the home has a PV system) and continuous (the size of the PV system) effects using the full dataset of PV homes. They are also used to test for any differences that exist between new and existing PV homes and between homes with PV systems of different ages, and to test for the possibility of non-linear returns to scale based on the size of the PV system or the home itself. Before describing these models in more detail, however, a summary of the variables to be included in the models is provided.

3.2. Variables Used in Models

In each base model, be it hedonic or difference-in-difference, four similar sets of parameters are estimated, namely coefficients on the variables of interest and coefficients for three sets of controls that include home and site characteristics, neighborhood (census block group) fixed effects, and temporal (year and quarter) fixed effects. The variables of interest are the focus of the research, and include such variables as whether the home has a PV system installed or not, the size of the PV system, and interactions between these two variables and others, such as the size of the home or the age of the PV system. To accurately measure these variables of interest (and their interactions) other potentially confounding variables need to be controlled for in the models. The base models differ in their specification and testing of the variables of interest, as discussed later, but use the same three sets of controls.

The first of these sets of control variables accounts for differences across the dataset in home and site-specific characteristics, including the age of the home (linear and squared), the total square feet of living area, and the relative elevation of the home (in feet) to other homes in the block group; the latter variable serves as a proxy for "scenic vista," a value-influencing characteristic

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[17] As will be discussed later, each of the "base" models is coupled with a set of two or three robustness models. The "other" models are presented without "robustness" models.

(see e.g., Hoen et al., 2009).[18] Additionally, the size of the property in acres was entered into the model in spline form to account for different valuations of less than one acre and greater than one acre.

The second set of controls, the geographic fixed effects variables, includes dummy variables that control for aggregated "neighborhood" influences, which, in our case, are census block groups.[19] A census block group generally contains between 200 and 1,000 households,[20] and is delineated to never cross boundaries of states, counties, or census tracts, and therefore, in our analysis, serves as a proxy for "neighborhood." To be usable, each block group had to contain at least one PV home and one non-PV home. The estimated coefficients for this group of variables capture the combined effects of school districts, tax rates, crime, distance to central business district and other block group specific characteristics. This approach greatly simplifies the estimation of the model relative to determining these individual characteristics for each home, but interpreting the resulting coefficients can be difficult because of the myriad of influences captured by the variables. Because block groups are fairly small geographically, spatial autocorrelation[21] is also, to some degree, dealt with through the inclusion of these variables.

Finally, the third set of controls, the temporal fixed effect variables, includes dummy variables for each quarter of the study period to control for any inaccuracies in the housing inflation adjustment that was used. A housing inflation index is used to adjust the sales prices throughout the study period to 2009 prices at a zip code level across as many as three price tiers. Although

[18] Other home and site characteristics were also tested, such as the condition of the home, the number of bathrooms, the number of fireplaces, and if the home had a garage and/or a pool. Because these home and site characteristics were not available for all home transactions (and thus reduced the sample of homes available), did not add substantial explanatory power to the model, and did not affect the results substantively, they were not included in the model results presented in this paper.

[19] For a portion of the dataset, a common subdivision name was identified, which, arguably, serves as a better proxy for neighborhood than block group. Unfortunately, not all homes fell within a subdivision. Nonetheless, a separate combined subdivision-block group fixed effect was tested and will be discussed later.

[20] Census block groups generally contain between 600 and 3,000 people, and the median household size in California is roughly 3.

[21] Spatial Autocorrelation - a correlation between neighbors' selling prices - can produce unstable coefficient estimates, yielding unreliable significance tests in hedonic models if not accounted for. One reason for this spatial autocorrelation is omitted variables, such as neighborhood characteristics (e.g., distance to the central business district), which affect all properties within the same area similarly. Having micro-spatial controls, such as block groups or subdivisions, helps control for such autocorrelation.

this adjustment is expected to greatly improve the model - relative to using *just* a temporal fixed effect with an unadjusted price - it is also assumed that because of the volatility of the housing market, the index may not capture price changes perfectly and therefore the model is enhanced with the additional inclusion of these quarterly controls.[22]

3.3. Fixed and Continuous Effect Hedonic Models

The analysis begins with the most basic model comparing prices of all of the PV homes in the sample (whether new or existing) to non-PV homes across the full dataset. As is common in the literature (Malpezzi, 2003; Sirmans et al., 2005b; Simons and Saginor, 2006), a semi-log functional form of the hedonic pricing model is used where the dependent variable, the (natural log of) sales price (P), is measured in zip code-specific inflation-adjusted (2009) dollars. To determine if an average-sized PV system has an effect on the sale price of PV homes (i.e., a fixed effect) we estimate the following base fixed effect model:

$$\ln(\mathrm{P}_{\mathrm{itk}}) = \alpha + \beta_1(\mathrm{T}_{\mathrm{t}}) + \beta_2(\mathrm{N}_{\mathrm{k}}) + \sum_{\mathrm{a}} \beta_3(\mathrm{X}_{\mathrm{i}}) + \beta_4(\mathrm{PV}_{\mathrm{i}}) + \varepsilon_{\mathrm{itk}} \tag{1}$$

where

P_{itk} represents the inflation adjusted sale price for transaction *i*, in quarter *t*, in block group *k,*

α is the constant or intercept across the full sample,

T_t is the quarter in which transaction *i* occurred,

N_k is the census block group in which transaction *i* occurred,

X_i is a vector of *a* home characteristics for transaction *i* (e.g., acres, square feet, age, etc.),

PV_i is a fixed effect variable indicating a PV system is installed on the home in transaction *i*,

β_1 is a parameter estimate for the quarter in which transaction *i* occurred,

β_2 is a parameter estimate for the census block group in which transaction *i* occurred,

β_3 is a vector of parameter estimates for home characteristics *a*,

β_4 is a parameter estimate for the PV fixed effects variable, and

ε_{itk} is a random disturbance term for transaction *i,* in quarter *t*, in block group *k*.

[22] A number of models were tested both with and without these temporal controls and with a variety of different temporal controls (e.g., monthly) and temporal/spatial controls (e.g., quarter and tract interactions). The quarterly dummy variables were the most parsimonious, and none of the other approaches impacted the results substantively.

The parameter estimate of primary interest in this model is β_4, which represents the marginal percentage change in sale price with the addition of an average sized PV system. If differences in selling prices exist between PV and non-PV homes, we would expect the coefficient to be positive and statistically significant.

An alternative to equation (1) is to interact the PV fixed effect variable (PV_i) with the size (in kW) of the PV system as installed on the home at the time of sale ($SIZE_i$), thereby producing an estimate for the differences in sales prices as a function of size of the PV system. This base continuous effect model takes the form:

$$\ln(P_{itk}) = \alpha + \beta_1 (T_t) + \beta_2 (N_k) + \sum_a \beta_3 (X_i) + \beta_4 (PV_i \cdot SIZE_i) + \varepsilon_{itk} \quad (2)$$

where

$SIZE_i$ is a continuous variable for the size (in kW) of the PV system installed on the home prior to transaction *i*,

β_4 is a parameter estimate for the percentage change in sale price for each additional kW added to a PV system, and all other terms are as were defined for equation (1).

If differences in selling prices exist between PV and non-PV homes, we would expect the coefficient to be positive and statistically significant, indicating that for each additional kilowatt added to the PV system the sale price increases by β_4 (in % terms).

This continuous effect specification may be preferable to the PV fixed effect model because one would expect that the impact of PV systems on residential selling prices would be based, at least partially, on the size of the system, as size is related to energy bill savings.[23] Moreover, this specification allows for a direct estimate of any PV home sales premium in dollars per watt ($/watt), which is the form in which other estimates – namely average net installed costs – are reported. With the previous fixed effects specification, a $/watt estimate can still be derived, but

[23] Ideally, the energy bill savings associated with individual PV systems could be entered into the model directly, but these data were not available. Moreover, estimating the savings accurately on a system-by-system basis was not possible because of the myriad of different rate structures in California, the idiosyncratic nature of energy use at the household level, and variations in PV system designs and orientations.

not directly. Therefore, where possible in this paper, greater emphasis is placed on the continuous effect specification than on the fixed effect estimation.

As mentioned earlier, for each base model we explore a number of different robustness models to better understand if and to what degree the results are unbiased. In the present research, two areas of bias are of particular concern: omitted variable bias and sample selection bias.

The omitted variables that are of specific concern are any that might be correlated with the presence of PV, and that might affect sales prices. An example is energy efficiency (EE) improvements, which might be installed contemporaneously with a PV energy system. If many homes with PV have EE improvements, whereas the comparable non-PV homes do not, then estimates for the effects of PV on selling prices might be inclusive of EE effects and, therefore, may be inappropriately high. Any other value-influencing home improvements (e.g., kitchen remodels, new roofs, etc.), if correlated with the presence of PV, could similarly bias the results if not carefully addressed.

With respect to selection bias, the concern is that the distribution of homes that have installed PV may be different from the broad sample of homes on which PV is not installed. If both sets of homes are assumed to have similar distributions but are, in point of fact, dissimilar due to selection, then the estimates for the effects of PV on the selling price could be inclusive of these underlying differences but attributed to the existence of PV, thereby also potentially biasing the results.

To mitigate the issue of omitted variable bias, one robustness model uses the same data sample as the base model but a different model specification. Specifically, a combined subdivision-block group fixed effect variable can be substituted, where available, in place of the block group fixed effect variable as an alternative proxy for "neighborhood." Potentially omitted variables are likely to be more similar between PV and non-PV homes at the subdivision level than at the

block group level, and therefore this model may more-effectively control for such omitted variables.[24]

To mitigate the issue of selection bias, one robustness model uses the same model specification as the base model but with an alternative (subset) of the data sample. Specifically, instead of using the full dataset with equations (1) and (2), a "coarsened exact matched" dataset is used (King et al., 2010).[25] This matching procedure results in a reduced sample of homes to analyze, but the PV and non-PV homes that remain in the matched sample are statistically equal on their covariates after the matching process (e.g., PV homes within a block group are matched with non-PV homes such that both groups are similar in the number of bathrooms, date of sale, etc.). As a result, biases related to selection are minimized.

Finally, specific to equation (2), a robustness model to mitigate both omitted variable and selection bias is constructed in which the sample is restricted to include ***only*** PV homes (in place of the full sample of PV *and* non-PV homes). Because this model does not include non-PV "comparable" homes, sales prices of PV homes are "compared" against each other based on the size of the PV systems, while controlling for the differences in the home via the controlling characteristics (e.g., square feet of living space). PV system size effects are therefore estimated without the use of non-PV homes, providing an important comparison to the base models, while also directly addressing any concerns about the inherent differences between PV and non-PV homes (e.g., whether energy efficient upgrades were made contemporaneously with the PV) and therefore omitted variable and sample selection bias.

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[24] Subdivisions are often geographically smaller than block groups, and therefore more accurately control for geographical influences such as distance to central business district. Moreover, homes in the same subdivision are often built at similar times using similar materials and therefore serve as a control for a variety of house specific characteristics that are not controlled for elsewhere in the model. For example, all homes in a subdivision will often be built using the same building code with similar appliances being installed, both of which might control for the underlying energy efficiency (EE) characteristics of the home. For homes not situated in a subdivision, the block group delineation was used, and therefore these fixed effects are referred to as "combined subdivision-block group" delineations.

[25] The procedure used, as described in the referenced paper, is coarsened exact matching (cem) in Stata, available at: http://ideas.repec.org/c/boc/bocode/s457127.html. The matching procedure creates statistically matched sets of PV and non-PV homes in each block group, based on a set of covariates, which, for this research, include the number of square feet, acres, and baths, as well as the age of the home, its elevation, and the date at which it sold. Because this matching process excludes non-PV homes that are without a statistically similar PV match (and vice versa), a large percentage of homes (approximately 80% non-PV and 20% PV) are *not* included in the resulting dataset.

3.4. New and Existing Home Models

Although equations (1) and (2) are used to estimate whether a PV system, on average, effects selling prices across the entire data sample, they do not allow one to distinguish any such effects as a function of house type, specifically whether the home is *new* or *existing*. As discussed earlier, *new* homes with PV might have different premiums than *existing* homes. To try to tease out these possible differences, two base hedonic models are estimated using equation (2), one with only *new* homes and the other with only *existing* homes.[26] Comparing the coefficient of the variable of interest (β_4) between these two models allows for an assessment of the relative size of the impact of PV systems across the two home types.

Additionally, two sets of robustness models that were discussed earlier are also applied to the *new* and *existing* home models, one using the coarsened exact matched datasets and the other using the combined subdivision-block group delineations. These models test the robustness of the results for selection and omitted variable bias, respectively. Although it is discussed separately as a base model in the following subsection, the difference-in-difference model, using repeat sales of *existing* homes, also doubly serves as a robustness test to the *existing* homes base model.

3.4.1. Difference-in-Difference Models

One classic alternative to estimating a hedonic model, as briefly discussed earlier, is to estimate a difference-in-difference (DD) model (Wooldridge, 2009). This model (see Table 1) uses a set of homes that have sold twice, both with and without PV, and provides estimates of the effect of adding PV to a subset of those homes as of the second sale ("DD" as noted in Table 1), while simultaneously accounting for both the inherent differences in the PV and non-PV groups and the trend in housing prices between the first and second sales of non-PV homes. Repeat sales models of this type are particularly effective in controlling for selection and certain types of

[26] *New* and *existing* homes were determined in an iterative process. For PV homes, the type of home was often specified by the data provider. It was also discovered that virtually all of the *new* PV homes (as specified by the PV data providers) had ages, at the time of sale, between negative one and two years, inclusive, whereas the *existing* PV homes (as specified by the PV data providers) had ages greater than two years in virtually every case. The small percentage (3%) of PV homes that did not fit these criteria were excluded from the models. For non-PV homes, no data specifying the home type were available, therefore, groupings were created following the age at sale criteria used for PV homes (e.g., ages between negative one and two years apply to *new* non-PV homes).

omitted variable bias. In the former case, any underlying difference in home prices between PV and non-PV homes prior to the addition of PV is controlled for. In the latter case, PV and non-PV homes are assumed to have undergone mostly similar changes (e.g., home improvements) between sales. Any changes to the home that are coincident with the installation of a PV system (or the PV system household), on the other hand, are not directly controlled for in this model, though there is reason to believe that any such remaining influences are not imposing substantial bias in the present study.[27]

The set of PV homes that are used in the DD model are, by default, *existing* homes (i.e., the home was not new when the PV system was installed). Estimates derived from this model, therefore, apply to - while also serving as a robustness tests for - the *existing* home models as specified above.

Table 6: Difference-in-Difference Description

	Pre PV	Post PV	Difference
PV Homes	PV_1	PV_2	$\Delta PV = PV_2 - PV_1$
Non-PV Homes	NPV_1	NPV_2	$\Delta NPV = NPV_2 - NPV_1$
			$DD = \Delta PV - \Delta NPV$
1 and 2 denote time periods			

The base DD model is estimated as follows:

$$\ln(P_{itk}) = \alpha + \beta_1(T_t) + \beta_2(N_k) + \sum_a \beta_3(X_i) + \beta_4(PVH_i) + \beta_5(SALE2_i) + \beta_6(PVS_i) + \varepsilon_{itk} \quad (3)$$

where

PVH_i is a fixed effect variable indicating if a PV system is or will be installed on the home in transaction *i*,

[27] Support for this assumption comes from two sources. Although surveys (e.g., CPUC, 2010) indicate that PV homeowners install energy efficient "measures" with greater frequency than non-PV homeowners, the differences are relatively small and largely focus on lighting and appliances. The former is not expected to substantially impact sales prices, while the latter could. The surveys also indicate that PV homeowners tend to install other larger EE measures, such as building shell, water heating and cooling improvements, with greater frequency than non-PV homes. Additionally, it might also be hypothesized that PV homeowners may be more-likely to have newer roofs (perhaps installed at the time of PV installation). Dastrop et al. (2010), however, investigated whether home improvements that might require a permit affect PV home sales premium estimates, and found they did not. It should be noted that the PV Only model, discussed previously, directly addresses the concern of omitted variable bias for this analysis.

$SALE2_i$ is a fixed effect variable indicating if transaction i is the second of the two sales,

PVS_i is a fixed effect variable (an interaction between PVH_i and $SALE2_i$) indicating if transaction i is both the second of the two sales and contained a PV system at the time of sale,

α is the constant or intercept across the full sample,

β_4 is a parameter estimate for homes that have or will have PV installed (i.e., from Table 6 "$PV_1 - NPV_1$"),

β_5 is a parameter estimate if transaction i occurred as of the second sale (i.e., "ΔNPV"),

β_6 is a parameter estimate if transaction i occurred as of the second sale and the home contained PV (i.e., "$\Delta PV - \Delta NPV$" or "DD"), and all other terms are as were defined for equation (1).

The coefficient of interest is β_6, which represents the percentage change in sale price, as expressed in 2009 dollars, when PV is added to the home, after accounting for the differences between PV and non-PV homes (β_4) and the differences between the initial sale and the second sale of non-PV homes (β_5). If differences in selling prices exist between PV and non-PV homes, we would expect the coefficient to be positive and statistically significant.[28]

To further attempt to mitigate the potential for omitted variable bias, two robustness models are estimated for the base DD model: one with the combined subdivision-block group delineations and a second with a limitation applied on the number of days between the first and second sale.[29] The first robustness model is similar to the one discussed earlier. The second robustness model accounts for the fact that the home characteristics used (in all models) reflect the most recent home assessment, and therefore do not necessarily reflect the characteristics at the time of the sale. Especially worrisome are the first sales in the DD model, which can be as much as 20 years before the second sale. To test if our results are biased because of these older sales - and the

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[28] This is the classic model form derived from a quasi-experiment, where the installation of PV is the treatment. An alternative specification would look at the incremental effect of PV system size holding the starting differences between PV and non-PV homes as well as the time-trend in non-PV homes constant. This model form was not evaluated in the current analysis effort, but could be considered grounds for future research in this area.

[29] Ideally a matched dataset could be utilized, for reasons described earlier, but because the matching procedure severely limited the size of the dataset, the resulting dataset was too small to be useful.

large periods between sales - an additional data screen is applied in which the difference between the two sale dates is limited to five years.[30]

3.5. Age of the PV System for Existing Homes Hedonic Models

The age of the PV system at the time of home sale could affect the sales price premium for *existing* homes (PV systems on new homes are, by definition, also new). This might occur because older PV systems have a shorter expected remaining life and may become somewhat less efficient with age (and therefore deliver a lower net present value of bill savings), but also because older PV systems will have generated more energy bill savings for the home seller and the seller may therefore more-willingly accept a lower price. Together, these factors suggest that premiums for older PV systems on *existing homes* would be expected to be lower than for newer systems. In order to test this directly the following base model is estimated:

$$\ln(P_{itk}) = \alpha + \beta_1 \left(T_t\right) + \beta_2 \left(N_k\right) + \sum_a \beta_3 \left(X_i\right) + \beta_4 \left(PV_i \cdot SIZE_i \cdot AGE_i\right) + \varepsilon_{itk} \quad (4)$$

where

AGE_i is a categorical variable for three groups of PV system age as of the time of sale of the home: 1) less than or equal to one year old; 2) between 2 and 4 years old; and, 3) five or more years old.

Therefore, β_4 is a vector of parameter estimates for the percentage change in sales price for each additional kW added to a PV system for each of the three PV system age groups, and all other terms are as are defined for equation (2). The assumption is that the coefficients for β_4 will be decreasing - indicating they are valued less - as the age of the PV systems decrease. The sample used for this model is the same as for the *existing* home model defined previously.

Additionally, two sets of robustness models are explored, one using the coarsened exact matched dataset and the other using the combined subdivision-block group delineations, to test the robustness of the results for selection and omitted variable bias, respectively.

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[30] As was discussed earlier, a screen for this eventuality (using *adjaar*) is incorporated in our data cleaning. This test therefore serves as an additional check of robustness of the results.

3.6. Returns to Scale Hedonic Models

As discussed earlier, it is not unreasonable to expect that any increases in the selling prices of PV homes may be non-linear with PV system size. In equation (2), it was assumed that estimated price differences were based on a continuous linear relationship with the size of the system. To explore the possibility of a non-linear relationship among the full sample of homes in the dataset, the following model is estimated:[31]

$$\ln(P_{itk}) = \alpha + \beta_1(T_t) + \beta_2(N_k) + \sum_a \beta_3(X_i) + \beta_4(PV_i \cdot SIZE_i) + \beta_5(PV_i \cdot SIZE_i \cdot SIZE_i) + \varepsilon_{itk} \quad (5)$$

where

β_5 is a parameter estimate for the percentage change in sales price for each additional kW added to a PV system squared, and all other terms are as are defined for equation (2).

A negative statistically significant coefficient (β_5) would indicate decreasing returns to scale for larger PV systems, while a positive coefficient would indicate the opposite.

Somewhat analogously, as was discussed previously, premiums for PV systems may be related to the size of the home.[32] To test this directly using the full dataset, the following model is estimated:

$$\ln(P_{itk}) = \alpha + \beta_1(T_t) + \beta_2(N_k) + \sum_a \beta_3(X_i) + \beta_4(SQFT_i) + \beta_5(PV_i \cdot SIZE_i) + \beta_6(PV_i \cdot SIZE_i \cdot SQFT_i) + \varepsilon_{itk} \quad (6)$$

where

$SQFT_i$ is a continuous variable for the number of square feet for the home in transaction *i*,[33]

β_4 is a parameter estimate for the percentage change in sale price for each additional 1000 square feet added to the home,

[31] Neither this nor the following model is coupled with robustness models in this paper.

[32] PV system size is also somewhat correlated with house size as a result of the tendency for increasing energy use and larger roof areas on larger homes. If this correlation was particularly strong then coefficient estimates could be imprecise. The correlation between PV house size and PV system size in the full sample of our data, however, is rather weak, at only 0.14. Clearly, many factors other than house size impact the sizing of PV systems.

[33] In all of the previous models the number of square feet is contained in the vector of characteristics represented by X_i, but in this model it is separated out for clarity.

β_5 is a parameter estimate for the percentage change in sale price for each additional kW added to a PV system,

β_6 is a parameter estimate for the percentage change in sale price for each additional 1000 square feet added to PV homes, assuming the size of the PV system does not change, and all other terms are as were defined for equation (2).

A negative statistically significant coefficient for β_6 would indicate decreasing returns to scale for PV systems as homes increase in size. Alternatively, a positive and statistically significant coefficient would indicate increasing returns to scale for PV systems installed on larger homes.

3.7. Model Summary

To summarize, the entire set of 21 estimated models discussed herein is shown in Table 7. The following definitions of terms, all of which were discussed earlier, are relevant for interpreting the models listed in the table, and therefore are briefly reviewed again. All "base" models are coupled with a set of "robustness" models (as noted by a capital "R" in the model number). The "Other" (returns to scale) models are presented alone. Models 1 - 4 and 6 - 8 use the hedonic pricing model, whereas Model 5 is based on the difference-in-difference (DD) model. "Fixed" (versus "continuous") means that the PV variable is entered into the regression as a zero-one dichotomous variable (for Models 1-1Rb and 5-5Rb), whereas "continuous" (for all other models) means that the model estimates the impact of an increase in PV system size on residential selling prices. Base Models 1, 2, 7 and 8 use the full dataset, while Models 4 and 6 are restricted to *existing* homes, Model 3 to *new* homes, and Model 5 to the repeat sales dataset. The "matched" models use the smaller dataset of coarsened exact matched (PV and non-PV) homes. "Base" models estimate neighborhood fixed effects at the census block group level, whereas the "subdivision" models estimate neighborhood fixed effects at the combined subdivision-block group level.

Table 7: Summary of Models

Model Number	Model Name	Base Model	Robustness Model	Other Models	Dataset	Neighborhood Fixed Effects
1	Fixed - Base	X			Full	Block Group
1Ra	Fixed - Matched		X		Full Matched	Block Group
1Rb	Fixed - Subdivision		X		Full	Subdivision/Block Group
2	Continuous - Base	X			Full	Block Group
2Ra	Continuous - Matched		X		Full Matched	Block Group
2Rb	Continuous - Subdivision		X		Full	Subdivision/Block Group
2Rc	Continuous - PV Only		X		PV Only	Block Group
3	New Homes - Base	X			New	Block Group
3Ra	New - Matched		X		New - Matched	Block Group
3Rb	New - Subdivision		X		New	Subdivision/Block Group
4	Existing Homes - Base	X			Existing	Block Group
4Ra	Existing - Matched		X		Existing - Matched	Block Group
4Rb	Existing - Subdivision		X		Existing	Subdivision/Block Group
5	Difference-in-Difference (DD) - Base	X			Repeat Sales	Block Group
5Ra	Difference-in-Difference (DD) - Subdivision		X		Repeat Sales	Subdivision/Block Group
5Rb	Difference-in-Difference (DD) - Sddif < 5 Years		X		Repeat Sales w/ sddif < 5	Block Group
6	Age of System - Base	X			Existing	Block Group
6Ra	Age of System - Matched		X		Existing - Matched	Block Group
6Rb	Age of System - Subdivision		X		Existing	Subdivision/Block Group
7	Returns to Scale - Size			X	Full	Block Group
8	Returns to Scale - Square Feet			X	Full	Block Group

4. Estimation Results

Estimation results for all 21 models (as defined in Table 7) are presented in Tables 8-11, with the salient results on the impacts of PV on homes sales prices summarized in Figures 2-4.[34, 35] The adjusted R^2 for all models is high, ranging from 0.93 to 0.95, which is notable because the dataset spanned a period of unusual volatility in the housing market. The model performance reflects, in part, the ability of the inflation index and temporal fixed effects variables to adequately control for market conditions.[36]

Moreover, the sign and magnitude of the home and site control variables are consistent with *a priori* expectations, are largely stable across all models, and are statistically significant at the 1% level in most models.[37] Each additional 1000 square feet of living area added to a home is estimated to add between 19% and 26% to its value, while the first acre adds approximately 40% to its value with each additional acre adding approximately 1.5%. For each year a home ages, it is estimated that approximately 0.2% of its value is lost, yet at 60 years, age becomes an asset with homes older than that estimated to garner premiums for each additional year in age. Finally, for each additional 100 feet above the median elevation of the other homes in the block group, a home's value is estimated to increase by approximately 0.3%. These results can be benchmarked to other research. Specifically, Sirmans et al. (2005a; 2005b) conducted a meta-analysis of 64 hedonic pricing studies carried out in multiple locations in the U.S. during multiple time periods, and investigated similar characteristics as included in the models presented here, except for relative elevation. As a group, each of the home and site characteristic estimates in the present

[34] For simplicity, this paper does not present the results for the quarter and block group (nor combined subdivision-block group) fixed effects, which consist of more than 900 coefficients. These are available upon request from the authors.

[35] All models were estimated with Stata SE Version 11.1 using the "areg" procedure with White's correction for standard errors (White, 1980). It should also be noted that all Durbin-Watson (Durbin and Watson, 1951) test statistics were within the acceptable range (Gujarati, 2003), there was little multicollinearity associated with the variables of interest, and all results were robust to the removal of any cases with a Cook's Distance greater than 4/*n* (Cook, 1977) and/or standardized residuals greater than four.

[36] As mentioned in footnote 22, a variety of approaches were tested to control for market conditions, such as spatial temporal fixed effects (e.g., census block / year quarter) both with and without adjusted sale prices. The models presented here were the most parsimonious. As importantly, the results were robust to the various specifications, which, in turn, provides additional confidence that the effects presented are not biased by the fluctuating market conditions that have impacted the housing market for some years.

[37] In some models, where there is little variation between the cases on the covariate (e.g., acres), the results are non-significant at the 10% level.

study differ from the mean Sirmans et al. estimates by no more than one half of one standard deviation.

In summary, these results suggest that the hedonic and repeat sales models estimated here are effectively capturing many of the drivers to home sales prices in California, and therefore increasing confidence that those same models can be used to accurately capture any PV effects that may exist.

4.1. Fixed and Continuous Effect Hedonic Model Results

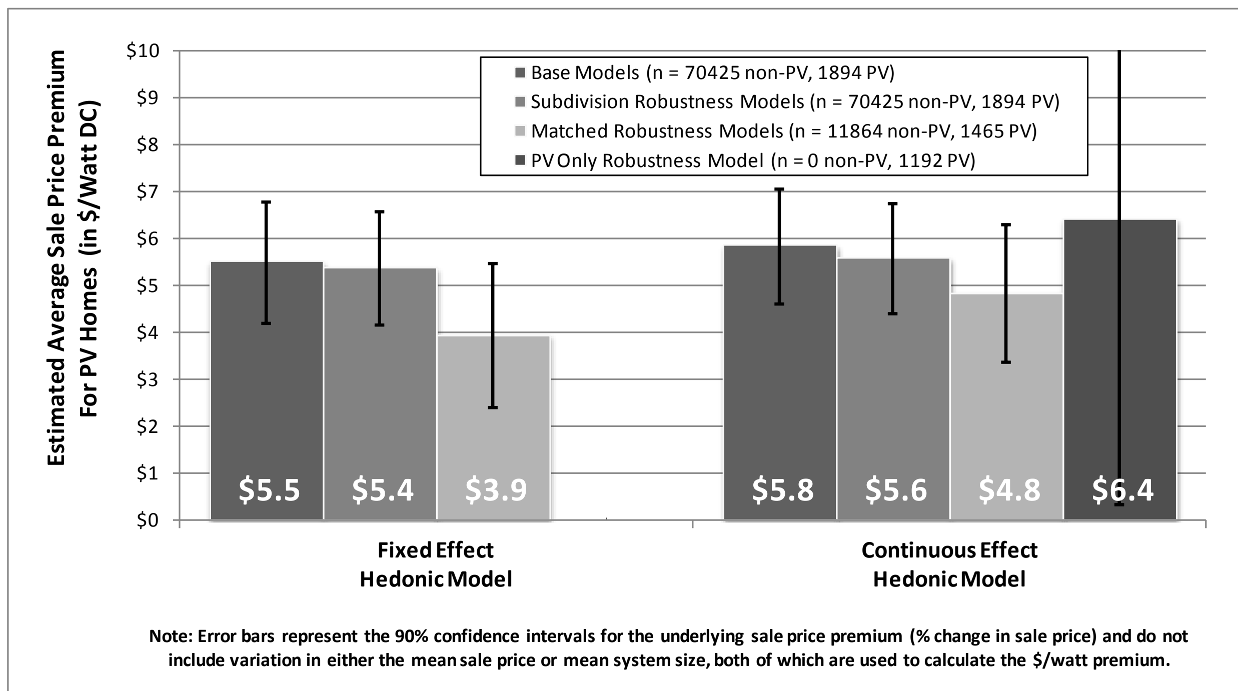
The results from the base hedonic models (equations 1 and 2) are shown in Table 8 as Models 1 and 2, respectively. These models estimate the differences across the full dataset between PV and non-PV homes, with Model 1 estimating this difference as a fixed effect, and Model 2 estimating the difference as a continuous effect for each additional kilowatt (kW) of PV added. Also shown in the table are the results from the robustness tests using the coarsened exact matching procedure and the combined subdivision-block group delineations, as shown as Models 1Ra and 1Rb for PV fixed effect models and Models 2Ra and 2Rb for continuous effect variables. Finally, the model that derives marginal impact estimates from ***only*** PV homes is shown in the table as Model 2Rc.

Across all seven of these models (Models 1 – 2Rc), regardless of the specification, the variables of interest of PV and SIZE are positive and significant at the 10% level, with six out of seven estimates being significant at the 1% level. Where a PV fixed effect is estimated, the coefficient can be interpreted as the percentage increase in the sales price of a PV home over the mean non-PV home sales price in 2009 dollars based on an average sized PV system. By dividing the monetary value of this increase by the number of watts for the average sized system, this premium can be converted to 2009 dollars per watt ($/watt). For example, for base Model 1, multiplying the mean non-PV house value of $480,862 by 0.036 and dividing by 3120 watts, yields a premium of $5.5/watt (see bottom of Table 8). Where SIZE, a continuous PV effect, is used, the coefficients reflect the percentage increase in selling prices in 2009 dollars for each additional kW added to the PV system. Therefore, to convert the SIZE coefficient to $/watt, the mean house value for non-PV homes is multiplied by the coefficient and divided by 1000. For

example, for base Model 2, $480,862 is multiplied by 0.012 and divided by 1000, resulting in an estimate of $5.8/watt.[38]

As summarized in Figure 2, these base model results for the impact of PV on residential selling prices are consistent with those estimated after controlling for subdivision fixed effects ($5.4/watt and $5.6/watt for fixed and continuous effects, respectively), differing by no more than $0.2/watt. On the other hand, the estimated PV premiums derived from the coarsened exact matched dataset are noticeably smaller, decreasing by 20 to 30%, and ranging from $3.9/watt to $4.8/watt for fixed and continuous effects, respectively. Alternatively, the PV only Model 2Rc estimates a higher $/watt continuous effect of $6.4/watt, although that estimate is statistically significant at a lower 10% level. This estimate, because it is derived from PV homes only, corroborates that any changes to the home that are coincident with the installation of the PV (e.g., energy efficient upgrades) are not influencing results dramatically.

Figure 2: Fixed and Continuous Effect Base Model Results with Robustness Tests



[38] To be exact, the conversion is a bit more complicated. For example, for the fixed effect model the conversion is actually (EXP(LN(480,862)+0.036)-480,862)/3.12/1000, but the differences are *de minimis*, and therefore are not used herein.

Though results among these seven models differ to some degree, the results are consistent in finding a premium for PV homes over non-PV homes in California, which varies from $3.9 to $6.4/watt on average, depending on the model specification. These sale price premiums are very much in line with, if not slightly above, the historical mean net installed costs (i.e., the average installed cost of a system, after deducting available state and federal incentives) of residential PV systems in California of approximately $5/watt from 2001 through 2009 (Barbose et al., 2010), which, as discussed earlier, may be reasonable given that both buyers and sellers might use this cost as a partial basis to value a home.[39]

Additionally, the one other hedonic analysis of PV selling price premiums (which used reasonably similar models as those employed here but a different dataset, concentrating only on homes in the San Diego metropolitan area) found a similar result (Dastrop et al., 2010). In their analysis of 279 homes that sold with PV systems installed in San Diego (our model only contained 35 homes from this area[40] – See Table 5), Dastrop et al. estimated an average increase in selling price of $14,069, which, when divided by their mean PV system size of 3.2 kW, implies an effect of $4.4/watt.[41]

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[39] Although not investigated here, one possible reason for sales price premiums that are above net installed costs is that buyers of PV homes may in some cases price in the opportunity cost of avoiding having to do the PV installation themselves, which might be perceived as complex. Moreover, a PV system installation that occurs after the purchase of the home would likely be financed outside the first mortgage and would therefore loose valuable finance and tax benefits, thereby making the purchase of a PV home potentially more attractive that installing a PV system later, even if at the same cost.

[40] Though we identified a higher number of PV homes that sold in the San Diego metropolitan area in our dataset, the home and site characteristics provided to us from the real estate data provider did not contain information on the year of the sale and therefore were not usable for the purpose of our analysis.

[41] In a different model, Dastrop et al. (2010) estimated an effect size of $2.4/watt but, for reasons not addressed here, this estimate is not believed to be as robust.

Table 8: Fixed and Continuous Base Hedonic Model Results with Robustness Tests

	Fixed			Continuous			
	Base	Robustness	Robustness	Base	Robustness	Robustness	Robustness
		Matched	Subdivision		Matched	Subdivision	PV Only
	Model 1	Model 1Ra	Model 1Rb	Model 2	Model 2Ra	Model 2Rb	Model 2Rc
pv	0.036***	0.024***	0.035***				
	(0.005)	(0.006)	(0.005)				
size				0.012***	0.010***	0.012***	0.013*
				(0.002)	(0.002)	(0.001)	(0.008)
sqft_1000	0.253***	0.205***	0.250***	0.253***	0.205***	0.250***	0.224***
	(0.001)	(0.006)	(0.001)	(0.001)	(0.006)	(0.001)	(0.010)
lt1acre	0.417***	0.514***	0.414***	0.416***	0.510***	0.413***	0.441***
	(0.009)	(0.040)	(0.010)	(0.009)	(0.040)	(0.010)	(0.066)
acre	0.016***	0.013	0.015***	0.016***	0.013	0.015***	-0.002
	(0.002)	(0.011)	(0.003)	(0.002)	(0.010)	(0.003)	(0.012)
ages2	-0.004***	-0.006***	-0.004***	-0.004***	-0.006***	-0.004***	-0.008***
	(0.0002)	(0.0012)	(0.0002)	(0.0002)	(0.0012)	(0.0002)	(0.0030)
ages2sqr	0.00003***	0.00004***	0.00003***	0.00003***	0.00004***	0.00003***	0.00004***
	(0.000003)	(0.000012)	(0.000003)	(0.000003)	(0.000012)	(0.000003)	(0.000033)
bgre_100	0.003***	0.015***	0.003***	0.003***	0.015***	0.003***	0.013***
	(0.001)	(0.004)	(0.001)	(0.001)	(0.004)	(0.001)	(0.005)
intercept	12.703***	12.961***	12.710***	12.702***	12.957***	12.710***	12.842***
	(0.010)	(0.044)	(0.012)	(0.010)	(0.043)	(0.012)	(0.073)
*Numbers in parenthesis are standard errors, *** p<0.01, ** p<0.05, * p<0.1*							
Results for subdivision, block group, and quarterly fixed effect variables are not reported here, but are available upon request from the authors							
Total n	72,319	13,329	72,319	72,319	13,329	72,319	1,192
Adjusted R^2	0.93	0.95	0.94	0.93	0.95	0.94	0.93
n (pv homes)	1,894	1,465	1,894	1,894	1,465	1,894	1,192
Mean non-pv asp2	$ 480,862	$ 480,533	$ 480,862	$ 480,862	$ 480,533	$ 480,862	$ 475,811
Mean size (kW)	3.1	3.0	3.1	3.1	3.0	3.1	2.7
Estimated $/Watt	$ 5.5	$ 3.9	$ 5.4	$ 5.8	$ 4.8	$ 5.6	$ 6.4
PV Only Model Notes: Mean non-pv asp2 amount shown is actually the mean PV asp2. Sample is limited to blockgroups with more than one PV home							

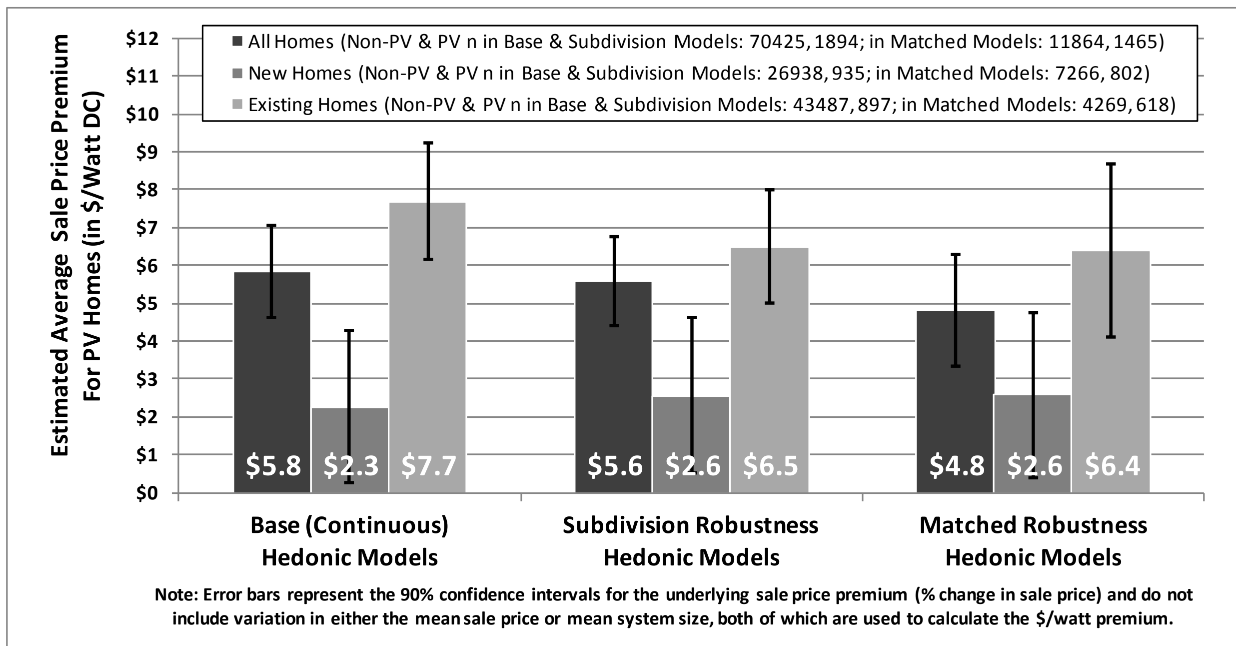
4.2. New and Existing Home Model Results

Turning from the full dataset to one specific to the home type, we estimate continuous effects models for *new* and *existing* homes (see equation (2)). These results are shown in Table 9, with Model 3 the base model for *new* homes and Model 4 the base model for *existing* homes. Also

shown are the results from the robustness tests using the coarsened exact matching procedure and the combined subdivision-block group delineations, as Models 3Ra and 3Rb, respectively, for *new* homes, and as Models 4Ra and 4Rb, respectively, for *existing* homes.

The coefficient of interest, SIZE, is statistically significant at or below the 10% level in all of the *new* home models and at the 1% level in all of the *existing* home models. Estimates for the average $/watt increase in selling prices as a result of PV systems (as summarized in Figure 3, which also includes the results presented earlier for all homes, Models 2, 2Ra, and 2Rb) for *new* homes are quite stable, ranging from $2.3 to $2.6/watt. In comparison, for PV sold with *existing* homes, not only are the selling price impacts found to be higher, but their range across the three models is somewhat greater, ranging from $ 6.4 to $7.7/watt.

Figure 3: New and Existing Home Base Model Results with Robustness Tests



Though the reasons for the apparent discrepancy in selling price impacts between *new* and *existing* homes are unclear, and warrant future research, they might be explained, in part, by the difference in average *net* installed costs, which, from 2007 to 2009, were approximately $5.2/watt for *existing* homes and $4.2/watt for *new* homes in California (derived from the dataset used for Barbose et al., 2010). The gap in net installed costs between new and existing homes is

not wide enough to fully account for these findings, however, with the model estimates for PV selling price premiums below the average net installed costs for *new* homes and above the average net installed costs for *existing* homes.[42]

Several alternative explanations for the disparity between *new* and *existing* home premiums exist. As discussed previously, there is evidence that builders of *new* homes might discount premiums for PV if, in exchange, PV systems provide other benefits for new home developers, such as greater product differentiation and increased the sales velocity, thus decreasing overall carrying costs (Dakin et al., 2008; SunPower, 2008). Further, sellers of *new* homes with PV might be reluctant to aggressively increase home sale prices for installed PV systems because of the burgeoning state of the market for PV homes and concern that more aggressive pricing could even slow home sales. Additionally, because many builders of *new* homes found that offering PV as an option, rather than a standard feature, posed a set of difficulties (Farhar et al., 2004b; Dakin et al., 2008), it has been relatively common in past years for PV to be sold as a standard feature on homes (Dakin et al., 2008). This potentially affects the valuation of PV systems for two reasons. First, because sales agents for the *new* PV homes have sometimes been found to either not be well versed in the specifics of PV and felt that selling a PV system was a new sales pitch (Farhar et al., 2004b) or to have combined the discussion of PV with a set of other energy features (Dakin et al., 2008), up-selling the full value of the PV system as a standard product feature might not have been possible. Secondly, the average sales price of new homes in our dataset is lower than the average sales price of existing homes: to the extent that PV is considered a luxury good, it may be somewhat less-highly valued for the buyers of these homes.

These downward influences for *new* homes are potentially contrasted with analogous upward influences for *existing* homes. Related, buyers of *existing* homes with PV may - to a greater degree than buyers of the less expensive *new* homes in our sample - be self selected towards those who place particular value on a PV home, and therefore value the addition more. Finally, in contrast to *new* home sellers, who might not be familiar with the intricacies and benefits of the

[42] A small number of "affordable homes" (*n* = 7) are included in the *new* PV homes subset, which, as a group, appear to have a slight downward yet inconsequential effect on the overall sales premium results, and therefore were not investigated further herein. If the number of affordable homes with PV was significant in future research, those effects would best be controlled for directly.

PV system, *existing* home sellers are likely to be very familiar with the particulars of the system and its benefits, and therefore might be able to "up-sell" it more effectively.

These possible influences, in combination, may explain the difference in average PV premium between *new* and *existing* homes. The present analysis did not seek to disentangle or evaluate these specific drivers, however, leaving that important effort for future research.

Table 9: New and Existing Home Base Hedonic Model Results with Robustness Tests

	New Homes			Existing Homes		
	Base	Robustness	Robustness	Base	Robustnes	Robustness
		Matched	Subdivision		Matched	Subdivision
	Model 3	Model 3Ra	Model 3Rb	Model 4	Model 4Ra	Model 4Rb
size	0.006*	0.006*	0.006**	0.014***	0.011***	0.012***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
sqft_1000	0.247***	0.190***	0.250***	0.256***	0.238***	0.251***
	(0.002)	(0.006)	(0.002)	(0.002)	(0.015)	(0.002)
lt1acre	0.536***	0.279***	0.517***	0.373***	0.426***	0.376***
	(0.019)	(0.073)	(0.024)	(0.010)	(0.046)	(0.012)
acre	-0.007	0.338***	-0.009*	0.019***	0.011	0.017***
	(0.005)	(0.027)	(0.005)	(0.002)	(0.011)	(0.003)
ages2	-0.010	0.081***	-0.010*	-0.005***	-0.006***	-0.005***
	(0.006)	(0.017)	(0.006)	(0.000)	(0.002)	(0.000)
ages2sqr	0.00768***	-0.02443***	0.00715***	0.00004***	0.00004***	0.00004***
	(0.001676)	(0.004407)	(0.001604)	(0.000003)	(0.000014)	(0.000004)
bgre_100	0.008***	0.027***	0.007***	0.002	-0.002	0.002
	(0.001)	(0.003)	(0.001)	(0.001)	(0.009)	(0.001)
intercept	12.651***	12.585***	12.627***	12.820***	13.023***	12.833***
	(0.022)	(0.066)	(0.025)	(0.013)	(0.077)	(0.014)
*Numbers in parenthesis are standard errors, *** p<0.01, ** p<0.05, * p<0.1*						
Results for subdivision, block group, and quarterly fixed effect variables are not reported here, but are available upon request from the authors						
Total n	27,873	8,068	27,873	44,384	4,887	44,384
Adjusted R^2	0.94	0.94	0.94	0.93	0.95	0.94
n (pv homes)	935	802	935	897	618	897
Mean non-pv asp2	$ 397,265	$ 399,162	$ 397,265	$ 532,645	$ 590,428	$ 532,645
Mean size (kW)	2.5	2.4	2.5	3.8	3.7	3.8
Estimated $/Watt	$ 2.3	$ 2.6	$ 2.6	$ 7.7	$ 6.4	$ 6.5

4.2.1. Difference-in-Difference Model Results

Delving deeper into PV system impacts on *existing* homes, Table 10 (and Figure 4) shows the results of the base Difference-in-Difference Model 5 as well as results from the two robustness tests (all of which can be compared to Models 4, 4Ra, and 4rb above, as is done in Figure 4). As a reminder, one robustness model limited the differences in sales dates between the first and second sales to five years (Model 5Rb), and the other robustness model used the combined subdivision-block group delineations as fixed effects variables (Model 5Rc). The variables of interest are PVH, SALE2 and especially PVS.

PVH estimates the difference in the first sale prices of homes that will have PV installed (as of the second sale date) relative to non-PV homes. The three models are consistent in their estimates, showing approximately a 2% premium for "future" PV homes, though only two of these estimates are statistically significant, and then only at the 10% level. Regardless, this finding suggests that PV homes tend to sell for somewhat more even before the installation of PV, presumably as a result of other amenities that are correlated with the (ultimate) installation of PV (such as, potentially, energy efficiency features). SALE2 estimates the price appreciation trend between the first and second sales for all homes. The coefficient for this variable is significant at the 1% level, and is fairly stable across the models, indicating a clear general trend of price increases, over and above inflation adjustments, of approximately 2% to 2.5% between the first and second sales.

Finally, and most importantly, homes with PV systems installed on them as of the second sale - after controlling for any inherent differences in first sale prices (PVH) and any trend between the first and second sales (SALE2) - show statistically significant sale price premiums of approximately 5 to 6%. These premiums equate to an increase in selling prices of approximately $6/watt for *existing* homes, closely reflecting the results presented earlier for the hedonic models in Table 9 and Figure 3. For comparison purposes, both sets of results are presented in Figure 4.

The premium for *existing* PV homes as estimated in the DD Models 5, 5Ra, and 5Rb and both robustness tests for the hedonic model (using the "matched" and "subdivision" datasets, Models 4Ra and 4Rb respectively) are consistently between $6 and $6.5/watt and are in line with –

though slightly higher than - the mean net installed costs of PV on existing homes in California of approximately $5.2/watt from 2007 through 2009. The base hedonic *existing* home model, on the other hand, estimates a higher premium of $7.7/watt. One possible explanation for this inconsistency is that the two robustness tests for the hedonic model and the various difference-in-difference models are less likely to be influenced by either selection or omitted variable bias than the base hedonic model. Regardless of the absolute magnitude, a sizable premium for *existing* PV homes over that garnered by *new* PV homes is clearly evident in these and the earlier results.

Figure 4: Existing Home Hedonic and Difference-in-Difference Model Results with Robustness Tests

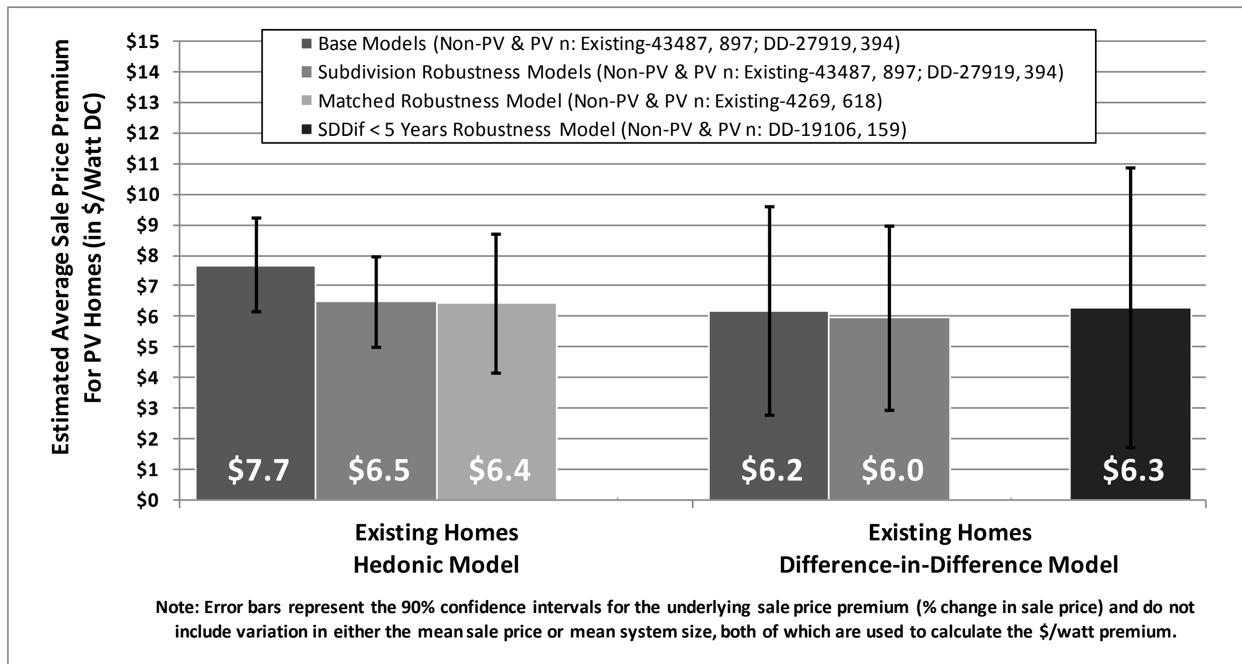


Table 10: Difference-in-Difference Model Results

	Difference-in-Difference		
	Base	Robustness	Robustness
		Subdivision	Sddif < 5
	Model 5	Model 5Ra	Model 5Rb
pvh	0.022*	0.024	0.022*
	(0.013)	(0.021)	(0.012)
sale2	0.023***	0.026***	0.019***
	(0.002)	(0.002)	(0.002)
pvs	0.051***	0.061**	0.049***
	(0.017)	(0.027)	(0.015)
sqft_1000	0.255***	0.256***	0.251***
	(0.002)	(0.002)	(0.002)
lt1acre	0.374***	0.385***	0.377***
	(0.011)	(0.013)	(0.012)
acre	0.012***	0.009**	0.011***
	(0.003)	(0.004)	(0.003)
age	-0.005***	-0.005***	-0.005***
	(0.0002)	(0.0003)	(0.0003)
agesqr	0.00004***	0.00004***	0.00004***
	(0.000003)	(0.000003)	(0.000003)
bgre_100	0.002*	0.000	0.001
	(0.001)	(0.001)	(0.001)
intercept	12.677***	12.594***	12.694***
	(0.013)	(0.015)	(0.014)
*Numbers in parenthesis are standard errors. *** p<0.01, ** p<0.05, * p<0.1. Results for subdivision, block group, and quarterly fixed effect variables are not reported here, but are available upon request from the authors*			
Total n	28,313	19,265	28,313
Adjusted R^2	0.93	0.94	0.94
n (pv homes)	394	159	394
Mean non-pv asp2	$ 488,127	$ 450,223	$ 488,127
Mean size (kW)	4.0	4.3	4.0
Estimated $/Watt	$ 6.2	$ 6.3	$ 6.0

4.3. Age of PV System for Existing Home Hedonic Model Results

To this point, the marginal impacts to selling prices of each additional kW of PV added to *existing* homes have been estimated using the full dataset of *existing* homes, which has produced an average effect, regardless of the age of the PV system. As discussed previously, it is

conceivable that older PV systems would garner lower premiums than newer, similarly sized systems. To test this directly, a base model is constructed - see equation (4) - that estimates the marginal impacts for three age groups of PV systems: no more than one year old at the time of sale; between two and four years old; and five or more years old. Results from this model as well as two robustness tests, using the coarsened exact matching procedure and the combined subdivision-block group delineations, are shown in Table 11 as Models 6, 6Ra, and 6Rb, respectively.

Each model finds statistically significant differences between PV and non-PV homes for each age group, and more importantly, premium estimates for newer PV systems are - as expected - larger than those for older PV systems and are monotonically ordered between groups, providing some evidence that older systems are being discounted by the buyers and sellers of PV homes. Specifically, the three models estimate an average premium for PV systems that are one year or less in age of $8.3-9.3/watt, whereas those same models estimate an average premium of $4.1-6.1/W for systems that are five or more years old.

4.4. Returns to Scale Hedonic Model Results

In the previous modeling, the marginal impacts to selling prices of each additional kW of PV in the continuous models have been estimated using a linear relationship. To test whether a non-linear relationship may be a better fit, a SIZE squared term is added to the model as shown in equation (5). Similarly, decreasing or increasing returns to scale might be related to other house characteristics, such as the size of the home (i.e., square feet). This hypothesis is explored using equation (6). Both model results are shown in Table 11 as Model 7 and 8, respectively.

Both models find small and non-statistically significant relationships between their interacted variables, indicating a lack of compelling evidence of a non-linear relationship between PV system size and selling price in the dataset, and a lack of compelling evidence that the linear relationship is affected by the size of the home. As such, the impact of PV systems on residential selling prices appears to be well approximated by a simple linear relationship, while the size of the home is not found to impact the PV sales price premium. In combination, these results seem to suggest that while California's tiered rate structures may lead to energy bill savings from PV

investments that vary non-linearly with PV system size and also vary by home size, those same rate structures have not – to this point – led to any clear impact on the PV premium garnered at the time of home sale. Similarly, though larger PV systems may be installed at a discount to smaller ones on a $/watt basis, and though any marginal green cachet that exists may diminish with system size, those possible influences are not apparent in the results presented here.

Table 11: Age of PV System and Return to Scale Hedonic Model Results

	Age of PV Systems for Existing Homes			Returns to Scale	
	Base	Robustness	Robustness	Size	Square Feet
		Matched	Subdivision		
	Model 6	Model 6Ra	Model 6Rb	Model 7	Model 8
size*1 year old	0.016***	0.016***	0.013***		
	(-0.004)	(-0.005)	(-0.004)		
size*2-4 years old	0.015***	0.010***	0.013***		
	(-0.002)	(-0.003)	(-0.002)		
size*5+ years old	0.012***	0.008**	0.008**		
	(-0.003)	(-0.004)	(-0.003)		
size				0.008**	0.021***
				(0.003)	(0.006)
sizesqr				0.001	
				(0.001)	
size*sqft_1000					-0.003
					(0.002)
sqft_1000	0.256***	0.238***	0.251***	0.253***	0.253***
	(0.002)	(0.015)	(0.002)	(0.001)	(0.001)
lt1acre	0.373***	0.426***	0.376***	0.416***	0.416***
	(0.010)	(0.046)	(0.012)	(0.009)	(0.009)
acre	0.019***	0.010***	0.017***	0.016***	0.016***
	(0.002)	(0.011)	(0.003)	(0.002)	(0.002)
ages2	-0.005***	-0.006***	-0.005***	-0.004***	-0.004***
	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)
ages2sqr	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
bgre_100	0.002***	-0.002***	0.002***	0.003***	0.003***
	(0.001)	(0.009)	(0.001)	(0.001)	(0.001)
intercept	12.820***	13.024***	12.834***	12.702***	12.701***
	(0.013)	(0.078)	(0.014)	(0.010)	(0.011)
*Numbers in parenthesis are standard errors. *** p<0.01, ** p<0.05, * p<0.1 Results for subdivision, block group, and quarterly fixed effect variables are not reported here, but are available upon request from the authors*					
Total n	44,384	4,887	44,384	72,319	72,319
Adjusted R^2	0.93	0.95	0.94	0.93	0.93
n (pv homes)	897	618	897	1,894	1,894
Mean non-pv asp2	$ 532,645	$ 590,428	$ 532,645	$ 480,862	$ 480,862
Mean size (kW)	3.8	3.7	3.8	3.1	3.1
Estimated $/Watt	$8.3 - $6.1	$9.3 - $4.9	$7.0 - $4.1	$ 6.3	$ 6.4
Note: $/watt estimates for Returns to Scale models include the non-statistically significant interaction coefficients and therefore should be interpreted with caution					

5. Conclusions

The market for solar PV is expanding rapidly in the U.S. Almost 100,000 PV systems have been installed in California alone, more than 90% of which are residential. Some of those “PV homes” have sold, yet little research exists estimating if those homes sold for significantly more than similar non-PV homes. Therefore, one of the claimed incentives for solar homes - namely that a portion of the initial investment into a PV system will be recouped if the home is sold – has, to this point, been based on limited evidence. Practitioners have sometimes transferred the results from past research focused on energy efficiency and energy bills more generally and, while recent research has turned to PV that research has so far focused largely on smaller sets of PV homes concentrated in certain geographic areas. Moreover, the home sales price effect of PV on a *new* versus an *existing* home has not previously been the subject of research. Similarly unexplored has been whether the relationship of PV system size to home sales prices is linear, and/or is affected by either the size of the home or the age of the PV system.

This research has used a dataset of approximately 72,000 California homes, approximately 2,000 of which had PV systems installed at the time of sale, and has estimated a variety of different hedonic and repeat sales models to directly address the questions outlined above. Moreover, an extensive set of robustness tests were incorporated into the analysis to test and bound the possible effects and increase the confidence of the findings by mitigating potential biases. The research was not intended to disentangle the various individual underlying influences that might dictate the level of the home sales price premium caused by PV, such as, energy costs savings, the net (i.e., after applicable state and federal incentives) installed cost of the PV system, the possible presence of a green cachet, or seller attributes. Instead, the goal was to establish credible estimates for the aggregate PV residential sale price effect across a range of different circumstances (e.g., new vs. existing homes, PV system age).

The research finds strong evidence that homes with PV systems in California have sold for a premium over comparable homes without PV systems. More specifically, estimates for average PV premiums range from approximately \$3.9 to \$6.4 per installed watt (DC) among a large number of different model specifications, with most models coalescing near \$5.5/watt. That

value corresponds to a premium of approximately $17,000 for a relatively new 3,100 watt PV system (the average size of PV systems in the study). These results are similar to the average increase for PV homes found by Dastrop et al. (2010), which used similar methods but a different dataset, one that focused on homes in the San Diego metropolitan area. Moreover, these average sales price premiums appear to be comparable to the average *net* (i.e., after applicable state and federal incentives) installed cost of California residential PV systems from 2001-2009 (Barbose et al., 2010) of approximately $5/watt, and homeowners with PV also benefit from electricity cost savings after PV system installation and prior to home sale.

Although the results for the full dataset from the variety of models are quite similar, when the dataset is split among *new* and *existing* homes, PV system premiums are found to be markedly affected, with *new* homes demonstrating average premiums of $2.3-2.6/watt, while *existing* homes are found to have average premiums of $6-7.7/watt. Possible reasons for this disparity between *new* and *existing* PV homes include: differences in underlying net installation costs for PV systems; a willingness among builders of new homes to accept a lower PV premium because PV systems provide other benefits to the builders in the form of product differentiation, leading to increased sales velocity and decreased carrying costs; and, lower familiarity and/or interest in marketing PV systems separately from the other features of *new* homes contrasted with a likely strong familiarity with the PV systems among *existing* home sellers.

The research also investigated the impact of PV system age on the sales price premium for existing homes, finding - as would be expected - evidence that older PV systems are discounted in the marketplace as compared to newer PV systems. Finally, evidence of returns to scale for either larger PV systems or larger homes was investigated but not found.

In addition to benchmarking the results of this research to the limited previous literature investigating the sales price premiums associated with PV, our results can also be compared to previous literature investigating premiums associated with energy efficiency (EE) or, more generally, energy cost savings. A number of those studies have converted this relationship into a ratio representing the relative size of the home sales price premium to the annual savings expected due to energy bill reductions. These ratios have ranged from approximately 7:1

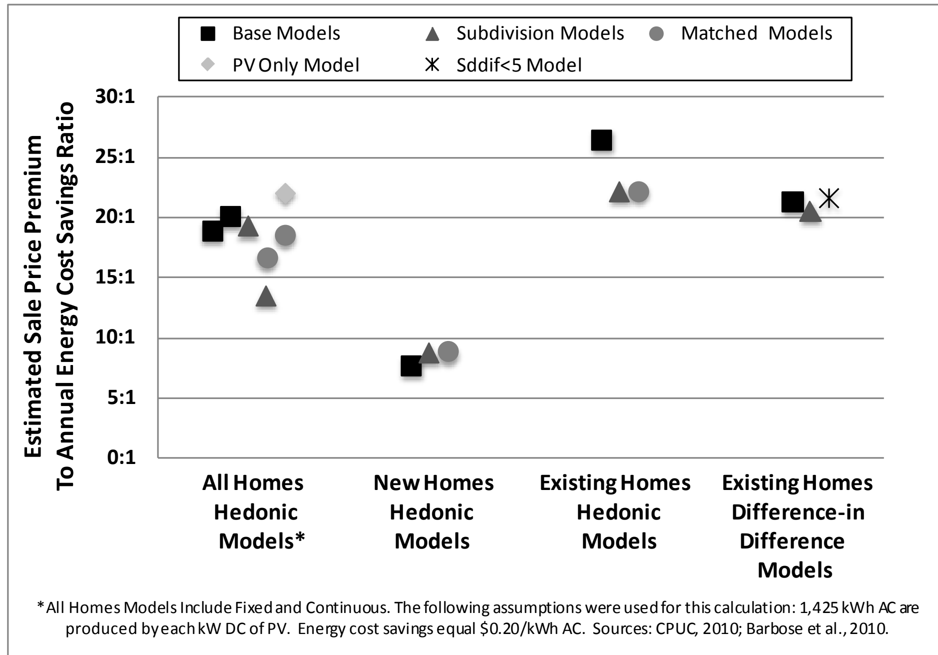
(Longstreth et al., 1984; Horowitz and Haeri, 1990), to 12:1 (Dinan and Miranowski, 1989), to approximately 20:1 (Johnson and Kaserman, 1983; Nevin et al., 1999; Eichholtz et al., 2009), and even as high as 31:1 (Nevin and Watson, 1998).

Although actual energy bill savings from PV for the sample of homes used for this research were not available, a rough estimate is possible, allowing for a comparison to the previous results for energy-related homes improvements and energy efficiency. Specifically, assuming that 1,425 kWh (AC) are produced per year per kW (DC) of installed PV on a home (Barbose et al., 2010; CPUC, 2010)[43] and that this production offsets marginal retail electricity rates that average $0.20/kWh (AC) (Darghouth et al., 2010), each watt (DC) of installed PV can be estimated to save $0.29 in annual energy costs. Using these assumptions, the $/watt PV premium estimates reported earlier can be converted to sale price to annual energy savings ratios (see Figure 5).

A $3.9 to $6.4/watt premium in selling price for an average California home with PV installed equates to a 14:1 to 22:1 sale price to energy savings ratio, respectively. For *new* homes, with a $2.3-2.6/watt sale price premium, this ratio is estimated to be 8:1 or 9:1, and for *existing* homes, with an overall sale price premium range of $6-7.6/watt, the ratio is estimated to range from 21:1 to 26:1. Without actual energy bill savings, these estimates are somewhat speculative, but nonetheless are broadly consistent with the previous research that has focused on EE-based home energy improvements.

[43] The 1,425 kWh (AC) estimate is based on a combination of a 19% capacity factor (based on AC kWh and CEC-AC kW) from CPUC (2010), and an 0.86 conversion factor between CEC-AC kW and DC kW (Barbose et al., 2010).

Figure 5: Estimated Ratios of Sale Price Premium to Annual Energy Cost Savings



Although this research finds strong evidence that homes with PV systems in California have sold for a premium over comparable homes without PV systems, the extrapolation of these results to different locations or market conditions (e.g., different retail rates or net installed costs) should be done with care.

Finally, additional questions remain that warrant further study. Perhaps most importantly, although the dataset used for this analysis consists of almost 2,000 PV homes, the study period was limited to sales occurring prior to mid-2009 and the dataset was limited to California. Future research would therefore ideally include more-recent sales from a broader geographic area to better understand any regional/national differences that may exist as well as any changes to PV premiums that occur over time as the market for PV homes and/or the net installed cost of PV changes. More research is also warranted on *new* versus *existing* homes to better understand the nature and underlying drivers for the differential premium discovered in this research; in addition to further hedonic analysis, that research could include interviewing/surveying home builders and buyers and exploring the impact of demographic, socio-economic, and others factors on the PV premium.

Additionally, future research might compare sales price premiums to actual annual home energy cost savings, to not only to explore the sale price to annual energy cost savings ratio directly, but also to explore if a green cachet exists over and above any sale price premiums that would be expected from energy cost savings alone. Further, house-by-house PV system and other information not included in the present study might be included in future studies, such as the actual net installed costs of PV for individual households, rack-mounted or roof-integrated distinctions as well as other elements of PV system design, the level of energy efficiency of the home, whether the home has a solar hot water heater, whether the PV system is customer or 3rd party owned at the time of sale, and if the homeowner can sell the green attributes the system generates.[44] Such research could elucidate important differences in PV premiums among households, PV system designs and state and federal programmatic designs, as well as bolster confidence in the magnitude of the PV premium estimated here. Finally, and more generally, additional research could investigate the impact of PV systems on the time homes remain on the market before sale, a factor that may be especially important for large developers and sellers of *new* homes.

[44] 3rd party owned PV systems would not be expected to command the same sort of premium as was discovered here. Although the level of penetration of 3rd party owners in our data was not significant (below 10%), and therefore would likely have not influenced our results in a substantive way, any future research, using more recent data, must account for their inclusion specifically.

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Understanding the Solar Home Price Premium: Electricity Generation and "Green" Social Status

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Understanding the Solar Home Price Premium: Electricity Generation and "Green" Social Status

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Abstract

This study uses a large sample of homes in the San Diego area to provide some of the first capitalization estimates of the resale value of homes with solar panels as compared to comparable homes without solar panels. While the residential solar home market continues to grow, there is surprisingly little direct evidence on the market capitalization effect. We find evidence using both hedonics and a repeat sales index approach that solar panels are capitalized at roughly a 3% premium. This premium is larger in communities with more registered Prius hybrid vehicles and in communities featuring a larger share of college graduates.

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I. Introduction

On a per-capita basis, California has the most installed residential solar capacity in the United States. Solar homes are expensive. It can cost $30,000 to install such a system. Today, there are several state and federal programs actively subsidizing this investment. Judged on strictly efficiency criteria (foregone electricity expenditure per dollar of investment), solar panels may be a bad investment. Borenstein (2008) finds that the cost of solar PV is about 80 percent greater than the value of the electricity it will produce.

But, solar panels bundle both investment opportunities (the net present value of the flow of electricity they generate) and conspicuous consumption opportunities (that it is common knowledge that your home is “green”). Kotchen (2006) provides the first theoretical analysis of this important case in which individuals have the option of consuming “impure” public goods that generate private and public goods as a joint product. Outside of the Toyota Prius, solar homes are perhaps the best known “green products” sold on the market.

The owner of a solar home faces low electricity bills and enjoys a consumption flow of “warm glow” for environmentalists who take pleasure in “doing their duty” in terms of producing minimal greenhouse gases associated with electricity consumption (Andreoni 1990). Since the presence of solar panels on most roofs is readily apparent, the solar home owner knows that others in the same community know that the home owner has solar panels. This community level re-enforcement may further increase the demand for this green product. This “observability” is likely to be even more valued in an environmentalist community (i.e a Berkeley) than in a community that dismisses climate change concerns. The recent political divide between Democrats and Republicans over climate change mitigation efforts highlights that in conservative communities that solar panels may offer less “warm glow” utility to its owners.

In this paper, we provide the first set of hedonic marginal valuation estimates for a large sample of solar homes based on recent real estate transactions in San Diego County. We document evidence of a solar price premium and find that this premium is larger in environmentalist communities. In most mature housing markets, we expect that the econometrician knows less about the market than the decision makers. In the case of solar panels, our interactions with professionals in the field suggests that these professionals have little basis for estimating the pecuniary benefits of solar installation.

Our hedonic study contributes to two literatures. The enormous real estate hedonics literature continues to explore how different housing attributes are capitalized into home prices. Solar installation can be thought of as a quality improvement in the home. Recent studies have used longitudinal data sets such as the American Housing Survey (which tracks the same homes over time) to study how home upgrades such as new bathrooms and other home improvements are capitalized into resale values (Harding, Rosenthal and Sirmans 2007, Wilhelmsson 2008). A distinctive feature of solar panels is that on a day to day basis they have no "use value" as compared to a new bathroom or kitchen. Solar panels reduce your household's need for electricity but from an investment standpoint they represent an intermediate good that indirectly provides utility to households. For those households who derive pleasure from knowing that they are generating their own electricity, the solar panels will yield "existence value". Such households will recognize that they have reduced their greenhouse gas emissions and thus are providing world public goods. In their local communities, such households may be recognized by neighbors for their civic virtue.

A more recent literature in environmental economics has examined the demand for green products. Most of these studies have focused on hybrid vehicle demand such as Kahn (2007), Kahn and Vaughn (2009) and Heutel and Muehlegger (2010) or the diffusion of solar panels across communities (Dastrup 2010 and Bollinger and Gillingham 2010). By using hedonic methods to estimate the price premium for green attributes our study shares a common research design with several recent studies that have used hedonic methods to infer the "green product" price premium. Delmas and Grant's (2010) study the demand for organic wine. Eichholtz, Kok, and Quigley (2010) estimate hedonic price regressions to uncover the capitalization of Energy Star and LEED status for commercial buildings. Brounen and Kok (2010) present a hedonic study documenting the capitalization of residential energy efficiency when Dutch homes are certified with regards to this criterion.

II. The Hedonic Equilibrium and the Make versus Buy Decision over Solar Installation

A household who wants to live in a solar home can either buy such a home or buy another home that does not have solar panels and pay a contractor to install these solar panels. This option to "make" versus "buy" should impose cross-restrictions on the size of the capitalization effect. Consider an extreme case in which all homes are identical and there is a

constant cost of $c to install solar panels. By a no arbitrage argument, in the hedonic equilibrium, we would recover a price premium of "c" for the solar homes. Over time, any supply innovations that lead to a lower installation cost or higher quality of the new solar panels would be immediately reflected in the hedonic price premium.

In reality, homes are differentiated products that differ along many dimensions. No home has a "twin". The non-linear hedonic pricing gradient is such that different homes are close substitutes at the margin (Rosen 2002). Since at any point in time the same home is not available with and without solar panels, there is no reason why the hedonic solar capitalization must equal the installation cost.

On the supply side, it is relevant to note that there are two sources of solar homes. One set represents existing homes whose owners have installed solar panels in the past and are now selling their home. Such owners would base their installation decision on a dynamic utility maximization decision that we will discuss below. In contrast, the second set of solar homes is produced by developers of new homes who will compare their profit for building a home with and without solar panels. Such developers are likely to have invested more effort in the basic marketing research of determining the market for this custom feature. In a built up area such as San Diego, there are unlikely to be pockets of housing in which existing homes sit adjacent to vacant parcels that are being developed by developers. If existing homes were next to new housing developments, then the developer's profit motive would be more likely to place restrictions on the hedonic solar capitalization.

Recognizing that both households and developers choose whether to install a solar system or not, we now turn to discussing this "participation equation" for each of these two types of agents. We assume that there is a one sized system so the decision makers choose whether or not to install solar.

We will start with an incumbent home owner. His solar installation decision depends on the number years, j, until he sells his home, the price appreciation measured in dollars when he sells, Δ, the upfront cost of installing the panels, C, the flow utility from having solar panels, I (the warm glow), and the forgone electricity expenditure, $p * E$, where E is the electricity the

panels generate and p is the price per unit of electricity.[2] Define the constant interest rate as r. Under perfect foresight, the home owner will install if

$$\frac{\Delta}{(1+r)^j} + \sum_j \frac{I + p * E}{(1+r)^j} > C * (1 - subsidy) \quad (1)$$

Consider the realistic case in which Δ is not a constant across homes and for the moment consider the unrealistic case in which heterogeneous households have perfect foresight about this capitalization effect. In this case, this essential heterogeneity creates an endogeneity issue for our hedonic pricing study (Heckman, Urzua, Vytlacil 2006). In our hedonic pricing regressions, the presence of solar panels will be our key explanatory variable. If equation (1) determines the solar installation decision, then it is clear that a "sorting on the gain" issue arises. Those households who expect that their home will appreciate the most due to solar installation are the most likely to install. This concern is even more likely for households who plan to sell soon (j is low) and for whom environmentalist ideology does not influence their decision (I=0). In a world with perfect foresight and heterogeneity, those households who expect the largest economic returns to selling the solar home and earning "delta" will have the greatest incentive to install solar. Such households with a j=0 and I=0 are effectively "developers" who are preparing to sell their home to maximize their profit.

While we acknowledge this potential concern, there are several factors that attenuate this endogeneity problem. First, we do not believe that households have perfect foresight about the returns to installing solar. Heckman et. al. (2006) point out that the essential heterogeneity problem does not arise in the case where agents are heterogeneous but do **not know** their own type. You cannot sort on what you do not know! Given that solar panels are a relatively new home attribute and that it is an open question among professionals in the industry concerning what is the capitalization, we believe that solar installers and future home buyers are making decisions over purchasing a solar home without knowing the marginal price premium they are paying for such a home. In addition, if the household who installs expects to stay in the home longer (a large j) then this attenuates endogeneity problem. In addition, those potential installers

[2] We acknowledge that an alternative interpretation for "*I*" is that there may be libertarian households who gain utility knowing that they are independent and self sufficient regardless of the environmental implications. Such individuals who "go off the grid" may embrace a very different ideology than those who purchase panels with public goods provision and warm glow in mind.

with a specific ideology (large I) will be more likely to install. When we estimate our hedonic regressions below, we discuss in detail potential omitted variables problems. For example, if ideological past owners install solar panels and install energy efficient windows, then a hedonic researcher who cannot control for the type of windows would miss this.[3]

It is interesting to contrast this home owner's installation decision with a new home developer's solar install decision. In this case, this profit maximize immediately sells the home and installs if:

$$\Delta > C * (1 - subsidy)$$

In terms of search activity, it remains an open question whether solar homes stay on the market less long than identical homes without solar panels.

In closing this section, it is relevant to note that equation (1) previews an identification strategy for bounding the role that ideology plays in determining the demand for solar panels. If we could estimate Δ, and had variation in electricity prices, solar cost installation and government solar subsidy policies, it would be possible to bound how much households must value solar panels due to ideological reasons. In this sense, we view our estimates of Δ as an input in a revealed preference analysis of the underlying causes of demand for green products.

III. Empirical Specification

To empirically assess the extent to which solar panels are capitalized into home prices, we employ both a hedonic and a repeat sales approach. The hedonic specification decomposes home prices by observable characteristics for all transactions while flexibly controlling for spatial and temporal trends. Solar panels are included as a home characteristic and average capitalization is measured as the coefficient on the solar panel variable. The repeat sales model controls for average appreciation of properties from one sale to the next within each census tract, with an indicator for installation of panels between sales. Average capitalization of solar panels is measured as the average additional appreciation across consecutive sales of homes with newly installed solar relative to other consecutive sales of homes within the same census tract. We also

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[3] There is little evidence in the hedonic literature that more energy efficient homes, in the absence of Report Card style grades as in Brounen and Kok (2010), sell for a price premium. If this point generalizes and non-visible energy efficiency is not capitalized then a researcher who does not observe such information will consistently estimate the solar price premium.

augment each specification to allow the extent of solar capitalization to vary with the size of the system as well as ideological measures of "greenness" and demographic characteristics of the neighborhood.

Hedonic approach

Our first approach to measuring the capitalization of solar panels in home sales is to decompose home prices by home characteristics and neighborhood level time trends. We interpret the average difference between the log price of homes with solar panels and those without after controlling for observable home characteristics and average neighborhood prices in each quarter as the average percent contribution to home sales price of solar panels. The baseline equation we estimate in our hedonic specification is

$$\log(\text{Price}_{ijt}) = \alpha\text{Solar}_{it} + \beta\text{X}_i + \gamma_{jt} + \varepsilon_{ijt} \qquad (2)$$

where Price_{ijt} is the observed sales price of home i in census tract j in quarter t. The variable Solar_{it} is an indicator for the existence of a solar panel on the property and α is the implicit price of the panels as a percentage of the sales price -- our measure of the extent of capitalization. Home, lot, and sale characteristics are included as X_i. We allow home and lot size to capitalize differentially over space by interacting the logs of these observable characteristics with zip code level indicator variables.[4] Additional characteristics contained in X_i are the number of bathrooms, the number of times the property has sold in our sales data, the number of mortgage defaults associated with the property since 1999, indicators for the building year, if the property has a pool, a view, and is owner occupied, and month of the year indicators to control for seasonality in home prices. In equation (2), we are imposing that the solar capitalization rate does not vary across time or space.[5]

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[4] There is substantial variation in climate and other local amenities across the three counties in our data sets. Our specification allows a home or lot of a given size on the temperate coast near the beach to be valued by the market differently than the same size home or lot in the inland desert region.

[5] Recently, there have major changes made in the federal tax incentives for solar and this may affect the solar price capitalization. On October 3, 2008 the President signed the Emergency Economic Stabilization Act of 2008 into law. The bill extends the 30% ITC for residential solar property for eight years through December 31, 2016. It also removes the cap on qualified solar electric property expenditures (formerly $2,000), effective for property placed in service after December 31, 2008 http://www.clarysolar.com/residential-solar.html. In time, there will be enough sales of solar homes after this new law was enacted to test for whether the law has affected the size of the solar capitalization effect.

Hedonic research has taught us that marginal valuation parameters such as α reflect both supply and demand forces (Rosen 2002). The hedonic identification problem must be reckoned with if one seeks to make strong demand side statements based on estimates of α. For example, if a city such as San Diego experiences an increase in trained solar installers then the marginal cost of installation may fall and we could observe α declining over time even if aggregate demand for solar panels is increasing.

We control for housing market price trends and unobserved neighborhood and location amenities with census tract-quarter fixed effects, γ_{jt}. Allowing different appreciation patterns for different geographies is critical because of the differences over space in the extent of price changes during our sample period which are correlated with the incidence of solar panel installation.

Any hedonic study is subject to the criticism that key explanatory variables are endogenous.[6] While we have access to a detailed residential data set providing numerous controls, we acknowledge that there are plausible reasons for why the solar panel dummy could be correlated with unobserved attributes of the home.

Our OLS capitalization estimate of α measures the average differential in sales price of homes with solar panels and homes without panels in the same census tract selling in the same quarter after controlling for differences in observable home characteristics. Interpreting the hedonic coefficient estimate as the effect on home price of solar panels requires the assumption that the residual idiosyncratic variation in sales prices, ε_{ijt} in our framework, and solar panel installation and observable household and neighborhood attributes are uncorrelated. This would not be the case if there are unobserved differences between homes with solar and neighboring homes selling contemporaneously which are systematically correlated with solar panel installation. For example, homeowners who install solar panels may be more likely to make other

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[6] We recognize that the standard OLS orthogonality condition is non-standard in our case. As discussed in Section II, if a perfect twin without solar panels exists for each home, then the no arbitrage argument implies that the capitalization of solar panels will equal the installation cost. To rule out the "twins case" requires that a home's attributes, X, and solar's presence not be independent (full spanning) but we require that $E(\varepsilon|X\ Solar)=0$. Intuitively, similar to any OLS study we require that unobserved home attributes be uncorrelated with observable attributes but we also require that the presence of solar panels be bundled with observable attributes of the home, X.

home improvements that increase sales prices of their homes than their neighbors. To investigate how this particular example influences our capitalization estimate, we estimate (1) with a control for whether a home improvement is observed in building permit data available for a large subset of San Diego County.

To allow the capitalization of panels to vary over system size and neighborhood characteristics, we interact our solar indicator variable in equation (1) with a linear term including the characteristic. Our estimating equation becomes;

$$\log(\text{Price}_{ijt}) = \alpha_0 \text{Solar}_{it} + \alpha_1 \text{N} * \text{Solar}_{it} + \beta \text{X}_i + \gamma_{jt} + \varepsilon_{ijt}. \qquad (3)$$

The value of installed solar panels may be influenced by factors beside the financial implications of installation, and we estimate equation (2) using a number of proxies for other factors. Households may have preferences for the production technology used to generate the electricity they use, motivated for example by a concern for individual environmental impact or a preference for individual energy independence. A desire to appear environmentally conscious may increase the value of solar, which allows a costly, permanent reminder of environmental activism to be installed on the roof. We use the percent of voters registered as Green party members in the census tract as a proxy for environmental idealism, and the Toyota Prius share of registered vehicles in the zip code to measure the neighborhood prevalence of demonstration of environmental concern.[7] For comparison, we estimate capitalization variation by Democratic party registered voter share and the pickup truck share of registered vehicles in the zip code. We also examine census tract log median income and percent of college graduates, as characteristics over which solar panel capitalization might vary.

Repeat sales approach

A second approach to measuring the average additional value to a home sale of solar panels is to average the additional appreciation of a single home from one sale to the next (repeat sales) when solar panels are installed between sales. We interpret the average differential in the appreciation in consecutive sales of properties where solar was installed between sales and other

[7] A high share of registered Green party members in a census tract may also capture an increased social return to demonstrating environmental awareness. A Prius purchase may, of course, also be motivated by a variety of additional factors, including environmental ideology.

properties in the same census tract with no installation between consecutive sales as the average capitalization of solar panels in home sales. The baseline equation we estimate for our repeat sales specification is

$$\log\left(\frac{\text{Price}_{ij(t+\tau)}}{\text{Price}_{ijt}}\right) = \tilde{\alpha}\Delta\text{Solar}_{i(t+\tau)} + T_{j(t+\tau)} + \tilde{\varepsilon}_{ij(t+\tau)} \tag{4}$$

where $\text{Price}_{ij(t+\tau)}$ and Price_{ijt} are consecutive sales of the same property i in neighborhood j occurring τ quarters apart where the first sale is in period t. The variable $\Delta\text{Solar}_{i(t+\tau)}$ is an indicator for the installation of solar panels at a property between sales (after t but before $t+\tau$). Census tract specific time effects are included as the vector $T_{j(t+\tau)}$, with remaining idiosyncratic property appreciation measured as $\tilde{\varepsilon}_{ij(t+\tau)}$.

Our repeat sales GLS capitalization estimate, $\tilde{\alpha}$, of the capitalization of solar panels in housing prices measures the average additional appreciation of homes with solar installed between sales beyond that measured by the housing price indexes of their respective census tracts. Interpreting $\tilde{\alpha}$ as the effect of panel installation on subsequent sales price requires the assumption that idiosyncratic price appreciation of homes is not correlated with solar panel installation. Again, this will not be the case if unobserved changes in properties are correlated with solar panel installation.[8]

[8] Note that our hedonic and repeat sales approaches are related. Differencing consecutive observations on the same property i in equation (2) results in equation (4) and so both methods estimate the same parameter for the average capitalization of solar panels, $\alpha = \tilde{\alpha}$. The log of the price ratio is the difference of the log prices of the two sales while $\Delta\text{Solar}_{i(t+\tau)} = \text{Solar}_{i(t+\tau)} - \text{Solar}_{it}$ is an indicator for the addition of solar. The contribution to the sales prices of house characteristics that do not change between t and $t+\tau$, including any unobservable characteristics not measured in X_i, is assumed to be equal in both periods. Census tract-quarter time effects, $T_{j(t+\tau)} = \gamma_{i(t+\tau)} - \gamma_{it}$, enter as a $1 \times (J * T)$ vector where J is the number of census tracts and T is the number of quarters. The element of $T_{j(t+\tau)}$ corresponding to census tract j and quarter $(t+\tau)$ is equal to 1; the element for census tract j in quarter t is equal to -1; and all other elements are equal to 0. In this specification we are jointly estimating quarterly repeat sales price indexes for each census tract. Since τ, the quarters between sales of a particular property i, varies over repeat sales observations, the distribution of the idiosyncratic error $\tilde{\varepsilon}_{ij(t+\tau)} = \varepsilon_{ij(t+\tau)} - \varepsilon_{ijt}$ is thought to depend on this parameter. To address this artifact of the repeat sales method, we adopt the standard repeat sales three stage GLS procedure by first estimating (4) by OLS, then regressing the magnitude of the first stage residual on a quadratic function of τ, and finally weighting observations by the inversed of the square of the predicted residual obtained in stage two in the third stage GLS estimation of (3).

IV. Data

We estimate the capitalization of solar panels in San Diego County home prices using administrative data tracking solar panel installations and county property transactions records. We control for home characteristics described by county tax assessor data and location defined by census tract boundaries. We use property addresses to match the subsidy program administrative records for all solar panels installed on single family residences in San Diego County to property transactions and characteristics records for all single family homes in the county. Properties are matched to census tract and zip code data using GIS processes to determine each property's location on the respective neighborhood maps. We examine how our capitalization estimates vary with neighborhood characteristics reported in California voter and vehicle registration summary datasets and the 2000 Census. Our analysis is limited to single family homes, since solar panel installations in multifamily buildings and condos often involve nonstandard ownership and electricity rate structures. A comparison of the characteristics of homes associated with each sales record where solar panels are installed to the full sample of records confirms that, on average, homes with panels are larger in terms of square footage and number of bedrooms and bathrooms, occupy larger lots, have more recent building years and are more likely to have a pools and views. They also sell less frequently at higher prices. We also find differences in the averages of neighborhood characteristics across neighborhoods where solar panels have been installed and those where no installations occur in our data.

Solar panel installations

Administrative records from four incentive programs that have subsidized residential solar panel systems in San Diego County are the source of or data on which homes have solar panels. California's Emerging Renewables Program subsidized solar panel installations as early as 1999 and supported almost all installations through 2007, when it was replaced as the primary State subsidy regime by the California Solar Initiative, which continues today.[9] Over 95% of the systems in our data are installed under these two programs. The New Solar Homes Partnership aims to encourage developers to include solar on new properties, and accounts for less than 1%

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[9] http://www.gosolarcalifornia.org/about/gosolar/california.php

of installations in our data. These programs are administered in areas of California serviced by public utilities, including San Diego County. A final program supported solar panel installations on rebuilding projects during 2005 to 2007 following wildfires in San Diego County.

The systems consist of solar panels installed on the property, typically on the roof, which are connected to the electricity grid, meaning the home draws electricity both from the panels and from standard utility lines and the panels supply electricity to the local infrastructure when production exceeds consumption at a given home. Conversations with industry experts confirm that installations receiving subsidies for these four programs represent virtually all such systems in San Diego County. We use a dataset of the administrative records from these programs to determine the presence of solar panels on a property being sold as well as the installation of panels between sales.[10]

The administrative dataset for the subsidy programs includes, for each installation, the address of the property, size of the system in terms of kilowatt production potential, and date completed. Most installations also include information on the cost of the system and the amount subsidized by the respective program. We successfully match 4,471 (89%) of the installation records for single family homes by address to public San Diego County Assessor property records for installations through 2009.[11] This allows us to identify 279 sales of homes with existing solar panel systems.

Property records

The San Diego County Assessor maintains public records of characteristics and transactions of all property in the county for tax assessment purposes. We restrict our analysis to the county's 543,730 single family homes, for which the county characteristics records report the home square footage, the number of bedrooms and bathrooms, the year the home was built or most recently underwent a major remodeling,[12] whether the property has a pool, whether the property has a view, and if the property is subject to a lower tax rate because it is owner occupied

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[10] Federal tax credits allow homeowners to recover 30% of the costs of a system, but we do not have access to tax return data as an additional source of installation detail.

[11] Our 89% match rate is a lower bound, as some of the unmatched properties are likely business or multifamily addresses. Match quality was verified by inspecting publicly available aerial photographs (www.bing.com/maps) of the installation addresses for the existence of panels for a subset of the records.

[12] The building year is not recorded for 1,732 properties, 35 of which are matched to solar panel installations.

along with a unique "parcel number" identifier. We use a corresponding publicly available map file (GIS shapefile) of the boundaries of all county properties to determine the acreage of the lot on which each home is built. These are the observable home characteristics included in our hedonic models as controls, along with the number of times the property has transacted in our dataset and the number of public mortgage default notices associated with the properties, which are included as proxies for idiosyncratic home quality. [13] Homes are grouped spatially using the county property map and census tract and zip code boundary maps to assign each parcel number to the respective geography in which its property lies.[14] We use these groupings to construct spatial and temporal controls as well as for matching a home to the characteristics of its census tract and zip code. The assessor also maintains a record of each property transaction in the county. The date, sales price, and parcel number identifier of all single family home sales since 1983 is publicly available from these records, which form the dataset which is our source for sales prices and dates. For our hedonic analysis, we utilize 348,182 sales records occurring between January 1997 and September 2009.[15] To increase our sample of repeat sales with intermittent solar installation we use first sales beginning as early as January of 1990.

If homeowners who install solar panels also make other improvements to their homes more often than their neighborhoods, our estimate of the home price premium for solar panels will be biased. To address this concern, we utilize building permit reports of all permitted home improvements beginning in 2003 for San Diego City, the largest permit issuing jurisdiction in San Diego County, as well as the administrative dataset of all residential building permits in Escondido, a smaller municipality in our sample area. In San Diego City, building permits are required for "all new construction" including for "repair or replacement of existing fixtures, such

[13] Default data is matched by parcel number from public records published online by the San Diego Daily Transcript.

[14] Maps were retrieved from www.sangis.org.

[15] Transactions are not included in our dataset if the sale date of the transaction is before the building year in county records (42,832 sales including two with previously installed solar panels; unfortunately, the assessor does not archive the original building year and property characteristics of properties which are rebuilt or remodeled), a mortgage on the property was in default during the year prior to the sale (23,178 sales including 27 with previously installed solar), or the listed sales price is not consistent with a correctly reported arms-length transaction or the property cannot be matched to a census tract (2,988 records with no installed solar). An additional 23 observations are omitted from the analysis because the recorded date of the solar panel installation occurs within the 90 days prior to the recorded date of the sale, casting doubt on whether the record is a treatment or a control observation.

as replacing windows." Permits are also required for changes to a home's "existing systems; for example, moving or adding and electrical outlet requires a permit."[16] A permit is not required "wallpapering, painting or similar finish work" and for small fences, decks, and walks.[17]

Neighborhood characteristics

We use voter registration summary statistics for each San Diego County Census tract in the year 2000 from the Berkeley IGS (see http://swdb.berkeley.edu/), zip code level automobile registration summary statistics from 2007, and 2000 Census tract level demographic as sources of descriptors of San Diego neighborhoods over which solar panel capitalization may vary. The voter registration summary files report the total number of registrants broken out by political party affiliation for each census tract in California. From these reports we calculate the percent of voters in each tract that are Green Party registrants as a measure of the level of environmentalism in the neighborhood. See Kahn (2007) for a discussion on the Green Party and party membership as an identifier of environmentalists. Similarly, we calculate the Toyota Prius share of registered autos from zip code totals of year 2007 automobile registration data (purchased from R.L Polk) as a measure of the neighborhood prevalence of displayed environmentalism. We likewise calculate the percent registered Democrats and vehicles classified as trucks from the respective summary datasets as comparison measures. We directly apply reported census tract median income from the 2000 Census as a measure of average neighborhood financial capacity and calculate average census tract education levels as percent of the over age 25 population who are college graduates calculated from the Census education statistics.

Summary statistics for San Diego

Table 1 presents the mean characteristics of the dataset we use to estimate our hedonic framework and a comparison of observations with solar panels to those without. These

[16] Anecdotally, many improvements are completed without a permit, which adds a variety of costs to a project, but we are able to identify a large number of "major renovations", which we define as a permit with a description referencing a kitchen, bath, HVAC, or roof with an associated value greater than $1,000, as well as a large number of "high value" renovations, which we define as permits with an associated value greater than $10,000. As long as homeowners who install solar panels are not less likely than others to obtain permits for other improvements, including permitting activity in our capitalization regressions should provide evidence of the extent of bias due to unobserved home improvements and maintenance in our capitalization estimates.

[17] http://www.sandiego.gov/development-services/homeownr/hometips.shtml#whendo

differences demonstrate the importance of controlling for observable home characteristics as well as census tract location in our empirical specification so that our regressions are comparing sales prices of homes with solar panels to sales of similar homes in the same census tract.

Neighborhoods where solar panels have been installed are also different from those where none were installed during period covered by our data. Table 2 presents the means across census tracts or zip codes for our neighborhood descriptors and additional neighborhood summary statistics. While this simple solar or no solar classification allows only a coarse comparison, the 103 of 478 census tracts where no solar has been installed have smaller homes on smaller lots, lower median incomes, more Democrats among registered voters, are less white and have fewer college graduates. Our empirical analysis exploits the gradation in these differences across neighborhoods to examine how capitalization in home price varies with ideological and demographic characteristics.

V. Estimation results

Given the results in Table 1 and 2 clearly indicate that solar is installed in a subset of the market both in terms of structure type and neighborhood type, it is important to remind the reader about our core identification strategy. We are not comparing large nice homes in rich white neighborhoods to small homes in poor minority neighborhoods. Instead, in our hedonic specification the solar coefficient is the average premium for a large nice home with solar (in a rich white neighborhood) relative to the other homes *in the same neighborhood* after flexibly controlling for observable differences between the two homes. This is because the hedonic regressions based on equation (2) contain census tract by quarter fixed effects, so the coefficient picks up the price premium for a home with solar relative to homes in the same tract. Similarly, our repeat sales approach measures the average additional increase in price between sales for homes with solar installed between sales relative to other homes in the neighborhood because we are fitting census tract specific repeat sales indexes.

Hedonic estimates

All of our hedonic specifications estimate the capitalization of solar panels in observed property sales while controlling for observed household characteristics, including zip code specific square footage and land size values, and average prices in each census tract in each quarter.

We find that solar panels add 3.3% to the sales price of home after controlling for observable characteristics and flexible neighborhood price trends (see Table 3). This corresponds to a predicted $16,235 increase in price for the average sale with solar panels installed. We observe a decreasing return to additional system size, a positive relationship between the capitalization rate and Prius penetration, Green party registration share, Democrat registration share, median income, and education, as well as a negative relationship between capitalization and truck ownership. Controlling for building permit activity in a subsample of our data suggests that the solar panel addition rather than unobserved home improvements are responsible for the measured price premium.

Our capitalization estimate for our baseline specification described in equation (1) is 0.033 and is presented in the baseline column of Table 3. This implies that, on average, solar panels increase the sales prices of homes in our data where they are installed by 3.3%. We convert this percent to a dollar amount of $16,235 by differencing the predicted sales price from our estimated model with our solar indicator equal to one and zero and all other characteristics equal to the mean values of all other homes with solar.

Table 4 compares this value to four different measures of costs of solar panels. The first potential comparison is the average total cost of the systems, which is $26,700. However, this amount does not include subsidies that lowered the effective price to homeowners, which was on average $15,712. Although we do not know the value to the homeowners of federal tax credits for each installation, this comparison suggests that on average, homeowners fully recover their costs of installing solar panels upon sale of the property. Another measure of the value of panels is the average cost of adding panels during the quarter in which the home was sold. We calculate this value for each quarter in our data, and for our sales the average of this replacement cost measure is $32,599 before and $22,266 after subsidies. It appears that, on average, homebuyers are paying less for already installed systems by paying more for a home with existing solar than they would spend putting a new system on a different home. Note however, that adding a 30% tax credit lowers this replacement cost measure net measure to $15,586, again approximately our estimated capitalization value. Table 4 also reports the predicted value of an additional kilowatt in size of $2,405. This figure is obtained by evaluating the System Size specification (equation (2)) estimates reported in table 3. The solar panel linear terms are jointly significant in this

specification and suggest that, as expected, an additional kilowatt of solar is valued at well below the average value per watt.

We use our hedonic estimates of equation (3) to test for heterogeneous impacts of solar installation across communities and structure attributes. First we include the log of the size in watts (maximum production capacity) of the solar system, $\mathrm{N} = \log(Watts_{it})$ as a measure of the expected energy production from the system. Although a larger system by definition produces more electricity, we do not expect capitalization to increase proportionally with system size due to the institutional structure of electricity rates and the "net metering" system in CA that is used during our sample period to value electricity produced by residential solar panels. Consumer electricity prices in San Diego County are tiered by monthly consumption, with each household allocated a geography specific baseline amount of electricity (from 9.6 kWh along the coast to 16.4 kWh per month in the inland desert during the summer) at a relatively low price (currently $0.039/kWh during the summer months) with an up to five fold increases for above baseline consumption (the top of four tiers is $0.197/kWh during the summer for all consumption over 200% of the baseline). The rate structure is relevant to the value of system size because households pay for electricity use in excess of what is produced by the panels at any given point in time. For excess generation, households may opt in to the net metering system that compensates them for electricity returned to the grid at (currently) between $0.171 and $0.275/kWh depending on the time of day, but the compensation is capped at the total of their annual electric bill and households face typically higher time of use prices for any electricity purchased from the utility. The combined effect of the rate structure and net metering is that electricity produced by residential solar panels in excess of their annual electricity consumption is essentially donated to the utility. While households may value larger systems for other reasons, additional financial incentives to installing capacity decrease with system size.[18]

Allowing capitalization to vary by neighborhood characteristics demonstrates that the addition to a home's market value from solar panels varies across neighborhoods by environmental ideology, income, and education levels. The estimated coefficients on the linear solar term are jointly statistically significant in each neighborhood variable specification, as

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[18] Because of these institutional factors, estimated or actual household specific expected electricity demand is necessary for a complete accounting of the financial benefit of installing a system as a function of system size, and is beyond the scope of this paper.

listed in Table 5. In each case, the capitalization of solar panels follows a pattern that would be predicted by the measure of environmental ideology, income, or education. Neighborhoods with relatively high a Prius concentration, Green party and Democrat registrant share, and median income capitalize solar panels at a higher value, while in neighborhoods with relatively many trucks, panels provide less of a premium to home sales.

Results of our final hedonic specification, shown in table 6, suggests that our estimates are not driven by unobserved home upgrades besides solar panel installation. Our capitalization estimate of 6.2% in the smaller subsample of San Diego City and Escondido is robust to the inclusion of our building permit measures. Our estimates suggest that remodeling a kitchen or bath or replacing a roof or HVAC system has a small impact on price, while high value renovations with costs similar to solar panels are estimated to have a similar value on home prices.

Repeat sales estimates

The results of our hedonic specification are largely replicated in our repeat sales approach. All of the presented results are based on three stage GLS estimates, with observations in the final stage weighted based on the time between sales, and control for jointly estimated census tract level repeat sales indexes.[19] As presented in table 7, our average capitalization estimate of 3.6% applied to the average price at the first sale in the repeat pair of $558,100 implies an average additional $20,194 in the subsequent sales price due to the installation of solar panels. This value suggests that households that install panels recuperate more than their costs in subsequent sales, although this estimated value remains below our "replacement cost" measure of solar value. Our estimate of the contribution of system size to the capitalization rate suggests an anomalous large negative relationship. Neighborhood characteristics estimates in the repeat sales framework also indicate that the capitalization of solar panels depends on local preferences and incomes.

[19] OLS estimates of solar capitalization that do not correct for time between sales do not vary greatly from our GLS estimates.

VI. Conclusion

This study has used a large sample of homes in the San Diego area to provide some of the first capitalization estimates of the resale value of homes with solar panels as compared to comparable homes without solar panels. While the residential solar home market continues to grow, there is surprisingly little direct evidence on the market capitalization effect. We find evidence using both hedonics and a repeat sales index approach that solar panels are capitalized at roughly a 3% premium. This premium is larger in communities with more registered Prius hybrid vehicles and in communities featuring a larger share of college graduates.

Our new marginal valuation estimates inform the debate that Borenstein (2008) has led concerning whether expenditure on residential solar is a “good investment”. His analysis, consistent with those taken by others in the literature, treats residential solar installations as a ‘pure’ investment good judged in terms of upfront cost and power generation. Our evidence suggests that similar to other home investments such as a new kitchen, solar installation bundles both investment value and consumption value. Put simply, some households may take pride in knowing that they are producers of “green” electricity. For households who sufficiently derive such a “warm glow”, utility maximization may triumph over present discounted value calculations in determining a household’s install choice.

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Table 1: San Diego Summary statistics and mean comparisons for solar and no solar home sales

	Sales with no solar	Sales with solar	No solar - solar
Variable	Mean *Std Dev*	Mean *Std Dev*	Difference in means *Pr(|T|>|t|)*
Sale price (real $s)	426,361 *374,520*	696,391 *425,167*	-270,031 *0.000*
Square feet	1,987 *961*	2,529 *1,134*	-542 *0.000*
Bedrooms	3.39 *0.89*	3.79 *0.86*	-0.40 *0.000*
Baths	2.38 *0.88*	2.91 *1.04*	-0.53 *0.000*
View	0.30 *0.46*	0.37 *0.48*	-0.07 *0.020*
Pool	0.18 *0.38*	0.34 *0.47*	-0.16 *0.000*
Acres	0.40 *1.53*	0.99 *2.78*	-0.59 *0.001*
Owner occupied	0.71 *0.46*	0.67 *0.47*	0.03 *0.219*
Building year*	1978 *19.5*	1984 *21.3*	-6.4 *0.000*
Sales since 1983	2.72 *1.36*	2.54 *1.15*	0.18 *0.009*
Defaults since 1999	0.26 *0.64*	0.24 *0.61*	0.02 *0.526*
System cost (Real $s)+		26,700 *17,245*	
System size (kW)		3.18 *2.15*	
Incentive amount+		10,988 *7,816*	
Observations	347,903 (*346,772)	279 (+259)	

Table 2: San Diego Neighborhood summary stats and comparison by solar penetration

Variable	Neighborhoods with no solar Mean *Std Dev*	Neighborhoods with at least one solar Mean *Std Dev*	No Solar - Solar Difference in Means *Pr(|T|>|t|)*
Average square footage	1,297	1,837	-540
	314	*536*	*0.000*
Average acreage	0.21	0.45	-0.24
	0.40	*0.89*	*0.000*
Percent with pools	3.49	15.33	-11.83
	4.03	*11.11*	*0.000*
Percent Green Party	0.50	0.52	-0.02
	0.50	*0.45*	*0.825*
Percent Democrat	47.15	35.26	11.89
	9.62	*8.66*	*0.000*
Median income ($1000s)	31.31	56.56	-25.25
	11.78	*22.87*	*0.000*
Percent White	27.54	61.89	-34.35
	22.61	*23.06*	*0.000*
Percent Owner Occupied	55.57	73.17	-17.59
	17.47	*8.88*	*0.000*
Percent College Grads	28.58	31.75	-17.90
	0.76	*0.82*	*0.000*
Percent Prius*	0.39	0.39	0.002
	0.03	*0.03*	*0.993*
Percent Truck*	46.01	45.61	6.21
	0.73	*0.73*	*0.126*
Observations	103	478	
	(*95)	(*89)	

*Auto data variables reported at the zip code level

Table 3: San Diego Hedonic OLS regression estimates of log sales price on solar panels

Variable	Baseline Coefficient *(Std Error)*	System Size Coefficient *(Std Error)*
Solar$_{ijt}$	0.033** *(0.011)*	-0.051 *(0.151)*
Log Size (watts) * Solar$_{ijt}$		0.011 *(0.019)*
Joint significance of solar terms		F Stat = 5.06, Prob > F = 0.006
Home characteristics	Yes	Yes
Census tract quarter fixed effects (578 tracts, 51 quarters)	27,854	27,854
Observations	348,182	348,182
Sales with solar	279	279
R^2 within; overall	0.64; 0.34	0.64; 0.34

**Significant at the 5% level

Table 4: Predicted value of solar from hedonic estimates and comparison sample values

Predicted added value of solar at mean characteristics of sales with solar	$16,235; ($5.09/watt)
Average total (before subsidy) system cost of solar for solar sales	$26,700; ($8.45/watt)
Average net (after subsidy) system cost of solar for solar sales	$15,712; ($4.94/watt)
Average mean total (before subsidy) system cost of all systems installed during quarter of home sale (replacement cost)	$32,599; ($7.60/watt)
Average mean net (after subsidy) system cost of all systems installed during quarter of home sale	$22,266; ($5.24/watt)
Predicted added value of an additional 1kW of system size	$2,405; ($2.41/watt)

Table 5: Hedonic OLS regression estimates of log price on solar panels with neighborhood characteristic interaction

Variable	Prius Share Coeff. *(S.E.)*	Truck Share Coeff. *(S.E.)*	Green Share Coeff. *(S.E.)*	Dems Share Coeff. *(S.E.)*	Log Med Income Coeff. *(S.E.)*	College Grads Coeff. *(S.E.)*
$Solar_{ijt}$	0.000 *(0.024)*	0.234*** *(0.084)*	0.023 *(0.015)*	-0.043 *(0.052)*	-0.081 *(0.292)*	-0.014 *(0.026)*
$NbhdVar_j$ * $Solar_{ijt}$	0.067* *(0.041)*	-0.004** *(0.002)*	0.020 *(0.022)*	0.003 *(0.002)*	0.010 *(0.026)*	0.001** *(0.0005)*
Joint significance of solar terms - F Stat; (Prob > F)	6.42; (0.002)	7.91; (0.0004)	5.32; (0.005)	6.03; (0.002)	4.95; (0.007)	6.85; (0.001)
Home characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Census tract quarter fixed effects (578 tracts, 51 quarters)	27,189	27,189	27,848	27,848	27,848	27,848
Observations	332,921	332,921	348,176	348,176	348,176	348,176
Sales with solar	271	271	279	279	279	279
R^2 within; overall	0.64; 0.33	0.64; 0.33	0.64; 0.34	0.64; 0.34	0.64; 0.34	0.64; 0.34

***,**,* Significant at 1%, 5%, 10% levels, respectively

Table 6: Hedonic OLS regression estimates of solar on log price with building permits

Variable	Baseline Coefficient *(Std Error)*	Major renovation Coefficient *(Std Error)*	High value renovation Coefficient *(Std Error)*	Any Permit Coefficient *(Std Error)*
Solar$_{ijt}$	0.062*** *(0.016)*	0.062*** *(0.016)*	0.060*** *(0.016)*	0.062*** *(0.016)*
Building Permit$_{ijt}$		0.025*** *(0.007)*	0.056*** *(0.005)*	-0.036*** *(0.001)*
Home characteristics	Yes	Yes	Yes	Yes
Census tract quarter fixed effects (578 tracts, 51 quarters)	13,416	13,416	13,416	13,416
Observations	136,389	136,389	136,389	136,389
Sales with solar	122	122	122	122
Sales with permit		725	1,411	20,324
Sales with solar and permit		4	12	25
R^2 within; overall	0.57; 0.31	0.57; 0.31	0.57; 0.31	0.57; 0.32

***Significant at the 1% level

Table 7: Repeat sales GLS regression estimates of log of sales price ratio on added solar

	Baseline	System Size
Variable	Coefficient *(Std Error)*	Coefficient *(Std Error)*
ΔSolar$_{ijt}$	0.036** *(0.018)*	0.611** *(0.277)*
Log Size (watts) * ΔSolar$_{ijt}$		-0.073** *(0.035)*
Joint significance of solar terms		F Stat = 4.36, Prob > F = 0.013
Census tract specific HPIs	110	110
Observations	80,182	80,164
Sales with solar	160	160
R^2	0.76	0.76

**Significant at the 5% level

Are There Rebound Effects from Energy Efficiency? – An Analysis of Empirical Data, Internal Consistency, and Solutions

Of the rigorously-framed hypotheses claiming that large negative rebounds exist, we measure them against the data, which refute the hypotheses. Rebounds at the end-use level are small and decrease over time. Rebounds at the economy-wide level are trivially small, and might well be a net positive.

by David B. Goldstein, Sierra Martinez, and Robin Roy

Every few years, a new report emerges that tries to resurrect an old hypothesis: that energy efficiency policy paradoxically increases the amount of energy we consume. This paper attempts to develop a rigorous and scientifically sound hypothesis for rebound theory. It shows that many of the hypotheses on which the recent papers promoting rebound effects are based are neither scientific nor testable. Further, the formulations of previous rebound hypotheses are biased toward only discovering negative second order effects of efficiency policies. We provide an unbiased formulation of rebound theory and call for balanced research into both positive and negative second order effects.

Of the rigorously-framed hypotheses claiming that large rebounds exist, we measure them against the data. The data refute the hypotheses. Rebounds at the end use level are small and are decreasing over time. Rebounds at the economy-wide level are trivially small, and very well might be a net positive effect.

We then assess the rebound theorists' solutions to climate change. We find some of the solutions inconsistent with rebound theory itself. We also find that regardless of the extent to which rebound theory may be true, once an emissions

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cap is instituted, efficiency policies only enhance that solution.

Last, we analyze the qualitative nature of rebounds and find that they are largely providing basic energy services to low income communities and those in developing countries. Rebound theorists have yet to explain how recommendations of less reliance on energy efficiency does not require maintenance of lower standards of living for many poor and developing populations around the world.

I. Introduction

Reducing our greenhouse gas emissions is essential if we are to combat climate change.[1] Efficiency has played and will play an essential role in achieving those goals.[2] However, rebound theorists argue that efficiency cannot make much of a difference in solving our climate change problems. Given the importance of climate change, we find it imperative that any theory that would challenge what is increasingly recognized as our most effective tool to combat climate change—energy efficiency—be subject to careful standards of scientific scrutiny.

In this paper we analyze the structure of the various hypotheses concerning rebound effects, and find that many are so loosely stated that they are incapable of being tested, or of yielding unambiguous and meaningful predictions. In some cases, hypotheses that rebounds can occur for some end uses in some countries are conflated with hypotheses that rebounds occur universally. For more rigorous statements of rebound hypotheses, we compare these hypotheses to the facts, and find that the data and logic do not support the claims of significant economy-wide losses due to rebound. We find that rebound is at most small and gets smaller as efficiency increases. Finally, we note that rebound, to the limited extent that it occurs, represents a net increase, not a loss, in consumer welfare. These findings reinforce the urgency with which we must deploy efficiency measures to address the threats of climate change.

After a hiatus of several years in academic and policy-related discussions of possible second-order effects of efficiency policies, several recent news articles have emerged arguing that efficiency programs cannot possibly save as much as one would think.[3] These articles present a particular version of possible second order effects by looking at "rebound" effects,[4] which assumes that

[1] Lenny Bernstein, et al., *Climate Change 2007: Synthesis Report: An Assessment of the Intergovernmental Panel on Climate Change* (2007) http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

[2] *See, e.g.*, International Energy Agency, World Energy Outlook 2009, which shows efficiency as the dominant component of a program to stabilize CO2 emissions at 450 ppm.

[3] David Owen, *The Efficiency Dilemma*, New Yorker, 78 (Dec. 27, 2010) [hereinafter "Owen"]; John Tierney, *When Energy Efficiency Sullies the Environment*, New York Times, (Mar. 7, 2011) [hereinafter "Tierney"]; *Not Such A Bright Idea*, The Economist, (Aug. 26, 2010); Jesse Jenkins, Ted Nordhaus, and Michael Shellenberger, *Energy Emergence: Rebound & Backfire as Emergent Phenomena* (Breakthrough Inst., Feb. 2011) [hereinafter "BTI"]; Steve Sorrell, *The Rebound Effect: An Assessment of the Evidence for Economy-Wide Energy Saving From Improved Energy Efficiency* (UK Energy Research Centre, Oct.. 2007) [hereinafter "Sorrell"].

[4] There are many terms in addition to "rebound" to describe these theories, including "snap back," "take back," "backfire," and "bounceback," among others.

the sign of the effect is negative, (i.e., that the second order effects all cause savings to be reduced instead of increased).[5] They also leave the impression that rebound effects are consistent and universal across uses and levels of efficiency.

Several of these articles note that the original idea was introduced in the 19th century under the name of "Jevons's Paradox." Jevons asserted that increases in efficiency of coal processes would cause coal consumption to increase, to a level that would exceed previous consumption levels.[6] What Jevons failed to address was that future consumption levels could also exceed previous consumption levels absent any improvements in efficiency, due to technological innovation and its consequent economic growth, which were emergent and poorly understood processes at the time. Further, Jevons lived during a time in which energy costs composed a much larger share of GDP than presently.[7] Additionally, Jevons limited his scope to the industrial sector, in which the share of energy costs were, and are, larger than many other sectors. These conditions would give the impression of high sensitivities to energy costs. As energy costs decrease as a share of total costs, sensitivity to energy prices decreases, as does the rebound effect.[8] However, we now live

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For purposes of this paper, "rebound" will be used to describe all these effects, with the term "backfire" reserved for rebounds of greater than 100 percent of the savings. See Sec. III, at 4, below, for further description.

[5] There is variation in terminology of "positive" versus "negative" rebound (or second order) effects. In this paper, we use "positive" second order effects to mean that savings were greater than expected, and "negative" to mean that savings were less than expected.

[6] "It is very commonly urged, that the failing supply of coal will be met by new modes of using it efficiently and economically. . . . [However, it] is wholly a confusion of ideas to suppose that the economical use of fuel is equivalent to a diminished consumption. The very contrary is the truth. As a rule, new modes of economy will lead to an increase in consumption." William Stanley Jevons, *The Coal Question*, 2nd ed., 122-123 (1866). Available at: http://wesurroundthemmelbourne.com/Downloads/ClimateChange/TheCoalQuestion.pdf. In fact, rebound was not the major thesis of his book, which addressed a wide variety of issues concerning coal, nor was rebound demonstrated with anything more analytical than a few individual coal uses and technologies. These were all cases where the uses that Jevons found to be rebounding were new technologies that had not consumed much or any coal in the past. In contrast, current theories of rebound address only efficiency measures aimed at processes or end uses that already use substantial amounts of energy.

[7] Jevons observed the British economy at an anomalous point in time, when its energy intensity was at or near its peak over the last 500 years. In 1865, energy intensity was over four times as high as it was in 2000. In 1865, energy intensity was >9 kWh (of final energy consumption)/£2,000 GDP and was about 2 kWh/£2,000 in 2000. Roger Fouquet and Peter Pearson, *Five Centuries of Energy Prices*, World Econ., vol. 4, no. 3, 2003) [hereinafter "Fouquet"]. *See also,* Imperial College London, *Energy History, Development, and Sustainability*, ESS Conference, Fig. 4, UK Energy Intensity, Final Use Energy Consumption Per Unit Real GDP, 1500-2000 (Dec. 2003), available at: http://www.scj.go.jp/ja/int/kaisai/ess2003/pdf_pre/s33_pearson.pdf.

[8] International Energy Agency, *The Experience with Energy Efficiency Policies and Programmes in IEA Countries: Learning from the Critics"* 6 (Aug. 2005) [hereinafter "IEA/Geller"]. Envtl. Protection Agency, Natl. Hwy. Traffic Safety Admin., *Final Rulemaking To Establish Light Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, Joint

in a world in which energy costs are a much smaller portion of total costs and we apply efficiency to all sectors, not just the industrial sector. Many experts have since found that Jevons erred.[9]

The theory resurfaced in a 1980 article by Khazzoom, who claimed that energy savings from appliance efficiency regulations might be much lower than engineering calculations would estimate.[10] This article, along with most of those that have followed, relied heavily on conjecture, rather than on empirical data.[11] It also relied heavily on a faulty assumption: that consumers would respond to reductions in the operating cost of appliances but would fail to respond to increases in the purchase price. Efficiency standards would cause both price changes, but Khazzoom did not analyze those effects.[12] We know that consumers do respond strongly to purchase price, because unexploited short paybacks do exist with consumers often exhibiting hurdle rates in excess of 30 percent[13]; and mainstream analyses of the effect of standards do show reductions in product sales in response to product price increases[14]. Failure to consider all capital costs and exclusive reliance on operating costs renders the Khazzoom analysis incomplete, biased and unproven.[15]

In section II, we present the various versions of rebound and backfire theory that we have collected from the literature. We find that some theories fail to meet scientific standards because they cannot be tested. While demonstrating this

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Technical Supporting Document, 4-19 (Apr. 2010) [hereinafter "EPA/NHTSA"].

[9] "Jevons wasn't wrong about nineteenth-century British iron smelting, [Schipper] said; but the young and rapidly growing industrial world that Jevons lived in no longer exists." Owens, 79 (quoting personal conversation with Schipper). "[V]arious studies suggest that this effect [rebound] is minimal – a loss of no more than 1 or 2 percent of the direct energy savings." IEA/Geller, 8. More generally, "This provocative claim [backfire] would have serious implications for energy and climate policy if it were correct. However, the theoretical arguments in favour of the postulate rely upon stylized models that have a number of limitations, such as the assumption that economic resources are allocated efficiently. . . .Since a number of flaws have been found with both the theoretical and empirical evidence, [backfire] cannot be considered to have been verified." Sorrell, vii.

[10] J. Daniel Khazzoom. *Economic Implications of Mandated Efficiency Standards for Appliances*, Energy J., vol. 1, no. 4, 21-39 (Oct. 1980).

[11] In fact, some rebound theorists have resisted the application of data and facts to their theories: "[N]o single, widely accepted methodology exists to quantify rebound effects at the scale of aggregation most relevant to climate and energy resource depletion concerns . . . [E]fforts to study and quantify rebound effects face inherent epistemological challenges, particularly at all but the simplest of microeconomic scales. . . . [T]he study of rebound at macroeconomic scales, . . . may be properly considered the domain of theoretical inquiry." Jenkins, 25;."

[12] Khazzoom refused to consider the capital cost increase: "I do not deal with the capital cost of appliances with higher efficiency. This should not affect the result." Khazzoom, s*upra* note 10.

[13] Energy Info. Admin., *Assumptions to the Annual Energy Outlook 2010* (DOE/EIA-0554, Apr. 2010), available at http://www.eia.doe.gov/oiaf/aeo/assumption/residential.html.; EPA/NHTSA, 4-19.

[14] *See, e.g.*, DOE analysis, *infra* note 32.

[15] "Since a number of flaws have been found with both the theoretical and empirical evidence, the K-B [Khazzoom-Brookes] postulate cannot be considered to have been verified." Sorrell, vii.

failure, we try to take a more scientific approach by selecting and shaping rigorous hypotheses concerning second-order effects of efficiency policies. We also attempt to improve them by including a more comprehensive analysis about the sign[16] and the mechanisms of the second order effects. We caution against the overreliance on economic theory because many of the critical assumptions of economic theory for conditions necessary to make markets work are conspicuously absent in the energy efficiency arena.[17] Thus, we rely only sparingly on economic theory or model-based results.

In Section III, this paper discusses the evidence that informs the most rigorous, testable, and internally-consistent forms of the rebound hypotheses. We find that the evidence consistently disproves the hypotheses that large rebound effects are likely at the end-use level and on an economy-wide basis. Some modest forms of rebound hypotheses are consistent with evidence in a limited number of cases. Such hypotheses of negative rebound have been analyzed in detail by IEA[18] and EPA.[19] These data show that rebound is generally small to trivial. This paper does not disagree with these findings. In addition to rebound hypotheses, others have hypothesized that second-order effects can be positive.[20] However, these hypotheses have not been tested, or were tested in limited fashion, like the Prius effect.[21] We conclude that further studies are warranted to

[16] Sorrell acknowledges: "in some cases individual component of the rebound effect may be negative [i.e. savings are greater than expected]. It is theoretically possible for the economy-wide rebound effect to be negative ('super conservation'), . . ." Sorrell, UKERC Review of Evidence for the Rebound Effect, Supplementary Note: Graphical Illustrations of Rebound Effects, 2 (Oct. 2007). However, Sorrell does not investigate data supporting this conclusion.

[17] "[A] number of standard neoclassical assumptions . . . are poorly supported by empirical evidence." Sorrell, 53. "Challenges to the existence of market barriers have, for the most part, failed to provide a testable alternative explanation for the evidence, which suggests that there is a substantial 'efficiency gap' between a consumer's actual investments in energy efficiency and those that appear to be in the consumer's own interest." William H. Golove and Joseph H. Eto, *Market Barriers to Energy Efficiency: A Critical Reappraisal of the Rationale for Public Policies To Promote Energy Efficiency* xi (LBL-38059, Mar. 1996) (finding numerous market barriers in the energy service markets, including misplaced incentives, lack of access to capital, flaws in the market structure, and imperfect information) available at: http://eetd.lbl.gov/ea/emp/reports/38059.pdf. Energy Modeling Forum, *Markets for Energy Efficiency*, EMF Rept. 13, vol. 1 (Sept. 1996) (finding common ground among various stakeholders that market barriers are widespread and exist in energy markets, preventing energy markets from allocating available resources efficiently) available at: http://emf.stanford.edu/research/emf13/.

[18] IEA/Geller, *supra* note 8.

[19] EPA/NHTSA, *supra* note 8. Note that the estimates of rebound were estimated without attempting to control for the effect of decreasing location efficiency on the amount households drive; location efficiency decreased throughout the period that fuel economy was increasing.

[20] "[I]n some cases individual component of the rebound effect may be negative [i.e. savings are greater than expected]. It is theoretically possible for the economy-wide rebound effect to be negative ('super conservation'), . . ." Sorrell, 3.

[21] Edmund Fantino, *Choice, Conditioned Reinforcement, and the Prius Effect*, The Behavior Analyst, vol. 31, no. 2, (Fall 2008); Jack N. Barkenbus, *Eco-driving: An Overlooked Climate Change Initiative*, Energy Pol., . 767-76, vol. 38, issue 2, (Feb. 2010) (showing that eco-driving can result in 10 percent to 25 percent savings).

explore initial evidence that positive second-order effects exist in some cases.

Section IV analyzes three energy and climate policy solutions that rebound theorists have proposed. First, some rebound theorists propose that reversing our efficiency progress, making energy use *less* efficient, is the solution. This paper finds that increasing *in*efficiency would not in fact decrease energy consumption, based on all available data. Second, some rebound theorists propose that increasing the supply of cleaner generation sources is the solution. We agree that increasing renewable or other low-emissions generation is a valuable strategy to combat climate change; however, we find that within rebound theory, supply-side solutions might also induce increases in energy consumption. Third, some rebound theorists propose that some combination of instituting a cap on absolute consumption or emissions, in conjunction with energy pricing policy, is the solution. We agree with this policy in part, and discuss why the issue of potential rebounds from efficiency may have less policy relevance than meets the eye.

Section V addresses the qualitative nature of rebounds. Rebounds mean that consumers are increasing their energy consumption. However, rebounds also mean that consumers are receiving increased energy services at lower cost. These services contribute to higher standards of living, such as being able to maintain thermal comfort in a home. Rebounds are a benefit to consumer welfare. Thus, an attempt to use rebound theory to disparage efficiency policy would necessarily reduce economic welfare by reducing the value of energy services, and largely affect low-income communities disproportionately. A carbon emissions strategy that ultimately requires much of the population to live a sub-standard lifestyle, with decreased energy services, is an untenable strategy. On the other hand, energy efficiency offers a strategy that allows people to live at a higher standard of living, with increased energy services, while decreasing consumption and carbon emissions. Instead of discrediting energy efficiency, rebound theorists concerned about emissions and economic welfare should promote accelerating energy efficiency policies.

II. Framing Hypotheses of Rebound and Other Second-Order Effects

There are numerous versions of the rebound hypothesis in the literature. Many of them are difficult to define, as acknowledged by rebound theorists themselves.[22] Thus, we attempt to clarify and strengthen the various versions of rebound theory in the literature.

A. Magnitude and Scope

We provide two factors to help organize the various hypotheses: magnitude and scope. The magnitude of the hypotheses refers to how much of the energy is consumed due to the efficiency improvement. If the amount of energy is less than 100 percent of the savings, the hypothesis is considered just "rebound."[23] If the amount is greater than 100 percent, it is considered

[22] Regarding macroeconomic rebound theory: "there is no single accepted framework to rigorously define these dynamics . . . ." BTI, 23.

[23] "'If you increase the productivity of anything, . . . demand goes up.' Nowadays, this effect is usually referred to as 'rebound'" Owen, 79; Sorrell, vii.

"backfire."[24] Jevons's Paradox was a backfire theory because he claimed that energy efficiency actually increased consumption, the result of rebounding over 100 percent.

The scope of the hypothesis refers to the level at which the analysis is being conducted: the micro or macro level. A micro-level hypothesis would be at the level of the individual consumer increasing their energy demand due to the cheaper price of operating the efficient appliance. A macro-level hypothesis would be consumers reinvesting their bill savings into other sectors of the economy. We find that these two factors help keep the various hypotheses organized.

B. Rebound Hypotheses

At the outset, we note that a simple reading of economic theory would assert that large cost effective energy efficiency resources—that is, efficiency measures whose present value of benefits greatly exceeds their present value of costs—are not supposed to exist.[25] The limits of classical economic theory in allowing cost-effective energy efficiency require that we use it only cautiously and self-consistently in analyzing that efficiency. Thus, the analyses of policies must be performed in a context that recognizes the array of market failures that allow the large efficiency resource to exist in the first place.

1. Hypothesis A

The first hypothesis is the strong version of the rebound hypothesis, backfire, with rebound exceeding 100 percent of savings, as noted by Owen and others.[26] We will call this Hypothesis A: "With fixed real energy price, energy efficiency gains will increase energy consumption above where it would be without these gains."[27]

Let us analyze the scientific rigor of this hypothesis. First, the concept of "energy efficiency gains" is insufficiently defined in order to test or refute. "Energy efficiency gains" could include those efficiency gains that occur from normal business decisions in the economy or they could be limited to improvements caused by policy. We will start with "energy efficiency gains" that are not attributed to any policy driver,

[24] "[W]here increased consumption more than cancels out any energy savings, as 'backfire.'" Owen, 79; "In some cases, the overall result can be what's called 'backfire': more energy use than would have occurred without the improved efficiency." Tierney, .2. "Behavioural responses such as these have come to be known as the energy efficiency "rebound effect". While rebound effects vary widely in size, in some cases they may be sufficiently large to lead to an overall increase in energy consumption – an outcome that has been termed 'backfire'." Sorrell, v.

[25] Simple economics argue against the existence of energy efficiency: if there were $20 bills lying on the ground, people would already be picking them up. But note: "In particular, the possibility of 'win-win' policies, such as those aimed at encouraging energy efficiency, may be excluded if an economy is assumed to be at an optimal equilibrium." Sorrell, 53. The presence of market barriers and market failures prevent the use of all cost-effective energy efficiency, in the absence of market intervention. Golove finds that neoclassical economic theory, on which many rebound theorists base their beliefs, (see BTI's reliance on neoclassical economic theory at 6, 9, 10, 11, 23, 25, 32, 41-46), fall short of identifying the full list of market barriers and failures, and finds additional barriers under transaction cost economics. Golove, 24.

[26] Owen, 79 (citing H. Saunders, *The Khazzoom-Brookes Postulate and Neoclassical Growth*, Energy J. 113-148, vol 13(4), (1992)).

[27] Saunders, *Id.*.

such as the improvement in the fuel economy of commercial aircraft. Thus, we have Hypothesis A1: "With fixed real energy price, energy efficiency gains, from any cause, will increase energy consumption above where it would be without these gains." This hypothesis in not refutable, since:

- "[W]here it would be without these gains" is not calculable, even approximately. Energy efficiency has increased in the American economy 57 percent over the last 60 years.[28] It would be extremely difficult to estimate, in a repeatable way,[29] what energy consumption *would have been* if efficiencies had remained constant for the last 60 years. A robust hypothesis, given Jevons's observations dating back to 1865, would need to provide a method to estimate what energy consumption would have been if efficiencies had remained constant for the last century and a half. The complexity of an economic model of all the energy uses and predictions for each where energy use would be if efficiency were held constant creates an insurmountable requirement. The fact that demand for energy services is always shifting would further complicate the process. Fundamental choices would have to be made that create irresolvable ambiguities. For example, we would have to estimate how far people would travel if a jet plane had the speed and efficiency of a horse-drawn cart.[30] For all intents and purposes, this requirement is unattainable, so the theory is not refutable.

Energy efficiency offers a strategy that allows people to enjoy a higher standard of living, with increased energy services, while decreasing consumption and carbon emissions.

- The condition of fixed real energy price has never been met for very long in practice, so this condition to Hypothesis A1 prevents us from analyzing such a theory with much data. At best, we could try to predict what would have happened in both the "would be" scenario and the real world scenario based on price elasticities, which leads to immense indeterminacy because estimates of price elasticity may vary by factors of 12 and more.[31] These estimates are further hampered by the fact that efficiency effects energy price.

[28] In 1949, the U.S. economy required 19.6 TBtu to produce $1 billion (in 2000$); whereas in 2008, it only required 8.4 TBtu to produce $1 billion. For data through 2004: US Department of Energy, Energy Intensity Indicators in the U.S., Economy-wide Total Energy Consumption (May 2008). Available at: http://www1.eere.energy.gov/ba/pba/intensityindicators/trend_data.html. For data from 2005-2008: US Department of Energy, State Energy Database System Consumption, British Thermal Units, 1960–2008, (June 2010). Growth in post-2004 years normalized to May 2008 data in order to maintain consistency across data sources. Both sources combined hereinafter referred to as "DOE Intensity."

[29] Here "repeatable" means in a way where two different analysts would derive the same result.

[30] Sorrell acknowledges this difficulty: "[A]s the time horizon extends, the effect of [fundamental] changes on the demand for the energy service becomes increasingly difficult to separate from the effect of income growth and other factors." Sorrell 2009, 1357.

[31] Sorrell cites to studies showing long-run elasticities of demand ranging from -0.05 to -0.6. Sorrell, 45 (citing Sweeney (1984) and Kauffman (1992)).

In conclusion, we cannot measure or calculate where it would be without these gains.

2. Hypotheses A2 & A3

Let us frame a narrower version—Hypothesis A2: "With fixed real energy price, energy efficiency gains *due to policy interventions* will increase energy consumption above where it would be without these gains." This hypothesis rectifies the problem of determining the cause of the efficiency gains, but fails to be testable for two reasons. First, as was the case with previous hypotheses, the condition of fixed real energy price makes it impossible to use long time periods for data. Second, there is considerable disagreement about what energy consumption would have been without any individual policy, both at the microeconomic level and at the macro level. For example, analysts do not agree on what automobile fuel economy would have been without the 1975 CAFÉ standards, or how many compact fluorescent lamps would be in use today without utility-based incentive programs.

At the macroeconomic level, many analysts assume that without any policy, energy use would grow proportionally to GDP. While this assumption may be correct in limited cases, theory does not necessitate that energy use be a fixed fraction of GDP. This is not true for other broad resource categories, such as food, metals, transportation, etc. Nevertheless, we can frame a hypothesis that assumes these problems away: Hypothesis A3 asserts that: "energy efficiency gains *due to policy interventions* will increase energy consumption above where it would be if energy use were proportional to GDP." This hypothesis is capable of being tested. As we show in Section III, it is refuted by the data.

3. Hypothesis B

Let us try a weaker form of the hypothesis—Hypothesis B: "With fixed real energy price, energy efficiency gains will decrease energy use by less than would be predicted."

This is also fatally ambiguous, because it begs the question of what would be predicted. In fact, most predictive models *already incorporate elasticities of demand that model several rebound effects*. Thus, if heating equipment becomes more efficient, somewhat higher thermostats are predicted. Models like the National Energy Modeling System (NEMS)[32] balance supply and demand at a lower price due to efficiency policies and cause predicted energy consumption for other end uses to increase through price elasticity. Whether these modeled effects are correctly done is another question, but some level of rebound is already predicted. Thus, Hypothesis B might be claiming that current energy models incorporate rebound, and that there is nothing new to add. Or it might be claiming that some other effect beyond current models is in play. Or it might be critiquing models other than NEMS. Without answering these questions, we cannot adequately define or test Hypothesis B.

4. Hypothesis C

[32] As documented below, rebound effects are already incorporated in to energy forecasting models in use at the Departments of Energy, both in the NEMS model and in models used by individual programs. Available at: www.eia.doe.gov/oiaf/aeo/overview/residential.html#consumption.

A modified version of the previous hypothesis would say that: "energy efficiency gains from policy will increase energy consumption above where it would be, assuming the difference between proposed efficiency versus constant efficiency."[33] Hypothesis C is a well-framed and testable hypothesis. We discuss testing it in Section III and show that the data disprove it.

However, Hypothesis C's formation contains a weakness: it assumes a sign of the effect without any reason. As we will show, there are reasons based on non-economic motivators of human behavior to expect positive rebound effects as well as negative ones.

5. Hypothesis D: Other second order effects

Every previous hypothesis assumes that the second order effects will be negative, i.e., decrease what the savings were expected to be. We think this assumption should be questioned. Let us introduce Hypothesis D: "energy efficiency gains from policy will result in energy consumption being *different* from where it would be assuming the difference between proposed efficiency versus constant efficiency." This formulation does not presume the sign of the effect. Such an absence of presumption is important, because if the hypothesis suggests *a priori* a sign of the second-order effects of efficiency policies, data analysis may be restricted to searching for the expected sign and may ignore data with the unexpected sign,[34] a point acknowledged by rebound theorists.[35]

Evaluating Hypothesis D would require considerable disaggregation, since the effects will be different for each end use and since there are a number of economy-wide or industry-wide effects that are possible. Simple price elasticity adjustments to account for reductions in the price of energy services would probably be insufficient to account for actual behaviors, since customers are so heterogeneous.[36]

Here are some examples of possible second-order effects about which we do not know *a priori* the sign of the effect:

- Assume energy policy makes homes use less energy. Will home size increase or decrease?

[33] Variants of Hypothesis C might allow the predicted savings from efficiency policy to be modified slightly by including, as NEMS does, some small end-use rebounds and some overall price elasticities due to energy price reductions caused by efficiency policy.

[34] E.g., if we hypothesize that a beam of alpha particles shot at a gold foil will cause them to deviate slightly from their path without the foil, we will fail to set up instruments to measure the existence of alpha particles that are scattered backward, and fail to discover, as Ernest Rutherford did around 1910, that atoms are made up of small nuclei at the center of clouds of electrons, rather than that they are a "plum pudding" of electrons and positively charged particles, and that therefore can scatter incident particles back toward their source.

[35] "Most estimates of the direct rebound effect assume that the change in demand following a change in energy prices is equal to that following a change in energy efficiency, but opposite in sign. . . . In practice . . . these assumptions may be incorrect." Sorrell, et al., Empirical Estimates of the Direct Rebound Effect: A Review, Energy Policy, Vol. 37, 1356-1371, 1362 (Jan. 2009) [hereinafter "Sorrell 2009"]. , 1362.

[36] *E.g.*, the behaviors of a household after a home retrofit performed on an uninsulated home heated to 18C would likely be far different than those of a household in an already modestly efficient home that could afford to heat to 23C before the retrofit.

- Alternate A: it gets bigger because the present value of energy is enough lower to allow the buyer to pay for more home.
- Alternative B: it gets smaller because the energy efficient investment increases the cost of construction and consumers bid up the price of the efficient home due to anticipated energy savings and non-energy benefits of the efficiency investments. Buyers can no longer qualify for a loan at the higher cost and have to buy an equally-priced, smaller home.

- Building codes increase insulation levels and reduce summer solar heat gain:
  - Occupants can afford more thermal comfort.
  - Occupants can maintain reasonable comfort levels without running the AC or furnace.
- More efficient lighting is installed in an office with an improvement in lighting quality:
  - Occupants leave lights on because the costs are lower.
  - Occupants turn the lights off aggressively because the improved appearance of the lights reminds them of the energy use, its costs, and its consequences.
  - Alternative C: occupants' rent does not depend on the energy management and there is no change in operations.
- More drivers purchase hybrid cars:
  - Travel is less expensive so people travel more, increasing energy consumption.
  - Drivers are so fascinated by the performance (and dashboard) of their cars that they practice eco-driving and increase fuel economy compared to their previous habits, consuming less energy than anticipated.
- Consumers have more money in their pockets because of savings from energy efficiency:
  - They re-spend the money on a market basket of goods and services with the same energy intensity as the economy as a whole.
  - They re-spend the savings on air travel and an SUV and other energy-intensive choices.
  - They reduce debt and increase savings, a service less energy-intensive than the general economy.
  - They discover how beneficial efficiency works and spend their saved money on additional savings or on other clean energy choices.

These are only a few examples where either from individual experiences or logic one could infer reasons for positive rebound and other reasons for negative, with no data yet that determine which effects are greater.

Further, the very assumptions behind rebound theory suggest that these positive rebound effects might very well occur. Rebound theory argues that when efficiency improvements cause the price of energy to fall, consumers will demand more of it. However, this is not necessarily the case, given the complexity of energy markets.

Rebound theory argues that when efficiency improvements cause the price of energy to fall, consumers will demand more of it. However, this is not necessarily the case.

Instead, when the price of energy falls, the supply might fall. This is documented as the "de-investment" effect, and acknowledged by rebound theorists.[37]

While these suggestions are speculative, the speculation is similar to those supporting rebounds: either may happen and at varying frequencies but we cannot know without measurement. While this paper does not call for unending research into every second order effect, it does call for a balanced approach in researching second order effects.

III. Data Do Not Support Large Rebound Hypotheses

First, there is a paucity of data that support large rebound hypotheses.[38] Rebound theorists acknowledge the lack of reliable data supporting the theory.[39] Where there are data, they reveal that rebound effects are small and decreasing. Additionally, none of these data include the positive second order effects discussed in Section II, so represent the highest end of rebound estimates.[40]

A. Micro Level Data Do Not Support Large Rebounds

The data show that rebounds are small, diminishing over time, and difficult to measure. "[E]mpirical evidence suggests that the size of the rebound effect is very small to moderate."[41] Further, "most of the direct energy savings from technical improvements in energy efficiency in OECD countries remain even after the direct rebound effect is accounted for."[42] These findings from a U.S. Department of Energy and International Energy Agency combined study provide the most comprehensive data and analysis on rebounds. The study found rebound effect of 0 percent for residential appliances, 0-2 percent for commercial lighting, and 5-12 percent for residential lighting.[43] Given that utility energy efficiency programs, research and development, and codes and standards have focused heavily in

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37 "[I]f demand is not sufficiently elastic, final market prices may remain lower following efficiency improvements, driving a 'disinvestment effect', which may actually decrease long-term energy demand." BTI, 22.

38 "[D]espite growing research activity, the evidence remains sparse, inconsistent and largely confined to a limited number of consumer energy services in the United States . . . "The methodological quality of many quasi-experimental studies is poor, [and] the estimates from many econometric studies appear vulnerable to bias." Sorrell 2009, 1364. "In summary, the accurate estimation of direct rebound effects is far from straightforward." Sorrell 2009, 1363.

39 "Evidence for the scale of macroeconomic composition effects is very limited." BTI, 23. "The available evidence for all types of rebound effect is far from comprehensive." Sorrell, 7. "There are very few studies of rebound effects from energy efficiency improvements in developing countries." Sorrell, 8. "[T]he empirical evidence for both [direct rebound effects in developing countries and from producers] is weak." Sorrell, 9.

40 *I.e.,* the bias of searching for negative data leads to an overestimate of the rebound effect. "[There are] a number of potential sources of bias with econometric estimates that may lead to the direct rebound effect to be overestimated." Sorrell 2009, 1357. "Both theoretical considerations and the limited empirical evidence suggest that direct rebound effects are significantly smaller for [certain] household energy services." Sorrell 2009, 1362.

41 IEA/Geller, 6.

42 *Id.*

43 *Id.*

these sectors and end uses, these results carry great explanatory weight. Additionally, the data showed a rebound effect of 0-20 percent for industrial processes, 10-30 percent for residential space heating, <10 percent-40 percent for residential water heating, and 0-50 percent for residential space cooling.[44] In transportation, EPA and DOT conducted a thorough and comprehensive survey of rebound estimates and found that in 2000-2004 the rebound effect in transportation was 6 percent[45], and ultimately proposed to use a 10 percent rebound estimate.[46] These data demonstrate that to the extent rebounds occur, they are small.

The empirical evidence reveals that in addition to being small, rebounds are diminishing with time. As efficiency increases, the rebound effect decreases because: (1) energy costs as a share of total costs decreases, decreasing sensitivity to energy prices;[47] (2) incomes increase, decreasing sensitivity to energy prices;[48] and (3) there are limits to end-use-specific energy services demanded, against which rebounds are measured.[49] As measured in transportation, rebound was estimated at 22 percent for 1966-2001, but decreased to 11 percent looking only at the later years 1996-2001, and decreased further to 6 percent looking at 2000-2004.[50] The empirical evidence shows that the magnitude of the rebound effect is declining over time.[51]

B. Macro Level

1. Survey of the Data Does Not Support Rebound Theory

[44] *Id.*

[45] Actually, the rebound in travel is likely to be even smaller, because none of the studies controlled for the fact that as cars became more fuel-efficient, land use patterns in America and throughout most of the world became less location efficient. The consequent increase in travel demand over time would be hard to distinguish from a rebound statistically without explicitly including it in the regressions.

[46] Envtl. Protection Agency, National Highway Traffic Safety Administration, Final Rulemaking To Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Joint Technical Support Document, EPA-420-R-10-901, 4-19 (Apr. 2010).

[47] "[T]he sensitivity of travel demand to fuel cost per mile has fallen over time as fuel cost as a fraction of the total cost of owning and operating a vehicle has declined . . . ." IEA/Geller, 6 (citing Green 1992).

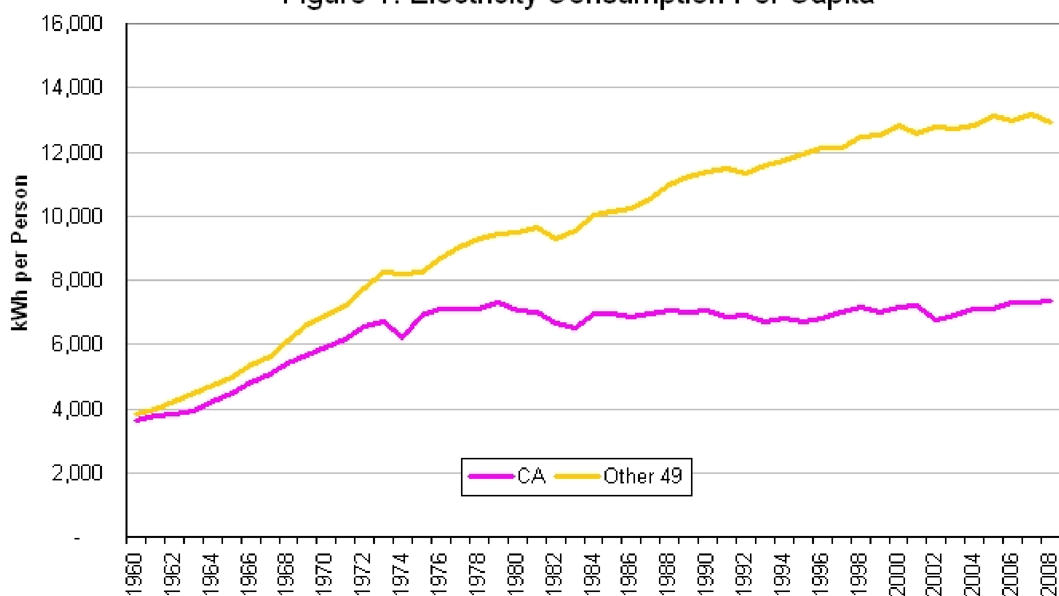
[48] [The] sensitivity of travel demand to fuel cost per mile has fallen over time . . . as incomes have risen . . . ." IEA/Geller (citing Green).

[49] Rebound, measured as a percentage of expected savings, decreases because there are finite and maximum levels of energy services demanded per end use. *E.g.,* there are a finite number of hours to drive during the day, and an absolute level of heat desired in a home, beyond which consumer would not or cannot increase consumption. Thus, the percentage of energy demand caused by rebound can only continue to decrease. "[A]s the consumption of a particular energy service increases, saturation effects should reduce the direct rebound effect. For example, direct rebound effects . . . should decline rapidly once whole-house indoor temperatures approach the maximum level for thermal comfort." Sorrell 2009, 1357.

[50] EPA/NHTSA, 4-19 (citing Greene).

[51] "[T]he magnitude of rebound effect is declining over time." EPA/NHTS, 4-19 (citing Greene).

The data at the macro level show that rebound is trivially small, at rebound theory's best, and some data suggest the second order effects could be positive, at rebound theory's worst. The dearth of data at the macroeconomic or economy-wide level is greater than micro-level data.[52] The most comprehensive survey of the literature shows that the economy-wide rebound effect is about 0.5 percent.[53] In other words, "more than 99 percent of the direct energy savings from energy efficiency improvements remain after the economy-wide effects are taken into account."[54]



Source: Energy Info. Admin., *State Energy Database System, Consumption, Physical Units 1960-2008*, (June 2010), available at: http://www.eia.doe.gov/states/_seds.html.

2. State Comparison Data Does Not Support the Rebound Theory

Given the rebound Hypothesis C: "energy efficiency gains from policy will increase energy consumption above where it would be assuming the difference between proposed efficiency versus constant efficiency," we can test it on an economy-wide level. The results refute it.

California embarked on a broad set of policy reforms to encourage efficiency and promote renewable energy in 1974, and has continued since. The California Energy Commission has estimated the cumulative electricity savings produced by these policies, using conservative assumptions, at about 15 percent of load.[55] Figure 1 shows the results of both these policies and all second order effects. The reduction in electricity use compared to the rest of the US is not smaller than what the policies were estimated to produce, it is greater. It is approximately four times as great.[56] In addition to being 400 percent of

52 "[N]o single, widely accepted methodology exists to quantify rebound effects at the . . . total economy-wide rebound [level] at a global scale." BTI, 25.

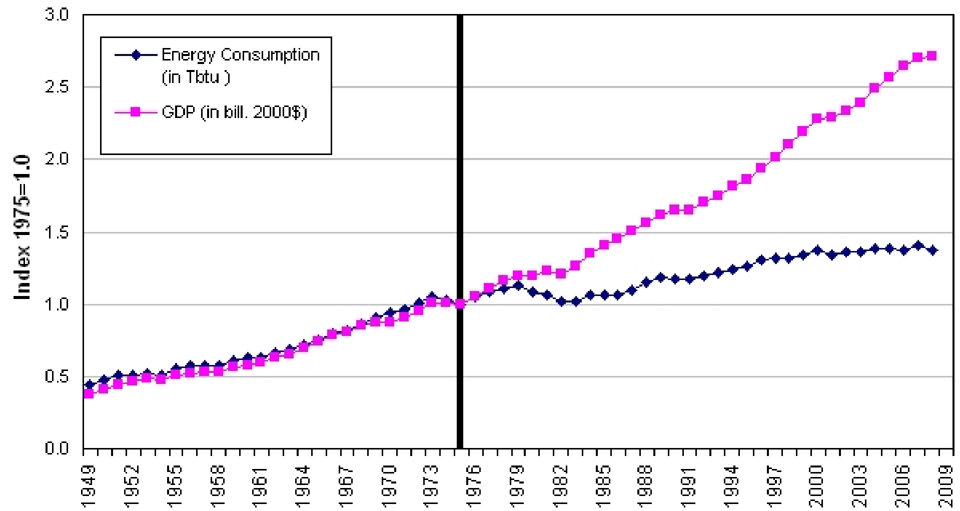
53 IEA/Geller, 7 (citing Lietner 2000).

54 IEA/Geller, 7.

55 Calif. Energy Commn., *Energy Action Plan II, Implementation Roadmap for Energy Policies*, 5 (Oct. 2005) (stating 15 percent of demand in 2003 saved by efficiency policies).

56 CEC estimated 40,000 GWh saved in 2003 due to efficiency policies. Given a population of 35.251MM in 2003 for California, that represents 1,134 kWh per capita due to efficiency policies. US Census Bureau. Since 1975, the rest of the US has increased its

expected results, realized savings are not compared here to a base case of roughly constant efficiency but compared to a base case of other states, some of which are also pursuing efficiency policies and all of which save energy due to spillover effects of California policies on efficiency.



Black line delineates year of index, where both values equal 1, and approximately, the beginning of some efficiency policies in the US. Source: DOE Intensity, *supra* note 28.

Similar, but about 50 percent smaller, results are documented for New York State.[57] Several other states and regions demonstrate that stronger energy efficiency policies result in energy consumption that is indeed lower than in states without such policies.[58] So, if anything is rebounding, it is the influence of energy efficiency policies: They are causing a whole economy to save much more than one would expect.

Further, two detailed statistical studies of California found that the majority of this difference could be explained by other factors[59] that are not related directly to energy efficiency but causing decreases in consumption. This analysis refutes Hypothesis C, which predicts that other factors must be causing additional increases in consumption, not decreases[60].

Last, it is hard to find a case showing the opposite: a jurisdiction that has implemented energy efficiency policies that are shown by careful analysis to be saving enough energy to be visible at the first order level, but which has no reductions in intensity or other macro indicators in the long run.

consumption 4,695 kWh per capita, while California has remained flat. Energy Info. Admin., *State Energy Database System, Consumption in Physical Units* (2010), available at: http://www.eia.doe.gov/states/_seds.html. Thus, the increase in the rest of the US is 4.14 times the savings in California.

57 National Academy of Sciences, *Real Prospects for Energy Efficiency in the United States* (2010).

58 See differences between Vermont or Massachusetts versus Kentucky or Wyoming. Energy Info. Admin., *supra* note 56.

59 *See* Anant Sudarshan, *Deconstructing the 'Rosenfeld Curve': Why is Per Capita Residential Energy Consumption in California so Low?* (US Assn. Energy Econ., USAEE-IAEE WP 10-063, Dec. 2010). Anant Sudarshan, *Deconstructing the 'Rosenfeld Curve': The Problem with Energy Intensities?*, (US Assn. Energy Econ., USAEE-IAEE WP 10-057, Nov. 2010).

60 Proponents of Hypothesis C might argue that the other factors that clearly are not consequences of energy efficiency policy should be controlled for, rather than considered part of the results. If such an argument were correct, it would undermine the ability to test Hypothesis C: different analysts could have different interpretations of which parameters might be second-order effects.

3. The Macro "GDP-Dependence" Theory Is Not Supported by Data

Hypothesis A3 is based on the assumption that energy tends to increase in proportion to GDP. This assumption is derived from the correlation that historically, societies' GDPs increased as did energy consumption.[61] The data show that economies can, and do, decrease their energy intensity beyond the status quo.[62] In the U.S., energy intensity dropped twice as much in the 13 years after energy efficiency became a policy priority than it did in the previous 25 years.[63] In China, energy intensity increased twice as fast as GDP before implementing energy efficiency policies; then dropped precipitously afterwards.[64] Energy intensity in the major OECD countries all decreased from 1973 to 1998.[65] And in last 500 years of the British economy, energy intensity has varied incredibly, more than doubling from 1700 to 1850, then dropping to its lowest levels ever by 2000, about one-fifth the level of its peak.[66] Even Jevons observed, and Owen recognized,[67] that economic productivity of energy consumption can increase, which decreases the energy intensity of an economy. By decreasing our energy intensity, we can in fact move towards unhinging our economy from energy that we currently depend upon.

In conclusion, energy consumption and GDP were previously believed to have an unchangeable causal relationship based on observed positive correlations of absolute levels. However, the data show that many advanced

[61] We note that such a simple correlation ignores the proportion in which GDP and energy increase. The energy intensity of the US economy in post-World War II was actually decreasing, despite both GDP and energy consumption increasing. From 1949 through 1973, energy intensity (measured by the E/GDP ratio) declined by 11 percent." DOE Intensity, *supra* note 28.

[62] "Believers in an unbreakable link between energy use and GDP assigned the immutability of a physical law to this historical relationship, but found their belief shattered by events. From 1973 to 1986, U.S. primary energy consumption stayed flat, but GDP rose 35 percent in real (inflation-adjusted) terms. These believers had forgotten that people and institutions can adapt to new realities, and historically-derived relationships (like the apparent link between energy use and GDP that held up for more than two decades in the post-World War II period) can become invalid . . . ." Jonathan Koomey, *Avoiding 'the Big Mistake' in Forecasting Technology Adoption*, 2 (LBNL-45383, Apr. 2000), available at: http://enduse.lbl.gov/Info/LBNL-45383.pdf.

[63] From 1949-1973, US energy intensity declined by 11 percent. Between 1973 and 1985, the E/GDP ratio decreased by 28 percent. DOE Intensity*, supra* note 28.

[64] From 1952 to 1980, energy demand grew twice as fast as GDP. From 1980 to 2002, after efficiency policies took effect, GDP grew much faster. Levine et al., *The Greening of the Middle Kingdom: The Story of Energy Efficiency in China*, LBNL-2413E, Figures 3a, 3b, (May 2009). Available at: http://china.lbl.gov/sites/china.lbl.gov/files/LBNL-2413E.Story_of_EE_in_China.pdf.

[65] *Annually*, between 1973 and 1998, US and Norway decreased their energy intensity over 2 percent; UK, Japan, Germany, Denmark, and Sweden all decreased over 1.5 percent; Australia, France, and Italy decreased over 1 percent; and Finland decreased over 0.5 percent. On average, these OECD countries decreased their energy intensity 1.6 percent per year. IEA/Geller, 3.

[66] Fouquet, 101.

[67] "[W]e can extract vastly more economic benefit from a ton of coal than nineteenth-century Britons did, ..." Owen, 82 (citing conversation with, though not endorsing, Schipper).

economies and also China have been able reduce their energy intensities over sustained periods, while increasing overall GDPs. The hypothesis (A3) that we cannot decrease our energy intensity without decreasing absolute GDP is disproven by the facts. It is indeed possible to decrease our dependence on energy consumption through energy efficiency.

IV. Rebound Solutions

In addition to needing a scientifically rigorous hypothesis, rebound theorists must be able to provide the equivalent in a solution if we are to decrease our energy consumption or associated emissions. Most rebound theorists agree that reducing energy consumption and GHG emissions is a worthy objective.[68] However, they believe that energy efficiency will either: a) help us to reduce our absolute energy consumption or GHG emissions less than we expect, but will still help somewhat, or b) will not help us. For those that agree that efficiency helps, the data above suggests we should not only continue pursuing efficiency as the primary strategy to reduce energy consumption, but accelerate it. For those that do not, they propose the following alternate solutions.

A. The Model T Solution

Backfire theorists believe that efficiency causes increased consumption of absolute energy; consequently, backfire theorists must necessarily believe that *in*efficiency causes decreased consumption of absolute energy. Regarding this conundrum, Amory Lovins joked, "[W]e should mandate inefficient equipment to save energy."[69] However, this is the logical conclusion of believing that efficiency causes increased consumption. There are presently mandates in place that increase efficiency. If these efficiency requirements are the problem, there must be a mandate to remove the efficiency requirements. Such a mandate increases inefficiency relative to the status quo. This is one proposed solution by backfire theorists and rebound theorists.

Owen proposes this solution, in the form of a Model T example[70]: "If the only motor vehicle available today were a 1920 Model T, how many miles do you think you'd drive each year . . . ?"[71] The explanation of the Model T solution, or switching to inefficient products, is that the Model T was (a) more costly to drive per mile, given inferior fuel efficiency compared to present fleet-wide averages and (b) delivered many fewer energy services (such as acceleration and air conditioning); therefore, the consumer would choose to drive less. First, this solution has yet to show results that would support it—e.g., we have not seen data that show Hummer drivers drive less than Prius drivers. Additionally, the Model T solution faces an extra hurdle: due to the new *in*efficiency, driving less would not necessarily decrease total energy consumption—drivers would first need to drive some amount less just to offset the new

[68] "Decreasing reliance on fossil fuels is a pressing global need." Owens, 85. Tierney, 3. *See* Sorrell, 1; BTI, 4-5.

[69] Robert Bryce, *Energy Tribune Speaks with Amory Lovins*, Energy Tribune, (Nov. 9, 2007). Available at: http://www.energytribune.com/articles.cfm?aid=672.

[70] While he later recognizes the political inability to enact such a solution, he never disavows it on substantive grounds. Owen, 85.

[71] Owen, 85.

inefficiencies, then, they would need to drive an additional amount less than that to actually decrease absolute consumption. In the Hummer example, the data would need to show that Hummer owners not only drive less, but that they consume less energy overall than Prius drivers—a tall order. These empirical and theoretical hurdles render this solution ineffective to reduce our climate emissions and energy consumption.

B. The Energy Price Solution

Owens foregoes the Model T solution in favor of the energy price solution,[72] as does Tierney.[73] The energy price solution states that increasing the cost of energy consumption will decrease demand.[74] Efficiency advocates believe a cap on greenhouse gas emissions is the appropriate mechanism to internalize some environmental costs into the price of energy. The cap might cause the price of energy to increase, as emissions permits are limited. Rebound enthusiasts believe that this price will be high, since one of the most effective means of lowering it—energy efficiency—is believed not to work, or to work less effectively than modeled. Environmentalists believe any price increase will be modest. But the important observation is that this solution—pricing the externality of emissions by placing a cap on them, makes as much policy sense if one rejects rebounds as it does if one accepts them. We should all be satisfied to let that experiment work its way through the economy, since we will be better off economically with strong efficiency policies[75] and a cap that meets environmental needs.[76]

C. The Supply-Side Solution

Rebound theorists have also proposed a supply side solution, which does not intend to decrease consumption, but rather to decrease GHG emissions through the supply of clean energy.[77] On this solution, we fully agree. Pursuing renewable energy is a priority strategy in reducing our GHG emissions

72 “No one’s going to ‘mandate inefficient equipment,’ but, unless we’re willing to do the equivalent—say, by mandating costlier energy—increased efficiency, . . . , can only make our predicament worse.” Owens, 85.

73 “it makes more sense [compared to efficiency] . . . to impose a direct penalty for emissions, like a tax on energy generation from fossil fuels. . . . [consumers] respond to a gasoline tax simply by driving less.” Tierney, 3.

74 “Carbon/energy pricing needs to increase over time, . . . simply to prevent carbon emissions from increasing. It needs to increase more rapidly if emissions are to be reduced.” Sorrell, 9.

75 As acknowledged by rebound theorists: “[S]uch efforts [cost-effective EE] make for excellent economic policy, as they are well suited to accelerate economic growth and modernization and expanding welfare.” BTI, 11.

76 Which agrees with some in the rebound field: “Carbon/energy pricing may be insufficient on its own, ... A policy mix [including efficiency] is required.” Sorrell, 9.

77 “Efforts to reliably reduce greenhouse gas emissions or dependence on depleting fossil fuels would be prudent to avoid the risk of overreliance on energy efficiency measures. Such efforts should therefore focus primarily on shifting the means of energy production (rather than end use), relying on zero-carbon and renewable energy sources to diversify and decarbonize the global energy supply system.” BTI, p.52. “[I]f your immediate goal is to reduce greenhouse emissions, then . . . it makes more sense to look for new carbon-free sources of energy.” Tierney, 3.

regardless of what one expects concerning efficiency gains.

However, suggesting cost-effective[78] clean energy supply[79] expansions as a solution to the problem of rebounds is not entirely self-consistent. According to rebound theory, increases in low-cost supply[80] would be expected to increase demand, and some cases such increases have been observed. A good example is in the transportation sector, where studies demonstrate supply-side rebounds or "induced demand" —the idea that as road supply increases, the cost per use will decrease, and demand will increase. In these studies the cost was indirect in the form of cost of traffic congestion. They show that increasing capacity of roads results in less-than-expected reductions in congestion. As lane-miles increase, some amount of vehicle- miles-traveled increases also. The estimates of induced demand vary widely, from 0.2-0.8 in some studies, depending on how wide the boundaries are in the particular study.[81] However, induced demand in the transportation sector must be higher than energy rebound effects because there is no cost to the consumer directly when increasing lane-miles, whereas there is cost to the consumer directly when investing in new energy supply. Additionally, the estimate of induced demand has increased over time, whereas rebounds have decreased. In sum, the effects of induced demand reveal inconsistencies[82] in the rebound theorists' proposed supply-side solutions.

[78] Here, "cost-effective" is defined as being less than the marginal cost of new energy resources, and we assume that prices properly reflect those marginal costs.

[79] *E.g.*, in many places of California, wind is a cost-effective source of clean energy supply because it costs less than the benchmark for marginal resources. The Renewable Energy Transmission Initiative estimates wind to cost between 6 and 11.6 cents/kWh whereas the CPUC estimates the market price referent to be between 8.5 and 14.4 cents/kWh. RETI, Phase 2B, Final Report, Figure 1-1 Typical Cost of Generation Ranges (May 2010). Available at: http://www.energy.ca.gov/2010publications/RETI-1000-2010-002/RETI-1000-2010-002-F.PDF. CPUC, Resolution E-4298, Table 1: Adopted 2009 Market Price Referents, (Dec. 2009). Available at: http://docs.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/111386.pdf.

[80] As the price of renewables decreases, we expect this inconsistency to be a larger problem for rebound theory.

[81] Robert Cervero, *Road Expansion, Urban Growth, and Induced Travel: A Path Analysis*, J. Am. Plan. Assn. 69, no. 2, 145 (2003); Robert Cervero and M Hansen, Induced Travel Demand and Induced Road Investment: A Simultaneous Equation Analysis, J. Transpt. Econ. Pol. 36, no. 3, 469-490 (2002) [hereinafter "Cervero 2002"]; Lewis Fulton et al., "A statistical analysis of induced travel effects in the US Mid-Atlantic region," J. Transp. and Statistics 3, no. 1, 1-14 (2000); Kent M. Hymel, Kenneth A. Small, and Kurt Van Dender, *Induced demand and rebound effects in road transport*, Transp. Research Part B: Methodological 44, no. 10, 1220-1241 (2010). In general, and not surprisingly, the wider the boundaries of the study (the greater the geographic extent of travel that was measured), the higher the induced traffic.

[82] In addition, we note an inconsistency regarding GHG emissions between supply- and demand-side solutions. Rebound theorists would hold that rebounds from low-cost clean energy supply do not create additional GHG emissions because the rebounds are being demanded from the new supply of

V. The Meaning of Rebounds

The main concern of rebound theory is that consumers might increase their energy consumption, relative to the level that could possibly be reached by an energy efficiency improvement—i.e., consumers might, through income or substitution effects, demand more energy services than previously demanded. Let us analyze the people to whom rebounds apply, the nature of these newly-demanded energy services, and the full set of consequences that results from opposing them.

Through income or substitution effects, the consumers that are demanding new energy services are those who either could not previously afford them or viewed the benefits as less than the cost. However, due to greater unsatisfied demand among low income communities, the consumer groups that account for the greatest rebounds are low-income communities.[83] Within this group, the now lower price of energy services allows the consumer to purchase an increased level of energy services. Through the income effect, the low-income consumer can demand new energy services, as her budget is expanded. Both mechanisms allow consumers, largely those who were unable to pay for it, to demand new energy services.

Theory suggests that rebounds apply largely to those who need energy services the most, those in the developing world.[84] Rebounds require consumers to have unsatisfied demand. The place where there is the greatest unsatisfied demand is in the developing world. Thus, large rebound should occur largely in the developing world. In fact, according to what empirical data exists,[85] the consumers that are demanding new energy services are largely located in the developing world.

Let us analyze the nature of these services. The end uses with high rebounds were: residential water heating, space heating, and space cooling. In other words, people were demanding basic energy services, like being able to heat their home, pump water, and have hot water.[86] These are energy services that improve consumers' quality of life and raise their standard of living. These services are mostly the basic energy services that those in the developed world already enjoy, a fact acknowledged by rebound theorists.[87]

If rebound theory were correct, energy efficiency would be a most effective policy for economic

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clean energy. If so, the same must hold for efficiency: rebounds from low-cost energy efficiency are being demanded from the new supply of energy efficiency; thus, also resulting in no increase of GHG emissions.

[83] "One important implication is that direct rebound effects will be higher among low-income groups, since these are further from satiation in their consumption of many energy services. Sorrell 2009, 1357 (citing Milne and Boardman, 2000).

[84] "Rebound effects may be expected to be larger in developing countries." Sorrell, 7. "The abundance of such 'marginal consumers' in developing countries points to the possibility of large rebounds in these contexts, ..." Sorrell 2009, 1357. While demand for energy services is typically inelastic in developed countries (Greening et al., 2000; Sorrell, 2007), (Laitner, 2000), demand for even basic energy services is largely unfulfilled across much of the developing world." BTI, 22

[85] Sorrell, 36 (citing Zein-Elabdin 1997).

[86] IEA/Geller, 6.

[87] BTI, 22.

development and improvement of the quality of life for the poorest of people in the poorest countries. Rebounds, if real, would provide basic energy services to those who vitally need them.

Projections of global energy demand assume that poor nations continue to strive for maximizing economic development, and thus are based on projections of rapidly growing energy service demands. But these demands should not be construed as rebound effects without evidence, and there is almost no evidence that supports a hypothesized link to efficiency policy.

Any energy reduction strategy that ultimately requires much of the population to maintain a lower standard of living is an untenable strategy. Advocates of policies based on rebound theory have yet to explain how recommendations of less reliance on energy efficiency policy avoid such a consequence.[88] Energy efficiency is a strategy that allows people to live a higher standard of living, with increased energy services, while decreasing their energy consumption. If these advocates agree that populations need not maintain lower standards of living, and are still concerned about reducing energy consumption, they should not disparage efficiency, but rather work to accelerate it.

VI. Conclusions

We have shown theories that predict large rebounds are difficult to specify in terms that are scientific and testable. We frame the most scientifically rigorous versions possible. We also propose unbiased formulations that would measure both positive and negative rebounds. We call for a balanced approach to research on second order effects.

Of the testable hypotheses, we analyze the available data. Those data show that end-use level rebounds are small, that economy-wide rebounds are trivial, and may be positive. They also show that negative rebounds are decreasing over time, as efficiency increases.

Assessing rebound theorists' proposed solutions to climate change, we find that even if one believed that economy-wide rebounds not accounted for in energy models were significant, it would not change the policy prescriptions compared to what the energy efficiency advocacy community has been promoting: a combination of a greenhouse gas emissions cap and energy efficiency policies.

We analyze the qualitative nature of rebounds and find that efficiency policies are largely providing basic energy services to low-income communities and those in developing countries, and that rebounds would amplify this effect. We find that energy efficiency provides a solution that allows us to reduce energy consumption without stifling the standard of living for many poor and developing populations around the world. ■

[88] Jevons himself indicated that the ultimate solution requires a lower standard of living: "It is thence simply inferred that *we cannot long continue our present rate of progress*. [A]fter a time we must either sink down into poverty, adopting wholly new habits, ..." Jevons, 18.

The Rebound Effect: Large or Small?

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Abstract

As the energy efficiency of products, homes, and businesses improves, it becomes less expensive to operate them. The rebound effect is a postulate that people increase their use of products and facilities as a result of this reduction in operating costs, thereby reducing the energy savings achieved. Periodically over the years, some analysts raise questions about the rebound effect, arguing that it is a major factor that needs to be accounted for when analyzing energy efficiency programs. This paper is written in "question and answer" format and is designed to summarize what we know, what we do not, and—given what we know—how large the rebound effect is likely to be.

We find that there are both direct and indirect rebound effects, but these tend to be modest. Direct rebound effects are generally 10% or less. Indirect rebound effects are less well understood but the best available estimate is somewhere around 11%. These two types of rebound can be combined to estimate total rebound at about 20%. We examined claims of "backfire" (100% rebound) and they do not stand up to scrutiny.

Overall, even if total rebound is about 20%, then 80% of the savings from energy efficiency programs and policies register in terms of reduced energy use. And the 20% rebound contributes to increased consumer amenities (for example, more comfortable homes) as well as to a larger economy. These savings are not "lost" but put to other generally beneficial uses.

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Introduction

Periodically over the years, some analysts raise questions about the rebound effect, arguing that it is a major factor that needs to be accounted for when analyzing energy efficiency programs.[1] This paper is designed to address questions about the rebound effect, what we know, what we do not, and—given what we know—how large the rebound effect is likely to be. We concentrate on information about the United States and not other countries.

Q. What is the rebound effect?

A. As the energy efficiency of products, homes, and businesses improves, it becomes less expensive to operate them. The rebound effect is a postulate that people increase their use of products and facilities as a result of this reduction in operating costs, thereby reducing the energy savings achieved. The most extreme position is that rebound can wipe out all of the energy savings caused by the efficiency gains, a phenomenon labeled backfire.

For example, if a 20% improvement in residential space heating actually results in only an 18% drop in natural gas consumption, the rebound effect would equal 10%.[2] The 2% of expected energy savings missing from the total savings realized is the extra energy consumed by the new, more efficient furnace because the household residents changed their habits, such as boosting the setting on their thermostat.

Q. Is there a single rebound effect or several?

A. Different authors have suggested different types of rebound effects, but these boil down to two general types—direct and indirect.

Direct rebound is the impact of a purchase of an efficient product by the purchaser's use of that product. For example, a car buyer may drive an efficient car more often than an inefficient one or a homeowner who weatherize his/her house may use a portion of the savings to increase the temperature in the house in the winter to increase comfort.

Indirect rebound, on the other hand, reflects the impact of re-spending the money that consumers and businesses save from improved energy efficiency. It can also include the fact that as factories and other parts of the economy get more efficient, production costs may be lower, freeing up funds to expand the factory. Also, if production costs are lower, demand for products can increase. An example of the former is a household that cuts its heating bill and takes back a little of the savings on higher thermostat settings, but then spends the money saved on eating out or buying a new flat screen

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[1] The first such reference is to a paper written in 1865 by William Stanley Jevons called *The Coal Question*. In the 1980s the concept was suggested by Daniel Khazzoom (1980) and was sometimes called the *Khazzoom Effect*. In the past few years papers claiming substantial rebound effects have been written by Sorrel (2007), Owen (2010), Jenkins et al. (2011), and Michaels (2012), among others. Counterarguments have been advanced by Goldstein et al. (2011), Koomey (2011), and Afsah and Salcito (2012), among others.

[2] Calculated as (20 – 18) / 20 * 100% = 10%.

television. An example of the latter is that efficiency improvements in aluminum smelting can reduce the price of aluminum thereby fostering increased aluminum sales that, requires additional energy consumption in its production.

Q. What are the most plausible estimates of the size of the direct rebound effect?

A. There have been more than 100 studies published that attempt to estimate direct rebound effects for specific energy efficiency programs and policies. Many of these are evaluations of individual programs. These studies indicate that direct rebound effects will generally be about 10% or less. In the paragraphs below we summarize some of the key findings by end-use.

Passenger Vehicles: More efficient vehicles cost less per mile for fuel, which can spur some car owners to drive longer distances. They could also potentially use some of the fuel savings to buy a larger car or even a second car. Many studies have been conducted and, interestingly, recent studies have found smaller rebound effects than older studies. For example, the National Highway Traffic Safety Administration and the Environmental Protection Agency (NHTSA and EPA 2010) discuss a series of papers by Small and Van Dender that found an average rebound effect of 22.2% over the 1966-2001 period, 10.7% over the 1997-2001 period, and 6% over the 2000-2004 period. Based on a thorough review of these and other recent studies, NHTSA and EPA (2010) estimate that rebound for passenger vehicles in response to new fuel economy rules will be about 10%.

Space Heating: Greening et al. (2000) and Sorrell (2007) both estimated 10-30% rebound for space heating, citing several studies they reviewed. This rebound includes behavioral effects (e.g., increasing thermostat setpoints) and technical effects (e.g., portions of the house are warmer after weatherization). However, examination of the underlying papers does not support the high end of this range, at least for most households in the United States. A more likely range is 1-12%, with rebound effects sometimes higher than this range for low-income households who could not afford to adequately heat their homes prior to weatherization.[3]

Space Cooling: Nadel (1993) examined eight studies that looked at rebound (called "takeback" in the paper) for air conditioning. This paper reports that "one study found no evidence of takeback, two

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[3] In the Greening et al. paper, four U.S. studies are listed. For one, they note 8-12% rebound while for another they note 1-3%. The other two were studies of consumer responses to changes in energy prices, not to responses following weatherization. But as Greene (2010) has shown for automobile fuel economy, the elasticities for prices and efficiency can be statistically different from each other. In the case of Sorrell, he lists five U.S. evaluation studies with rebound numbers. Three of these are from the same project in the town of Hood River, Oregon, with rebound estimates of 5% from temperature data and 5%, 20%, and 25% based on electricity billing data and "complicated assumptions" for which the original authors urge caution. Also part of the effect in Hood River was a fuel switching effect—some participants used less wood heat and increased their use of electric heat. The same authors estimate 11% rebound in a study in a different region, again with a caution about "complicated assumptions." The final study estimated a 40% rebound but this was a study on low-income homes in a mild climate—both factors that can lead to higher than average rebound (rebound in low-income homes is discussed in the text; moderate climates are discussed in the Space Cooling section). Sorrell also cites several econometric studies that calculate price elasticity, not responses following weatherization. In sum, the most widely applicable estimates of rebound in these studies range from 1-12%.

studies found evidence for limited takeback, one study found circumstantial evidence for takeback, and four studies were inconclusive." The paper concludes: "Clearly more work is needed on this issue, but some takeback may be occurring. Evidence indicates that takeback may be more likely in moderate climates (e.g., Wisconsin) and in moderate temperature months (e.g., spring and fall in Florida) where use of air conditioning can be considered optional rather than mandatory." For example, Dubin et al. (1986) conducted a statistical analysis on a high efficiency air conditioner/heat pump program operated by Florida Power & Light. Based on this model, the authors conclude that very little rebound took place in the summer months when outdoor temperatures are very high (rebound estimates were 1-2% of the energy savings that would otherwise result) but that significant, though limited, rebound took place in spring and summer when temperatures and the need for air conditioning were more modest (rebound estimates were as much as 13% of anticipated energy savings)[4].

Residential Lighting and Appliances: Nadel (1993) looked at five lighting studies and concluded that consumers modestly increase operating hours after they install efficient lights, with a range of 5-12% greater operating hours. Greening et al. (2000) use the same range. For water heating, Nadel also found five studies and these found little evidence of rebound. For example, two studies involving low-flow showerheads found no increase in the length of showers after the new showerheads were installed.[5] For refrigerators, Nadel looked at two studies and concluded that "it appears that if any takeback is occurring, the takeback is very limited." Greening et al. echo this finding. Finally, Sorrell (2007) discusses work by Davis on a study involving high-efficiency clothes washers. The study found that following purchase of high-efficiency clothes washers the pounds of clothes washed increased by about 5%. It is unclear to what extent this increase is due to the higher efficiency of the new washers or to their larger capacity per load.

Summary: While there is some uncertainty, particularly for space heating and air conditioning, available evidence indicates that direct rebound effects will generally be 10% or less. Estimates of higher direct rebound effects are primarily based on studies on consumer responses to changes in energy prices, but as shown by Greene (2010) for vehicles this is different from consumer response to changes in energy efficiency. There is a need for a study on home weatherization that attempts to separate out price and rebound effects to see if they are similar or different. Rebound is probably higher for weatherization of low-income homes since prior to weatherization some of these households could not afford to keep their homes as warm as they would have liked.

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[4] [4] Greening et al. (2000) cite this study and also one by Hausman. However, as described by Nadel (1993): "the [Hausman] study compared homes with and without high efficiency air conditioners and did not examine changes in consumer behavior after the efficient air conditioner was purchased. Thus, instead of inferring takeback, one could hypothesize that consumers who operate air conditioners for long periods of time are more likely to purchase high efficiency air conditioners than consumers who operate air conditioners less frequently."

[5] Greening et al. (2000) estimate 10-40% rebound but this appears to be based on one econometric study by Hartman that looked at price and income elasticities for a hypothetical water heater wrap and solar water heating program. As discussed in Footnote 3 of this paper, price elasticities are different from the rebound effect.

Q. What is the range of estimates on the indirect rebound effect and which are most plausible?

A. There is substantial uncertainty about the size of indirect rebound effects and more careful studies are needed. From the evidence that is available, the most likely estimate is that indirect rebound effects are on the order of 11%, increasing both energy use and the level of economic activity. This 11% means that if a set of policies reduce a country's energy use by 10%, after indirect rebound is accounted for, actual energy savings will be only 8.9%.[6]

This 11% rebound estimate comes from a study by Barker and Foxon (2008) that used a sophisticated macroeconomic model to examine the impact of a number of United Kingdom energy efficiency policies over the 2000-2010 period. The study estimated that indirect rebound was 11% by 2010, with higher effects (15%) in energy-intensive industries and lower effects for commerce (5%), road transport (6%) and households (10%). Unfortunately, there are no similar studies of the U.S., although such a study would be useful.

Other studies, using different methodologies, come up with different answers, both higher and lower. For example, Laitner et al. (2012) examine energy efficiency opportunities out to 2050. In their advanced scenario, they estimate that energy use can be reduced by 42% in 2050 relative to a business-as-usual reference case. Using an input-output model of the U.S. economy, they estimate that these efficiency savings will increase U.S. GDP in 2050 by 0.3% above the reference case. If this extra GDP growth requires the same amount of energy per dollar of GDP as the rest of the economy, the rebound would be only 0.7%.[7] On the one hand money saved from efficiency can be reinvested in the economy. On the other hand, the efficiency investments pull capital that would have been invested elsewhere. The net effect is a small macroeconomic rebound. However, Laitner et al. posit that this estimate likely underestimates the indirect rebound to some degree because there are attendant non-energy or productivity enhancing impacts that they did not model that may boost the economy more than 0.3%.

At the high end, a variety of Computable General Equilibrium (CGE) models have been used to estimate indirect rebound effects. Sorrell (2007) summarizes eight such studies, none in the United States. Rebound estimates range from 37% to more than 100%. However, as described in detail by Sorrell, CGE models have a number of limitations. According to Sorrell, such models are "based upon a number of standard neo-classical assumptions (e.g., utility maximization; perfect competition; constant returns to scale in production, etc.) that are poorly supported by empirical evidence. In particular, the possibility of "win-win" policies, such as those aimed at encouraging energy efficiency, may be excluded if an economy is assumed to be at an optimal equilibrium."

Several additional lines of reasoning can be used to reject rebounds approaching 100%. First, returning to the Laitner et al. study, in order for rebound to eliminate all of the savings estimated, assuming 5% direct rebound, indirect rebound would have to increase U.S. energy use by 49

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[6] 10% savings * (100% - 11% rebound) = 8.9% savings after rebound.
[7] 0.3% higher energy use / 42% energy savings = 0.7% rebound.

quadrillion Btu.[8] If this extra energy use was at the same energy per dollar GDP ratio as the rest of the economy, the U.S. economy would be $25 trillion bigger (2009 $), an increase of 69% relative to the business-as-usual base case. While as energy efficiency advocates we would love to be able to claim that energy efficiency could grow the economy by 69%, such claims are not plausible.

Second, we can look at the fact that energy is about 7% of total GDP in the U.S.[9] If money saved through energy efficiency is respent, we would expect about 7% of this money to ultimately be used to purchase energy. It would be a little higher than 7% if this respending were in energy-intensive portions of the economy (e.g., this was among Barker and Foxon's findings, contributing to their estimate of 11% indirect rebound).

Third, we can look at look at evaluations of energy efficiency programs in the industrial sector. The industrial sector is a more complicated sector for exploring rebound than the residential sector or passenger vehicles. Energy efficiency investments reduce costs, which can allow sales and hence production and energy use to increase. For much of the industrial sector, energy costs are a very small portion of production costs (e.g., 2% on average[10]) and reductions in energy use will not be great enough to appreciably affect production costs. But for some energy-intensive industries (e.g. aluminum, steel, chemicals) energy costs are more significant and it is possible for decreases in energy costs to affect sales. This could happen for a single plant, with some of the extra production offset by reductions at a less efficient plant, or if the savings were large enough, it could affect an entire industry, albeit again with some offsets (e.g. if sales of aluminum increased, there might be some declines in steel or plastics). In terms of actual data, Nadel (1993) reviewed a set of eleven evaluations of specific industrial efficiency improvements at individual plants. Of the eleven evaluations, nine found no change in production, one indicated that production had increased 12% as a result of the efficiency measures installed and one indicated that the firm plans to increase production in the future (although it was unclear if the efficiency improvement was contributing to this planned change). Overall, this small sample provides a preliminary indication that, on average, only limited rebound with industrial process measures can be expected. Further real-world data on these issues would be useful.

Finally, experience at the state level in a state with extensive energy efficiency savings is instructive. For example, in recent years Vermont has had the most aggressive electric and natural gas efficiency programs. As a result absolute electricity use in Vermont peaked in 2005 and has since declined 5% (as of 2010, the last data available). Likewise, absolute natural gas use peaked in 2000 and has declined 11% since then. And there have not been shifts to other energy sources since overall energy use peaked in 2004 and subsequently declined by about 9% (EIA 2012). These changes have not happened at the expense of the state's economy—Gross State Product increased 12% over the 2000-2010 period (in 2005 $) (Bureau of Economic Analysis 2012). The economy of an entire state is very complex and these simple numbers cannot be used to calculate a specific indirect rebound estimate.

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[8] A quadrillion is 10 to the 15th power. The U.S. now uses about 100 quadrillion Btu of energy annually.

[9] See http://www.eia.gov/oiaf/economy/energy_price.html.

[10] Derived by ACEEE from data in Bollman (2008).

But these numbers do illustrate that efficiency programs and policies do save substantial energy, and while there could be some rebound, backfire is not happening.

In summary, there is substantial uncertainty about the size of indirect rebound effects and more careful studies are needed, such as a detailed macroeconomic study of the U.S. similar to what Barker and Foxon did for the U.K. From the evidence that is available, the most likely estimate is that indirect rebound effects are on the order of 11%, increasing both energy use and the level of economic activity.

Q. What other types of analyses have been done and do they provide useful information about the rebound effect?

A. A variety of other analyses have been done that are purported to support high estimates of rebounds. These include anecdotes, comparisons between engineering estimates of energy efficiency savings and the actual savings achieved, and statistical approaches.

A good example of the use of anecdotes is Owen's article in *The New Yorker* (2010). For example, Owen notes that between 1993 and 2005, new air conditioners in the U.S. increased in efficiency by 28%, but by 2005, homes with air conditioning increased their consumption of energy for their air conditioners by 37%. But as Dr. James Barrett, Chief Economist of the Clean Economy Development Center, responds: "Owen presents this as clear and obvious proof of a [rebound] effect. Case closed. Here is where Owen gets lazy: A few key facts disprove the point." Barrett finds that over this period per-capita real income rose 30%, homes got 16% bigger, the proportion of homes with air conditioning doubled and average efficiency of air conditioners in use (both new and old units) increased only 11% (Barrett 2010). Nadel adds that the cost of air conditioners declined more than 50% over the 1960-2009 period, even after adjusting for inflation (Nadel 2011). Clearly an 11% increase in air conditioner efficiency did not cause all of these other effects. Instead, air conditioning used more energy not because of greater efficiency but despite it.

Among the arguments made by Michaels (2012) is that actual evaluations of savings from utility energy efficiency programs show that savings achieved are typically around 75% of the savings estimated from engineering calculations of the measures installed. He argues that such findings "are consistent with appliance rebound studies." However, there are many reasons that engineering estimates may be off (Nadel and Keating 1991) and thus faulty engineering calculations are not evidence of rebound.

Finally, a variety of statistical analyses have been done that claim to tie increases in energy efficiency to increases in energy use.[11] However, correlation is not the same as causation. As Afsah and Salcito (2012) point out, a careful review of underlying technological change and engineering changes are needed to figure out what is causing the increase in energy use.

In sum, these other lines of evidence are very weak.

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[11] See, for example, Saunders (2010).

Conclusions

There are both direct and indirect rebound effects, but these tend to be modest. Direct rebound effects are generally 10% or less. Indirect rebound effects are less well understood but the best available estimate is somewhere around 11%. These two types of rebound can be combined to estimate total rebound at about 20%. [12] Claims of "backfire" (100% rebound) do not stand up to scrutiny. Furthermore, direct rebound effects can potentially be reduced through improved approaches to inform consumers about their energy use in ways that might influence their behavior (Ehrhardt-Martinez and Laitner 2010). And indirect rebound effects, which appear to be linked to the share of our economy that goes to energy, may decline as the energy intensity of our economy decreases.

Overall, even if total rebound is about 20%, then 80% of the savings from energy efficiency programs and policies register in terms of reduced energy use. And the 20% rebound contributes to increased consumer amenities and a larger economy. These savings are not "lost" but are put to other generally beneficial uses.

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[12] 0% direct rebound + (11% indirect rebound * 100% - 10% direct rebound) = 20%.

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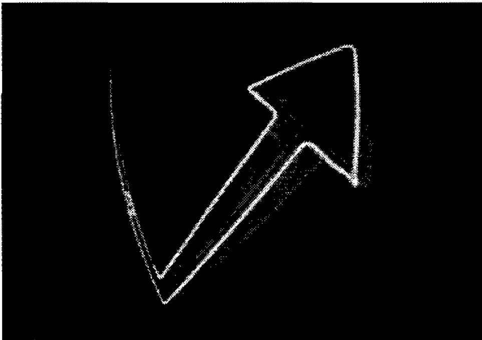
The Rebound Effect: Real, but Not Very Large

Author: Steven Nadel [1]



As the energy efficiency of products, homes, and businesses improves, it becomes less expensive to operate them. The *rebound effect* [2] postulates that people increase their use of products and facilities as a result of this reduction in operating costs, thereby reducing the energy savings achieved. Periodically, some analysts raise questions about the rebound effect, arguing that it is a major factor that needs to be accounted for when analyzing energy efficiency programs. The most recent example is a report [3] by the Institute for Energy Research, an organization that primarily works on oil, gas, coal, and electricity markets. In order to address these recurring arguments, today ACEEE released a white paper entitled *The Rebound Effect: Large or Small?* [4] The paper is written in a "question and answer" format designed to summarize what we know, what we do not, and—given what we know—how large the rebound effect is likely to be. The paper examines both direct and indirect rebound effects.

Direct rebound is the impact of a purchase of an efficient product by purchasers' use of that product. For example, a car buyer may drive an efficient car more often than an inefficient one or a homeowner who weatherizes his/her house may use a portion of the savings to increase the temperature in the house in the winter to increase comfort.

Indirect rebound, on the other hand, reflects the impact of re-spending the money that consumers and businesses save from improved energy efficiency. It can also include the fact that as factories and other parts of the economy get more efficient, production costs may be lower, freeing up funds to expand the factory and increasing demand for products. An example of the former is a household that cuts its heating bill and takes back a little of the savings on higher thermostat settings, but then spends the remaining money saved on eating out or buying a new flat screen television. An example of the latter is that efficiency improvements in aluminum smelting can reduce the price of aluminum, thereby fostering increased aluminum sales that requires additional energy consumption in its production.

There have been more than 100 studies published that attempt to estimate rebound effects, many of which we examined for our paper. We found that while there is some uncertainty, available evidence indicates that *direct* rebound effects will generally be 10% or less. Estimates of higher direct rebound effects are primarily based on studies of consumer responses to changes in energy prices, but as shown by Greene for vehicles [5], this is different from consumer response to changes in energy efficiency. There is a need for a study on home weatherization [6] that attempts to separate out price and rebound effects to see if they are similar or different. Rebound is probably higher for weatherization of low-income

homes since prior to weatherization some of these households could not afford to keep their homes as warm as they would have liked. And rebound may be higher during shoulder periods where use of heating or cooling is optional.

We found that there are larger uncertainties about the size of indirect rebound effects and more careful studies are needed. From the evidence that is available, the most likely estimate is that indirect rebound effects are on the order of 11%, increasing both energy use and the level of economic activity. This 11% estimate comes from a study by Barker and Foxon [7] that used a sophisticated macroeconomic model to examine the impact of a number of United Kingdom energy efficiency policies over the 2000-2010 period. The study estimated that indirect rebound was 11% by 2010, with higher effects (15%) in energy-intensive industries and lower effects for commerce (5%), road transport (6%), and households (10%). Unfortunately, there are no similar studies of the U.S., although such a study would be useful.

Other studies, using different methodologies, come up with different answers, both higher and lower. At the high end, a variety of Computable General Equilibrium [8] (CGE) models have been used. However, such models are based upon a number of standard assumptions from neo-classical economics (perfect competition, constant returns to scale in production, consumers always work to maximize their utility) that are poorly supported by empirical evidence. In particular, the possibility of "win-win" policies, such as those aimed at encouraging energy efficiency, cannot be fairly modeled if an economy is assumed to be at an optimal equilibrium, a key assumption of these models.

In conclusion, we found that there are both direct and indirect rebound effects, but these tend to be modest. Direct rebound effects are generally 10% or less. Indirect rebound effects are less well understood but the best available estimate is somewhere around 11%. These two types of rebound can be combined to estimate total rebound of about 20%. We examined claims of "backfire" (100% rebound), but they do not stand up to scrutiny. Furthermore, direct rebound effects can potentially be reduced through improved approaches to inform consumers about their energy use in ways that might influence their behavior. And indirect rebound effects, which appear to be linked to the share of our economy that goes to energy, may decline as the energy intensity of our economy decreases.

Overall, even if total rebound is about 20%, then 80% of the savings from energy efficiency programs and policies register in terms of reduced energy use, which benefits the environment and public health. And the 20% rebound contributes to increased consumer amenities (like more comfortable homes), as well as to a larger economy and more jobs [9]. Therefore, these savings are not "lost," but put to other generally beneficial uses.

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How Does Energy Efficiency Create Jobs?

Author: Casey Bell [1]

With unemployment hovering at a stubborn 9%, it is no wonder that job creation has become a hot topic. It is nearly impossible to read the news without encountering an article describing how a policy or industry creates a given number of jobs. Often, job creation is used as a justification for public sector investment in a program, policy, institution, or project. You may also see numbers from the energy industry proclaiming the ways their particular resource creates jobs. These claims, however, rarely or clearly explain how job creation assessments are carried out and what the jobs numbers actually mean.

For many years, ACEEE has done analyses and written reports on the role of energy efficiency in creating jobs. Recently, we released a fact sheet, "How Does Energy Efficiency Create Jobs?," [2] that seeks to de-mystify how net job impacts should be estimated, and demonstrate how investments in cost-effective energy efficiency improvements can yield a net positive benefit for the nation's overall employment.

A recent New York Times column [3] raised a question on whether or not *anybody,* be they politicians or CEOs, can actually "create" jobs. The article points out that in many cases, policies or investments are not creating new jobs but, at best, are simply shuffling them around amongst different industries, and asserts that "jobs are not the cause of a healthy economy; they're a byproduct." It concludes that we need to find a way to train Americans for jobs that will help them earn a living wage, which is an argument of merit. Yet, there are also ways we can streamline our energy use and alter our spending patterns to free up additional funds to support higher levels of employment overall, as well as promote a healthier and more robust economy.

Net Jobs vs. Gross Jobs

Energy efficiency, for the most part, creates *net* gains in employment (defined below), which extend well beyond the jobs that shift among industries. It does so in two ways. First, an initial effort or investment will create opportunities for workers (e.g., an investment in infrastructure improvements [4]). This stimulates opportunities for the construction sector and industries that support it. Second, energy bill savings that stem from the initial effort or investment will free up the funds to support additional employment throughout the economy. In other words, energy efficiency investments not only inject funds into the economy to stimulate job creation, but they also have the potential to alleviate systemic unemployment by reducing energy bills and making those dollars available to support broader economic activity.

Readers should be aware that other analysts often opt to report job creation in terms of *gross* jobs (defined in Table 1) without assessing impacts relative to a "business as usual" case—in other words, *the number of jobs that would have been supported on average across all sectors of the economy by that same investment amount*. This approach ultimately inflates the estimates by neglecting to provide context (i.e., a power plant may support 100 jobs, but the economy might be able to support 170 jobs if funds were not required to keep the plant running). In this scenario, saying that the power plant creates 100 jobs is misleading.

Table 1: Common Terms Used in Jobs Analysis	
Job	A metric that is equivalent to the resources required to employ 1 person for 12 months (or 2 people working 6 months each, or 3 people for 4 months each). Can be full-time or part-time.
Gross Jobs	The total number of jobs supported by an industry and its supply chain.
Net Jobs	The number of jobs created in an industry and its supply chain compared to a "business as usual" reference case.
Direct Jobs	Jobs generated from a change in spending patterns resulting from an expenditure or effort. (e.g. construction jobs for a retrofit project)
Indirect Jobs	Jobs generated in the supply chain and supporting industries of an industry that is directly impacted by an expenditure or effort.
Induced Jobs	Jobs generated by the respending of received income resulting from direct and indirect job creation in the affected region.
Labor Intensity	The number of jobs necessary to support the spending required to produce goods and services

How Does Energy Efficiency Impact Employment and Create Jobs?

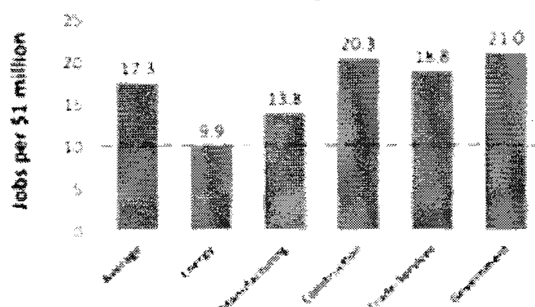


Figure 1 Jobs per Million Dollars of Revenue by Key Sectors of the US Economy

To understand how a cost-effective energy efficiency investment can create *net* jobs, it is important to consider how efficiency diverts funds away from less labor-intensive sectors of the economy in order to support greater overall employment. On average, $1 million spent in the U.S. economy supports approximately 17 total jobs (including direct, indirect, and induced jobs—defined in the example below). It is important to note that the $1 million expenditure does not divide neatly into workers' salaries (17 people are not making $59,000 a year as a result of this investment).

Investments directed towards a specific industry may support greater or fewer jobs depending on the industry (you can see in Figure 1 that manufacturing supports approximately 14 jobs per $1 million investment, while the trade-services sector supports just under 19 jobs).

So, an investment in energy efficiency will first create opportunities for workers in industries that are more labor intensive than average (as you'll see in our example, a retrofit [5] project will create jobs in the construction sector, which supports approximately 20 jobs per $1 million, compared to the all-sector average of 17). Then, it will continue to support jobs year after year by saving energy. The energy savings generated by the investment diverts spending away from power generation and distribution, which supports just under 10 total jobs per $1 million (see Figure 1) back into the overall economy (which supports 17 jobs per $1 million).

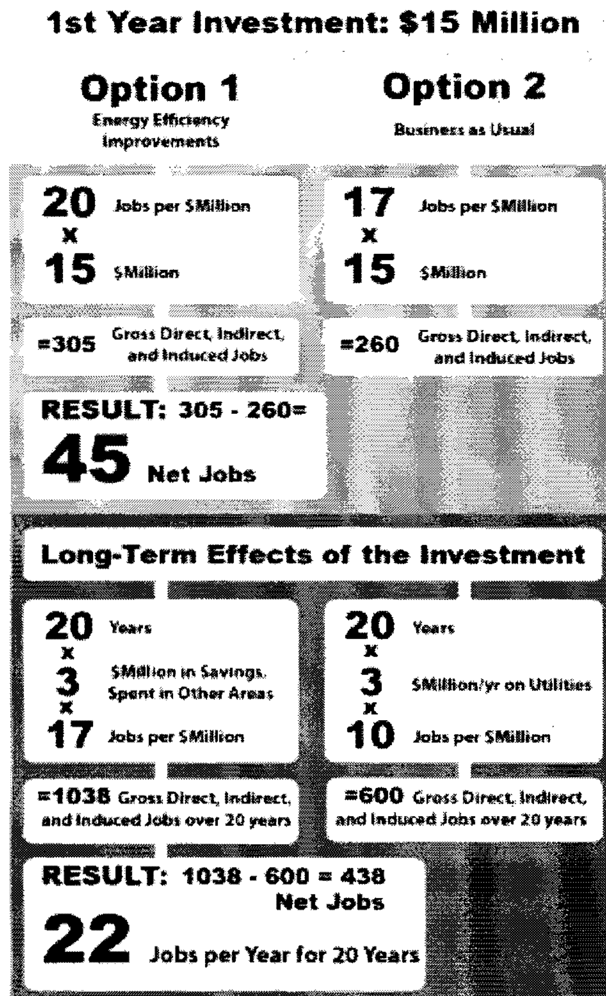
Let's Look at an Example:

A city decides to use $15 million of its revenue to improve energy efficiency in public buildings. These improvements will save the city $3 million a year for the next 20 years.

Three types of jobs are created from this investment. First, a construction contractor will have to hire workers to install the desired energy efficiency measures. These contractor jobs are the *direct* jobs resulting from the investment. In addition, the workers will require materials that they have to purchase from other companies (e.g., insulation, tools). These purchases create jobs throughout the economy for manufacturers and service providers who supply the building industry. These supply-chain jobs are the *indirect* jobs resulting from the investment. Finally, workers in these direct and indirectly created jobs may choose to spend their earnings on goods and services in the local economy, creating *induced* jobs.

In our example, we can assume that funds will be redirected from their "business as usual" spending pattern and channeled into the construction industry, which is more labor intensive than the average sector of the economy. This will support approximately 20 (direct, indirect, and induced) jobs per $1 million investment. In this case, the tradeoff (from spending that supports 17 jobs per $1 million to spending that supports 20 jobs per $1 million) results in an additional 45 jobs in the year the upgrade occurs (see Figure 2).

Figure 2: $15 Million for Energy Efficiency Improvements



Additionally, energy efficiency generates energy bill savings over the life of the investment, which frees up funds to support more jobs in the economy by shifting jobs in the energy generation and distribution industries (lower labor intensity: 10 jobs per $1 million) to jobs in all other industries (higher labor intensity: 17 jobs per $1 million on average). We assume that our investment will save $3 million a year for 20 years and thus achieve a net gain of 22 jobs per year (see Figure 2). Please note that to simplify our calculations in this demonstrative example we assumed that energy savings would be recognized immediately in the first year of the investment, which is often not the case. For many of our analyses, we assume that energy savings are recognized at least six months to one year after the efficiency measures are implemented.

As you can derive from Figure 2, the "business as usual" (pre-efficiency) scenario supports 860 gross jobs (260 + 600) in the first year, which sounds like a lot of jobs (and 600 gross jobs year after year for the next 19 years). However, you can also see that the efficiency scenario supports 1,343 gross jobs (305 + 1038) in the first year (and 1,038

gross jobs year after year for the next 19 years), which is greater than the number of jobs supported by "business as usual." Therefore, energy efficiency creates 67 net jobs in the first year, and continues to support an additional 22 net jobs year after year for the 20-year life of the investment.

How Does ACEEE Determine the Number of Jobs Created by a Given Policy, Program, Institution, or Project?

In recent years, ACEEE has explored how energy efficiency policies can drive net job creation using our in-house Dynamic Energy Efficiency Policy Evaluation Routine (DEEPER) [6] modeling system. DEEPER evaluates the economy-wide impacts of a variety of energy efficiency, renewable energy, and climate policies at the local, state, and national level. It is a dynamic input-output (I/O) model of the U.S. economy that leverages information about how different institutions—households, industries, businesses, and governments—trade goods and services with one another to estimate the impact that a given policy or investment will have on the larger economy.

DEEPER utilizes jobs coefficients (e.g., the multipliers show in Figure 1) from the Impact Analysis for Planning (IMPLAN) [7] Modeling System's data set. Our definition for jobs (see Table 1) is consistent with their definition, which they derive from the Bureau of Labor Statistics and the Bureau of Economic Analysis [8]. Also, the IMPLAN multipliers account for leakages, or money that will be spent outside the region's economy.

Over the last 10 years, one of ACEEE's priorities has been to estimate potential jobs and other economic impacts from pending federal energy efficiency legislation. A study performed in 2010 by Laitner, et al [9]. suggested, for example, that adopting a particular suite of Senate-proposed energy efficiency policies could result in a net gain of approximately 700,000 jobs by 2030, and just over 1 million jobs by 2050. Early in 2012 ACEEE will release our analysis on the pending energy efficiency legislation introduced by Senators Jeanne Shaheen (D-NH) and Rob Portman (R-OH) and the Implementation of National Consensus Appliance Agreements Act (INCAAA). While policymakers may not be able to wave a magic wand and instantly create new jobs for the unemployed, they can support legislation and investments that will save energy and make our economy stronger.

Skip Laitner contributed to this post.

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Economic Impact Analysis of Property Assessed Clean Energy Programs (PACE)

Research Performed by ECONorthwest for PACENow, April 2011

This report summarizes an analysis by ECONorthwest of the economic impacts of Property Assessed Clean Energy (PACE) programs. The analysis measures the output, employment and tax impacts of purchase activity with the same composition of the project activity of the PACE energy efficiency and renewable energy projects. The analysis is performed using the IMPLAN input-output model system and simulated the implementation of PACE projects in four cities, with computation of both local and national impacts. Significant, positive economic and fiscal impacts are potentially associated with PACE energy efficiency and renewable energy projects.

Economic Impact Analysis of Property Assessed Clean Energy Programs (PACE)

Research Performed by ECONorthwest for PACENow, April 2011

Executive Summary

ECONorthwest was engaged by the PACENow coalition to assist them in describing the economic effects of the Property Assessed Clean Energy (PACE) programs. Specifically, this report presents calculations of the direct, indirect, and induced impacts of purchases associated with hypothetical PACE program implementations on various measures of economic activity, including direct, indirect and induced impacts on output and employment, and the associated impacts on local, state and federal tax revenues.

Findings

The analysis suggests that such programs have the potential of generating significant economic and fiscal impacts. Specifically, $4 million in total PACE project spending, across the four cities included in this analysis ($1 million in spending in each city) will on average generate:

- $10 million in gross economic output;
- $1 million in combined Federal, State and Local tax revenue;
- 60 jobs.

As a result, the PACE program projects have the potential to provide stabilizing economic influences that should redound to the

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benefit of involved communities, the regional and national economies and, thereby, to the value of housing collateral of associated mortgages. The channels by which this occurs are through the largely domestic supply-chain linkages of the purchases associated with the project developments themselves, and the net reduction in housing user costs that flows from implementation of cost-beneficial energy-efficiency improvements. We also offer an opinion regarding the likely effect of the senior property tax lien that is associated with the structure of the PACE program. We conclude that, under most likely conditions, the reduction in the cost and volatility of a building's purchased energy requirements should add strength and resilience to home values in a manner that counterbalances the lenders' concern about the lien impairing their mortgage loan collateral.

Study Approach

The analysis performed by ECONorthwest uses hypothetical purchase activity with the same, approximate composition as PACE projects in terms of the economic sectors involved and does not evaluate particular PACE projects. The impacts of project purchases associated with PACE activity are traced to the linkages between PACE purchases and the chain of vendor relationships. Because PACE projects also have the potential to affect household spending, through reductions in energy costs, the impacts of that effect of the PACE projects were also examined.

The measurement of these relationships is performed within an input-output model framework using IMPLAN model and data. The purchase activity is modeled in four, separate cities with local impacts measured at the county or multi-county level. Impact measures are extended to the nation as a whole, thereby producing local, elsewhere-in-the-US, and total US impact measures for the modeled activities.

The remainder of this report presents the analysis that yielded these findings. First, a brief summary of the PACE program is presented to set the context of the analysis. Then, we report the results of tracing the direct, indirect and induced effects of the spending associated with types of energy-efficiency improvements proposed by the PACE program. We also investigate the economic impacts of any enlargement of household spending potential that arises from the reduced need to purchase energy at market prices. Measurement of the economic implications includes an accounting of the tax-revenue effects of each of the two spending impact channels.

In a final section of the report, the measured economic impacts are discussed in the context of the concerns expressed by bank regulators and secondary mortgage market agencies.

Background: The PACE Program

Since 2008, twenty-four (24) states and the District of Columbia have passed laws enabling local government jurisdictions to establish special assessment districts (also called special improvement districts) that allow residential and commercial property owners to finance renewable energy (RE) and

energy efficiency (EE) improvements on their properties. The National Renewable Energy Laboratory describes the PACE program in this way:

> *The pivotal innovation of PACE is the creation of EE/RE assessments that are tied directly to the house and repaid via the property owner's tax bill. The assessment, which is secured by a senior lien on the property, does not require an up-front payment. The lien provides strong debt collateral in the event the homeowner – or business owner – defaults on the assessment. Because the assessment and lien are tied directly to the property, they can be transferred upon sale*.[1]

By the first half of 2010, PACE programs had been launched in a handful of communities and early results were promising. The program appears to be effective in overcoming traditional barriers to significant investment in energy efficiency and renewable energy and the associated spending have been linked to construction activity in communities with PACE programs. Sonoma County, California, for example, reportedly experienced more than $20 million in program spending activity by April 2010 and had seen its local construction industry employment rate improve dramatically in comparison to neighboring counties.[2]

In early May 2010, Fannie Mae and Freddie Mac issued short letters suggesting that the PACE program violated standard mortgage provisions.[3] In addition, on July 6, 2010 the Federal Housing Finance Agency (FHFA) and the Office of the Comptroller of the Currency (OCC) issued statements concluding that PACE programs "present significant safety and soundness concerns to the housing finance industry."[4]

As reported by the Lawrence Berkeley National Laboratory's Clean Energy Financing Policy Brief in August 2010, that said, "Typically, the tax liens created by assessments are senior to other obligations, like mortgages, and must be paid first in the event of foreclosure. Fannie Mae, Freddie Mac, the FHFA and other financial regulators reasoned that PACE assessments were, in effect, loans not assessments and so violated standard mortgage provisions requiring priority over any other loan."[5]

These and related developments have halted most PACE programs, according to Mr. David Gabrielson, Executive Director of PACENow.

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[1] Property-Assessed Clean Energy Financing of Renewables and Efficiency. NREL/BR-6A2-47097. July 2010.
[2] Written testimony of Sonoma County Auditor-Controller-Treasurer-Tax Collector Rod Dole before the House Ways and Means Committee, April 14, 2010
[3] Lawrence Berkeley National Laboratory, "Clean Energy Financing Policy Brief", August 11, 2010. http://eetd.lbl.gov/ea/emp/ee-pubs.html
[4] http://www.fhfa.gov/webfiles/15884/PACESTMT7610.pdf
[5] Lawrence Berkeley National Laboratory, "Clean Energy Financing Policy Brief", August 11, 2010. http://eetd.lbl.gov/ea/emp/ee-pubs.html

The Role of this Analysis

PACE proponents are assembling information in an effort to respond to these interpretations of mortgage policy. This includes elucidating the economic and tax impacts of PACE projects as well as the projects' effects on household budgets and housing values. To the extent that PACE projects can be demonstrated to have the potential to enhance economic activity and associated tax collections, they have the potential to strengthen local, state and national economic and fiscal conditions. In so doing, PACE projects can improve the weakened housing and construction markets.

An additional issue, although not the direct focus of the quantitative research presented here, relates even more directly to the concerns of regulators and agencies regarding the PACE program and mortgage risk. To the extent the EE and RE projects reduce and/or stabilize households' energy budgets, the programs have the potential to be risk reducing, rather than risk enhancing, for mortgage lenders.

Both of these issues are discussed herein. We turn first to measuring the Program's potential economic impacts. There are two dimensions to this analysis. One is the impact of the spending that occurs as the result of installing energy efficiency and renewable energy measures. The second is the impact on the household of changes in the burden in utility bills and, thus, on the effective cash resources of the household to support other household spending.

Measuring the PACE Program's Project Spending Impacts

PACE program projects generally involve spending on a variety of energy efficiency and renewable energy improvements to existing housing. The decision to employ the PACE program is made by consumers or developer/builders whose motives are reflective of consumer perspectives of the value of the projects. In this respect, PACE project implementations are no different from other home-improvement investment decisions that are made routinely in the economy, either by owner-occupants or property renovators.[6]

The accepted method of measuring the impact of a purchase such as the PACE or traditional home-improvement projects is to trace the impact of the initial ("direct") purchase decision on the activity of vendors of goods and services affected by the purchase. Input-output models are used to trace these

[6] The only significant distinction is that the PACE projects are financed through a though a special finance mechanism. Specifically, through arrangements approved by participating tax authorities, the financing is effected by dedication of a property tax increment to support repatriation of the costs of the PACE improvements. A lien is placed on the property to provide security to the financing entity, and to permit the lien to follow the property when it is sold. Although much is made of this distinctive feature of the program, in fact so-called mechanics' liens are commonly placed against property to ensure that unpaid home-improvement contractors, in the worst case, will have a claim against the value of the property.

impacts. Distinctions are made among *direct*, *indirect* and *induced* impacts. (See Appendix B for a brief summary of the input-output model tool that was used to develop the economic impact findings.)

Direct impacts

The renovation of buildings involves the purchase of capital equipment and labor to install such things as photovoltaic systems and insulation products. The expenditure of funds on these activities is associated with increased output by the directly involved enterprises. Each enterprise can be seen as a firm who's production function consists of purchases of labor services from its own employees, and purchases of output of other firms that produce the constituent materials that are used in the provision of the energy production and energy efficiency systems installed at the individual sites.

These activities are said to have *direct* impacts in the form of employment of the associated labor, and addition of value to the inputs purchased from other enterprises. The economic *output* of the installation activity and the *jobs* directly associated with that activity are two key measures of the direct impacts. Economists focus on the economic output measure because it is closest to the incremental contribution to total, gross economic output made by the installation activity. Policy makers concerned with job creation often focus more on the labor activity associated with the activity.

Other dimensions of direct impacts include the taxes as a course of providing the installation activity. The tax impacts take the form of local, state and federal tax payments associated with the incomes of those who own or work at the enterprise that performs the project as well as any payroll taxes, property taxes, sales taxes and other payments to taxing entities to which the provider of the PACE improvements is subject. Local governments and agencies are often interested in this dimension of the direct impacts of the installation activity.

Indirect impacts

The direct purchase activity has *indirect* effects on the economy, in addition to the *direct* effects. These occur because the direct purchases result, in turn, in the purchase of goods and services from other businesses, since virtually no firms provide themselves with every needed input. These indirect, (“supply-chain”) impacts take the same, general form as the direct impacts. That is, indirect purchases result in impacts on labor services, create value-added, contribute tax payments, etc. in the course of each vendor providing its products and services to the installation sector. The input-output modeling of the various sectors that constitute the economy are used to trace the indirect effects through all of the myriad links in the supply chain. Each vendor to the direct installation activity has vendors, who, in turn, have vendors, etc. The matrix mathematics of input-output models permits aggregating the impacts on what is, in theory, an infinite chain of vendor relationships.

Induced impacts

The third, and final mechanism by which the initial, direct purchase activity has impacts is through the consumption expenditures of those who enjoy incomes from the direct or indirect activities that occur.

That is, some of their income is spent purchasing goods and services that also result in a cascade of supply chain effects. These so-called *induced* impacts together with the indirect and direct impacts are additive and constitute the total impact of the installation activity. The ratio of the total impacts to the direct impacts on each of the dimensions of impact is often reported as the *multiplier* effect of the direct activity. Thus, multipliers can be measured for jobs, value-added, tax receipts, or any other dimension of the accumulated impacts.

The geography of impacts

The impact analysis implicitly has geographic dimensions. That is, the various vendors associated with providing goods and services in response to the direct, indirect, and induced purchases can be located in the immediate locality, other localities and states, or foreign countries. It is possible, with the latest versions of input-output data, to assemble impacts at the various geographies. American policy makers are generally interested in activity that accretes to labor, business and governments within the boundaries of our nation. Purchases that occur in foreign countries are often considered "leakage" of impacts to these locations.

From the broader view of the world economy, even foreign impacts may ultimately stimulate demand for US goods and services through the international exchange of goods and services and international flows of financial capital. Nonetheless, it is not unreasonable for policy makers to be interested primarily in certain, specific geographies when measuring impacts. In the analysis reported herein, the direct purchases of installation services are assumed to be located in one of four, cities, with the impacts appraised at both the local and the national level. This is done because regions host different suppliers of goods and services, and have different labor market and tax systems. Thus, the aggregation of impacts to the national level can vary with the locus of the initial purchase activity.

The Modeling Tool

The modeling of the impacts of purchases made under PACE program is performed using the IMPLAN (“IMpact Analysis for PLANning”) model. IMPLAN was originally developed by the Forest Service of the U.S. Department of Agriculture in cooperation with the Federal Emergency Management Agency and the Bureau of Land Management of the U.S. Department of the Interior in 1993, and is currently licensed and distributed by the Minnesota IMPLAN Group, Inc.

The IMPLAN model is an implementation of an input-output model–a way of representing an economy that was developed by Wassily Leontief, for which he received the Nobel Memorial Prize in Economic Sciences. An input-output model uses tabular (matrix) representations of an economy to measure the effect of changes in one industry on others. It can be used to measure the effects of purchases made by US consumers and governments, and foreign entities. Details on the constituent

matrices of input-output model systems and the associated mathematics can be found in many sources.[7].

The IMPLAN model is a highly respected implementation of Leontief's input-output concept, and is generally agreed to be superior to regional impact multiplier systems.[8] IMPLAN is constructed with data assembled for national income accounting purposes, thereby providing a tool that has a robust link to widely accepted data development efforts. In addition, IMPLAN has been subject to detailed scrutiny by experts on regional impact analysis. Most recently, the United States Department of Agriculture (USDA) recognized the IMPLAN modeling framework as "one of the most credible regional impact models used for regional economic impact analysis" and, following a review by experts from seven US agencies, selected IMPLAN as its analysis framework for monitoring job creation associated with the American Recovery and Reinvestment Act (ARRA) of 2009.[9] [10] More information on the features of IMPLAN can be found at Appendix B or www.implan.com.

Application of the IMPLAN model in the case of the PACE program involves the following steps:

1. Development of a representation of PACE projects. This takes the form of a representation of the labor and product purchases that constitute an energy efficiency or renewable energy project.
2. Selection of locales (cities) in which to hypothetically implement the projects. City data is assembled from constituent county data.
3. For each selected city and project, building a model in IMPLAN that emulates the city by linking the constituent counties.
4. Applying the assumed purchase activity to the affected IMPLAN sectors.

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[7] See, for example: Leontief, Wassily W. *Input-Output Economics*. 2nd ed., New York: Oxford University Press, 1986; Miller, Ronald E. and Peter D. Blair. *Input-Output Analysis: Foundations and Extensions*, 2nd edition, Cambridge University Press, 2009: and Ten Raa, Thijs. The Economics of Input-Output Analysis. Cambridge University Press, 2005.

[8] One such system is RIMS III. See, US Department of Commerce, Bureau of Economic Analysis, *Regional multipliers: A user handbook for regional input-output modeling system (RIMS II)*. Third edition. Washington, D.C.: U.S. Government Printing Office. 1997.

[9] See excerpts from an April 9, 2009 letter to MIG, Inc., from John Kort, Acting Administrator of the USDA Economic Research Service, on behalf of Secretary Vilsack, at www.implan.com.

[10] In the economics profession, there is a lively debate as to whether job creation measured using input-output tools such as IMPLAN under- or overstates the economic impacts of the spending activities modeled using the IMPLAN system. Pessimists are tempted to assert that if spending occurs on Project A, then one should account for the fact that Project B may not be pursued because of the diversion of funds to Project A. This view of the economy as a zero-sum game is clearly incorrect in the aggregate, because we observe economic growth despite constrained investment budgets. In this analysis we implicitly embrace this more realistic view because the PACE program, though enabled by public policy, is implemented by the private sector which faces incentives to only pursue cost-beneficial programs. This pursuit of economically efficient projects is consistent with the notion that selecting productivity-enhancing (and thus, resource sparing) projects enlarges the potential of an economy, in contrast to the implication of the zero-sum game perspective.

5. Build a model in IMPLAN that links the purchase data and local models, one by one, to the national model. Run the models to compute direct, indirect and induced impacts.

The manner of representing the PACE activities in IMPLAN is discussed further below.

Representing PACE Program Purchases in IMPLAN

In order to implement the IMPLAN model in the study of the PACE program, the purchases typically made with PACE projects must be associated with the sectors that are representable within IMPLAN. Recall that there are two, broad classes of PACE program projects:

1. The *energy efficiency* measures focus on reduction in the use of conventionally sourced energy through the use of higher-efficiency devices and products. Such measures include permanent improvements such as energy efficient HVAC systems; attic and wall insulation; duct and home sealing; cool roof systems; solar water heater systems; tankless water heaters; and evaporative coolers.
2. The *renewable energy* projects involve provision of energy to the household by means that are described as "renewable" because of their reliance on sunlight, wind, ocean waves and other, effectively non-depletable resources. Rooftop photovoltaic projects are expected to be the most common form of project associated with the PACE programs.

As the project descriptions above suggest, a diverse family of products constitute the PACE program, making it hazardous to assume a "typical" project. Installation of, say, a particular type of window product, is also difficult to represent in IMPLAN because IMPLAN is able to represent the production functions of a limited number of industrial products, and there is variation in production techniques ad product features across producers of the same, general class product.

In addition, the costs of energy efficiency measures vary widely due to regional climate and the local costs of labor and materials. Adding efficient central air conditioning to a home with existing forced air heat, for example, costs approximately $3,500-$4,000 and takes about two days.[11] Installing double-paned windows can cost as much as $20,000 in a two-story home.[12] According to GreenHomes America, a leading residential energy services company which operates from coast to coast, an average whole home retrofit project would cost the homeowner approximately $10,000.[13] Average labor costs represent 55% of the total and materials costs represent approximately 45%.[14]

Similarly, the costs of renewable energy projects of a given capacity in kilowatts (kW) is also variable due to variations in the availability of the underlying natural resource (e.g., sunlight in the case of photovoltaic devices), the cost of installation labor, variations in the characteristics of the property, etc.

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[11] http://www.fhfa.gov/webfiles/15884/PACESTMT7610.pdf

[12] Lawrence Berkeley National Laboratory, "Clean Energy Financing Policy Brief", August 11, 2010. http://eetd.lbl.gov/ea/emp/ee-pubs.html

[13] Email correspondence of Mr. Cliff Staten with GreenHomes America Senior VP Michael Rogers, 2/18/11.

[14] *ibid*

According to a December 2010 report by the Lawrence Berkeley National Laboratory, the national average for a 4kW solar photovoltaic system is $30,000.[15] Materials account for 52%, while labor costs associated with marketing, permitting and system installation accounts for approximately 48% of the total.[16]

Because of the variations in the nature of energy efficiency and renewable energy projects, we determined it is not appropriate to characterize a "typical" PACE project. In addition, energy efficiency and renewable energy project activities are not represented at high resolution in the available input-output model data. These models disaggregate the economy into approximately 440 sectors, and it is necessary to represent project spending in terms of these sectors. Therefore, in the analysis that is presented herein, the PACE projects are not specified in detail; rather, we model the impacts in the following fashion:

1. An arbitrary amount of purchases ($1 million in 2011 dollar terms) is used to represent PACE activity in a given locale. Since the inner workings of IMPLAN assume a constant production function (specific to the year the model data represents), taking this approach allows one to scale the impacts to an actual program simply by scaling actual spending to the $1 million placeholder value.
2. It is arbitrarily assumed that 50% of the assumed purchases is associated with photovoltaic (renewable energy) installations, and 50% with energy efficiency projects.
3. Energy efficient project purchases were evenly allocated to the various weatherization and other energy efficiency product sectors represented in IMPLAN. (See Exhibit 1 in Appendix C for the list of IMPLAN and associated North American Industrial Classification System (NAICS) sectoral codes that likely comprise the sectors affected by the energy efficiency and renewable energy project purchases.)
4. No special edits of the IMPLAN model coefficients were made during the modeling. Specifically, the regional purchase coefficients (RPCs) that represent the share of product purchases that are made within the US was left at the average that IMPLAN derives from national income accounting data. For example, solar photovoltaic systems in IMPLAN have an RPC of 75 percent (i.e., less than would be the case with higher US content), because it is not possible to distinguish retail photovoltaic products from other crystalline semiconductor products. This probably yields a somewhat more conservative (low) total domestic impact because an active program like PACE could make special efforts to source products with higher shares of US content.

Geographic Representation in IMPLAN

ECONorthwest and its client agreed that it would be useful to model the consequences of PACE activity in a variety of locales. The selected, four communities are:

1. Columbus, OH (built from Delaware and Franklin Counties)
2. Long Island, NY (built from Nassau and Suffolk Counties)
3. Santa Barbara, CA (represented by Santa Barbara County)
4. San Antonio, TX (represented by Bexar County)

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[15] "Tracking the Sun III," December 2010. http://eetd.lel.gov/ea/emp/re-pubs.html

[16] "The Prospect for $1/Watt from Solar" U.S. DOE Workshop Presentation by John Lushetsky, August 10, 2010.

The primary reason for modeling various locales is that vendor relationships vary geographically, with some areas able to source from the immediate locale, while others tending to source from distant US sources, or overseas suppliers. Budgetary considerations limited the number of locales able to be modeled, because representation of each locale requires acquisition of individual databases, in addition to linkages to the national model. However, the four chosen locales are diverse in geography and climate conditions, and are locales of interest to the PACE program.

Findings of the Project Spending Impact Analysis

The findings of the economic impact analysis are presented in detail in Exhibit 2 through Exhibit 10 in the Appendix C. These exhibits report the economic impacts of the hypothetical $1 million in project purchases. In the exhibits, these impacts are reported along the following dimensions:

- **The type of project**. This is defined as a mix of energy efficiency measures or a photovoltaic renewable energy installation;
- **The dimension of the economic impact**. The reported measures are economic output, personal income, jobs and tax revenues;
- **The type of impact**. The direct, indirect, induced and total impacts are reported.
- **The geography of the impact**. Impacts are measured for each of the modeled cities, for the rest-of-the-nation, and the nation as a whole. In the aggregation to the geographic level, a 50% weight is put on energy efficiency and photovoltaic projects, respectively.
- **The type of tax revenue generated**. For compactness, the wide variety of tax types reported by IMPLAN are grouped into four tax base levies–corporate profits and dividends taxes, indirect business taxes, personal taxes, and social insurance levies.
- **The level of government receiving the tax revenues**. These are presented as state and local, and federal subtotals, respectively.

It would be cumbersome to describe here each of the several hundred impact measures provided in the exhibits. Instead, we first report here the range of impacts reported in the summary exhibits, Exhibit 2 and Exhibit 3 in Appendix C. These tables summarize the impacts by the type of project, the type of impact, and the dimension of the economic impact for each of the cities, and for elsewhere-in-the-US and the US as a whole.[17]

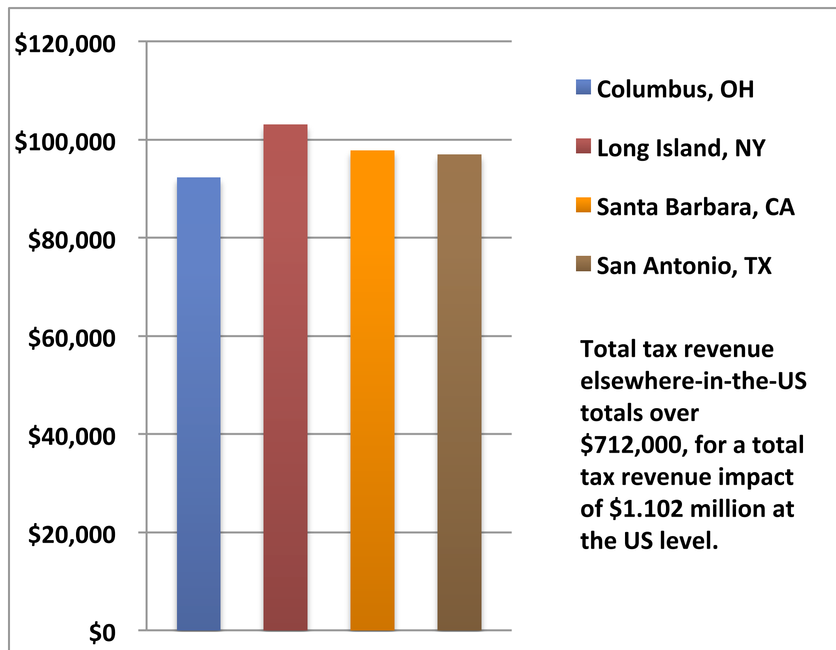
Turning first to solar photovoltaic projects, we find the following impacts for spending $1 million in each of the four cities:

- The impact on total economic output ranges from approximately $718,000 to $872,000 at the individual city level, and is $7.044 million for the rest of the US, and $10.250 million for the US as a whole.
- The impact on personal income ranges from approximately $284,000 to $330,000 at the individual city level, and is $2.066 million for the rest of the US, and $3.325 million for the US as a whole.

[17] Elsewhere-in-the-US and national totals aggregate across the four analyzed cities.

- The impact on jobs ranges from 6 to 8 additional jobs at the individual city level, and is 35 for the rest of the US, and 60 for the US as a whole.
- Tax revenue impacts at the federal level range from $55,000 to $63,000 at the individual city level, and is $426,000 for the rest of the US, and $669,000 for the US as a whole.
- Tax revenue impacts at the state and local level range from $34,000 to $41,000 at the individual city level, and is $287,000 for the rest of the US, and $433,000 for the US as a whole.
- Total tax revenue impact at all levels of government is $1.102 million at the US level.

Figure 1. Total Tax Revenue (Fiscal) Impacts at the City Level, per $1 million in Project Spending per City.



For energy efficiency projects, we find the following impacts for each $1 million in purchases at the city level:

- The impact on total economic output ranges from approximately $717,000 to $939,000 at the individual city level, and is $7.570 million for the rest of the US, and $10.925 million for the US as a whole.
- The impact on personal income ranges from approximately $283,000 to $352,000 at the individual city level, and is $1.943 million for the rest of the US, and $3.232 million for the US as a whole.
- The impact on jobs ranges from 5 to 8 additional jobs at the individual city level, and is 35 for the rest of the US, and 61 for the US as a whole.
- Tax revenue impacts at the federal level range from $60,000 to $66,000 at the individual city level, and is $307,000 for the rest of the US, and $658,000 for the US as a whole.
- Tax revenue impacts at the state and local level range from $35,000 to $41,000 at the individual city level, and is $259,000 for the rest of the US, and $411,000 for the US as a whole.
- Total tax revenue impact at all levels of government is $1.058 million at the US level.

As we have modeled the two project types in IMPLAN, there appears to be a somewhat greater local impact associated with the energy efficiency versus the solar photovoltaic project types. This is consistent with the fact that the specialized products and labor needed to produce photovoltaic products are not likely to be as localized as are the products used in energy efficiency improvements.

When viewed from the jobs impact perspective, the $4 million of PACE-type project spending across the four cities is associated with approximately 60 jobs somewhere in the nation. If one viewed the PACE program as a jobs stimulus program (akin to those pursued at public expense under American Recovery and Reinvestment Act of 2009), the cost per job at $67,000 is quite modest. In fact, of course, in the PACE program the only significant role of government is to authorize a financing mechanism to overcome what some believe to be non-economic impediments to credit access.

If viewed, alternatively, from a fiscal perspective, the $4 million of spending across the four cities ultimately provides over $1 million in tax revenue to local, state or federal taxing entities. If the PACE program is able to identify and stimulate cost-beneficial investments in energy enhancements of housing, government stands to be a major beneficiary of the associated private spending.

Measuring the PACE Program's Household Budget Impacts

In addition to the spending impacts associated with developing PACE-type projects, cost-beneficial PACE projects[18] should also reduce and/or stabilize the cost of energy to the households that occupy the affected housing units. By definition, a cost-beneficial project is one that, over its lifetime, provides the property owner more in the form of avoided energy costs than is spent enhancing the home.[19] Access to alternative energy sources (through so-called renewable energy projects) can also provide, in effect, insurance against the uncertainty about the path of future fossil fuel prices. This insurance effect can be modeled as a financial option that has a positive financial value even if conventional fuel prices are just variable, and do not necessarily trend upward.

Regardless of whether the project persistently lowers the market-energy needs of the household (through energy efficiency projects) or simply provides insurance against uncertainty in market fuel price movements, a cost-beneficial project reduces a household's effective budgetary burden of home

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[18] ECONorthwest was not asked to opine on whether typical PACE projects are, in fact, cost-beneficial. However, since private agents are the ones primarily involved in the decision-making, it is reasonable to anticipate that the projects that are successfully adopted are perceived as cost-beneficial by households or contractors developing the projects for sale to consumer households.

[19] The typical financial calculus involved in this determination involves, therefore, comparing the present value at the time the enhancement spending occurs of the stream of expected energy cost savings enjoyed over the lifetime of the energy enhancements. A discount rate is applied to the stream of energy cost savings in this calculation.

ownership.[20] Thus, to the extent that the project results in additional free cash flow in the household (after paying the tax increment used to pay for the PACE improvements), there can be annual increments of economic impact associated with the likely additional spending that the household will perform.

This impact can also be measured using the IMPLAN modeling system by assuming a hypothetical quantity of additional, non-utility spending by households. As with the PACE program spending impacts, there are direct, indirect, and induced effects of this spending. In this case, however, the amount measured by this method yields only the gross spending effects; the loss of spending to the utility sector will result in a partial offset to these impacts.[21]

Exhibit 11, on page 31, summarizes the city-level and US total impacts, in present value terms, of a household enjoying energy cost savings of $1,000 per year in 2011 dollars for 25 years. As the exhibit reveals, the gross impacts of even a modest annual cost savings can yield large impacts on output, personal income, jobs, and tax revenues over a 25-year period.

Conclusions: The Implications of the Analysis for Issuers of Mortgages on PACE Project Properties

The background of the PACE program reveals that the program is currently not operational because of concerns of bank regulators and secondary mortgage market entities regarding the security of their access to the collateral value of the property in the event of default. The existence of a senior lien (senior to the mortgage) is always of concern to mortgage issuers, especially in non-recourse states (i.e., states in which the lender may not levy claims against assets other than the mortgaged property itself).[22]

Several aspects of the impact analysis presented here bear upon the position taken by those concerned about such risks. First, to the extent that the PACE program operates in the manner assumed in the analysis in this report, use of the program has the potential to have positive economic impacts on the regional (city) economy, as well as the nation as a whole. Cost-beneficial programs that generate such impacts can contribute to the process of recovery for both the economy in general, and the construction services sector in particular.

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[20] Even in the special case where a renewable energy project only provides insurance against future volatility of market fuel prices, the household enjoys budgetary relief. It need not set aside funds against the eventuality of a surprise upward movement in energy costs.

[21] Without knowing the composition of utility and non-utility spending of the affected income groups, the effects of the shift in spending composition can only be estimated in rough terms.

[22] There are 17 such non-recourse states.

Second, to the extent that the projects generate the generous revenues for local, state and federal jurisdictions modeled here, additional stabilization of the general economy can be expected. This is because the difficulties that governments currently have in balancing their budgets is requiring either reductions in public services or increases in taxes, or both. The risk of loss of public services, or reductions in its quality, and the risks of increased taxation on private activity create an environment of uncertainty, in general, and disrupt household location, migration and housing tenure decisions. On some margin, these conditions weaken the strength of the housing market, aggravating lender collateral problems. Cost-beneficial private sector activity that has the effect of enhancing the value of housing services should not be discouraged by lenders, even from the perspective of their own self-interest.

Third, in an environment of uncertain and costly supply of conventional fuels, properties that are distinguished by having energy-sparing or inflation-defensive features will enjoy priority in desirability, and hence, enjoy superior pricing in the marketplace. In a manner similar to the relative price movements of gasoline-consumptive SUVs versus more fuel-efficient vehicles, properties with good energy efficiency characteristics will rise in price in an uncertain commodity price environment.

Finally, although the existence of a lien in a superior position to a mortgage is legitimately worrisome to lenders, the increment in value of the home that is represented by the energy technologies financed by the lien may well move counter-cyclically to other factors affecting home prices and collateral value. If this is the case, then the putative adverse presence of the lien may well be counterbalanced by the superior net resilience of PACE-improved home values. This seems true whether the economy fails to come gracefully out of the recession because of central bank difficulties managing the balance between inflation and real interest rates, or because of rising and/or uncertain energy costs:

- If the monetary expansion results in higher, general inflation levels in the future, households for whom the absolute energy cost of their budgets is below average will be less subject to inflation effects on energy cost components of their budgets than households with larger absolute energy budgets. Moreover, to the extent that the energy features of the home provide a hedge against some portion of general inflation, the value of the home will rise by an amount reflective of the value of that hedge.
- If real interest rates rise instead, those homes with fixed lien payments associated with the PACE program (and, ideally, a fixed-rate mortgage as well) enjoy, in effect, a reduction in the present value of the lien payment obligations. Although higher mortgage rates will not be favorable to home sales or home building, creditors with fixed-rate obligations enjoy an implicit capital gain (much as the holders of low rate mortgages will suffer a capital loss). Abandoning a home with a fixed lien in a rising real interest rate market makes no more sense than abandoning a low-rate mortgage in that environment.
- If energy prices rise independently of other prices (commodity price inflation), the value of the energy-sparing improvements will rise, even if and as the higher energy prices impair economic recovery, incomes and housing demand. By recognizing the value of the energy-sparing features of the home and accommodating borrowers who must take on property tax liens to enjoy these

> features, the lenders are, in effect, putting themselves in a better position than if they had lent the same principal amount to a homeowner who had not acquired protection against energy price movements.

In summary, it is hard to construct a scenario in which the presence of a lien that is associated with value-enhancing and stabilizing housing services adds to the riskiness of a mortgage vs. a loan on a home without the lien and energy features, everything else being equal.

These arguments would be less persuasive, of course, if one did not believe that (a) the housing market recognizes the value of energy-sparing features of homes or that (b) the programs of PACENow and like initiatives will deliver improvements that cost-effectively provide the homeowner with lower energy cost burdens and/or a hedge against rising or uncertain energy prices. ECONorthwest cannot opine on the logic of (b), but has experience in evaluating the relationship between the market prices of homes and their energy features. In 1993, ECONorthwest published a study of an energy-efficient mortgage program that was performed for the Oregon Department of Energy. Using a unique database that contained information on various home insulation and heat source features of homes that sold in Oregon, ECONorthwest established both that the market does recognize the present value of energy cost savings in higher home prices and that the changes in Oregon's building code in 1992 (to reduce energy use by housing) were cost-beneficial.[23]

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[23] See, *Implementing Oregon's Energy Efficient Mortgage Program: Final Report*, ECONorthwest, June 1993. In Part 3 of that report ("Market Response to Energy Saving Features") an econometric analysis was performed using a special database provided by the Appraisers' Comp Service (ACS). At the time, the ACS maintained a database of real estate sales in major markets so that appraisers may obtain comparable sales information for use in appraisals. Uniquely, the database contained information on certain energy-related features of the homes sold including ceiling insulation value, floor insulation value, wall insulation value, type of heating and whether the home had been built to the 1992 code (in addition to many other features of the homes). The sales prices covered a narrow period of September 4, 1992 to June 15, 1993, and comprised approximately 2,780 total observations in two metropolitan areas of Oregon. The econometric analysis revealed that buyers assigned high values to energy-sparing features. The value of those features was such that ECONorthwest concluded on page 48 that "…the 1992 code enhancements are associated with significant enhancements in home value. All of the estimates are far in excess of the estimated costs of the 1992 code described by builders in Part One of this report."

Appendix A: About the Authors

Randall Pozdena, PhD, Senior Economist and Managing Director

Dr. Pozdena leads ECONorthwest's quantitative analysis practice. He joined ECONorthwest as a managing director and head of its Portland office in 1991. He has extensive experience in macro-economic modeling and forecasting, project feasibility analysis, banking and securities markets, real-estate economics, and monetary policy. In this capacity, he has developed and applied project evaluation and pricing tools, and state, regional and sectoral macroeconomic forecasting and economic impact models. Prior to joining ECONorthwest, Pozdena was research Vice President of the Federal Reserve Bank of San Francisco. He directed the Banking and Regional Studies section, which advised on matters relating to financial-market developments, mortgage and housing markets, banking operations and regulation, and the regional economies of the eight western United States. The latter duties involved developing and operating models of states and metropolitan-area economies and analysis of credit flows in the economy. Before his work at the Federal Reserve Bank, Pozdena was a senior economist at SRI International, where he provided consulting on economics, finance, and transportation economics. In addition, he has taught economics and finance at the Graduate School of Business, University of California, Berkeley and at the Graduate School of Administration, University of California, Irvine. He was also associated with the Institute of Transportation Studies at Irvine. Pozdena has been a member of the CFA Institute for over 15 years and a member, and former board member, of the Portland Society of Financial Analysts. He has written over 50 published books and papers, has 21 listings in the Journal of Economic Literature, and over 5,000 search cross-references in Google Research.

Alec Josephson, MA, Senior Economist and Director of Economic Impact Analysis

Josephson has been with ECONorthwest since 1992 and has participated in well over 300 economic impact studies using the IMPLAN modeling systems. Josephson's experience spans a wide range of industries, sectors, and programs, including major transportation improvement projects; heavy and light manufacturing activities; renewable energy projects and technologies; agriculture, forestry, mining, and commodities; and economic development projects. Josephson recently completed a comprehensive economic analysis of the impacts from proposed changes to Seattle area transportation resulting from restructuring of the Alaska Way Viaduct, including analysis of tolling and other congestion models, impacts of freight traffic, analysis of the short-term construction impacts and the long-term accessibility and business development impacts. In addition to his work with ECONorthwest, Mr. Josephson is an adjunct professor of economics at Pacific University, where he teaches courses in energy and environmental economics, microeconomics, and macroeconomics. Mr. Josephson and his staff conducted the modeling presented in this report.

Appendix B: The IMPLAN Modeling System[24]

Social Accounting

IMPLAN's Social Accounting Matrices (SAMs) capture the actual dollar amounts of all business transactions taking place in a regional economy as reported each year by businesses and governmental agencies. SAM accounts are a better measure of economic flow than traditional input-output accounts because they include "non-market" transactions. Examples of these transactions would be taxes and unemployment benefits.

Multipliers

Social Accounting Matrices can be constructed to show the effects of a given change on the economy of interest. These are called Multiplier Models. Multiplier Models study the impacts of a user-specified change in the chosen economy for 440 different industries. Because the Multiplier Models are built directly from the region specific Social Accounting Matrices, they will reflect the region's unique structure and trade situation.

Multiplier Models are the framework for building impact analysis questions. Derived mathematically, these models estimate the magnitude and distribution of economic impacts, and measure three types of effects that are displayed in the final report. These are the direct, indirect, and induced changes within the economy. Direct effects are determined by the Event as defined by the user (i.e. a $10 million dollar order is a $10 million dollar direct effect). The indirect effects are determined by the amount of the direct effect spent within the study region on supplies, services, labor and taxes. Finally the induced effect measures the money that is re-spent in the study area as a result of spending from the indirect effect. Each of these steps recognizes an important leakage from the economic study region spent on purchases outside of the defined area. Eventually these leakages will stop the cycle.

Trade Flows Method

Unique to IMPLAN data, 2008 and forward, is a method of tracking regional purchases by estimating trade flows. An updated and improved method for calculating and tracking the movement of commodities between industries within a region, this method tracks over 500 commodities in each study area, and allows more accurate capturing of indirect and induced effects. This new method of capturing regional purchase coefficients also makes it possible for our Version 3 software to perform Multiregional Analysis, so users can see how a change in their local region causes additional affects surrounding areas.

Cost-Effective Modeling

Tremendous amounts of data are required in order to run Social Accounting Matrices and Multiplier Models that will accurately estimate the effects of a given event on an economy. There are numerous

[24] Abstracted from descriptive materials offered by IMPLAN at www.implan.com.

factors that need to be taken into account to fully visualize direct, indirect and induced effects of an event. The expense and labor of developing this data independently are prohibitive. By offering the data in many discreet forms, IMPLAN also allows studies to be localized effectively and only data of interest to be purchased.

Appendix C: Exhibits[25]

[25] The data in all exhibits is from ECONorthwest using IMPLAN modeling and emulation of PACE project purchases as described in the text of the report.

Exhibit 1: IMPLAN and NAICS Sectors Associated with PACE Project Activity

IMPLAN Sector	IMPLAN Description	2007 NAICS Codes
40	Maintenance and repair construction of residential structures	23*
99	Wood windows and doors and millwork manufacturing	32191
128	Synthetic rubber manufacturing	325212
137	Adhesive manufacturing	32552
146	Polystyrene foam product manufacturing	32614
149	Other plastics product manufacturing	32619
168	Mineral wool manufacturing	327993
216	Air conditioning- refrigeration- and warm air heat	333415
243	Semiconductor and related device manufacturing	334413

Exhibit 2: Summary of Economic Impacts of Photovoltaic Projects, per $1 million in Project Purchases

Economic Impacts - Solar Photovoltaics

Impact Area / Type of Impact	Direct	Indirect	Induced	Total
Santa Barbara, CA				
Output	$490,221	$116,918	$173,047	$780,185
Personal Income	$214,608	$45,318	$59,668	$319,593
Jobs	3	1	1	6
San Antonio, TX				
Output	$507,649	$145,867	$218,552	$872,068
Personal Income	$198,656	$57,671	$73,611	$329,937
Jobs	5	1	2	8
Columbus, OH				
Output	$501,674	$132,488	$201,844	$836,006
Personal Income	$202,121	$55,477	$68,120	$325,718
Jobs	4	1	2	7
Long Island, NY				
Output	$438,330	$121,541	$157,729	$717,599
Personal Income	$177,780	$49,051	$57,453	$284,284
Jobs	3	1	1	5
Elsewhere in the United States				
Output	$1,587,757	$2,597,183	$2,859,334	$7,044,273
Personal Income	$409,984	$778,674	$877,716	$2,066,374
Jobs	4	12	18	35
United States Total				
Output	$3,525,630	$3,113,996	$3,610,504	$10,250,130
Personal Income	$1,203,148	$986,190	$1,136,566	$3,325,904
Jobs	20	16	24	60

Exhibit 3: Summary of Fiscal Impacts for Solar Photovoltaics, per $1 million in Project Purchases

Fiscal Impacts - Solar Photovoltaics

Impact Area / Type of Impact		Direct	Indirect	Induced	Total
Santa Barbara, CA					
Federal		$33,390	$17,238	$12,393	$63,021
State and Local		$12,188	$8,920	$13,578	$34,685
	Total All	$45,578	$26,158	$25,971	$97,706
San Antonio, TX					
Federal		$33,990	$13,135	$16,104	$63,228
State and Local		$6,964	$12,005	$14,725	$33,693
	Total All	$40,953	$25,139	$30,829	$96,921
Columbus, OH					
Federal		$29,878	$10,819	$14,317	$55,013
State and Local		$10,491	$11,259	$15,467	$37,217
	Total All	$40,369	$22,078	$29,784	$92,230
Long Island, NY					
Federal		$36,904	$11,239	$13,725	$61,867
State and Local		$15,494	$11,213	$14,451	$41,157
	Total All	$52,398	$22,451	$28,176	$103,024
Elsewhere in the United States					
Federal		$88,116	$149,923	$187,622	$425,660
State and Local		$37,306	$100,785	$148,646	$286,737
	Total All	$125,422	$250,707	$336,268	$712,396
United States Total					
Federal		$222,276	$202,352	$244,160	$668,788
State and Local		$82,442	$144,180	$206,866	$433,488
	Total All	$304,718	$346,532	$451,026	$1,102,276

Exhibit 4: Summary of Economic Impacts of Energy Efficiency Programs, per $1 million in Project Purchases

Economic Impacts - EE Measures

Impact Area / Type of Impact	Direct	Indirect	Induced	Total
Santa Barbara, CA				
Output	$513,252	$123,023	$174,721	$810,996
Personal Income	$215,490	$46,942	$60,245	$322,677
Jobs	3	1	1	6
San Antonio, TX				
Output	$513,521	$145,532	$219,473	$878,525
Personal Income	$199,952	$57,372	$73,921	$331,244
Jobs	5	1	2	8
Columbus, OH				
Output	$565,830	$155,640	$217,883	$939,353
Personal Income	$215,850	$62,958	$73,534	$352,342
Jobs	4	1	2	8
Long Island, NY				
Output	$442,063	$113,635	$161,223	$716,921
Personal Income	$180,828	$44,978	$57,298	$283,104
Jobs	3	1	1	5
Elsewhere in the United States				
Output	$1,772,714	$3,070,827	$2,735,981	$7,579,521
Personal Income	$367,042	$736,774	$839,779	$1,943,594
Jobs	6	11	17	35
United States Total				
Output	$3,807,378	$3,608,656	$3,509,280	$10,925,314
Personal Income	$1,179,160	$949,024	$1,104,776	$3,232,960
Jobs	21	16	24	61

Exhibit 5: Summary of Fiscal Impacts of Energy Efficiency Measures, per $1 million in Project Purchases

Fiscal Impacts - EE Measures

Impact Area / Type of Impact		Direct	Indirect	Induced	Total
Santa Barbara, CA					
Federal		$33,515	$17,551	$12,513	$63,578
State and Local		$12,119	$9,146	$13,709	$34,973
	Total All	$45,633	$26,697	$26,222	$98,551
San Antonio, TX					
Federal		$36,421	$12,584	$16,715	$65,720
State and Local		$8,334	$11,458	$15,287	$35,079
	Total All	$44,755	$24,042	$32,002	$100,798
Columbus, OH					
Federal		$32,427	$12,301	$15,454	$60,181
State and Local		$11,852	$12,613	$16,695	$41,159
	Total All	$44,279	$24,913	$32,149	$101,340
Long Island, NY					
Federal		$37,245	$10,333	$13,688	$61,265
State and Local		$15,578	$10,439	$14,413	$40,429
	Total All	$52,823	$20,771	$28,101	$101,694
Elsewhere in the United States					
Federal		$72,768	$145,060	$178,967	$396,795
State and Local		$17,150	$101,554	$140,997	$259,701
	Total All	$89,918	$246,614	$319,964	$656,495
United States Total					
Federal		$212,374	$197,828	$237,336	$647,538
State and Local		$65,032	$145,208	$201,100	$411,340
	Total All	$277,406	$343,036	$438,436	$1,058,878

Exhibit 6: Summary of Impacts, Columbus Ohio, per $1 million in Project Purchases

Solar Photovoltaics

Type of Impact	Direct	Indirect	Induced	Total
Output	$501,674	$132,488	$201,844	$836,006
Personal Income	$202,121	$55,477	$68,120	$325,718
Jobs	4.3	1.2	1.7	7.2

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$1,831	$829	$1,818	$4,478
Indirect Business	$534	$1,804	$2,378	$4,715
Personal	$9,924	$2,589	$3,164	$15,676
Social Insurance	$17,590	$5,597	$6,958	$30,144
Total Federal	$29,878	$10,819	$14,317	$55,013
State and Local				
Corporate Profits and Dividends	$1,949	$883	$1,935	$4,766
Indirect Business	$2,589	$8,752	$11,539	$22,880
Personal	$5,391	$1,406	$1,719	$8,515
Social Insurance	$564	$219	$275	$1,057
Total State and Local	$10,491	$11,259	$15,467	$37,217
Total All	$40,369	$22,078	$29,784	$92,230

Energy Efficiency

Type of Impact	Direct	Indirect	Induced	Total
Output	$565,830	$155,640	$217,883	$939,353
Personal Income	$215,850	$62,958	$73,534	$352,342
Jobs	4.5	1.3	1.8	7.6

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$2,225	$1,004	$1,963	$5,192
Indirect Business	$645	$1,999	$2,566	$5,210
Personal	$10,560	$2,937	$3,415	$16,912
Social Insurance	$18,997	$6,361	$7,511	$32,868
Total Federal	$32,427	$12,301	$15,454	$60,181
State and Local				
Corporate Profits and Dividends	$2,368	$1,069	$2,089	$5,525
Indirect Business	$3,129	$9,701	$12,455	$25,284
Personal	$5,736	$1,595	$1,855	$9,186
Social Insurance	$620	$249	$297	$1,165
Total State and Local	$11,852	$12,613	$16,695	$41,159
Total All	$44,279	$24,913	$32,149	$101,340

Exhibit 7: Summary of Impacts, Long Island, NY, per $1 million in Project Purchases

Solar Photovoltaics

Type of Impact	Direct	Indirect	Induced	Total
Output	$438,330	$121,541	$157,729	$717,599
Personal Income	$177,780	$49,051	$57,453	$284,284
Jobs	3.0	0.8	1.1	5.0

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$1,279	$556	$1,002	$2,836
Indirect Business	$360	$856	$1,086	$2,301
Personal	$16,486	$4,537	$5,298	$26,320
Social Insurance	$18,780	$5,291	$6,340	$30,411
Total Federal	$36,904	$11,239	$13,725	$61,867
State and Local				
Corporate Profits and Dividends	$2,174	$945	$1,705	$4,823
Indirect Business	$3,135	$7,458	$9,455	$20,048
Personal	$9,489	$2,611	$3,050	$15,150
Social Insurance	$697	$199	$241	$1,137
Total State and Local	$15,494	$11,213	$14,451	$41,157
Total All	$52,398	$22,451	$28,176	$103,024

Energy Efficiency

Type of Impact	Direct	Indirect	Induced	Total
Output	$442,063	$113,635	$161,223	$716,921
Personal Income	$180,828	$44,978	$57,298	$283,104
Jobs	3.1	0.8	1.1	4.9

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$1,324	$530	$1,000	$2,854
Indirect Business	$341	$799	$1,083	$2,222
Personal	$16,805	$4,161	$5,283	$26,248
Social Insurance	$18,776	$4,844	$6,323	$29,942
Total Federal	$37,245	$10,333	$13,688	$61,265
State and Local				
Corporate Profits and Dividends	$2,252	$902	$1,701	$4,854
Indirect Business	$2,965	$6,961	$9,430	$19,355
Personal	$9,672	$2,395	$3,042	$15,109
Social Insurance	$690	$182	$241	$1,112
Total State and Local	$15,578	$10,439	$14,413	$40,429
Total All	$52,823	$20,771	$28,101	$101,694

Exhibit 8: Summary of Impacts, San Antonio, Texas, per $1 million in Project Purchases

Solar Photovoltaics

Type of Impact	Direct	Indirect	Induced	Total
Output	$507,649	$145,867	$218,552	$872,068
Personal Income	$198,656	$57,671	$73,611	$329,937
Jobs	4.5	1.3	1.8	7.7

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$2,388	$1,075	$2,043	$5,506
Indirect Business	$610	$1,566	$1,891	$4,067
Personal	$11,903	$3,747	$4,305	$19,955
Social Insurance	$19,089	$6,747	$7,865	$33,701
Total Federal	$33,990	$13,135	$16,104	$63,228
State and Local				
Corporate Profits and Dividends	$818	$368	$700	$1,886
Indirect Business	$4,300	$11,030	$13,323	$28,652
Personal	$1,564	$492	$566	$2,621
Social Insurance	$283	$115	$137	$534
Total State and Local	$6,964	$12,005	$14,725	$33,693
Total All	$40,953	$25,139	$30,829	$96,921

Energy Efficiency

Type of Impact	Direct	Indirect	Induced	Total
Output	$513,521	$145,532	$219,473	$878,525
Personal Income	$199,952	$57,372	$73,921	$331,244
Jobs	4.5	1.3	1.8	7.7

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$2,845	$1,058	$2,121	$6,023
Indirect Business	$767	$1,493	$1,963	$4,222
Personal	$12,659	$3,600	$4,469	$20,727
Social Insurance	$20,151	$6,434	$8,163	$34,748
Total Federal	$36,421	$12,584	$16,715	$65,720
State and Local				
Corporate Profits and Dividends	$974	$362	$727	$2,063
Indirect Business	$5,403	$10,514	$13,832	$29,748
Personal	$1,663	$473	$587	$2,723
Social Insurance	$295	$109	$142	$546
Total State and Local	$8,334	$11,458	$15,287	$35,079
Total All	$44,755	$24,042	$32,002	$100,798

Exhibit 9: Summary of Impacts, Santa Barbara, California, per $1 million in Project Purchases

Solar Photovoltaics

Type of Impact	Direct	Indirect	Induced	Total
Output	$490,221	$116,918	$173,047	$780,185
Personal Income	$214,608	$45,318	$59,668	$319,593
Jobs	3.4	0.9	1.4	5.6

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$1,094	$150	$892	$2,135
Indirect Business	$412	$3,574	$1,431	$5,416
Personal	$13,958	$2,572	$3,779	$20,308
Social Insurance	$17,927	$10,944	$6,292	$35,162
Total Federal	$33,390	$17,238	$12,393	$63,021
State and Local				
Corporate Profits and Dividends	$1,352	$507	$1,102	$2,961
Indirect Business	$2,945	$6,710	$10,233	$19,887
Personal	$7,218	$1,486	$1,955	$10,658
Social Insurance	$673	$218	$289	$1,180
Total State and Local	$12,188	$8,920	$13,578	$34,685
Total All	$45,578	$26,158	$25,971	$97,706

Energy Efficiency

Type of Impact	Direct	Indirect	Induced	Total
Output	$513,252	$123,023	$174,721	$810,996
Personal Income	$215,490	$46,942	$60,245	$322,677
Jobs	3.4	0.9	1.4	5.7

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$1,083	$177	$900	$2,160
Indirect Business	$400	$3,592	$1,445	$5,436
Personal	$14,014	$2,675	$3,816	$20,504
Social Insurance	$18,019	$11,107	$6,353	$35,479
Total Federal	$33,515	$17,551	$12,513	$63,578
State and Local				
Corporate Profits and Dividends	$1,338	$541	$1,113	$2,991
Indirect Business	$2,858	$6,841	$10,332	$20,030
Personal	$7,246	$1,539	$1,973	$10,758
Social Insurance	$678	$225	$292	$1,195
Total State and Local	$12,119	$9,146	$13,709	$34,973
Total All	$45,633	$26,697	$26,222	$98,551

Exhibit 10: Summary of Impacts, United States (aggregate), per $1 million in Project Purchases per City

Solar Photovoltaics

Type of Impact	Direct	Indirect	Induced	Total
Output	$3,525,630	$3,113,996	$3,610,504	$10,250,130
Personal Income	$1,203,148	$986,190	$1,136,566	$3,325,904
Jobs	19.6	16.0	24.4	60.0

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$20,048	$19,414	$27,984	$67,446
Indirect Business	$7,214	$17,650	$26,040	$50,904
Personal	$73,692	$59,976	$69,150	$202,818
Social Insurance	$121,322	$105,312	$120,986	$347,620
Total Federal	$222,276	$202,352	$244,160	$668,788
State and Local				
Corporate Profits and Dividends	$17,330	$16,778	$24,188	$58,296
Indirect Business	$45,408	$111,096	$163,900	$320,404
Personal	$17,102	$13,922	$16,048	$47,072
Social Insurance	$2,602	$2,384	$2,730	$7,716
Total State and Local	$82,442	$144,180	$206,866	$433,488
Total All	$304,718	$346,532	$451,026	$1,102,276

Energy Efficiency

Type of Impact	Direct	Indirect	Induced	Total
Output	$3,807,378	$3,608,656	$3,509,280	$10,925,314
Personal Income	$1,179,160	$949,024	$1,104,776	$3,232,960
Jobs	21.4	15.8	23.6	60.8

Type of Tax	Direct	Indirect	Induced	Total
Federal				
Corporate Profits	$17,460	$22,090	$27,204	$66,754
Indirect Business	$4,870	$17,546	$25,312	$47,728
Personal	$72,308	$57,784	$67,216	$197,308
Social Insurance	$117,736	$100,408	$117,604	$335,748
Total Federal	$212,374	$197,828	$237,336	$647,538
State and Local				
Corporate Profits and Dividends	$15,094	$19,092	$23,514	$57,700
Indirect Business	$30,656	$110,454	$159,330	$300,440
Personal	$16,780	$13,410	$15,602	$45,792
Social Insurance	$2,502	$2,252	$2,654	$7,408
Total State and Local	$65,032	$145,208	$201,100	$411,340
Total All	$277,406	$343,036	$438,436	$1,058,878

Exhibit 11: Economic Impacts of $1,000 in Annual Household Energy Costs for 25 Years (in Present Value)

Impact Area	Output	Personal Income	Jobs (Full- and Part-time)	Federal Taxes	State and Local Taxes
Santa Barbara, CA	$19,484	$6,648	0.15	$1,383	$1,515
San Antonio, TX	$21,730	$7,197	0.18	$1,441	$1,358
Columbus, OH	$19,979	$6,578	0.17	$1,548	$1,404
Long Island, NY	$21,007	$7,400	0.15	$1,769	$1,879
United States (est.)	$306,914	$98,453	1.97	$19,119	$12,722

The impacts are the present value effects of $1,000 in energy cost savings per year for 25 years. To reduce this stream of savings to a single number for comparability with project purchase impacts, the so-called *present value* of the savings is calculated. For the present value calculation, it is assumed that the appropriate real (inflation adjusted) discount rate is 3 percent, and that energy costs rise at a rate that is one percentage point higher than other prices. The US totals are estimated outside of IMPLAN using total US spending relative to the city totals observed in the program purchase modeling. These impacts should be considered gross impacts, since the potentially offsetting impacts of reduced utility activity are not captured in these measures.

community septic management program

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
Division of Municipal Services
July 2005

The Community Septic Management Program (CSMP) was developed through the collaboration of the Department of Environmental Protection (DEP), the Executive Office of Administration and Finance, the Office of State Treasurer, and the Department of Revenue to provide funds and assistance to Massachusetts homeowners for compliance with Title 5.

This document is a comprehensive step-by-step guide to help communities implement the CSMP at a local level.

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THE COMMUNITY SEPTIC MANAGEMENT PROGRAM

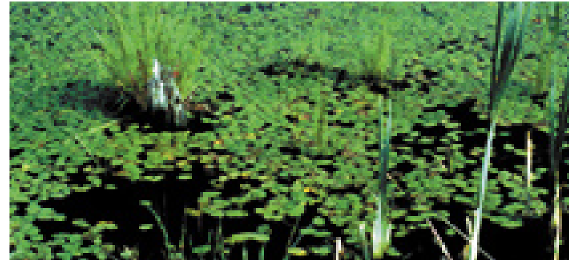
Highlights of the Community Septic Management Plan:

- The Commonwealth provides funding for the Community Septic Management Program to the Community through a "State Revolving Fund" (SRF) loan.
- The SRF loan is offered at an effective 0% interest rate (the technical term is "50% Grant Equivalency") by the Commonwealth to the Community. The Community reloans these funds usually at the rate of 5% interest to homeowners.
- The Town Meeting (or City Council) Vote authorizes Communities to borrow the SRF loan funds from the Massachusetts Water Pollution Abatement Trust.
- If less than the authorized SRF is borrowed (drawn down), the Community only repays the amount it has borrowed from the Commonwealth.
- The 5% interest charged on the betterment loans to homeowners provides "positive" cash flow and additional security to the Community.
- There should be NO additional taxes if the town participates in this program – the primary repayment obligation is undertaken by the homeowners receiving betterment loans.
- If a participating homeowner defaults on the payment, the Community has a municipal lien on the property. Any homeowner defaults will be charged an accrued interest rate of 14% rising to 16% if a "taking" is required (state law for "delinquent" municipal charges).
- The Community's repayment to the Commonwealth begins in the second year after the program commences – a year or more after the homeowners begin making payments to the Community. This enables the Community to accumulate at least one year of payments, including 5% interest, to cover unexpected defaults.
- The participation of homeowners in areas identified as environmentally sensitive (to failed systems) is not mandatory. However, if the homeowner's septic system constitutes an imminent health hazard according to the local Board of Health, the homeowner can be given priority for assistance. Homeowner participation is encouraged because correctly operating septic systems are beneficial to the environment and the low interest rate offered by the Program helps homeowners comply with Title 5.
- The Community has an option to set aside up to 2.5% of the loan funds to obtain consulting services to administer the Program. There is also a $20,000 grant available for first-time Communities entering the Program to provide additional funds to assist with administrative costs.
- The betterment payments can be spread over a period of up to 20 years and is assumable by the buyer of a property.
- The Community can require repayment of betterment loans by the homeowner sooner than the SRF payments are required by the Commonwealth (for example: betterment loans are made to homeowners over 10 years; the Community takes its SRF loan for 20 years). This provides extra protection to the town.
- The Community does not have to adopt any special provision at the Town Meeting to accept the 'Betterment Law' Chapter 111, Section 127B ½ is a 'General Law' and is always available.

These points, presented during town meetings, can explain how the program works, where the funding sources come from, who can apply for funding, and how this program will address the environmental issues facing your community.

Introduction

Across Massachusetts, failing cesspools and septic systems are a leading cause of contaminated drinking water, tainted shellfish beds, weed-choked lakes and ponds, and polluted beaches. In 1995, the Department of Environmental Protection (DEP) with the help of key stakeholders, revised Title 5 of the State Environmental Code to protect the health of Massachusetts citizens and the state's natural resources. This was the first time the state's septic system rules were revised since 1978. This revised code reflects a new understanding of the impact of septic systems on the subsurface environment and groundwater and surface waters like rivers, lakes, and ponds. Title 5 requires inspection of private on-site sewage disposal systems before properties using them are sold, expanded, or undergo a change in use. Systems deemed "failed" are required by Title 5 to be repaired, replaced, or upgraded to protect the public health and the environment.



To help homeowners comply with the revised Title 5 rules, the Commonwealth has invested approximately $164 million in various assistance programs aimed at upgrading septic systems, building community systems, or new sewers. The Community Septic Management Program (CSMP) was developed through the collaboration of DEP, the Executive Office of Administration and Finance, the Office of the State Treasurer, and the Department of Revenue. Funding for the Program was provided by the 1996 Open Space Bond Bill that authorized DEP to spend $30 million to assist homeowners to comply with Title 5. DEP will use the appropriation to fund loans to communities through the Massachusetts Water Pollution Abatement Trust (the Trust). Using the State Revolving Fund (SRF) loans from the Trust, communities can provide betterment loans to assist homeowners who must address septic system failures. Betterment loans are described in greater detail in section 4 and 5 of this document.

This manual is a comprehensive step-by-step guide to help communities implement the Community Septic Management Program at the local level. Implementation includes the development of a local inspection or management plan and a betterment loan program administered by the Board or Department of Health that will provide direct financial assistance to homeowners with failed septic systems. The effectiveness of the Community Septic Management Program's implementation depends largely on the initiative of local officials and their sensitivity to the needs and concerns of homeowners and the community.

Communities must identify and devise a plan to protect environmentally sensitive areas from septic system contamination. Such plans always include the creation of a database and the provision of financial assistance to homeowners using betterments. As discussed in these materials, the community may devise either a Community Inspection Plan (Option A) or a Local Septic Management Plan (Option B). Communities are eligible for a planning grant and a SRF loan of $200,000 with either Option A or Option B. The SRF loan proceeds may be used to provide betterment loans to homeowners and for eligible administrative costs.

Section 2. CSMP Planning Guidance

The Community Septic Management Program (CSMP) provides financial and management tools for local boards of health (BoH) to identify and protect environmentally sensitive areas in their cities and towns. Communities are provided with pre-loan financial assistance in the form of a grant to identify and rank environmentally sensitive areas and to create a plan to protect such areas from septic system contamination. The grant is available after submission of the application described in this manual. After the development and acceptance by DEP of the local program and borrowing authorization by the Town Meeting or City Council, the community can provide financial assistance and incentives to homeowners with failed septic systems in environmentally sensitive areas and in the community at large.

Local implementation of the Community Septic Management Program must include two (2) program elements:

Community Inspection Plan : (Option "A") which meets the requirements of 310 CMR 15.301(4)(c) and is approved by DEP;

OR

Local Septic Management Plan : (Option "B") which identifies, monitors, and addresses the proper operation, maintenance, and upgrade of septic systems in a comprehensive manner,

AND

Financial Assistance : The community provides financial assistance to homeowners for the repair, replacement or upgrade of failed septic systems using betterment agreements under M.G.L. c. 111 §127B½. (See Sections 4 - 8).

A Community Inspection Plan (Option A) requires the regular inspection of all septic systems at least once every 7 years, and allows the systems covered by the plan to be relieved of the inspection upon property transfer requirement in Title 5. In comparison, the Local Septic Management Plan (Option B) does not require the periodic inspection of systems, does not relieve homeowners of system inspection upon transfer, and allows for a wide range of septic system management approaches. Communities may use either approach to identify and address septic system failures. To develop and implement either plan, grant money is provided by DEP and the Trust for the first two (2) rounds of the loan program.

Schedule for Planning Assistance : Within four (4) months from the date of signing the planning grant agreement with the Trust, the participating community must submit its Local Septic Management Plan or Community Inspection Plan for DEP's review and initial approval and comment. The proposed plan must be modified in accordance with DEP's comments, requirements, and time frame.

After acceptance of the borrowing element of the community's plan at a town meeting or by the City Council, the community should forward the plan to DEP for final review and approval with the Program Application (Section 3). The Program Application is brief and designed to notify DEP that the plan has local approval and that Local Authorization to borrow the funds has been voted by the Town Meeting or City Council. For sample authorization language, contact your regional coordinator (See Resources in Appendices). DEP will certify the program approval and acceptance of the Community Inspection Plan or Local Management Plan by forwarding a Project Approval Certificate/Project Regulatory Agreement (PAC/PRA) to the Trust (Section 9). The PAC/PRA is an agreement between DEP and the community and is signed by the DEP Commissioner and Chief Executive Officer of the community. The PAC/PRA will incorporate DEP's program requirements (e.g., the approved local Plan and Betterment Loan Program), and will set the schedule and budget for implementing the program within the community. The community will then be authorized to enter into an SRF Loan Agreement with the Water Pollution Abatement Trust (See Section 10 for more information.) Communities will have 18 months to disburse the SRF Loan to homeowners for septic system repairs, replacements, and upgrades through its local program.

Loan Administration and Project Management : All communities will receive SRF loan installments to keep pace with the schedule set forth in the PAC/PRA. Upon the completion of each betterment (i.e. each homeowner project), the community must submit a Title 5 Certificate of Compliance to DEP. Copies of the betterment agreements and supporting documentation must be available for inspection and audit by DEP. Within six months of the first installment payment, DEP reviews the program's progress. Each municipality must also submit quarterly reports to the Department of Environmental Protection (DEP) and the Massachusetts Water Pollution Abatement Trust (MWPAT) .

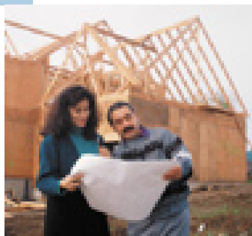
Municipal Program Completion : Completion of the project will occur when:

- a community expends the full SRF loan proceeds for activities eligible under the program and the Project Regulatory Agreement/Project Approval Certificate (PRA/PAC), or
- as much of the funding as is expended within the project period or if DEP determines that the plan will not move forward in a timely manner.

When implementation of a plan is complete, a community is required to certify that the program has been completed according to the provisions of the PRA/PAC.

Guidelines for Implementing Community Inspection Plans (Option A) 310 CMR 15.301 (4)

Introduction



The Community Inspection Plan is one of two plans communities can choose when implementing the Community Septic Management Program. The following guidelines will help local and regional governmental agencies prepare Community Inspection Plans and details the minimum requirements necessary for DEP approval.

Title 5 requires the inspection of on-site sewage disposal systems at the time of transfer of title of the facility served by the system, unless ***"the facility is subject to a comprehensive local plan of on-site septic system inspection approved in writing by the Department and administered by a local or regional governmental entity, and the system has been inspected at the most recent time required by the plan."*** (310 CMR 15.301(4)(c)). Under a Community Inspection Plan, a community must inspect all septic systems in the areas of the community subject to the Plan at least once every seven years. If the community implements a Community Inspection Plan, homeowners within the plan area are not required to have a septic system inspection when transferring title. Such a Community Inspection Plan:

> *"may prioritize systems to be inspected on the basis of proximity to water resources, soil or geological conditions, age or size of systems, history of performance, frequency of pumping or other routine maintenance activity, or other relevant factors, and may establish different schedules and frequency of inspection on the basis of such criteria, provided that all systems are inspected at least once every seven years by a System Inspector approved by the Department."*

Minimum Requirements

A. Scope and Basis for the Plan

1. As required by Title 5, the proposed inspection plan must be comprehensive in nature. While this requirement does not mandate that the inspection plan be community-wide (in the case of a city/town) or region-wide (in the case of a regional entity), it does require the proponent to analyze and document the feasibility of implementing such a program and explain the reasons for proposing a plan of lesser scope (e.g., prioritizing a neighborhood with failed septic systems that impacts a nearby waterbody).

2. The proponent of the proposed Community Inspection plan must document the basis for scope and requirements of the plan (e.g., in the prioritization of the areas covered by the plan, the frequency of inspections, the nature and scope of interim maintenance measures, the implementation and administration of the plan).

B. Prioritization of Areas to be Inspected

1. The Community Inspection Plan must prioritize areas to be inspected based on the consideration of the following factors:

(a) Areas with high system failure rates attributable to:

- high ground water;
- poor soils (e.g. showing evidence of breakout);
- frequent pumping of systems required;
- proximity to water resources - e.g., systems located in close proximity to a surface water supply or tributary, or to private wells, systems located within a Zone I of a public well; cesspools or privies located in close proximity to a surface water or tributary, a bordering vegetated wetland or a salt marsh; large systems located within a nitrogen sensitive area or in close proximity to a surface water supply or tributary; and
- other Title 5 failure criteria.

(b) Areas of particular concern due to:

- high groundwater;
- poor soils;
- high density of private wells;
- within a Zone II or a Zone A;
- concentration of old systems and/or cesspools and privies; and
- close proximity to contaminated or degraded shellfish beds, nitrogen sensitive embayment, or other sensitive water resources (e.g. recreational lakes and ponds).

(c) Areas of high system density not included in (a) or (b) above.

(d) Areas that do not appear to pose a threat to public health or the environment.

2. The plan must include a map on which is depicted the above proposed prioritization of areas to be inspected. The map may be created as an overlay of a USGS (or GIS) map showing physical features and highlighting water resources (e.g. lakes, ponds, public water supply wells, reservoirs, Zone IIs, Zone A & B, wetlands, shellfish beds, etc.).

3. The plan must include a narrative describing prevailing site conditions in the areas that have been designated for inclusion in plan. If the area does not encompass the entire community or region, the narrative must also contain a comparative description of the site conditions existing outside of plan area (e.g., the narrative might explain that the area within plan consists of small lots close to pond, and that the area outside of plan consists generally of large lots with well drained soils).

4. The plan must describe the information and process from which the proposed inspection prioritization scheme is based (e.g., review of existing files in Board of Health, DPW, water/sewer department; survey of property owners; site visits by health agent/staff).

C. Proposed Schedule for System Inspections

1. The plan must identify the proposed schedule for system inspections, consistent with the requirements of Title 5. As provided for in 310 CMR 15.301(4)(c), all systems covered under the plan must be inspected at least once every seven (7) years by a DEP approved Septic System Inspector. A list of certified inspectors can be found on DEP's web site : http://www.mass.gov/dep/brp/wwm/soilsys.htm. The plan may identify different inspection frequencies for different categories of systems, based, e.g., on the area the system is located in or on the type and age of the system. In all cases, the plan must adequately explain and support the selected inspection schedule(s).

2. If applicable, the plan must also explain how large systems (discharging in excess 10,000 gallons per day or GPD), shared systems, innovative and alternative systems and other systems requiring periodic inspection under Title 5 are to be integrated into the plan. All system inspections must be performed in accordance with 310 C.M.R. 15.302, ***Criteria for Inspection***, and all applicable DEP guidance and training materials.

D. Interim Maintenance Measures

The plan should describe any proposed interim maintenance measures (e.g., pumping and/or other routine maintenance activities), water quality monitoring, or reporting requirements to be required of property owners whose septic systems are covered by the plan.

E. Implementation and Administration of the Plan

1. The plan must describe the legal and jurisdictional basis for the establishment and enforcement of the Community Inspection plan and include all supporting documentation (e.g., enactment of a BOH regulation or a town bylaw or city ordinance). The plan must include these legally enforceable requirements:

(a) all systems covered by the plan shall be inspected in accordance with the schedule in the DEP approved plan;

(b) all inspections must comply with the inspection criteria in Title 5 and be performed by DEP approved Septic System Inspectors;

At the initiation of the plan:

(1) a notice must be recorded on the properties deed served by the septic systems covered under the plan, stating the existence of the DEP approved inspection plan, its applicability to the property, and the requirement that the system be inspected in accordance with the schedule outlined in the DEP approved plan; or,

(2) some other mechanism as approved by DEP for giving notice of the above described information to subsequent owners and other interested parties.

2. The plan must set forth a system for monitoring:

(a) whether inspections are being performed in accordance with the DEP approved plan (using a DEP approved data base system for tracking septic system inspections); and

(b) whether failed systems are being upgraded in accordance with the applicable time frames in Title 5.

3. The plan must include:

(a) A proposed source of funds for administration and identification of the proposed revenue sources (e.g., fees, inspection charges) for inspections;

(b) A proposed budget for administration and inspection;

(c) A staffing plan for program management with identification of the personnel to be used to inspect the systems (and whether such personnel

will be staff of the city/town and/or private inspectors retained by the septic system owners and/or the city/town), as well as identification of other staff who will oversee the implementation and ongoing administration of the inspection program;

(d) An outreach and education strategy that includes a description of the proposed public education and outreach efforts that must be integrated into the implementation of the plan.

4. The plan must include an annual status report by the city/town, to be submitted to DEP within 30 days of the end of the State Fiscal year, July 1- June 30.

(a) This plan should include the results of the above required monitoring system stating:

(1) the total number of systems inspected, categorized by uses (e.g., residential, commercial, institutional, school), flows, and age (if available), and

(2) the number of failed systems discovered during inspection, broken down by the above categories;

(b) The number, use, flow, and age and compliance status of all systems required to be upgraded in compliance with the applicable time frames in Title 5; and

(c) Identification of those systems which are not in compliance with the requirements of the plan, and a description of the actions taken by the city/town to address such noncompliance.

In addition, upon completion of the first time inspection of all the systems covered by the plan, the city/town shall submit a report to DEP evaluating the effectiveness of the plan and determining whether any modifications to the scope and requirements of the plan, consistent with Title 5 and applicable DEP Guidelines, are warranted.

5. **The plan must include an opinion of city/town legal counsel certifying that the plan and its requirements have been legally adopted and are enforceable by the city/town.**

Guidelines for Implementing Local Septic Management Plans (Option B)

<u>*Introduction*</u>

Under the Community Septic Management Program, communities may choose to develop a ***Local Septic Management Plan (LSM)*** which identifies, monitors, and addresses the proper operation, maintenance, and upgrade of septic systems in a comprehensive manner. Unlike a Community Inspection Plan, a Local Septic Management plan does not meet the requirements of 310 CMR 15.301(4)(c). As a result, septic systems covered by an LSM plan must be inspected prior to property transfer as required by Title 5.

At a minimum, an LSM plan must include, but is not limited to, the following elements:

(a) Identification and prioritization of areas containing systems warranting more regular monitoring and maintenance and/or upgrade, based on existing and new information and data, as appropriate (e.g., voluntary inspections);

(b) Development of a DEP approved data base system for tracking the inspection of septic systems and whether failed systems are being upgraded in accordance with the time frames outlined in Title 5; and

(c) Development of requirements and a schedule for periodic pumping and other routine maintenance of systems covered by the program.

Once the Project Approval Certificate/Project Regulatory Agreement (PAC/PRA) is issued to the community and the loan agreement with the Water Pollution Abatement Trust is finalized, the community may begin the activities under its Septic Management plan. Activities should include:

A. Creation of an administrative structure to manage the program (administrative tasks may be delegated to a regional planning agency or contractor or shared among communities),
B. Prioritization of environmentally sensitive or threatened areas,
C. Public Notification,
D. Priority Lists,
E. Homeowner Selection Criteria for loans,
H. Development of Betterment Agreements,
I. Project administration for repair of septic systems (procurement, funding and oversight), and
J. Administration of loan repayment.

<u>A. Program Administration</u>

Administrative responsibilities and tasks for the program should be defined as a part of local program development. Subcontracting for the oversight of the program or specific program tasks to a separate entity, such as a regional planning agency, county government, or a private consultant is permitted. Participating communities are responsible for preparing and processing the legal agreements and contracts to procure such services, when necessary. A formal Request for Services or Request for Responses (RFR) may be necessary to procure services from private contractors. The Town Counsel, City Solicitor, or Chief Procurement Officer should be consulted to ensure compliance to applicable state laws.

B. Prioritization of Environmentally Sensitive or Threatened Areas

The Board of Health, together with other community officials, should identify and prioritize environmentally sensitive or threatened areas. All such areas presently or potentially impacted by failed, substandard or poorly sited septic systems should be identified using a numerical ranking system established by the municipality. The most seriously impacted areas shall be ranked number one, and so on in descending order, until all areas are ranked. Similar priority areas may be afforded equal ranking.

Each community must determine the level of community and citizen involvement necessary to establish environmental priorities. Keep in mind that because of funding limitations only the higher priority areas in a community are in likely to receive the initial funding under the Community Septic Management Program.

C. Public Notification

Public awareness and support of the Community Septic Management Program is likely to be an important to the success of the program in the community. It is the responsibility of each community to inform homeowners of the goals of the in their town/city and the availability of financial assistance to homeowners that need it.

Notice of the Program can be provided in the following manner:

- Notices in local newspapers (through legal and other advertisements, press releases, newspaper articles and letters to the editor),
- Discussions during public meetings,
- Public access cable television shows,
- Local commercial radio and television shows,
- Direct mailings to homeowners in priority areas,
- Adding program brochures along with municipal utility bills,
- Postings in heavily trafficked public places (town hall, community center, library, etc.).

Each community is responsible for notifying the public that loan applications will be received during a specified time. The notice should state the period for which applications will be accepted, areas within the town that are eligible for funding (if applicable), and the contacts for information within the Board of Health or other designated agency or administrator. DEP recommends that each community establish an annual time period for accepting applications (e.g. January 15 to February 15.) Applications received after the date can be put on a waiting list. Some communities have found that preliminary applications, those requesting only name, address and telephone number, are more successful than detailed loan applications, at least prior to establishing project priority lists. Interest in the program will vary from community to community. In some communities the local program will not require much effort to attract customers. Others will need an extensive marketing campaign.

The process for receipt of applications and record keeping should be established. Bear in mind that any personal financial information of applicants should be protected and kept in a secure filing system. Suggested Application Forms are provided in the appendices of this manual. Cities and towns may use or modify these forms. To avoid the appearance of arbitrariness, applicants must be informed of the criteria for awarding betterment loans well in advance of the award selection.

D. Determining Priorities

The Board of Health or its consultants should make an approximate determination of the number of septic systems that can be repaired with the available program funds. Applications should be screened for location in priority areas and ranked according to reestablished criteria. Applicants whose property poses equal environmental or public health problems should be ranked on the basis of income and funding needs. Betterment loans cannot be awarded to any person or family with a gross taxable income in excess of $150,000 prior to DEP approval. Properties in the community known to pose a current and direct threat to public health and the environment may also be afforded a higher priority in the ranking system. If there are not enough applications for properties in the priority area(s), the board of health can choose to extend the time to apply or award betterment loans based on date of the filing of the application. These criteria should be established prior to making betterment awards to avoid the appearance of arbitrariness.

E. Priority Lists

After the application deadline has passed, a priority list may be prepared. A ranking of applications for assistance, based on previously established criteria should be made. Communities may wish to develop a "scoring" approach that awards extra "points" to those applicants in previously established environmental priority areas. Applicants with equal scores may achieve priority by an earlier application date. Communities may consider income when scoring otherwise equally ranked applications.

The final Priority List may include the following information:

- Name of applicant,
- Address of applicant,
- Environmentally sensitive area (Yes/No)?; If yes, identify the area ranking,
- Type of project (repair of septic system, shared system, sewer hookup, etc.),
- Estimated project cost/betterment amount.

Steps to creating a group of projects to receive Betterment Loans can be as follows:

- Establish deadline for applications.
- Rank project according to environmental impact.
- Apply level of funding to the list of projects to establish a cut off on the priority list.
- Reserve 10% for contingency.
- Certify noncompliance with Title 5.
- Create a waiting list from remaining pool of projects to rank project for future funding
- To bypass projects selected for funding, use the waiting list to choose the next highest rank project.

F. Homeowner Selection

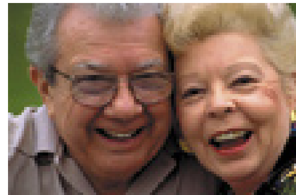
After the Priority List is finalized, municipalities can offer to enter into Betterment Loan Agreements with homeowners on the priority list. When communities issue an offer to enter into a Betterment Agreement with a homeowner, the offer should contain a strict time limit for response. The offer should explain that there is a waiting list and request that the Board of Health or its administrator be advised immediately if the homeowner is no longer interested in obtaining a Betterment Loan. It is strongly advised that a "grace period" be built in so that otherwise qualified applicants are not denied funding because of unforeseen circumstances (e.g. illness, vacation, etc.) Once the grace period has expired without a Betterment Agreement being created, the homeowner should be notified in writing advising the homeowner that he or she has been moved from the projects to be funded list to the waiting list. After this notice, the Priority List may be revised to 'move up' one or more homeowners from the Extended List.

Once an offer to enter into a Betterment Agreement is accepted, copies of the relevant Betterment Documents should be provided to the homeowner. The Program Administrator should be prepared to answer questions regarding what costs are eligible for funding, when and how money will be made available and what documentation must be provided to satisfy the program legal requirements. Setting timetables and deadlines is necessary to ensure that Betterment Agreements are promptly executed and that septic system repair and upgrade projects are commenced and completed on time.

The program administrator should review each form carefully to ensure that the homeowner provides all of the required information. Keep in mind that Betterment Agreements work like construction loans: money is disbursed to cover costs actually incurred to perform the design, repair or upgrade work. The total actual costs will not be determined until the project is complete. The Betterment Agreement forms provide that funding may be available for site investigation, design and repair or upgrade of a septic system.

It may be useful for the first few projects to have the City Solicitor or Town Counsel review the legal requirements to ensure that the forms are executed in compliance with Massachusetts law and that a valid Betterment lien is established. However, it is not likely that each Betterment Agreement will require legal review.

G. Elderly Deferrals



The Board of Health can enter into Deferral and Recovery Agreements (DRAs) with eligible homeowners. Such agreements allow the homeowner to postpone payment of the betterment provided that the provisions of the applicable statute are complied with. The provisions include a requirement that the homeowner be eligible for a real estate tax exemption under clause 41A of Section 5 of Chapter 59 of the General Laws. The Board of Health must forthwith record at the registry of deeds a statement (notice) of the Agreement in order for it to be effective against third parties. The statute provides that if the applicant qualifies for entry into a DRA, the Board of Health shall grant it. However, a new application for a DRA must be filed each year with the Board. In addition, the Board must annually advise the Board of Assessors of the charges to be deferred.

Before advising homeowners that entry into a DRA is available, the Board of Health must verify that the town has accepted the provisions of Massachusetts General Laws (M.G.L.) Chapter 80 §13B at a town meeting or by vote of the City Council. Ask the Town Clerk or Town Counsel to verify whether the town has in fact accepted this statute. A majority vote is necessary to accept the provisions of the statute.

Chapter 59 sets out the following requirements for eligibility to enter into a DRA under Chapter 80 §13B:

A. Age and Status:

I. Owner is single or, if married, the owner's spouse is not an owner. Owner must be 65 years or older by July 1 in the year in which application for the agreement is made or;
II. Owner and spouse are joint owners. Either spouse must be 65 years or older by July 1 of the year in which application is made.

B. Ownership and Occupancy:

The applicant must have owned and occupied as a domicile any real property in Massachusetts (including the present property) for five (5) years. Massachusetts must have been the applicant's domicile for the preceding ten (10) years.

C. Gross Income:

Gross income from all sources in the calendar year preceding the year in which application is made may not exceed $20,000.00. A town may adopt a higher maximum qualifying gross income amount but such amount may not exceed $40,000.00.

A surviving spouse inheriting the property must have occupied it or other real property in Massachusetts for five (5) years. The surviving spouse who otherwise qualifies may continue to defer payment of the betterment. However, the total apportioned and deferred betterment payments (and taxes if applicable), together with interest accrued, may not exceed fifty (50%) percent of the owner's interest in the assessed value of the property.

Anyone having a legal or beneficial interest in the property (including a lender holding a mortgage) must approve of the Deferral and Recovery Agreement. The Deferral and Recovery Agreement form contains a section for such persons or entities to sign off.

Payment of a deceased spouse's deferred betterment charges shall not be required during the life of a surviving spouse who inherits the property and who enters into a DRA.

> Important! The community remains responsible for repayment of monies loaned by the Trust. If repayment by the homeowner of the costs associated with septic system betterment agreements is to be deferred, adequate planning for alternative means of repayment to the Water Pollution Abatement Trust must be made.

II. Program Costs, Homeowner Repayment and SRF Loan Repayment

General

The Community Septic Management Program anticipates that private contractors will perform repairs and upgrades of failed septic systems. All design professionals (Professional Engineers and Registered Sanitarians), site investigators (i.e. soil evaluators) and construction contractors must have the qualifications and licenses required by Massachusetts law and carry adequate liability and other appropriate insurance. All work must conform to the requirements of 310 C.M.R. 15.00 (Title 5) and any applicable requirements of the state plumbing and building codes and other applicable laws and regulations. All required permits and licenses must be obtained in connection with repair and upgrade projects performed pursuant to the program. Prevailing wages are not required to be paid.

The steps to be undertaken to ensure that the work is performed adequately are described in Section 5.

A. Administrative Costs

All communities must submit an administrative budget prior to final approval of the project. Eligible costs may be drawn down out of the preloan assistance grant. The Board of Health should work with the treasurer to ensure that requisitions for administrative costs, as well as other program costs, are handled promptly and efficiently and documented appropriately. Proceeds of the Trust loan (not to exceed 2.5% of the loan amount) may be used for local administrative costs and other costs of issuance related to the Trust loan.

B. Eligible Betterment Project Costs

Betterment Agreements made pursuant to M.G.L. c. 111 §127B ½ can fund septic system repair and upgrade projects performed by the homeowner. Funds may be used for all costs necessary to repair or replace a failed septic systems by renovating the existing system; hook-up to existing sewers; or replacing traditional septic systems with an alternative system approved pursuant to Title 5.

The following costs are eligible for funding under the Program:

(a) Performing soil and percolation tests and other necessary site analyses;
(b) Specification of the Failed System components to be repaired, replaced and/or upgraded;
(c) Design of the system or components thereof to be repaired, replaced and/or upgraded;
(d) Obtaining all applicable federal, state and local permits and approvals required to complete the work;
(e) Seeking bids and awarding contracts for assessment, design, consulting and construction work and materials in accordance with applicable laws, regulations and requirements;

(f) Minimizing any disruption of utility service, and reasonably restoring the property to as near its original condition as practicable;

(g) Engaging such other services and procuring such other materials as, within the reasonable discretion of the Board of Health, shall be necessary to complete the project in a good and workmanlike manner; and

(h) Professional services for project oversight and management.

Other costs, directly or indirectly related to the project may be eligible. Before the commencement of a project, the Board of Health or its administrator and the homeowner should agree upon a scope of work. In the event that unanticipated circumstances arise such as the discovery of a boulder, ledge or other subsurface condition, the board may increase the loan sum provided that the work is reasonably related to the accomplishment of the project.

C. Homeowner Repayment of Betterment Loans

The Board or its administrator together with the municipal treasurer and accountant must set up a separate account for each Betterment project. After all betterment loan funds have been disbursed to a homeowner, a final accounting must be made. The Board of Health must certify the total amount funded for the project to the municipal assessor. The assessor, in turn, commits for collection to the tax collection the total project amount. In general betterment loans, together with accrued interest, are repaid through the Community's tax collection. The DOR/Division of Local Services accounting and collection requirements are described in a DOR Bulletin dated August 1997. More information can be found in the resource section of the Appendices.

D. Repayment of SRF Loan

Each municipality must authorize borrowing funds from the Massachusetts Water Pollution Abatement Trust through town meeting or city council vote. A vote of ⅔ of the members voting is necessary. Once borrowing authorization has been obtained, the municipality can seek DEP's approval of the municipality's Community Inspection Plan or Local Septic Management Plan. After DEP approval of the Local Plan, the chief executive officer of the municipality can execute a Loan Agreement with the Trust. The Loan Agreement describes the terms and conditions of the SRF loan made by the Trust to the municipality. Each community assumes full responsibility for repaying monies borrowed from the Trust. However, the repayment obligation is secured with the betterment agreements made with homeowners. DEP recommends that the Board of Health and/or its consultants meet with the municipal finance team, the town collector/treasurer, accountant, and assessor, to ensure the smooth implementation of the local program and appropriate fiscal accounting. Communities will commence repayment approximately two years after the loan agreement is made. The municipality need only repay monies actually drawn down to fund betterment loans.

The Community Septic Management Program anticipates that communities will charge homeowners either two percent (2%) or five percent interest (5%) on Betterment Loans at the option of the community.

Interest accrued on Betterment Loans may be used for future administrative costs. Principal and interest payments are credited to a special 'receipt reserved' account reserved for future project costs. The repayments are not to be credited to the community's general fund account. Monies repaid to the community may be 'reloaned' to fund additional betterment projects provided that the local plan is reauthorized by the Town Meeting or City Council on an annual basis.

The treasurer and accountant prepare a quarterly report detailing betterment loan activity and anticipated project funding for the next quarter. The report is provided to the Trust and DEP. The loan agreement between the Trust and the community will provide a Final Disbursement Date by which all SRF loan funds must be expended for homeowner septic repairs or administrative costs.

SECTION 3. PROGRAM APPLICATION AND INSTRUCTIONS

1. General Information (see application form on next page)

A-G. *For the Community/Applicant* - Provide the name and address of the Applicant that will undertake the Project. List the name, title, telephone number and fax number of the contact person for the Project.

For the Program Administrator - If the Applicant has or will be contracting with another entity (public or private) to assist it in the Project administration, provide the same information for the Program Administrator.

H. Identify the Applicant's Department of Revenue ("DOR") identification number (i.e., the ID number used for all state revenue aid programs).

2. Type of Assistance
Identify the applicable financing option and Loan amount: - $200,000;
Select one of the Community repayment options (5, 10, 15 or 20 years).

3. Local Authorization and appropriation
The Applicant must demonstrate by means of a local authorization appropriation that it has sufficient approval to borrow funds to cover project costs.

4. Project Description
Statement of Program Objectives: The Applicant must include and highlight any updated information relevant to the project, particularly proposed changes to the project budget and schedule.

5. Certification
The authorized representative of the Applicant must sign the Application certification. The Applicant must attach a local resolution designating by title the official (e.g., Mayor, City or Town Manager, Chairman of the Board of Sewer Commissioners, Board of Selectmen) to act as the representative of the Applicant to sign for, accept, and take whatever action is necessary relative to the Project.

In addition the community will have to fill out a form for the Authority to File. The city council will generally name the authorized representative for the city. An action by town meeting will name the appropriate town body, such as the board of selectmen or the board of health, which will, in turn, name the authorized representative for the town. If the Authority to File statement identifies an office rather than an individual, the Applicant must submit a certified statement naming the individual currently in office.

The Authority to File statement must also be certified, either by a certification at the bottom of the statement or by submitting a separate certification. A sample form for Certifying the Authority to File may be obtained from your regional coordinator.

Finally, in the event the authorized official is replaced while the project is still active, the Applicant must submit a certified statement naming the new incumbent and the effective date of his or her appointment.

Application

1. General Information

1. *For the Community/Applicant*

A. Community/Applicant:

____

B. Street

____

C. City, State, Zip Code

____

D. Contact Person

____

E. Title

____

F. Telephone Number

( ) ______________________

G. Fax Number

( ) ______________________

H. Department of Revenue Identification Number

____

2. *For the Administrating Entity:*

A. Administrating Entity

____

B. Street

____

C. City, State, Zip Code

____

D. Contact Person

____

E. Title

____

F. Telephone Number

( ) ______________________

G. Fax Number

( ) ______________________

H. Dept. of Revenue Identification Number

____

2. Terms of Loan Assistance

A. ($200,000) B. Repayment Period: 5 years __ 10 years ___15 years __ 20 years

3. Local Appropriation

Attach a certified copy of town meeting or city council vote, as applicable.

4. Project Description

Statement of Program Objectives For *(a) or (b)*: Attach a copy of the Local Septic Management Plan or Community Inspection Plan, as approved by DEP.

The Applicant must include and highlight any updated information relevant to the Project, particularly proposed changes to the Project budget and schedule.

5. Certification

In submitting this Application for Loan assistance under the Local Septic Management Program, the Appli cant certifies to the Department of Environmental Protection ("DEP") as follows:

"To the best of my knowledge and belief the information provided by the Applicant in this Application is true and correct, and the documentation submitted by the Applicant is complete and responsive to the Application and has been duly authorized by the governing body of the Applicant.

The applicant further assures DEP that it possesses the legal authority to apply for the Loan, and to finance and implement the proposed Project. A resolution, motion, or similar action has been duly adopted or passed as an official act of the Applicant's governing body, authorizing the filing of this Application. The same resolution, motion, or similar action is directing and authorizing the person identified below as the authorized representative of the Applicant to act on behalf of the Applicant in connection with this Application and to provide such additional information as may be required to receive Loan assistance."

______________________ ______________________

Authorized Representative (Type) Title

______________________ ______________________

Signature of Representative Date

Section 4. Betterment Agreements M.G.L. c.111 § 127B ½

The original Betterment Law, M.G.L. Chapter 80, defines a Betterment Assessment as "a charge imposed on real property ... which receives a benefit ... from a public improvement made by ... order of a board of officers of the commonwealth, a county, city, town or district." Municipalities pay for improvements such as roads, sidewalks and sewer lines by traditional betterments. The innovative use of the betterment concept in the Betterment Bill, M.G.L. c. 111 §127B ½, (See Section 8) was inspired by the concept that in many towns septic systems serve as the wastewater disposal and treatment system in lieu of public sewers. By using a financing and repayment mechanism similar to the one used to construct public sewer improvements, a town can protect community water resources by providing financial assistance to homeowners and accelerating the pace of septic system repairs and upgrades.

Unlike traditional betterments, the betterment established under M.G.L. c. 111, §127B ½ is created through the agreement of the town and the homeowner. The Betterment Agreement provides an outline of the rights and responsibilities of the town and the homeowner in connection with the repair, replacement, or upgrade by the town or by the owner of the homeowner's septic system. The basic elements of the Betterment Agreement are:

- The town agrees to provide financial assistance to the homeowner to repair, replace, and/or upgrade the septic system or to do the work on the homeowner's behalf.
- If the homeowner performs the work, the homeowner agrees to repay, with interest, any money advanced by the town over an agreed upon period of time.
- If the town contracts to perform the work, the homeowner agrees to repay the town's costs, with interest, over an agreed upon period of time.
- The town establishes an account, similar to a loan, which will be paid on the homeowner's real estate tax bill.
- The town may obtain a first priority "municipal lien" on the homeowner's property if the repayments are not made on time.
- Even if the town contracts to perform the work, the septic system remains the property of the homeowner.

Betterment Agreements are the tools used by towns to provide financial assistance to homeowners. DEP recommends that Boards of Health work closely with the municipal treasurer and assessor before entering into agreements with homeowners to ensure that the Betterment Agreements are consistent with program requirements.

The Betterment Agreement specifies that the Board of Health make a finding that the homeowner's septic system exhibit one or more of the failure criteria set forth in Title 5. It is not necessary for the Board to condemn the homeowner's property or issue an eviction order. However, the Board retains its powers under M.G.L. c. 111 §127B should the need to exercise those powers arise. For example, the Board continues to have authority to order an emergency or interim repair of a failing septic system.

After the finding is made, the Board must enter an order requiring that work be accomplished to bring the system into compliance with Title 5. The order can be satisfied either by the homeowner, using financial assistance provided by the town or by the town itself on the homeowner's behalf. Notice of the Betterment Agreement is to be recorded at the Registry of Deeds to provide public notice of the existence of an agreement affecting the property. If the homeowner determines, after the site investigation or after receipt of the construction bids, that he or she is unwilling to proceed with construction, the order can be revoked. The homeowner must still repay all advanced money and costs to the town. In addition, the homeowner is still required, pursuant to Title 5, to repair or upgrade the septic system within the parameters set by the regulation (i.e. timeframes, maximum feasible compliance).

If the homeowner is performing the work, the Board of Health will approve the project by issuing a Disposal System Construction Permit and take the steps outlined in the Betterment Agreement (Owner to Procure and Contract) form. The model forms provide a framework for ensuring that costs are controlled, competent work is performed and completed, unexpected contingencies are handled promptly, and insurance is in place in the event of an accident. Both homeowner and contractor are held accountable to complete the project.

The Betterment Bill statute makes the homeowner liable for the repayment of all direct and indirect expenses incurred by the Board of Health in connection with the repair, replacement and/or upgrade of the septic system.

The recent revisions to the Betterment Bill eliminate the need to obtain and record an estimate of costs. However, some homeowners may discover that the proposed construction costs (even with low interest rate financing) exceed their reasonable ability to repay the town. Therefore both Betterment Agreement forms provide that until construction commences, the homeowner is not under an obligation to proceed with the construction phase of the project. Once construction commences, however, the homeowner agrees to expeditiously complete the project and to use reasonable efforts to ensure that the contractor completes their obligations as well.

Because unknown subsurface conditions may substantially increase the project costs, DEP recommends that a contingency reserve of up to 10% of the project costs be budgeted. The homeowner is obligated to repay only that part of the reserve actually drawn down to complete the project. Once the project is complete, any remaining reserve amounts can be released for use on other projects.

M.G.L. c. 111 §127B ½ makes it possible to "roll-over" the personal obligation to repay the town for Betterments from the original homeowner to subsequent owners. The effect of the law is to release the homeowner from the personal liability for repayment when a purchaser agrees to assume the liability. A written release should be provided to the homeowner within a reasonable time after request. The Betterment Agreement forms detail the steps to accomplish the roll over and the conditions under which rollovers may occur.

The law provides that the municipal lien securing any payment due shall arise ***"on the day immediately following the due date of [the betterment] assessment or apportioned part of such assessment."*** If the apportioned payment is made in a timely manner, no betterment lien attaches to the property. Betterments under M.G.L. c. 111 §127B ½ operate in the manner comparable to sewer assessments under M.G.L. 83. Assessments under M.G.L. 83 also do not become liens until the day immediately following the due date of the assessment. Just like sewer assessments, it can be expected that lenders will require payment only of amounts due at the time the owner (or buyer) grants a mortgage.

A property subject to a betterment under M.G.L. c. 111 §127B ½ may be sold or mortgaged free of liens even though remaining betterment payments will come due in the future. This aspect of the law facilitates the transfer of properties improved with betterments by permitting the betterment to be amortized over the entire original term of the betterment agreement even if the property is conveyed to a new owner. As a result, property owners that experience financial hardship as a result of complying with Title 5 may have the full benefit of the financial assistance provided using betterments.

If a betterment lien arises, it jumps ahead of an existing mortgage and other liens. Because of this feature of the law, lenders will want to know exactly how much is outstanding on the betterment account so that an escrow can be established and collected along with the monthly mortgage payment.

After the project is complete the total amount of financial assistance or total costs of the town incurred in connection with the project must be provided to the homeowner and certified to the Assessor. The Assessor will, in turn, take the required steps to include the yearly charge for the project in the homeowner's tax bill. As funds are repaid to the town, they are to be deposited into the special revenue account. The funds may then be used for additional septic system betterment projects.

The forms provided are intended to assist Boards of Health create Betterment Agreements with homeowners. The forms may be modified to suit particular circumstances and meet the needs of the town and homeowner. Boards of Health are encouraged to seek the input of municipal officials and others with experience providing assistance to homeowners and overseeing repair and upgrade projects.

Section 5. Project Management using Betterment Agreements

<u>Betterment Agreement</u>

Betterment Agreement projects anticipate that funding will occur in a single payment or design services and on a periodic basis for construction services and materials. The Betterment Agreement specifies that installment payments shall be made on the following basis:

(A) In the event the owner seeks a contractor to perform field work and preparation of plans for the project, the owner is advised to solicit three estimates for the necessary field work and plan preparation from registered professional engineers or registered sanitarians and submit to the City/Town the owner's choice of an engineer or sanitarian. The Board of Health may approve a payment not to exceed the amount of the selected estimate. A payment for field work and plan preparation can be made by check payable jointly to the owner and the engineer or sanitarian upon presentation and approval of the invoices.

(B) The contractor must allow the homeowner 30 days for the remittance of all invoices charged to the betterment project. In a payment request, the contractor shall give notice to the owner specifying the cost incurred for the payment requested. Such notice shall consist of a detailed request describing the value of the completed items of work. The City/Town may issue a check payable jointly to the owner and contractor, such check shall be forwarded by City/Town to the owner.

(C) Prior to making an installment payment, the Board of Health may cause the project to be inspected to verify that the work items described in the request have been actually completed. In any case, the contractor shall provide verification that the work referred to in the installment request has been completed in accordance with the approved plans.

(D) Prior to paying the final installment, the contractor shall provide verification that all work has been completed in accordance with the approved plans, including a sworn statement that all materialmen, subcontractors and employees have been paid for work on or materials supplied for the project and the Board of Health shall have issued a Certificate of Compliance for the project.

The Board of Health is responsible for submitting Form DMS T5-1000 (see Appendices) to DEP as betterment agreements are completed to request a payment requisition. Form DMS T5-1000 requires that a brief financial summary of each betterment project be provided. DEP reserves the right to review and audit individual betterment agreements for compliance with the Community Septic Management Program requirements. Based on the amount of completed individual betterments DEP will notify the Trust when the community will require a subsequent loan installment.

The Betterment Agreement specifies that the following items must be present in order for funding of the project to commence:

(A) Inspection of the Failed System by a representative of Board of Health or by a DEP Certified Septic System Inspector, as deemed necessary by the Board of Health;

(B) Approval of plans by the Board of Health that were submitted by the owner or contractor. In the event the owner seeks an installment payment to pay for field work and preparation of plans for the project, the owner shall

  (i) solicit three bids for the necessary field work and plan preparation from registered professional engineers or registered sanitarians,

  (ii) shall submit documentation of these bids to City/Town and

  (iii) specify the owner's choice of an engineer or sanitarian. The owner must provide a detailed explanation if the proposed engineer or sanitarian is other than the low bidder or if fewer than three bids are submitted. The Board of Health may approve an installment payment not to exceed the amount of the selected bid. An installment payment for field work and plan preparation shall be made by check payable jointly to the owner and the engineer or sanitarian and shall be payable upon presentation and approval of the selected bid;

(C) Submission to Board of Health by the owner of three bids for the project in accordance with the plans from licensed (including, but not limited to, a Disposal System Installer's Permit), insured, septic system contractors, which bids shall contain detailed breakdowns of the cost of the Project by tasks;

(D) Approval by Board of Health of a contractor for the construction of the project selected by the owner from these bidders. The owner must provide a detailed explanation if the proposed contractor is other than the low bidder or if fewer than three bids are submitted;

(E) Approval by Board of Health of a project budget based on the bid submitted by the contractor;

(F) Execution of a construction contract between the owner and the contractor pursuant to the plans and specifications and approved by the Board of Health;

(G) Issuance by the Board of Health of a Disposal System Construction Permit with respect to the project.

The Board or its administrator together with the municipal treasurer must set up a separate record and accounting for each Betterment project. Once all project funds are disbursed to the homeowner, the Board or its administrator must certify the total amount funded for the project to the municipal assessor. The process for including this amount on the homeowner's tax bill is established in M.G.L. c 44.

Septic System Betterment Program Checklist

- ❑ Town establishes priorities for making Betterment Agreements with homeowners.
- ❑ Financing for Betterment Projects may be secured through state funding, local appropriation, borrowing, bonding, or a combination of these sources.
- ❑ Information on the Betterment Program is disseminated by town officials to the public.
- ❑ Homeowners submit applications and petition Board of Health to enter into Betterment Agreements.
- ❑ Board of Health reviews applications and develops a list of eligible homeowners.
- ❑ Board of Health selects eligible homeowners based on criteria established locally and in accordance with state or local funding program requirements.
- ❑ Eligible homeowners and Board of Health develop Betterment Agreements.
- ❑ If the homeowner is to perform the work, use Betterment Agreement.
- ❑ Board of Health executes Betterment Agreements with homeowners which include findings pursuant to M.G.L. c. 111 and an order to perform work.
- ❑ Notice of Betterment Agreement is recorded at the Registry of Deeds.
- ❑ Board of Health undertakes its responsibilities under the Betterment Agreement.

Using the Betterment Agreement (Homeowner to Procure and Contract)

- ❑ Homeowner should schedule and conduct site visits with designers.
- ❑ Homeowner should schedule and conduct deep hole and perc tests; coordinates with Board of Health agent and soil evaluator.
- ❑ Homeowner procures written bids for design services.
- ❑ Homeowner selects winning design bid.
- ❑ Homeowner submits winning bid to Board of Health for approval and payment.
- ❑ Design is rendered.
- ❑ Board of Health or agent reviews and approves design and issues Disposal System Construction Permit.
- ❑ If necessary, homeowner schedules and conducts prebid conference with installers.
- ❑ Homeowner procures 3 written bids for system installation/ construction and related work.
- ❑ Homeowner selects winning installer bid.
- ❑ Board of Health or agent reviews and approves winning installer bid, including the construction schedule and budget.
- ❑ Board of Health or Agent receives, reviews and approves all necessary paperwork (DSCP, related permits and approvals [ZBA, ConCom], easement or license agreements from private parties; insurance certificates, etc.).
- ❑ Construction funds are made available by the Town Treasurer.
- ❑ Preconstruction advance is made, if necessary.
- ❑ First construction advance made after requisition (requisition must include contractor and homeowner signatures, affidavits/ lien waivers from subcontractors, copies of interim approvals, etc.).
- ❑ Second construction advance, if necessary.
- ❑ Construction work is completed by contractor.
- ❑ Board of Health or Agent conducts site inspection and issues Certificate of Compliance for System.
- ❑ Final Payment made to contractor after delivery of Certificate of Compliance, all related paperwork (affidavits, lien waivers, etc.). If money is to be withheld from contractor pending additional work, an escrow agreement should be established.
- ❑ Final closeout of project account.
- ❑ Amount paid to homeowner certified to Town Assessor.
- ❑ Betterment assessments repaid through tax collection pursuant to the Betterment Agreement.

Betterment Agreement
[Owner contracts for the Work]

This Agreement is entered into by and between _______ (the "City/Town"), by its Board of Health and Treasurer, and _______ (the "Owner") this ___ day of, 200_.

WHEREAS, the Owner owns residential property, including improvements thereon, known as and numbered ________, ________, Massachusetts, ___, (Assessors' Map ___, Lot ___, Block ___) and described in a deed dated _______ and recorded with the _________ Registry of Deeds in Book , Page ___, [filed as Document No. _____ with the __________ Registry District of the Land Court] (the "Property"); and

WHEREAS, the Owner has petitioned the City/Town to make findings pursuant to M.G.L.c. 111; and

WHEREAS, the Board of Health has made findings, pursuant to M.G.L.c. 111, that the on-site subsurface sewage disposal system serving the Property (the Failed System), exhibits one or more of the failure criteria set forth in Title 5 of the State Environmental Code, 310 CMR 15.000 (Title 5), such findings being made by the Board of Health prior to, or during the course of proceedings conducted pursuant to M.G.L. c. 111, §127B; and

WHEREAS, the Board of Health has adopted an Order requiring the Owner to repair, replace or upgrade the failed system to comply with the requirements of said Title 5; and

WHEREAS, the Owner has, pursuant to M.G.L. c. 111, §127B1/2, applied to the City/Town for financial assistance to repair, replace and/or upgrade the failed system; and

WHEREAS, the City/Town intends to provide financial assistance to the owner in the form of a Betterment Agreement made pursuant to said M.G.L. c. 111, §127B 1/2: and

WHEREAS, the parties intend by this Betterment Agreement to cause the repair, replacement and/or upgrade the failed system to comply with Title 5 and other applicable public health and environmental laws and to complete other work directly or indirectly related thereto (the "project" as described in Paragraph 4 hereof); and

WHEREAS, the parties intend to have the project performed by one or more persons under contract to complete the project (the "contractor(s)"); and

WHEREAS, the public purpose of the project is to protect the public health, safety, welfare and the environment by the repair, replacement and/or upgrade of the failed system.

NOW THEREFORE, the parties, for and in consideration of mutual covenants and other good and valuable consideration, do hereby agree to the terms of this Agreement, as set forth below.

1. The Agreement

The City/Town hereby agrees to provide financial assistance in an amount up to $_____________ to be advanced from time to time by the City/Town to the owner pursuant to the terms of this Agreement. The owner promises to repay, with interest as set forth herein, all sums provided to owner by the City/Town. Following notice to the owner by the City/Town collector of taxes of the amount of the betterment assessment, an amortization schedule shall be developed and incorporated as an attachment to this Agreement[1].

Interest on the amounts advanced by the City/Town to owner shall be computed annually at the rate of _______ percent (___%) per anum on the outstanding principal balance, accruing from the 30th day after the City/Town Assessor commits the betterment assessment to the City/Town collector of taxes. The amount to be repaid shall be included on and paid with the (quarterly, semi-annual, annual) municipal tax bill. Interest amounts due prior to the inclusion of amounts due hereunder on the tax bill shall be paid pursuant to an interim bill.

[1] In cases where the final amount of the betterment has been definitively established at the signing of the Betterment Agreement, the amortization schedule should be developed and incorporated into the Betterment Agreement at the outset.

All outstanding amounts due to the City/Town by owner if not prior paid, shall be due and payable on _______________ [fill in date of term].

Prepayment in full or in part of all amounts advanced hereunder may be made by the owner without penalty.

This Agreement represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Agreement may only be amended or modified by a written modification.

2. Installment Payments.

The City/Town shall make advances of funds to owner and contractor, pursuant to the terms of this Agreement, from time to time to pay for the project. Such advances shall be made solely for the purposes set forth in this Agreement.

The obligation of the City/Town to advance all or any part of the financial assistance for repair, replacement and/or upgrade of the failed system is subject to the following:

(A) Inspection of the failed system by a representative of Board of Health or by a DEP Certified Septic System Inspector, as deemed necessary by the Board of Health;

(B) Submission by owner or contractor on behalf of the owner of plans approved by the Board of Health for the project. In the event owner seeks an installment payment to pay for field work and preparation of plans for the project, owner shall (i) solicit a bid or bids for the necessary field work and plan preparation from registered professional engineers or registered sanitarians, (ii) shall submit documentation of these bids to City/Town and (iii) specify owner's choice of an engineer or sanitarian. The Board of Health may approve an installment payment not to exceed the amount of the selected bid. An installment payment for field work and plan preparation shall be made by check payable jointly to owner and the engineer or sanitarian and shall be payable upon presentation and approval of the selected bid;

(C) Submission to Board of Health by owner of the bid or bids for the project in accordance with the plans from licensed (including, but not limited to, a Disposal System Installer's Permit), insured, septic system contractors, which bids shall contain detailed breakdowns of the cost of the project by tasks;

(D) Confirmation by Board of Health that the contractor for the construction of the Project (the "Contractor") selected by owner has a valid Disposal System Installer's Permit in effect for the time period covering the system upgrade financed under this Betterment Agreement;

(E) Review by Board of Health of a Project Budget based on the bid submitted by the contractor;

(F) Execution of a construction contract between the owner and the contractor pursuant to the plans and specifications which have been previously approved by the Board of Health;

(G) Issuance by the Board of Health of a Disposal System Construction Permit with respect to the project.

3. Conditions for Payment

Installment payments of the financial assistance are to be made by the City/Town under the following conditions:

(A) An installment payment for field work and preparation of plans shall be made to the owner and engineer or sanitarian in accordance with Subsection (B) of Section 2.
(B) A reasonable time before the date on which any other installment payment is requested to be made, the contractor shall give notice to owner and City/Town specifying the total installment payment requested. Such notice shall consist of a detailed request describing the value of the completed items of work. The amount of the request shall equal the amount of the requested installment. The request shall be accompanied by a sworn certificate of the contractor that all suppliers, subcontractors and employees have been paid for prior work on the project. The City/Town may request the owner to provide further documentation in support of a request for an installment payment. Upon approval of any requested installment payment, the City/Town shall issue a check payable jointly to owner and contractor, which check shall be forwarded by City/Town to owner.
(C) City/Town may require as a condition of any installment payment that owner submit satisfactory evidence that there are sufficient remaining funds to pay for completion of the project in accordance with the approved plans.
(D) Prior to making an installment payment, the Board of Health may cause the project to be inspected to verify that the work items described in the request have been actually completed. In any case, the contractor shall provide verification that the work referred to in the installment request has been completed in accordance with the approved plans.
(E)Prior to paying the final installment, the contractor shall provide verification that all work has been completed in accordance with the approved plans, a sworn certificate that all suppliers, subcontractors and employees have been paid for work on or materials supplied for the project and the Board of Health shall have issued a Certificate of Compliance for the project.

4. Scope of Work for Project

The owner and the contractor, pursuant the Disposal System Construction Permit issued by the Board of Health, shall determine the Scope of the Work necessary to bring the failed system into compliance with Title 5. Such Scope of Work may include, but not be limited to:

(a) performing soil and percolation tests and other necessary site analyses;

(b) specification of the failed system components to be repaired, replaced and/or upgraded;

(c) design of the system or components thereof to be repaired, replaced and/or upgraded;

(d) obtaining all applicable federal, state and local permits and approvals required to complete the work;

(e) seeking bids and awarding contracts for assessment, design, consulting and construction work and materials in accordance with applicable laws, regulations and requirements;

(f) minimizing any disruption of utility service, and reasonably restoring the property to as near its original condition as practicable; and

(g) engaging such other services and procuring such other materials as shall be reasonably necessary to complete the project in a good and workmanlike manner.

All such work shall be performed pursuant to written contracts and agreements, copies of which shall be incorporated by reference into this Agreement.

5. City/Town's Right to Inspect

The owner agrees to allow the City/Town, including its Board of Health, Health Agent and other officials, employees and agents to enter onto the property, as is reasonably necessary and upon reasonable notice, to test, examine and inspect the project to verify the completion and adequacy of the work.

6. Covenant Not To Sue

The owner covenants and agrees not to sue the City/Town for any claims of damage to or loss of property of the owner or others, or for breach of warranty regarding the performance or condition of the project, or for injury, illness or death arising out of the performance of any contractors or agents engaged to perform the Work. This Covenant Not To Sue provision shall have no application to causes of action which may have arisen prior to the execution of this Agreement, or to causes of action that are unrelated to this Agreement, or to causes of action against any person or entity other than the City/Town.

7. Owner's Representations And Warranties To The City/Town

The owner represents and warrants to the City/Town that:

(A) Financial Information: The borrower's Affidavitt furnished to City/Town by the owner is accurate and complete;
(B) Title: The owner has good record title to the property, subject only to the Encumbrances of Record;
(C) Permits and Compliance With Law: The owner has obtained or will obtain all necessary governmental permits for the project. The On-Site Sewage Disposal System for the dwelling on the property, after completion of the project, will comply with all applicable laws, regulations, codes and ordinances, including but not limited to Title 5; and
(D) Insurance: The owner and contractor have procured or will procure insurance in such forms and in such amounts as shall be satisfactory to the City/Town. Certificates of Insurance shall be attached as Exhibits to this Agreement.

Each of the foregoing representations and warranties in this section shall remain in force until the financial assistance is repaid in full. The owner shall indemnify and hold harmless the City/Town from and against loss, expense, or liability (including costs of defending any claim), directly or indirectly from the falsity, inaccuracy, or breach of any of the above representations and warranties.

8. Owner's Obligations.

During the term of this Betterment Agreement, the owner agrees that the owner shall comply with all of the terms and conditions of this and any related agreement and that the owner shall:

(A) Completion of Project. Cause the project to be promptly completed in a manner in accordance with the approved plans and with the Project Budget and in compliance with all applicable laws, regulations, codes and ordinances and notify City/Town when the project is complete.
(B) Records and Cooperation With City/Town. Keep complete records relating to the project, which records shall be available for inspection and copying by the City/Town, and cooperate fully with any audit of the project if so requested by City/Town.
(C) Performance of Other Obligations. Perform all the owner's obligations and agreements under any present or future mortgage or other Covenant or Agreement which encumbers the property.
(D) Use of Financial Assistance. The financial assistance is provided for the public purpose of protecting the public health, safety, welfare and the environment. The owner shall use the proceeds of the financial assistance solely for costs included in the project budget and ensure that the proceeds are not used for any other purpose.

9. Events Of Default

The owner shall be in default under this Agreement upon the occurrence of any one or more of the following events:

(A) Sale, Transfer or Assignment Without Approval. The owner assigns or transfers any money advanced or to be advanced hereunder to any person or entity not approved by City/Town.
(B) Cessation of Construction. The owner or contractor ceases construction of the project for more than 30 consecutive calendar days. The Board of Health may waive this event of default upon application of the owner and a demonstration that such cessation occurred because of an Act of God, governmental order or restriction, fire or other casualty, or other causes beyond owner's reasonable control.
(C) False Representations or Warranties. Any representation or warranty made herein shall prove to be false or inaccurate in any material respect.
(D) Breach of an Obligation. The owner defaults in the performance of any of owner's obligations contained herein.

10. City/Town's Rights On Default

Upon owner's default, the City/Town shall have no further obligation to make any further installment payments and all amounts advanced by City/Town to owner shall become immediately due and payable.

11. Notice of Betterment Agreement

Upon execution of this Agreement by the owner and the City/Town a Notice of this Agreement shall be recorded as a betterment and shall be subject to the provisions of M.G.L.c. 80 relative to apportionment, division, reassessment and collection of assessment, abatement and collection of assets, provided however, that the lien which shall arise pursuant to M.G.L. c. 111, §127B 1/2 shall take effect by operation of law on the day immediately following the due date of such assessment or apportioned part of such assessment. The Betterment Lien, if any, shall be deemed to secure all amounts advanced hereunder, together with interest thereon, and shall include costs of collection and reasonable attorneys fees.

12. Improvements to the Property

Any alterations or improvements to the property resulting from the project are the property of the owner, and the City/Town shall bear no responsibility for the condition of the improvement or its maintenance.

13. Cancellation of the Agreement by the Owner

The owner may by written notice to the Board of Health and the Treasurer of the City/Town cancel owner's further obligations for repayment under this Agreement at any time prior to the end of ten (10) calendar days following notice in writing to the City/Town of the owner's proposed successful construction bid, based on the owner's evaluation of the proposed scope and cost estimate of the system upgrade derived from the field work, project design and the successful construction bid. However, in the event of such cancellation, the owner shall remain liable for repayment of all sums advanced by the City/Town to owner pursuant to this Agreement. All sums advanced by the City/Town to owner shall be repaid with interest and within the term set forth in Paragraph 1 hereof. Upon application of the owner, the Board of Health may revoke the Order for Improvements, provided however, that owner shall remain liable to comply with the provisions of Title 5.

14. Personal Obligation of the Owner

In addition to those remedies available to the City/Town regarding the assessment and collection of betterments, the owner shall be personally liable for the repayment of the amounts advanced, plus interest thereon and the total direct and indirect costs incurred by the City/Town in the contemplation and the performance of this Agreement or the project. After written request of owner, in connection with the purchase or transfer of the owner's entire interest in the property, the City/Town shall permit

the assumption of the personal liability hereunder by said purchaser or transferee and shall release the personal liability of the owner. The assumption and release of liability hereunder shall be in writing and shall be executed prior to the purchase or transfer by the owner, the purchaser or transferee and the Treasurer of said City/Town.

15. Notice

Any notice required to be given under this Agreement shall be made in writing and shall be delivered by either in-hand delivery or by prepaid, first class mail.

If notice is made to the City/Town, it shall be made to:

Notice shall be deemed given on the day it is hand delivered or three (3) days after the date of posting of first class mail.

16. Funding for the Agreement

The obligations of the City/Town are expressly contingent upon funding. In the event that funding for the City/Town's obligation is unavailable, upon notice to the owner, the City/Town may cancel this Agreement and all obligations of the City/Town shall be null and void.

17. Enforcement of Laws

Nothing in this Agreement shall be deemed to stop or effect a waiver, or otherwise act as a bar or defense, to any legal proceeding by the City/Town relating to the system or the property.

18. Severability

In the event that one or more provisions of this Agreement is deemed unenforceable by a court of competent jurisdiction, the Agreement, except as deemed unenforceable, shall remain in full force and effect.

19. Governing Law

This Agreement shall be governed by Massachusetts law.

IN WITNESS WHEREOF, the undersigned parties have signed this Agreement as an instrument under seal this _____ day of ________, 200_.

City/Town:
By it's Board of Health:
____

Owner:
____

As to interest rate:
City/Town
By it's Treasurer:
____

Approved as to form:
____
City Solicitor/Town Counsel

Exhibits

1. Designer Contract
2. System Plans and Design
3. Construction Contract(s)

1. Project Budget
2. Certificate(s) of Insurance
3. Disposal System Construction Permit

Section 7. Notice of Betterment Agreement pursuant to M.G.L. c.111§127B ½

THE COMMONWEALTH OF MASSACHUSETTS

....
CITY, TOWN OR DISTRICT
OFFICE OF ....

TO THE REGISTER OF DEEDS OF ....20...

NOTICE is hereby provided that the BOARD OF HEALTH of .... on .... 20 ......, made findings pursuant to c. 111 s. 127B1/2 and on .... 20 ..... and adopted an order for improvements to be made to the on-site wastewater system serving the property described herein.

The property to be benefited is owned by .... of ...., ..., MA, is described on a plan entitled ".." which is deposited in the office of .... and is described in a deed dated ....….. and recorded with said Deeds in Book ...., Page .... [filed as Document No. .... with the .... District of the Land Court](the "Property"). Pursuant to said M.G.L. c. 111 s. 127B 1/2, a Betterment is to be assessed on the Property in an amount to be determined pursuant to the Betterment Agreement of the Owner of the Property and the Board of Health dated _______________.

BOARD OF HEALTH OF

....
CITY, TOWN OR DISTRICT

....

....

....

THE COMMONWEALTH OF MASSACHUSETTS

................................, s.s. ...., 20.....

Then personally appeared the above named .... who acknowledged the foregoing to his/her free act and deed and the free act and deed of the .... Board of Health, before me,

....
NOTARY PUBLIC
MY COMMISSION EXPIRES:

Section 8. The Betterment Bill

M.G.L c. 111 §127B½
Petition for Findings as to Septic System, Underground Fuel Storage Tank, or Lead Paint;
Agreement on Remedial Measures; Responsibility for Costs.

At any time prior to or during the course of proceedings conducted pursuant to section one hundred and twenty-seven B, resulting solely from a residential underground fuel storage tank or the detection of dangerous lead paint levels, as determined under the authority of section one hundred and ninety-four, or in the event the state environmental code pursuant to section thirteen of chapter twenty-one A requires the repair, replacement and/or upgrade of a septic system the owner of a structure used for human habitation may petition the board of health in a city or town to make findings consistent with its authority under this chapter and may enter into an agreement, subject to appropriation, authorizing such board of health or such owner to cause the premises to be properly serviced by a septic system, removal of a residential underground fuel storage tank or to have removed any dangerous levels of lead paint, as determined under the authority of section one hundred and ninety-four, at the owners expense. An owner who enters into such an agreement shall be responsible for all expenses incurred by the board of health, directly or indirectly, or required by the board of health and incurred by the owner for such repairs, replacement and/or upgrade of a septic system, removal of a residential underground fuel storage tank or removal of dangerous levels of lead paint. A notice of such agreement shall be recorded as a betterment and be subject to the provisions of chapter eighty relative to the apportionment, division, reassessment and collection of assessment, abatement and collections of assessments, and to interest; provided, however, that for purposes of this section, such lien shall take effect by operation of law on the day immediately following the due date of such assessment or apportioned part of such assessment and such assessment may bear interest at a rate determined by the city or town treasurer by agreement with the owner at the time such agreement is entered into between the board of health and the property owner. In addition to remedies available under chapter eighty, the property owner shall be personally liable for the repayment of the total costs incurred by the city or town under this section; provided however, that upon assumption of such personal obligation to a purchaser or other transferee of all of the original owners interest in the property at the time of conveyance and the recording of such assumption, the owner shall be relieved of such personal liability.

Any costs incurred under the provisions of this section may be funded by an appropriation or issuance of debt, provided that any debt incurred shall be subject to the provisions of chapter forty-four and shall not exceed twenty years.

Any appropriation or borrowing by the city or town for purposes contained within this section shall not be included for the purpose of computation of the levy or borrowing limits otherwise imposed upon such city or town by the general laws.

An agreement between an owner and a board of health in a city or town pursuant to this section shall not be considered a breach of limitation or prohibition contained in a note, mortgage or contract on the transfer of an interest in property.

A board of health in a city or town acting pursuant to the provisions of this section shall have the same authority as set forth in section one hundred and twenty-seven B to institute an action for eviction. Any such action by the board of health shall not otherwise impair the rights or obligations of the occupants or owner with respect to each other.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
THE LOCAL SEPTIC MANAGEMENT PROGRAM

Project Approval Certificate and Regulatory Agreement
I. Project Approval Certificate

The Department of Environmental Protection (DEP) of The Commonwealth of Massachusetts (the Commonwealth), in accordance with Section 2 of Chapter 15, Acts of 1996 (the Act), hereby approves the project of Town of ________ (the Borrower), developed in accordance with the Department's Community Septic Management Program Description and Requirements, and hereby certifies to the Massachusetts Water Pollution Abatement Trust (the Trust) the total costs of the project eligible for a Loan from the Trust in the amount of $200,000, subsidized at a 50% grant equivalency. (See Exhibit A, page 34, for Borrower information, Project budget, completion schedule, and special conditions.)

This Certificate is issued by DEP on the basis of information provided by the Borrower in its application for financial assistance from the Community Septic Management Program. The Borrower has agreed to promptly notify DEP of any material change in the above information, which may be grounds for modification or rescission of this Certificate.

II. Project Regulatory Agreement

WHEREAS, DEP has issued the above referenced Project Approval Certificate, and the Department, as authorized under the Act, has allocated funds for loans from the State Revolving Loan Fund (SRF), administered by the Trust to fund local betterment programs; and

WHEREAS, the Borrower has requested that the Trust finance costs of the Project by a loan from the Trust to the Borrower (the Loan), and to evidence the indebtedness to be incurred thereby, the Borrower has executed and delivered a Loan Agreement to the Trust (the "Loan Agreement"); and

NOW, THEREFORE, in consideration of the premises and the mutual covenants hereinafter contained, the parties hereto agree as following provisions:

Section 1. Project Funding
1.01 The Borrower agrees with DEP's determination of eligible Project Costs as set forth in the Project Approval Certificate, and shall seek payment or reimbursement of Project Costs in accordance with such determination.

Section 2. Disbursement of Loan Proceeds
2.01 Disbursements. Funds will be made available to the Borrower by advance installment payments and in amounts determined by DEP. The Borrower shall expend the full amount of the Loan consistent with the project completion schedule in Exhibit A unless DEP approves an extension of time as provided for in section 3.09 below.

(a) All requisitions for advance payment shall be submitted by the Borrower in accordance with a form approved by DEP and at a frequency satisfactory to the department.

(b) Each requisition shall be signed by the authorized officer of the borrower and shall set forth in reasonable detail the amount of advance payment requested. Each requisition shall also include a written certification signed by an Authorized Officer of the Borrower stating that:

(i) such payment is for Project Costs and that the obligations specified therein have not been the basis for a prior requisition that has been paid;

(ii) no Default as defined hereunder, and no Event of Default as defined in the

Loan Agreement, has occurred and is continuing and no event or condition exists which, after notice or lapse of time or both, would become a Default hereunder or Event of Default under the Loan Agreement; and
(iii) the payment requested by the requisition will be for Project Costs to be or already authorized under a betterment agreement between the Borrower and system owner, and that no advance funds shall be disbursed to the system owner until such betterment agreement has been executed between the Borrower and the system owner.

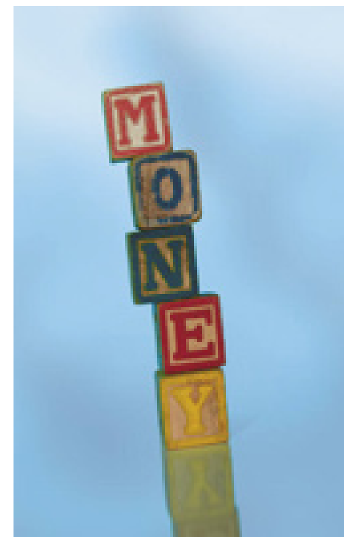
2.02 Loan Monitoring. In addition, as a precondition to receiving and retaining any advance payments under this Agreement, the Borrower shall submit ***"The Analysis of the Homeowner Septic Repair Special Revenue Account Quarterly Report*** (the Report)" no later than fifteenth day of July, October, January, and April. The report requires the Borrower to provide information on the status of advance payments and to account for any actual and planned disbursements to system owners based on executed betterment agreements for each quarter ending September 30, December 31, March 30, and June 30. Both the Treasurer and senior accountant of the Borrower shall sign each Report. Reports must be mailed or hand delivered to the Title 5 Coordinator assigned to your loan by DEP's Regional Office.

(a) Each system upgrade completed shall be evidenced by the submission of the Certificates of Compliance issued by the board of health documenting that the upgrade of each failed septic system financed by the Loan and the underlying betterment agreement between the Borrower and the system owner has been completed in compliance with 310 CMR 15.000 (Title 5).
(b) If requested by DEP, the Borrower shall submit further documentation in support of a report or a requisition.

2.03 Program Completion. Completion of the Program shall be evidenced by the filing with DEP of a certificate (the "Project Completion Certificate") signed by an Authorized Officer of the Borrower stating that the project (i.e., the Borrower's betterment program) has been completed and performed in accordance with the requirements of this Regulatory Agreement and the Loan Agreement. Such Project Completion Certificate shall be accompanied by a final report and any remaining Certificates of Compliance issued by the board of health documenting that the upgrade of each failed septic system financed by the Loan has been completed in compliance with 310 CMR 15.000 (Title 5).

Section 3. General Conditions and Covenants of the Borrower

3.01 The Borrower shall comply with all state statutes, regulations and requirements applicable to the Project, including, but not limited to the requirements of Title 5, M.G.L.c.111, §127B½, and with DEP's approval of the project and its Community Septic Management Program Description and requirements.



3.02 The Department and/or the State Auditor or his or her designee, shall have the right at reasonable times and upon reasonable notice to examine the books, records and other compilations of data which pertain to the performance of the provisions and requirements of this Regulatory Agreement. In addition, the Borrower shall give DEP access to the project site at reasonable times and upon reasonable notice to the Borrower by DEP.

3.03 The Borrower shall retain all records relating to the project for seven (7) years after project completion, or until any litigation, appeal, claim, or audit that is begun before the end of the seven-year period is completed and resolved, whichever is longer.

3.04 The Borrower shall maintain project accounts in accordance with generally accepted government accounting standards.

3.05 The Borrower shall comply with the Civil Rights Act of 1964, 42 USC s.2000(a) et seq., as amended, and all Executive Orders and regulations promulgated thereunder. A Nondiscrimination in Employment form shall be signed and delivered to DEP.

3.06 The Borrower shall comply with the provisions set forth in Executive Order 237 (or in any successor Executive Order) for the use of minority and woman business enterprises (M/WBEs) in all construction, service and supply contracts related to the project.
3.07 The Borrower shall furnish information and otherwise cooperate with the Department in any evaluation pursuant to the Massachusetts Environmental Policy Act, M.G.L.c. 30, §61 et seq. (MEPA). The Borrower shall implement all mitigation measures required in connection with the review processes under MEPA.
3.08 The Borrower shall obtain, and comply with, all state permits and approvals required for the Project, and is solely responsible for the administration and successful completion of the Project.
3.09 The Borrower shall promptly notify DEP in writing whenever the Borrower has good reason to believe that: (1) the project costs which it will incur will be substantially less than those previously approved in the loan, as set forth in the Project Budget in Exhibit A; or (2) the Borrower will be unable to meet the schedule set forth in the Project Schedule in Exhibit A and/or requisition the full amount of the Loan. DEP shall not be obligated to certify, nor the Trust to pay for, project costs incurred in excess of the Loan amount unless DEP has approved the increase through an amendment to the project approval certificate and the loan has been amended to include the increased amount. DEP reserves the right to rescind its approval, in whole or in part, should the borrower fail to commit to executed betterment agreements, the full amount of the initial installment received by the borrower within six months of the executed loan agreement. DEP may, at its discretion, grant an extension to the program deadline in cases where the Borrower has demonstrated that its failure to requisition the full Loan amount was justified under the circumstances and that the Borrower will complete the project and requisition the remaining Loan amount in a timely manner.
3.10 The Borrower shall implement the project in accordance with the requirements of 310 CMR 15.000 and DEP's approval of the project and its Community Septic Management Program Description and Requirements. In doing so, the local betterment program component of its Comprehensive Community Septic Management Program must also take into account the financial needs of low and moderate-income homeowners in the following manner:

> ***The upgrade of septic systems having the greatest environmental impact should receive funding preference. However, in the event that the upgrades are of equivalent environmental priority, funding should first be allocated to upgrade the system owned by a low or moderate-income homeowner, as defined by the Massachusetts Housing Finance Agency ("MHFA").***

3.11 Use of Betterment Agreement(s): DEP and the Trust have developed the following model Betterment Agreements for use under the Community Septic Management Program:

- Betterment Agreement (when the homeowner is contracting to do the upgrade of the failed septic system).

The Borrower is not precluded from modifying or supplementing the terms of these model Betterment Agreements, provided that any such changes are consistent with the model Betterment Agreements and the Borrower retains the language of the following provisions of the model Betterment Agreements:

In Betterment Agreement : (1) The Agreement (with the flexibility noted therein - see n.1); (2) Installment Payments (the Borrower has the discretion to specify additional procurement requirements - e.g., minimum no. of bids or BOH approval of construction contract); (3) Conditions for Payment); (5) Right to Inspect; (7) Owner's Representations and Warranties to City/Town; (8) Owner's Obligations; (9) Events of Default; (13) Cancellation of the Agreement by the Owner; and (14) Personal Obligation of the Owner.
3.12 DEP may suspend or terminate payments to the Borrower under the loan agreement in instances where it determines that there is probable cause to believe that the loan agreement was obtained on the basis of fraud, deceit, or illegality or that the Borrower has failed to comply with the terms of the Loan Agreement.

3.13 DEP's approval of this project for SRF loan assistance does not constitute a state sanction or approval of any changes or deviation from established water quality standards, criteria, and implementation dates or from dates established by applicable enforcement proceedings.

3.14 The Borrower shall provide DEP representatives with access to the project whenever it is in preparation or progress, including obtaining, through the underlying betterment agreements, the consent of the septic system owners to provide such access to DEP.

3.15 The Borrower shall comply with the special conditions set forth in Exhibit A.

Section 4. Default/Remedies for Default

4.01 Default. The Borrower shall have committed a Default under this Regulatory Agreement if the Borrower shall fail to perform and observe any covenant, agreement or condition on its part provided in this Regulatory Agreement and such failure shall continue for a period of thirty (30) days after written notice thereof shall be given to the Borrower by DEP; provided if such failure cannot be remedied within such thirty (30) day period, it shall not constitute a Default hereunder if corrective action satisfactory to DEP is instituted by the Borrower within such period and diligently pursued until the failure is remedied.

4.02 Remedies for Default. If a default shall occur, and be continuing hereunder, DEP may, in its sole discretion, take one or more of the following measures to the extent necessary to remedy the default:

(a) DEP may postpone approval of requisitions submitted pursuant to Section 2 or direct the Trust to cancel all or any part of the Loan not yet disbursed to the Borrower; or

(b) DEP may rescind approval of any requisition previously approved but not yet acted upon by the Trust; or

(c) DEP may direct the Trust to declare an Event of Default under the Loan Agreement.

Section 5. Miscellaneous

5.01 Notices. All notices, consents, certificates and other communications hereunder shall be sufficiently given when delivered by hand or courier or photocopied or mailed by registered or certified mail, postage prepaid, addressed as set forth in Exhibit A or to such further or different address provided by any of the parties.

5.02 Assignments. The Borrower shall not assign this Regulatory Agreement, or any of the rights or obligations hereunder, without the prior written consent of DEP and the Trust.

5.03 Severability. In the event that any court of competent jurisdiction shall hold any provisions of this Regulatory Agreement invalid or unenforceable, such holding shall not invalidate or render unenforceable any other provision hereof.

5.04 Amendment. This Regulatory Agreement may not be amended, modified or changed in any respect except in writing and signed by the parties hereto. No such amendment, modification or change to this Regulatory Agreement (other than an amendment to Sections 2 and 4 and Exhibit A of such Regulatory Agreement) which, in the reasonable opinion of the Trust (expressed in a certificate of an Authorized Officer of the Trust delivered to DEP and the Borrower prior to the execution and delivery of such amendment, modification or change), would materially and adversely affect the rights and obligations of the Trust under the Loan Agreement shall be effective without the prior written consent of the Trust, which consent shall not be unreasonably withheld. A copy of any proposed amendment, modification or change to the applicable sections of the Regulatory Agreement shall be delivered to the Trust by DEP not less than ten (10) days prior to the date of execution and delivery thereof.

5.05 Execution in Counterparts. This Regulatory Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

5.06 Applicable Law. This Regulatory Agreement shall be governed by, and construed in accordance with, the laws of the Commonwealth.

IN WITNESS WHEREOF, the Department and the Borrower have caused this Regulatory Agreement to be executed by their duly Authorized Officers the day and year first above written.

DEPARTMENT OF ENVIRONMENTAL PROTECTION:

By____________________________________

Steven J. McCurdy

Program Director

Divison of Municipal Services

BORROWER:

By ___________________________________

Authorized Officer

PAC/PRA Exhibit A
Local Septic Management Program

A. General Information

For the community/applicant

Community/Applicant:

Street:

City, State, Zip:

Contact Person:

Title:

Telephone:

Fax:

For the Administrating Entity

Administrating Entity:

Street:

City, State, Zip:

Contact Person:

Title:

Telephone:

Fax:

B. Budget

Title 5 Betterment Loans $200,000

C. Project Completion Schedule

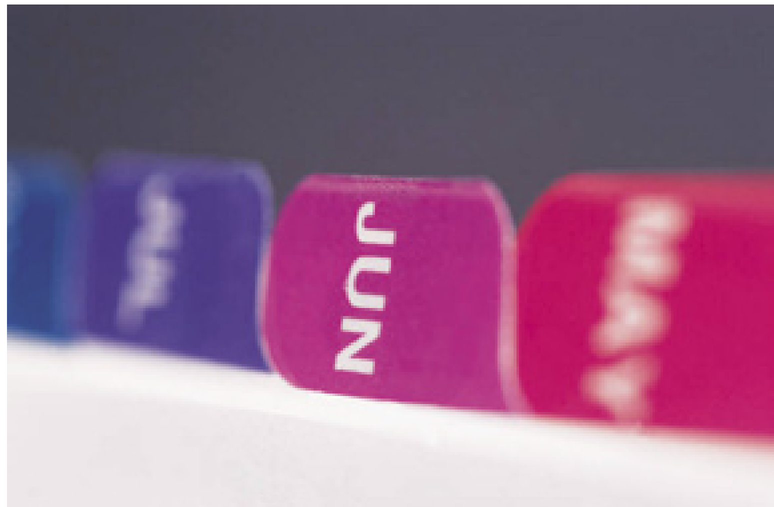
D. Special Conditions

Section 10. State Revolving Fund Procedures

Each municipality participating in the Community Septic Management Program will enter into a State Revolving Fund (SRF) loan with the Massachusetts Water Pollution Abatement Trust (the Trust). The SRF serves as the source of funds for making betterment loans to homeowners and for project administration. The funds are loaned on the basis of a 50% grant equivalency. The grant equivalency is the Commonwealth's method of describing the level of subsidy provided to lower the interest rate incurred by the municipality. As a result of this interest rate subsidy, the municipality will incur no interest charge during the term of the SRF loan.

To be eligible to enter into an SRF loan, each municipality must obtain the authorization required by the terms of the loan. In most towns, a 2/3 vote of the town meeting authorizes the borrowing. In other towns and cities, a 2/3 vote of the City Council, Town Council or Board of Aldermen must occur. After this vote, the chief executive of the town (Mayor, Town Manager, Chairman of the Board of Selectmen) may sign the Loan Agreement and related documents. The Loan Agreement and its attachments and certifications propose the basic legal terms and conditions of the SRF loan. This standard form agreement is provided by the Trust. In addition, the municipality will execute a Loan Questionnaire and a Borrower's Closing Certificate to evidence the SRF loan. The municipality will issue notes or bonds (as required by the Trust) and must supply the Trust with a legal opinion from the municipality's Bond Counsel. Samples of each of the documents are provided in the appendices.

Once the legal documents have been executed and returned to the Trust, the municipality may requisition SRF loan funds. Payment requisitions must be made on the DEP/Department of Municipal Services (DMS) T5-1000 form. The forms should be executed by the municipal treasurer and health official (or the persons who have been provided with authority to execute the forms). The forms are then forwarded to the DEP Regional Coordinator assigned to the municipality (See the Contact section of the appendices). The Coordinator will forward the requisition request to the DEP/ DMS contact person and to the Trust. Payment requisitions may be made in amounts sufficient to cover anticipated funding needs for up to three months. Disbursements will be made by wire transfer only.



The municipal treasurer and accountant will be required to make an annual report to the Division of Local Services. (See appendices for forms). This report will summarize the financial aspects of Local Septic Management Program activity. During the fiscal year, copies of the quarterly report must be forwarded to the DEP Regional Coordinator and to the Trust.

The Division of Local Services has provided a bulletin to define the municipal accounting procedures for funds received by municipalities from the Trust and the funds repaid by homeowners who have obtained financial assistance through betterment loans. For more information, go to: http://www.dls.state.ma.us/publ/bullidx.htm. Once at the site, you will go to the reference section, and search for the bulletin, "Title 5 Betterment Loan Program — Accounting", through the UMAS, Special Revenue Fund section.

The Program establishes a timeframe during which betterment loans may be made to homeowners from the initial SRF loan. As a result, the municipality will have a sufficient opportunity to commence collections from homeowners. Operation of the program will require that the municipal accountant have an appropriate cash management strategy in place. Department of Revenue and Division of Local Services field representatives have been trained to provide assistance to municipal officials responsible for oversight and financial management of Local Septic Management Programs.

Appendices

I. Contacts and Resources i

II. Sample Applications vi
Homeowner Package viii
Application Form ix
Brochure for Homeowners x
Homeowner Checklist xi
Forms

DEPARTMENT OF ENVIRONMENTAL PROTECTION - REGIONAL CONTACTS

Current Department of Environmental Protection contacts for information, updates, technical assistance, and guidance related to the Community Septic Management Program:

NORTHEAST/METRO BOSTON REGION	SOUTHEAST REGION
Nihar Mohanty One Winter Street Boston, MA 02108 Tel: (617) 654-6515 Fax: (617) 292-5851 email: Nihar.Mohanty@state.ma.us	Pamela Truesdale 20 Riverside Drive Lakeville, MA 02347 tel: (508) 946-2881 fax: (508) 947-6557 email: Pamela.Truesdale@state.ma.us
CENTRAL REGION Joanne Kasper-Dunn 627 Main Street Worcester, MA 01608 tel: (508)-767-2763 fax: (508) 792-7621 email: joanne.kasper@state.ma.us	**WESTERN REGION** Deirdre Cabral 436 Dwight Street, Suite 402 Springfield, MA 01103 tel: (413) 755-2148 fax: (413) 784-1149 email: deirdre.cabral@state.ma.us

DEPARTMENT OF ENVIRONMENTAL PROTECTION - BOSTON RESOURCES

For specific information on state revolving fund loans, financing and other funding related issues
For information on SRF loan administration and project management, payments forms and draw down requests:

Margaret Mansfield One Winter Street Boston, MA 02108 tel: (617) 292-5943 fax: (617) 292-5850 email: Margaret.Mansfield@state.ma.us
Stephen Hawko One Winter Street Boston, MA 02108 tel: (617) 292-5741 fax: (617) 292-5850 email: Stephen.Hawko@state.ma.us

Massachusetts Water Pollution Abatement Trust

For information on the status of wire transfers, disbursements of funds from the Trust, loan repayment information and copies of legal documents (loan agreement, loan amortization, etc.):

Mass. Water Pollution Abatement Trust
One Ashburton Place, Room 1207
Boston, MA 02108

Nancy Parrillo, Chief Financial Officer
tel: (617) 367-9333 ext 508
fax: (617) 227-1773

Keith McCarthy
tel: (617) 367-9333 ext 521

Department of Revenue/Division of Local Services

The Department of Revenue/Division of Local Services provides information and technical assistance to cities and towns in matters regarding municipal finance. The Division has published the ***"Guide to Financial Management for Town Officials"*** which provides an excellent introduction for municipal officials in municipal finance. The DOR regularly publishes Informational Guidance, Bulletins, Regulations and other materials on its web site: http://www.dls.state.ma.us/dor2.htm.

For more information regarding financial accounting for the Community Septic Management Program and related issues contact:

Division of Local Services
ATTN: Director of Accounts
Box 9569
Boston, MA 02114
Tel: (617) 626 2300
Fax: (617) 626 2330

DOR/DLS field representatives in each region are available to assist local officials comply with the fiscal accounting and reporting requirements for the Program.

Infoline, Hotlines

Serving more than 18,000 callers a year, DEP's InfoLine is a one-stop source for business people, consultants, lawyers and municipal officials who need:

- Answers to general DEP Questions,
- Permit Application Kits,
- Compliance Fee Assistance,
- DEP Seminar Information,
- Referrals to Technical Experts,
- Policies and Guidance Documents,
- Environmental Education Materials, and
- Access to the MCP Hotline for information on waste site cleanup regulations.

DEP's InfoLine and the Regional Service Centers are both a part of DEP's commitment to making it easier for you to understand and comply with the environmental rules.

From area code 617 and 781 and outside Massachusetts:

(617) 338-2255 (TDD: 617-574-6868)

From area codes 413, 508 and 978:

1-800-462-0444 (TDD: 1-800-298-2207)

By Email: infoline@state.ma.us

Title 5 Hotline:
Title 5 (Septic Systems): 1-800-266-1122 or (617) 292-5886

GIS Assistance

To obtain GIS maps, data layers, general information and assistance in setting up GIS tools for the Community, information on ArcView (GIS Data Visualization Tool), general training to interested groups on what GIS can do.

Department of Environmental Protection One Winter Street 8th Floor Boston, MA 02108 Tel: (617) 292-5575 Fax: (617) 556-1049	Executive Office of Environmental Affairs 100 Cambridge Street 9th floor Boston, MA 02108 Tel: (617) 626-1000 Fax: (617) 626-1249

Consumer Protection Information

Office of the Attorney General
200 Portland Street
Boston, MA 02114
tel: (617) 727 2200 ext 3200

Consumer Information Hotline:

(617) 727 8400

Regulations

The State House Bookstore maintains a wide variety of publications, regulations and useful documents. A catalog of materials available at the Bookstore is available.

Secretary of the Commonwealth Room 116, State House Boston, MA 02133 tel: (617) 727-2834 fax: (617) 973-4858	Secretary of the Commonwealth Western Office 436 Dwight Street Springfield, MA 01103 (413) 784-1376

***Massachusetts Sites*:**

Massachusetts State Government	http://www.mass.gov
Department of Environmental Protection	http://www.mass.gov/dep
DEP's Division of Municipal Services	http://www.mass.gov/dep/brp/mf/cwsrf.htm
Department of Revenue	http://www.dls.state.ma.us/dor2.htm
Department of Public Health	http://www.mass.gov/dph

***Other sites of interest*:**

EPA's Office on Water	http://www.epa.gov/ow/
MA Association of Health Boards	http://www.mahb.org
MA Association of Health Officers	http://www.mhoa.com

Relevant information, forms and updates about the Community Septic Management Program will be posted from time to time on DEP's web site.

National Small Flows Clearinghouse

West Virginia University
P.O. 6064
Morgantown, WV 26506-6064
Tel: (800) 624-8301
Fax: (304) 293-4191
web: http://www.nesc.wvu.edu/nsfc/nsfc_index.htm

The National Small Flows Clearinghouse (NSFC) provides information, referrals, training and technical assistance for small communities to aid in solving wastewater problems. NSFC is sponsored by grants from the US Environmental Protection Agency. The Clearinghouse publication 'Small Flows' provides information in an easy-to-understand format and is available free of charge by mail or through the Internet.

Regional Planning Agencies

Regional Planning Agencies offer a wide variety of services to the communities in their regions. Issues pertaining to economic development, land use, transportation, air and water quality, housing and others may be the subject of planning initiatives by RPAs. Planning agency staff can offer assistance in diverse areas such as GIS, creating and administering Local Inspection and Local Management Plans, and other tasks related to the implementation of the Community Septic Management Program.

Information on planning agencies and services may be obtained from:

Metropolitan Area Planning Council 60 Temple Place Boston, MA 02111 tel: (617) 451-2770 fax: (617) 482-7185	Montachusett Regional Planning Commission Town Hall 173 Main Street Groton, MA 01450 tel: (978) 448-1111
Berkshire Cty. Regional Planning Comm'n. 1 Fenn Street Pittsfield, MA 01201 tel: (413) 442-1521	Nantucket Planning & Economic Devel. Commission 4 North Water Street Nantucket, MA 02554 tel: (508) 228-7237
Cape Cod Commission 3225 Main Street Barnstable, MA 02630 tel: (508) 362-3828	Northern Middlesex Council of Gov'ts 115 Thorndike Street Lowell, MA 01852 tel: (508) 454-8021
Central Mass. Regional Planning Comm'n. 35 Howard Street Worcester, MA 01609 tel: (508) 756-7717	Old Colony Planning Council 70 School Street Brockton, MA 02401 tel: (508) 583-1833
Franklin Council of Gov'ts./Planning Dept. 425 Main Street Greenfield, MA 01301 tel: (413) 774-2251	Pioneer Valley Planning Commission 26 Central Street W. Springfield, MA 01089 tel: (413) 781-6045
Martha's Vineyard Commission P.O. Box 1447 Oak Bluffs, MA 02557 tel: (508) 693-3453	Southeastern Regional Planning and Economic Development District 88 Broadway Taunton, MA 02780 tel: (508) 824-1367
Merrimack Valley Planning Commission 160 Main Street Haverhill, MA 01830 tel: (978) 374-0519	

Sample Application

TOWN OF MIDDLEBORO

COMMUNITY SEPTIC MANAGEMENT PROGRAM

General

The Town of Middleboro has received approval by Town Meeting vote to enact the Community Septic Management Program. This septic system replacement program, provided through the Department of Environmental Protection (DEP), makes available a loan to homeowners in our community, whom lie within an environmental sensitive area, as outlined herein. To qualify you must have a failed septic system and lie within an environmental sensitive area.
A failed septic system should have a certification, stating such, issued by a DEP approved system inspector.

Eligible Items

The loan will consist of combining all costs associated with septic system repair, replacement or upgrading. This includes property line determination, soil evaluation, septic system design and general construction and installation. The Town of Middleboro or designee will determine any ancillary items that may be required eligible.

sample

Loan Terms

The loan's terms will be a five percent loan, to be paid back over ___ (15 or 20) years. Payment will be twice yearly with your real estate tax bill.
The loan will be secured as a betterment assessment against your property. The betterment assessment may be paid off at any time, or when you sell your home, without penalty. You will be expected to make payment upon receipt of the first tax bill received, after the Board of Health for the completed issues the Certificate of Compliance and accepted Title 5 designed and installed septic system.

Environmentally Sensitive Areas

The Town of Middleboro has determined that the following areas are environmentally sensitive areas. The Town has designated a plan or map, entitled _______________________-, to provide an outline of environmental sensitive areas. Other areas, not outlined on the map at this point in time, shall be determined by the Town, on a case by case basis, until finalization of environmentally sensitive areas are completed.

1. Wood Pond Area
2. Areas within Zone II of the Town's ground water wells.
3. Areas within 100 feet of any stream, river or waterway
4.
5.
6.

The Town may designate specific environmentally sensitive areas as having a higher priority than others, based on the number of applicants that are received.

Application Process

Should you, as a resident and homeowner of the Town of Middleboro qualify, then complete the attached application and submit to _________________ the Town Manager's Office. You will be notified or your eligibility. You should be aware that the Town might exhaust available monies, made available by DEP. If so, then you may be placed on a waiting or 'Priority List', until additional monies become available.

Public Meeting

There will be a public meeting on _________ at Town Hall. The purpose of this public meeting will be to explain the program and answer any questions that you, the homeowner may have.

The Process

Upon approval by the Town of Middleboro of your application, you will be expected to sign a Betterment Agreement with the Town of Middleboro. The Betterment Agreement outlines the terms of the loan and what is expected of both parties. Have your lawyer review the Agreement, if you find it necessary.
Once the agreement is signed, then you may proceed with one of two choices.
You may elect to obtain bids from engineers and/or general contractors (vendors) on your own. It is recommended that you obtain at least three bids. This will allow you to obtain the most cost effective price. It is up to you, the homeowner to select the choice that you feel most comfortable with. It does not necessarily have to be the lowest bidder. You will enter into a signed contract with either vendor. You may want to consider having the design engineer serve as the inspector of the general contractor's work and coordinator of submitting bills to Town Hall.
If you choose this option, engineers and general contractors will be expected to submit bills to you twice. You will be expected to review the bill, approve it and forward it to _______ at Town Hall.
A joint check will be issued by the Town with your name and the vendor's name to you. You will be expected to sign the check and give it to the vendor, if you approve their work. Upon completion of the engineering evaluation and design and the general construction, the Board of Health will inspect and issue a Certificate of Compliance for the septic system. This is the end of the project. A final check may be issued to the engineer and general contractor, provided that all work has been performed satisfactorily.

COMMUNITY SEPTIC MANAGEMENT PROGRAM

BETTERMENT LOANS

HOMEOWNER PACKAGE

Dear Homeowner:

This package provides information for you, the homeowner, to apply for a septic system betterment loan. This loan is provided, through the Department of Environmental Protection at a five percent (5%) interest rate for a period of 5, 10, 15, or 20 years. There is no credit check required, although all of your real estate taxes, water bill or any other municipal account should be paid and up to date. The loan process is reviewed and approved by the Board of Health and you will be notified within two weeks (2) of your standing.
Attached are various documents for your review. These documents are outlined as follows:

Application:
This application must be completed and submitted to the Board of Health that will confirm your interest in the program.

Homeowner Checklist For Engineering Design:
This checklist contains a series of queries to ask an engineer, septic system inspector or a soil evaluator. These disciplines are necessary to initially inspect (System Inspector), perform a soil evaluation and percolation test (Soil Evaluator) and design a septic system (Civil or Sanitary Engineer). All must be certified and licensed by the Commonwealth of Massachusetts. Ask to see their license or certification.

Homeowner Checklist for A General Contractor:
This checklist allows you to question a general contractor whom may be bidding on the Board of Health approved septic system design plans.

Betterment Agreement:
The betterment agreement is the signed agreement between you, the homeowner and our community. This agreement may be reviewed by your lawyer when provided to you by our Board of Health. The agreement allows our community to provide you money to pay for the work that is agreed upon.

Draft Contract for the Engineer

Draft Contract for the General Contractor

Sample

Local Septic Management Program
Application Form
Community of (your town/city)

Homeowner Information

Name: _______________

Address: _______________

Phone:(W) _______________

Phone: (H) _______________

General Information

	YES	NO
1. Has your septic system been failed by a certified inspector?		
1a. Does your system need to be pumped more than four (4) times per year?		
2. Have you had a soil evaluation test and/or engineering plans for your system completed (or in process)?		
3. Have you received estimates for engineering work? Have you received general contractor (installation) work?		
4. Can your property lot lines be determined, so that the proposed septic system and soil adsorption system be located without infringing on your neighbor's property?		
5. Are you in an environmentally sensitive area? (Check plan) Name of area: ___________________________ No. _____________		
6. Can you be connected to our community's existing sewerage collection system?		
7. If known, please provide information of the type and costs of the repairs: Needs: a. New soil absorption system (SAS) b. Entire new system c. Repairs done to parts of system d. Want connection to our community's existing sewer system 1. Engineering soil evaluation and design $____________ 2. Estimated costs of repair, replacement, or connection $____________ 3. Contingency amount (20%) $ ____________ Total Loan Estimate $ ____________		

I, we will agree to sign a betterment/loan agreement with the Town of ___________________, to pay for the required costs associated with the septic system repair, and am aware that these costs will be treated as a municipal lien on my property tax bill.
This loan is contingent on the Town determining that my property lies within an environmentally sensitive area that is deemed to be fundable by the town for that fiscal year.

Signature:_________________ Date: ________________
(Property Owner)

Board of Health Use Only:
Project Number ________________________

Environmental Area Number _______ Env. Area Priority No. __________

Date Accepted _________________ Priority List No. ________________-

Brochure for Homeowners
Draft

Introduction

The ______ of __________ Board of Health has received funding approval from the Commonwealth of Massachusetts - Department of Environmental Protection to prepare and administer a septic system repair program. This program, referred to as the MA Title 5 Betterment Loan Program, will enable our community to provide financial assistance to homeowners living in environmentally sensitive areas, whom have failed septic systems. Through this program, the engineering and general construction costs associated with connection to an existing sewer main, or replacement or upgrade of a failed septic system can be provided as a low interest loan, to you, the homeowner. The loan will be paid back to the _____________ with payment of your real estate tax bill. After reviewing this brochure, should you elect not to participate in this Program, please review another brochure the Board of Health or DEP has available. This brochure describes the "Homeowner Septic System Repair Program", which is a program administered by the Massachusetts Housing Finance Agency (MHFA).

The Betterment Law

Under a revised state law, every town and city in Massachusetts has the option of providing upfront financing for residential cesspool or septic system repairs, replacements or upgrades for failed septic systems. This is done in much the same way many communities currently undertake public works improvements, such as the paving of roads and the installation of sewer or watermains. The Betterment Law allows a community to create a loan fund that must be authorized by _____ vote. The loan fund pays for Board of Health approved repairs to septic systems. The Community recovers those costs by assessing annual betterments on those individual homeowners property tax bills that benefit by the improvement.

Financial Assistance Terms

Financial Assistance consists of a five percent (5%) loan, that you, the homeowner pays back twice a year, with each real estate tax payment. Loan repayment terms may be over 10 or 20-year time periods, depending on costs of the septic system repair. Loans may be paid back early, without penalty.

Elderly Deferral

Elderly homeowners, with gross incomes of $20,000 or less, may request a deferred payment loan. This type of loan does not have to be repaid back to our community, until the property is sold or transferred. The authority to have a deferred payment loan program must be specifically approved by ___________ vote. Loans may be paid back early, without penalty.

Community Yearly Program

Each fiscal year, the Board of Health will provide a number of loans to homeowners located in environmentally sensitive areas. The number of homeowners provided loans would be based on available money and the priority of that particular environmental area. Your application will be kept on file, regardless of whether you qualify that particular year. Notice will be provided yearly, of homeowners standing, through the issuance of a priority list. Priorities of environmentally sensitive areas will be based on environmental concerns, such as the proximity of the failed septic system to our community's water supply, surface waters, wetlands or coastal waters.

General Assistance

Once you have been determined to be eligible for a loan, the Board of Health will prepare a Betterment Loan Agreement for your execution. Upon completion of the loan agreement, the Board of Health is prepared to offer service in one of two ways, in order to complete the project. You may decide to control the project yourself or with an informed family member. You may select either an engineer for design of the septic system and/or a general contractor to install the septic system improvements from the Board of Health's pre-approved list. All bills incurred for the work are submitted to the Board of Health for payment.

For Further Information

For further information on this program, please contact ____________ at () -___________.

Local Septic Management
Homeowner Checklist

ENGINEERING SERVICES
Design Questions to Ask an Engineer Prior to Completing a Contract

This checklist will assist you, the homeowner, in asking an engineer, who is proposing to evaluate and design a septic system improvement for you, appropriate questions that should assist you in determining their suitability to perform the work.

A. General Questions

1. Have you performed septic system design work (under the new Title 5 regulations issued by the Commonwealth in 1996) that has been approved by our communities Board of Health or other regulating Department?
2. When was the last year and how many septic systems have you submitted and received approval for by our Board of Health?
3. Do you have a current professional registration (civil or environmental) engineering registration provided by the Commonwealth of Massachusetts Engineering Board of Registration? Can you provide a copy for our records?
4. Will you provide up to three most recent references for your work, from local communities homeowners?
5. Are you insured and do you carry professional liability insurance as required by the Commonwealth of Massachusetts and professional standards, as provided by the American Association of Professional Engineers?

SYSTEM INSPECTOR

B. Initial Location and Inspection of the Septic System

There are numerous septic system inspectors, licensed by the DEP - Commonwealth of Massachusetts. These inspectors are not necessarily engineers, and may be a cost effective alternative to hiring an engineering firm to perform the inspection.
1. We had (or haven't had) our septic system located and inspected. The inspector deemed that the system has failed and under Title 5 criteria, must be replaced. Will you review this inspection and ensure us that the Commonwealth's Title 5 regulations do indeed, require replacement of the entire system or a part of the system?
2. Our septic system has not been inspected, but we are having problems. Will you locate and sketch out the location and present system design and perform an inspection and provide options for us to consider, as outlined under the Title 5 regulations?
3. Will you or a subcontractor perform the inspection?

ENGINEERING DESIGN OF SEPTIC SYSTEM

C. Design Questions

There are two components of septic system design. The first consists of noting where your property lines may be so that test holes can be dug. These holes will locate your soil adsorption system, which handles the fluid part of septic wastes.
The first part also includes actually digging the test holes with a backhoe, performing a soil examination and 'perc' test and then submitting the results to you, the homeowner, and the Board of Health.
This part of design does not have to be performed by a professional engineer, but can be done by a certified soil evaluator (certified by the Commonwealth of Massachusetts). The results of the soil examination are submitted to the Board of Health and You, the homeowner. The homeowner can then submit the results to a chosen registered professional engineering firm for design purposes.

These questions can be asked to either the professional design engineer or a chosen certified soil evaluator.

1. Will you charge us for determining where our property lines are located, or use general field work as determined from meeting with us today, as part of your design estimate?
2. If you cannot determine from our provided plans, or locations of known property bounds, drill holes, stakes or other property line markings, what will be your limits to determine property lines for location of the septic system components and soil adsorption system?

3. How will the soil examination (percolation test) be performed, by you or a subcontractor? Will you be present to show the subcontractor where to dig the holes for location of the soil adsorption system? Do the subcontractor and the heavy machine operator work directly for you, and do they carry the necessary liability insurance?
4. Will they be responsible for calling Dig Safe, if required?
5. Will the dug holes and tractor (tire) damages be filled in, graded and seeded or left in the general construction state of disrepair?
6. When the soil examination is completed, will you submit a copy to the Board of Health, our chosen design engineer and us?
7. How will billing be performed? We may request that billing be performed in the following manner:

Number / Description	Percent of Cost
1.Provide a written estimate for all phases of the proposed work:	
Inspection of System	
a. Initial Inspection, location of system and written evaluation	
1.Inspection and location	25%
2.Written and signed evaluation	75%
Soil Evaluation and Percolation Testing	
2. a. Location of Lot Lines with side line stakes	
b. Onsite backhoe for soil test with successful percolation test and soil examination	
c. Written report and confirmation of submittal to Local BOH of certified test	75%
d. Completion of backyard grading and cleanup	25%
3. Engineering Design	
a. Site visit and write up of estimate	
b. Survey work for plan of work	
c. Review of soil evaluation test and opinion to us of the type of systems that could be installed, along with price estimates for each one.	
d.Draft plans for review and approval of approved septic system. (We will provide permit fee for submittal to our Board of Health at that time)	
e.Final plans submitted to Board of Health and a bill from you.	60%
f.Board of Health approves the plan and we receive four copies for our use. Written specifications will be included with plans	40%
4.Engineering Oversight of Construction	
a. Hourly charge for inspection of contractor's work.	
b. Estimate of total time estimated for inspection and maximum costs	
c. Time to provide written change orders on site, to be included with hourly charge.	
d. Billing to be done per inspection, with 10 days to pay.	

Homeowner Checklist

Questions to ask a General Contractor Prior to Agreeing to a Contract

This checklist will assist you, the homeowner, in asking a general contractor questions, prior to signing a written agreement, for the improvement or installation or a septic system or a sewage connection.

A. General Questions

1. How many installations have you performed, under the old Title 5 regulations and under the new Title 5 regulations, and, how long have you been in business?
2. How many have been done in our Town/City over the past two (2) years?
3. Would you say the Board of Health and its agent has been satisfied with your work 100% of the time?
4. Are there any septic systems that you have worked on, or are presently working on, that have not been completed? If so, why not?
5. How long will it be before you provide a written estimate, if we provide a set of plans and written specifications right now?
6. If your written estimate is submitted, based on our provided plans and written specifications, how long will it be before you show up on the job?
7. Will you break down the pay estimate in phases as outlined below:

Item	Description	% of Total
a.	Submit a written estimate and if accepted, a contract.	
b.	Drop off materials and bring a machine to start digging	
c.	Complete Installation of any required septic system components	
d.	Complete the soil adsorption system	
e.	Obtain a successful inspection from the Board of Health	80%
f.	Cover over the system to grade	
g.	Seed and loam as required	20%

8. Will you provide us three references of homeowners of your last three jobs?
9. Do you carry insurance? If so, does it consist of:
    a. Property Liability
    b. Vehicle Liability
    c. Workers Comp (unless self employed)

10. How long will our toilets, dishwasher, sinks, etc. be off line (can't be used)?
11. How long will this job take from start until completion?

Forms

Sample Town Meeting/City Council Article and Vote	a
Payment Requisition	i
Form DA91	ii
Final Report	iv
DOR Form	vi
Sample Loan Agreement	vii
Sample Loan Questionnaire	xxv
Local Bond Counsel Legal Opinion	xxx

(back to Appendices)

Massachusetts Water Pollution Abatement Trust
Community Septic Management Program
Department of Environmental Protection

These sample forms are for guidance purposes only. The Applicant's bond counsel should be consulted to determine the exact form of authorization required and which local body or official must approve the terms of borrowing and the forms of documentation.

Sample Town Meeting/City Council Article and Vote

To see if the Town/City will vote to appropriate a sum of money for the purpose of financing the following water pollution facility projects: repair, replacement and/or upgrade of septic systems, pursuant to agreements with Board of Health and residential property owners, including without limitation all costs thereof as defined in Section 1 of Chapter 29C of the General Laws; to determine whether this appropriation shall be raised by borrowing from the Massachusetts Water Pollution Abatement Trust or otherwise, or to take any other action relative thereto.

Vote

Voted: that $______ is appropriated for the purpose of financing the following water pollution abatement facility projects: repair, replacement and/or upgrade of septic systems, pursuant to agreements with the Board of Health and residential property owners, including without limitation all costs thereof as defined in Section 1 of Chapter 29C of the General Laws; that to meet this appropriation the Treasurer with the approval of the Board of Selectmen or City Council is authorized to borrow $______ and issue bonds or notes therefore under M.G.L. c.111, s.127B ½ and/or Chapter 29C of the General Laws; that project and financing costs shall be repaid by the property owners, in accordance with those agreements, but such bonds or notes shall be general obligations of the Town/City; that the Treasurer with the approval of the Board of Selectmen or City Council is authorized to borrow all or a portion of such amount from the Massachusetts Water Pollution Abatement Trust established pursuant to Chapter 29C and in connection therewith to enter into a loan agreement and/or security agreement with the Trust and otherwise contract with the Trust and the Department of Environmental Protection with respect to such loan and for any federal or state aid available for the projects or for the financing thereof; and that the Board of Selectmen, Board of Public Works, City Council, or other appropriate local body or official is authorized to enter into a project regulatory agreement with the Department of Environmental Protection, to expend all funds available for the projects and to take any other action necessary to carry out the projects.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF MUNICIPAL SERVICES

COMMUNITY SEPTIC MANAGEMENT PROGRAM

PAYMENT REQUISITION

SECTION I: LOAN INFORMATION	
LOAN No. ______________________	REQUEST NO. ____________
LEGAL NAME AND ADDRESS OF BORROWER:	PAYABLE TO: ____________
	PAYMENT METHOD: Wire Transfer
	Acct. #:

SECTION II: ADVANCE REQUEST

We request an advance of $________________________ to be used to finance the upgrade of failed septic systems, through betterments,
in accordance with the Program. This advance is requested in anticipation of the financial requirements of projects under this program
for the next three months. We understand that we must make monthly accounting reports of these advance funds using Section III below.

SECTION III: ADVANCE ACCOUNTING PROJECT NUMBER	APPROVED PROJECT COSTS	PREVIOUS REQUEST $	THIS REQUEST $
Advance			
Totals			

ADVANCE RECONCILIATION

Amount Advanced: $ ____________

Advance Expended: $ ____________

Advance Balance: $

SECTION IV: CERTIFICATION OF THE BORROWER:

(i) Such payment is for Project Costs and the obligations specified herein have not been the basis for a prior requisition that has been paid.

(ii) No Default as defined in the Regulatory Agreement, and No Event of Default as defined in the Loan Agreement, has occurred and is continuing and no event or condition exists which, after notice or lapse of time or both, would become a Default hereunder or Event of Default under the Loan Agreement.

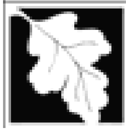
(iii) The payment requested by this requisition will be for Project Costs to be or already authorized under a betterment agreement between the Borrower and a system owner, and that no advance funds shall be disbursed to the system owner until such betterment agreement has been executed between the Borrower and the system owner.

Treasurer: Date:

Authorized Health Official Date:

DMS Director Signature Date

DMS FORM T5-1000



Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Division of Municipal Services
Form DA91
Analysis of Homeowner Septic Repair Special Revenue Account

City/Town of

Quarter ended (date)

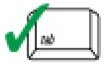
Note: File by 15th of month following end of quarter with:

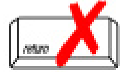
Mass. Water Pollution Abatement Trust
ATTN: Treasurer
One Ashburton Place, Room 1207
Boston, MA 02108

MA DEP

ATTN: Regional Coordinator
[Western, Central, Southeast, or Northeast]

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the





A. Balance from previous report: $ ________ Amount

B. Advances from WPAT ________ Date $ ________ Amount

C. Disbursements to or for homeowners (carry total amount forward from schedule on next page) $ ________ Amount

D. Other allowable costs (describe on attachment): $ ________ Amount

E. Ending balance (A+B-C-D): $ ________ Amount

E. Plan for disbursements during next quarter:

____

____

____

____

____

Completed By:

Treasurer

Auditor or Accountant

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Division of Municipal Services
Form DA91
Analysis of Homeowner Septic Repair Special Revenue Account

City/Town of

Quarter ended (date)

Schedule of Disbursements to or for Homeowners

No.	Date of Betterments	Homeowner's Name	Payee	Amount	Betterment Committed
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	Date	Name	Name	$	Date
	TOTALS: Carry forward to Section C on previous page			$	

City/Town of ______________________________

Date: _______________, 20____

Analysis of Homeowner Septic Repair Special Revenue Account

FINAL REPORT

Mass. Water Pollution Abatement Trust ATTN: Treasurer Room 1207, One Ashburton Place Boston, MA 02108	Mass. Div. of Local Services ATTN: Director of Accounts Box 9569 Boston, MA 02205-5490	Mass. Dept. of Environmental Protection ATTN: Regional Coordinator [Western, Central, Southeast, or Northeast]

A.	Total advances from WPAT (excluding pre-loan assistance payments)	$
B.	Total disbursements to homeowners (complete the attached table)	$
C.	Pre-loan financial assistance received (maximum $20,000)	$
D.	Pre-loan assistance spent (management plan, loan administration etc.):	$
E.	Ending Balance: LOANS (A - B)	$
F.	Ending Balance: PRE-LOAN ASSISTANCE (C-D)	$
G.	Number of septic systems repaired/upgraded/replaced (provide copies of Certificates of Compliance)	________
	Number of homes connected to sewers	________

This is to certify that the above referenced project has been completed in accordance with the scope of work identified in the Statement of Program Objectives. As required by the project Regulatory Agreement all copies of the homeowner's Certificate of Compliance funded with Community Septic Management Funds have been forwarded to DEP along with the attached final report. All homeowner Betterments have been recorded by the Registry of Deeds and the appropriate tax collecting office has been notified of the pending assessments.

Completed by:

____

____

Treasurer Auditor or Accountant

City/Town of ______________________________

NO	Date of Betterments	Homeowner's Address	Final Betterment Amount $
		TOTAL (Carry Forward To Line B On FINAL REPORT)	

City/Town of ___________________________________

Fiscal year ended June 30,

Analysis of Loans from WPAT for Homeowner Septic Repair[1]

Massachusetts Division of Local Services
Attn: Director of Accounts
Box 9569
Boston, MA 02114

Note: File with Analysis of Special Revenue Account for quarter ended June 30.

A. *Balance from previous report* $

B. Notes or Bonds issued to Trust $

Date Amount

C. Collections from regular tax billing[2] $
Date Amount

August 1
November 1
February 1
May 1

D. Lump sum collections $

Date Name Amount

E. Principal payments to Trust $

Date Amount

August 1
February 1

F. Balance on June 30, 20_____ $

Completed by:
___________________________ Treasurer

______________________________Accountant or Auditor

[1] Form DA 92
[2] Principal (and interest if Town Meeting or City Council vote so provides)

Loan No: T5-97-1019-B Date of Authorization : February 4, 2002

Borrower: Town of Wareham

Sample

MASSACHUSETTS WATER POLLUTION ABATEMENT TRUST

COMMUNITY SEPTIC MANAGEMENT PROGRAM

LOAN AGREEMENT

LOAN AGREEMENT, dated as of the date indicated above (the "Agreement"), by and between the Massachusetts Water Pollution Abatement Trust (together with its successors and assigns, the "Trust"), an instrumentality of The Commonwealth of Massachusetts (the "Commonwealth"), and the political subdivision or public instrumentality of the Commonwealth indicated above (together with its successors and assigns, the "Borrower"):

WITNESSETH:

WHEREAS, the Trust is organized and exists under Chapter 29C of the General Laws of the Commonwealth (the "Enabling Act") to assist Local Governmental Units in the Commonwealth to initiate, acquire, construct, improve, maintain and operate Water Pollution Abatement Projects; and

WHEREAS, pursuant to the Enabling Act, the Trust is authorized to make loans to Local Governmental Units in the Commonwealth to finance or refinance costs of Water Pollution Abatement Projects and Local Governmental Units are authorized to contract with the Trust with respect to such loans and to issue Local Governmental Obligations to evidence their obligations to repay such loans; and

WHEREAS, in order to implement the financing programs authorized by the Enabling Act the Trust adopted on March 4, 1993, a resolution currently entitled "Amended and Restated Resolution Authorizing and Establishing a Water Pollution Abatement and Drinking Water Project Financing Program" (as heretofore or hereafter amended and supplemented in accordance with its terms, the "Program Resolution"); and

WHEREAS, the Borrower has developed a community septic management program, constituting a Water Pollution Abatement Project within the meaning of the Enabling Act, to assist eligible homeowners to upgrade failing septic systems and otherwise to comply with the requirements of 310 CMR 15.000 et seq. ("Title 5") through underlying betterment agreements with such homeowners (collectively, the "Project"); and

WHEREAS, the Department of Environmental Protection of the Commonwealth (the "Department") and the Borrower have executed and delivered a Project Approval Certificate and Regulatory Agreement pertaining to the Project (as more fully identified in Schedule A hereto, the "Project Regulatory Agreement"); and

WHEREAS, the Trust has heretofore approved a loan (the "Loan") from the Trust to the Borrower to finance or refinance costs of the Project in an aggregate amount not to exceed the Initial Loan Obligation set forth in Schedule C attached hereto (the "Initial Loan Obligation") and, to evidence the indebtedness to be incurred thereby, the Trust and the Borrower have duly authorized the execution and delivery of this Agreement and, pursuant to the Applicable Bond Act (as herein defined), the Borrower has duly authorized the issuance and delivery to the Trust of its obligations (as more fully described herein, the "Local Governmental Obligations") in an aggregate principal amount equal to the Initial Loan Obligation; and

WHEREAS, the Loan will be funded by the Trust from the proceeds of bonds issued by the Trust in accordance with the Enabling Act and under and pursuant to the Program Resolution and a Water Pollution Abatement and Drinking Water Project Bond Resolution (Pool Program) to be adopted by the Trust prior to the Closing Date (as herein defined) (the "Bond Resolution"); and

WHEREAS, in anticipation of the closing of the Loan as herein provided, the Trust will finance or refinance costs of the Project incurred by the Borrower prior to the completion of the Project from the proceeds of a temporary loan (the "Interim Loan") to the Borrower to be funded by the Trust from amounts held in the Clean Water Program Account in the Interim Loan Fund under the Program Resolution that are legally available for such purpose;

NOW, THEREFORE, in consideration of the premises and the mutual covenants hereinafter contained, the parties hereto agree as follows:

Section 1. Definitions. All capitalized, undefined terms used in this Agreement shall have the same meanings given such terms in the Recitals hereto or in Section 1 of the Enabling Act. In addition, the following words and phrases shall have the following meanings:

"Applicable Bond Act" means the general or special laws of the Commonwealth identified in Schedule A attached hereto;

"Authorized Officer" means the officer or officers of the Borrower, the Trust or the Department, as the case may be, identified in Schedule A attached hereto;

"Bonds" means the Pool Program Bonds issued by the Trust to fund the Loan, as more fully described in the Bond Resolution;

"Bond Trustee" means State Street Bank and Trust Company and its successors and assigns as Bond Trustee under the Bond Resolution;

"Business Day" means any day other than a Saturday, a Sunday or any other day on which banks doing business in the Commonwealth are authorized or required to be closed for business;

"Closing Date" means (i) the date set forth in Schedule A hereto, (ii) such earlier date as may be mutually agreed upon by the Trust and the Borrower, or (iii) such later date as may be designated by the Trust by written notice delivered to the Borrower not less than thirty (30) days prior to such later date, which later date shall be not later than three (3) years after the date of the Interim Loan Note;

"Code" means the Internal Revenue Code of 1986, as amended, and all Treasury Regulations promulgated thereunder to the extent applicable to the Loan, the Bonds or the Local Governmental Obligations;

"Commonwealth Assistance Contract" means the Amended and Restated Agreement for Contract Assistance dated as of September 1, 1999, between the Commonwealth and the Trust, as amended to the date hereof and as hereafter amended in accordance therewith, and the Contract Assistance Determination, if any, applicable to the Loan issued thereunder;

"Contract Assistance Payments" means amounts, if any, provided to the Trust by the Commonwealth in accordance with Section 6 of the Enabling Act and the Commonwealth Assistance Contract; except as otherwise provided herein, for purposes of this Agreement Contract Assistance Payments shall mean the amounts, if any, applicable to each Loan Repayment Date, and to each Scheduled Loan Repayment due on such date, set forth in the column labeled "Loan Subsidy Amounts - Contract Assistance Payments" in Schedule C attached hereto, as such schedule may be amended from time to time in accordance herewith;

"Debt Service Fund" means the Debt Service Fund established under the Bond Resolution;

"DEP Regulations" means the regulations of the Department applicable to the Program appearing in 310 CMR 44.00 as such regulations may be amended from time to time, including, without limitation, the Department's Community Septic Management Program Description and Requirements as amended and supplemented from time to time;

"Equity" means amounts held in or for the credit of the Clean Water Equity Fund under the Program Resolution as more fully described in the Program Resolution and the Equity Allocation Certificate;

"Equity Allocation Certificate" means the certificate of the Trust with respect to the Loan delivered to the Program Trustee pursuant to Section 205 of the Program Resolution;

"Equity Earnings" means earnings derived from the investment or deposit of Equity allocable to the Loan to the extent provided in the Equity Allocation Certificate; except as otherwise provided herein, for purposes of this Agreement Equity Earnings shall mean the amounts applicable to each Loan Repayment Date, and to each Scheduled Loan Repayment due on such date, set forth in the column labeled "Loan Subsidy Amounts - Equity Earnings" in Schedule C attached hereto, as such schedule may be amended from time to time in accordance herewith;

"Event of Default" means any of the events or circumstances specified in Section 9(a) of this Agreement;

"Federal Act" means Title VI of the Federal Water Pollution Control Act (Pub. L. 92-500, commonly known as the Clean Water Act), as amended by the Federal Clean Water Act of 1987 (Pub. L. 100-4), as the same may be further amended from time to time, and all regulations of the United States Environmental Protection Agency applicable thereto as amended from time to time;

"Fiscal Year" means the period beginning on July 1 in any year and ending on June 30 in the next succeeding year;

"Grant Equivalency Percentage" shall mean the amount set forth in Schedule A attached hereto;

"Interim Loan" shall have the meaning given such term in Section 3 hereof;

"Interim Loan Note" shall have the meaning given such term in Section 3 hereof;

"Interim Loan Disbursement Date" means each day on which proceeds of the Interim Loan may be disbursed to the Borrower from the Interim Loan Project Account in accordance with Section 4 hereof and the Project Regulatory Agreement;

"Interim Loan Project Account" means the account allocable to the Interim Loan established in the Interim Loan Fund under and pursuant to the Program Resolution in accordance with Section 3 hereof;

"Investment Obligations" shall have the meaning given such term in the Bond Resolution;

"Loan Prepayments" means all payments made by or for the account of the Borrower which reduce or eliminate the principal balance due on the Loan and the Local Governmental Obligations by reason of the prepayment of all or any part of the principal prior to the due date thereof;

"Loan Principal Obligation" means, at any time of calculation, the aggregate unpaid principal amount of the Loan, which amount shall equal the Initial Loan Obligation less all Scheduled Loan Repayments and all Loan Prepayments on account of the principal amount of the Loan then or theretofore made or provided for by or for the account of the Borrower and received by or for the account of the Trust;

"Loan Repayments" means, as the context requires, the Scheduled Loan Repayments or the Net Loan Repayments payable by the Borrower hereunder;

"Loan Repayment Dates" means February 1 and August 1 of each year (commencing on the first such date indicated on Schedule C attached hereto) or, if any such day is not a Business Day, the next succeeding Business Day;

"Loan Subsidy Amounts", except as otherwise provided in this Agreement, means the amounts, if any, applicable to each Loan Repayment Date, and to each Scheduled Loan Repayment due on such date, set forth in

the column labeled "Loan Subsidy Amounts" in Schedule C attached hereto, as such schedule may be amended from time to time in accordance herewith;

"Local Bond Counsel" means an attorney or firm of attorneys (who may be counsel to any party hereunder) of nationally recognized standing in connection with the issuance of obligations similar to the Local Governmental Obligations, selected by the Borrower and satisfactory to the Trust;

"Net Loan Repayments" means the payments to be made by the Borrower in repayment of the Loan and the Local Governmental Obligations, and the interest, if any, payable thereon, which payments shall be made on the Loan Repayment Dates set forth in Schedule C attached hereto and in the amounts on each Loan Repayment Date (determined as provided in Section 4 hereof) set forth in the column labeled "Net Loan Repayments" in said Schedule C payable on such date (as such schedule may be amended from time to time in accordance herewith);

"Program" means the financial assistance program of the Trust established pursuant to the Enabling Act as more fully described in the Program Resolution;

"Program Trustee" means State Street Bank and Trust Company and its successors and assigns as Program Trustee under the Program Resolution;

"Project Cost" or "Costs" means any cost of the Project approved by the Department for payment or reimbursement from proceeds of the Interim Loan, as more fully described in the Project Regulatory Agreement;

"Scheduled Loan Repayments" means the fixed payments payable in repayment of the Loan and the Local Governmental Obligations, and the interest payable thereon, which payments shall be due on the Loan Repayment Dates and in the amounts set forth in the column labeled "Scheduled Loan Repayments" in Schedule C attached hereto (as such schedule may be amended from time to time in accordance herewith).

Section 2. Representations. (a) The Borrower represents and warrants to the Trust as follows:

(i) The Borrower is a Local Governmental Unit as defined in the Enabling Act with full legal right and authority under the Enabling Act and the Applicable Bond Act to authorize, execute and deliver this Agreement and the Project Regulatory Agreement, to execute, issue and deliver the Interim Loan Note and the Local Governmental Obligations, to undertake the Project, and to carry out and consummate all transactions contemplated by the foregoing;

(ii) The Borrower has duly and validly authorized the execution and delivery or adoption of this Agreement, the Project Regulatory Agreement, the Interim Loan Note and the Local Governmental Obligations and all approvals, consents and other governmental proceedings necessary for the execution and delivery of any of the foregoing or required to make them the legally binding obligations of the Borrower that they purport to be in accordance with their terms have been obtained or made;

(iii) No action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, public board or body, is pending or, to the knowledge of the Authorized Officers of the Borrower executing this Agreement, threatened seeking to restrain or enjoin the execution and delivery or adoption of this Agreement, the Project Regulatory Agreement, the Interim Loan Note or the Local Governmental Obligations or the carrying out of the Project; or contesting or affecting the validity of this Agreement, the Project Regulatory Agreement, the Interim Loan Note or the Local Governmental Obligations or the power of the Borrower to assess and collect taxes, rates and charges to pay all Loan Repayments hereunder; and neither the corporate existence of the Borrower nor the title to office of any Authorized Officer of the Borrower executing this Agreement, the Project Regulatory Agreement, the Interim Loan Note or the Local Governmental Obligations is being contested;

(iv) The authorization, execution and delivery or adoption of this Agreement, the Project Regulatory Agreement, the Interim Loan Note and the Local Governmental Obligations, and performance of each thereof, will not

constitute a breach of, or a default under, any law, ordinance, resolution, agreement, indenture or other instrument to which the Borrower is a party or by which it or any of its properties is bound;

(v) This Agreement and the Loan are, and when executed and delivered the Interim Loan Note and the Local Governmental Obligations will be, valid general obligations of the Borrower, for the payment of which its full faith and credit are and will be pledged, enforceable in accordance with their terms and the terms of the Enabling Act and the Applicable Bond Act, and payable as to principal, premium, if any, and interest (to the extent not paid from other sources) from taxes which may be levied upon all taxable property within the territorial boundaries of the Borrower, subject only to the limit imposed by Chapter 59, Section 21C of the General Laws of the Commonwealth to the extent applicable to the Interim Loan Note and the Local Governmental Obligations.

(b) The Trust represents and warrants to the Borrower as follows:

(i) The Trust has the full legal right and authority under the Enabling Act to adopt and perform the Program Resolution and the Bond Resolution, to authorize, issue, execute, deliver and perform the Bonds and to authorize, execute, deliver and perform this Agreement;

(ii) The Trust has duly and validly adopted the Program Resolution and has duly and validly authorized the execution of this Agreement; at or prior to the Closing Date the Trust will duly and validly adopt the Bond Resolution and duly and validly authorize the execution and delivery of the Bonds; and all approvals, consents and other governmental proceedings necessary for the adoption of the Program Resolution and the Bond Resolution and the execution and delivery and performance of the Bonds and this Agreement or required to make them the legally binding obligations of the Trust that they purport to be in accordance with their terms have been or at or prior to the Closing Date will be obtained or made;

(iii) No action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, public board or body is pending or, to the knowledge of the Authorized Officers of the Trust executing this Agreement, threatened seeking to restrain or enjoin the adoption or performance of the Program Resolution or the Bond Resolution or the execution and delivery and performance of the Bonds or this Agreement or contesting or affecting the validity thereof or hereof; and neither the existence of the Trust nor the title to office of any Trustee of the Trust or any Authorized Officer of the Trust executing this Agreement is being contested;

(iv) The adoption of the Program Resolution and the Bond Resolution and the authorization, execution and delivery of the Bonds and this Agreement, and performance of each thereof, will not constitute a breach of, or a default under, any law, resolution, agreement, indenture or other instrument to which the Trust is a party or by which it is bound; and

(v) The Program Resolution is, and when adopted or executed and delivered the Bond Resolution, this Agreement and the Bonds will be, valid obligations of the Trust, enforceable in accordance with their terms and the terms of the Enabling Act.

Section 3. <u>The Interim Loan</u>. (a) Subject to the availability to the Trust of moneys for such purpose, the Trust (upon not less than ten (10) Business Days prior notice from the Borrower) agrees to provide the Interim Loan to the Borrower to pay or provide for the eligible Costs of the Project prior to its completion and the Closing of the Loan and (i) incurred by the Borrower on and after the date of execution and delivery by the Borrower of this Agreement or (ii) incurred by the Borrower prior to the date of its execution and delivery of this Agreement and either (x) paid by the Borrower from the proceeds of notes or other obligations issued by the Borrower in anticipation of the Loan, or (y) paid by the Borrower from other moneys available to the Borrower under a valid declaration of official intent to reimburse such payment from the proceeds of the Loan. The Interim Loan shall be evidenced by a note (the "Interim Loan Note") issued by the Borrower to the Trust pursuant to the Applicable Bond Act in form and substance satisfactory to the Trust and otherwise as hereinafter provided. The Interim Loan and the Interim Loan Note, when executed and delivered, shall be a general obligation of the Borrower payable as to principal and interest (to the extent

not paid from other sources) from taxes which may be levied upon all taxable property within the territorial boundaries of the Borrower, subject only to the limit imposed by Chapter 59, Section 21C of the General Laws of the Commonwealth to the extent applicable to the Interim Loan.

(b) The Interim Loan Note shall be dated the date of its execution and delivery by the Borrower, shall mature and be payable on the Closing Date for the Loan, without interest thereon, and shall be in principal amount equal to the aggregate amount of proceeds thereof from time to time disbursed to or for the account of the Borrower (as evidenced by a disbursement schedule appearing on the Interim Loan Note), not exceeding the Initial Loan Obligation set forth in Schedule C hereto (or such lesser amount as shall equal the total eligible Costs of the Project approved by the Department at the date of the Closing of the Loan).

(c) Upon execution and delivery by the Borrower of the Interim Loan Note, the Trust shall direct the Program Trustee to establish under the Program Resolution a separate account for the Project designated "Interim Loan Project Account - (Name of Borrower) Project No. _____" (an "Interim Loan Project Account"), to be held and maintained in accordance herewith, with the Federal Act and with the Program Resolution. Subject to the availability to the Trust of moneys for such purpose, the Trust shall deposit or cause the Program Trustee to deposit from time to time in the Interim Loan Project Account amounts (representing proceeds of the Interim Loan) sufficient in amount and time of deposit to satisfy each requisition for payment or reimbursement of Costs of the Project submitted to the Trust by the Borrower as provided in Section 4 hereof.

(d) Notwithstanding anything herein to the contrary, the obligation of the Trust to make and fund the Interim Loan is expressly conditional upon the receipt by the Trust of the following, each in form and substance satisfactory to the Trust:

(i) Copies, certified by an Authorized Officer, of all governmental proceedings of the Borrower authorizing the Loan and the Interim Loan and the execution and delivery of this Agreement, the Project Regulatory Agreement, the Interim Loan Note and the Local Governmental Obligations;

(ii) A certificate or certificates of Authorized Officers of the Borrower confirming the representations and warranties of the Borrower in Section 2 hereof;

(iii) A certificate or certificates of Authorized Officers of the Borrower as to the due authorization, execution and delivery of this Agreement, the Project Regulatory Agreement and the Interim Loan Note and to the further effect that (x) none of the foregoing instruments have been amended or supplemented since their date (except such amendments or supplements which have been approved by the Trust or the Department, as applicable, or which under the terms of the applicable instrument may be executed and delivered or adopted by the Borrower without the consent of the Trust or the Department) or repealed and that each such instrument remains in full force and effect as of such date, and (y) as of such date, no Event of Default or Default, as applicable, and no event which with the passage of time or the giving of notice may become or may be declared to be an Event of Default or a Default, shall have happened and shall be continuing under this Agreement or the Project Regulatory Agreement;

(iv) The Interim Loan Note duly executed by Authorized Officers of the Borrower;

(v) An opinion of Local Bond Counsel to the effect that this Loan Agreement, the Project Regulatory Agreement and the Interim Loan Note, and the execution and delivery thereof, have been duly authorized by the Borrower in accordance with the Applicable Bond Act; this Loan Agreement and the Project Regulatory Agreement have been duly and validly executed and delivered by the Borrower and each constitutes a valid and binding obligation of the Borrower enforceable in accordance with its terms and the terms of the Enabling Act and the Applicable Bond Act; the Interim Loan Note has been duly and validly executed by or on behalf of the Borrower and delivered to or upon the order of the Trust in accordance with this Agreement and the Applicable Bond Act; and the Interim Loan Note constitutes a valid and binding general obligation of the Borrower enforceable in accordance with its terms and payable as to principal, premium, if any, and

not paid from other sources) from taxes which may be levied upon all taxable property within the territorial boundaries of the Borrower, subject only to the limit imposed by Chapter 59, Section 21C of the General Laws of the Commonwealth to the extent applicable to the Interim Loan.

(b) The Interim Loan Note shall be dated the date of its execution and delivery by the Borrower, shall mature and be payable on the Closing Date for the Loan, without interest thereon, and shall be in principal amount equal to the aggregate amount of proceeds thereof from time to time disbursed to or for the account of the Borrower (as evidenced by a disbursement schedule appearing on the Interim Loan Note), not exceeding the Initial Loan Obligation set forth in Schedule C hereto (or such lesser amount as shall equal the total eligible Costs of the Project approved by the Department at the date of the Closing of the Loan).

(c) Upon execution and delivery by the Borrower of the Interim Loan Note, the Trust shall direct the Program Trustee to establish under the Program Resolution a separate account for the Project designated "Interim Loan Project Account - (Name of Borrower) Project No. _____" (an "Interim Loan Project Account"), to be held and maintained in accordance herewith, with the Federal Act and with the Program Resolution. Subject to the availability to the Trust of moneys for such purpose, the Trust shall deposit or cause the Program Trustee to deposit from time to time in the Interim Loan Project Account amounts (representing proceeds of the Interim Loan) sufficient in amount and time of deposit to satisfy each requisition for payment or reimbursement of Costs of the Project submitted to the Trust by the Borrower as provided in Section 4 hereof.

(d) Notwithstanding anything herein to the contrary, the obligation of the Trust to make and fund the Interim Loan is expressly conditional upon the receipt by the Trust of the following, each in form and substance satisfactory to the Trust:

(i) Copies, certified by an Authorized Officer, of all governmental proceedings of the Borrower authorizing the Loan and the Interim Loan and the execution and delivery of this Agreement, the Project Regulatory Agreement, the Interim Loan Note and the Local Governmental Obligations;

(ii) A certificate or certificates of Authorized Officers of the Borrower confirming the representations and warranties of the Borrower in Section 2 hereof;

(iii) A certificate or certificates of Authorized Officers of the Borrower as to the due authorization, execution and delivery of this Agreement, the Project Regulatory Agreement and the Interim Loan Note and to the further effect that (x) none of the foregoing instruments have been amended or supplemented since their date (except such amendments or supplements which have been approved by the Trust or the Department, as applicable, or which under the terms of the applicable instrument may be executed and delivered or adopted by the Borrower without the consent of the Trust or the Department) or repealed and that each such instrument remains in full force and effect as of such date, and (y) as of such date, no Event of Default or Default, as applicable, and no event which with the passage of time or the giving of notice may become or may be declared to be an Event of Default or a Default, shall have happened and shall be continuing under this Agreement or the Project Regulatory Agreement;

(iv) The Interim Loan Note duly executed by Authorized Officers of the Borrower;

(v) An opinion of Local Bond Counsel to the effect that this Loan Agreement, the Project Regulatory Agreement and the Interim Loan Note, and the execution and delivery thereof, have been duly authorized by the Borrower in accordance with the Applicable Bond Act; this Loan Agreement and the Project Regulatory Agreement have been duly and validly executed and delivered by the Borrower and each constitutes a valid and binding obligation of the Borrower enforceable in accordance with its terms and the terms of the Enabling Act and the Applicable Bond Act; the Interim Loan Note has been duly and validly executed by or on behalf of the Borrower and delivered to or upon the order of the Trust in accordance with this Agreement and the Applicable Bond Act; and the Interim Loan Note constitutes a valid and binding general obligation of the Borrower enforceable in accordance with its terms and payable as to principal, premium, if any, and

Section 5. The Loan. (a) On the terms and conditions provided herein and in the Project Regulatory Agreement, the Trust hereby agrees to make the Loan to the Borrower, and the Borrower agrees to accept the Loan, in an aggregate principal amount equal to the outstanding principal amount of the Interim Loan on the Closing Date, after credit for any proceeds of the Interim Loan returned to the Trust on or before such date pursuant to Section 4(d) hereof. On the Closing Date the Trust shall apply the proceeds of the Loan to the payment of the principal of the Interim Loan in full.

(b) On or prior to the Closing Date the Trust shall file the Equity Allocation Certificate with the Program Trustee allocating Equity to the Loan in an amount sufficient to provide Equity Earnings hereunder in the amounts and on the dates set forth in Schedule C attached hereto, as such schedule may be amended from time to time in accordance herewith.

(c) As evidence of the Loan made to the Borrower, the Borrower agrees to issue and deliver to the Trust on the Closing Date the Local Governmental Obligations in aggregate principal amount equal to the principal amount of the Loan. Subject to Section 11 hereof, the Local Governmental Obligations shall be issued in such form as shall be approved by the Trust and shall be payable on the Loan Repayment Dates and in the aggregate amounts as to principal and interest corresponding to the Scheduled Loan Repayments required hereunder with respect to the Loan. Except as otherwise provided in Section 6 hereof, the Loan Principal Obligation, and the corresponding principal amount of the Local Governmental Obligations, shall mature and bear interest in the amounts for each Scheduled Loan Repayment specified in Schedule C attached hereto.

(d) Each Scheduled Loan Repayment made by or for the account of the Borrower hereunder, whether by direct payment to the Trust by the Borrower, or by application of Loan Subsidy Amounts as provided herein, shall satisfy the corresponding obligation of the Borrower to pay the principal and interest, if any, then due on the Local Governmental Obligations as the same become due on the applicable payment dates therefore, and each payment of principal and interest made by the Borrower on the Local Governmental Obligations shall satisfy the obligation of the Borrower to pay the corresponding Loan Repayment then due hereunder.

(e) Except as otherwise provided in the Local Governmental Obligations, the obligation of the Borrower to pay on each Loan Repayment Date the Scheduled Loan Repayments then due in accordance with this Agreement and the principal and interest, if any, then due on the Local Governmental Obligations is a general obligation of the Borrower payable as to principal, premium, if any, and interest (to the extent not paid from other sources) from taxes which may be levied upon all taxable property within the territorial boundaries of the Borrower, subject only to the limit imposed by Chapter 59, Section 21C of the General Laws of the Commonwealth to the extent applicable to the Local Governmental Obligations.

Section 6. Loan Repayments. (a) Except as otherwise provided in this Section 6, the Loan Principal Obligation shall be repaid by the Borrower, and Scheduled Loan Repayments on account of such Loan Principal Obligation and interest, if any, thereon shall be payable by the Borrower, on the Loan Repayment Dates and in the amounts set forth in Schedule C attached hereto. All Loan Repayments payable on the Loan, and all Loan Subsidy Amounts, if any, applied on account of such Loan Repayments as hereinafter provided, shall be received and applied solely as permitted by the Federal Act and as provided herein, in the Bond Resolution and the Program Resolution. All Loan Repayments made by the Borrower hereunder, and all Loan Subsidy Amounts, if any, applied on account of such Loan Repayments, shall be applied, first, to the interest, if any, then due and payable on the Loan and, second, to the principal amount of the Loan then due and payable hereunder. Any portion of a Loan Repayment not paid in full when due shall bear interest hereunder until paid at twelve percent (12%) per annum.

(b) Notwithstanding the provisions of Paragraph (a) of this Section 6, but subject to the provisions of Paragraphs (c), (e) and (i) of this section, on each Loan Repayment Date the Trust shall apply, and the Borrower shall receive, as a credit against the Scheduled Loan Repayment then payable on the Loan, the Loan Subsidy Amounts allocable to such Loan Repayment Date set forth in Schedule C attached hereto, as such schedule may be amended from time to time as provided in this Section 6. The Trust shall provide the

Borrower with written notice of each Loan Repayment due hereunder not less than ten (10) Business Days in advance of the applicable Loan Repayment Date (provided failure by the Trust to provide such notice or any defect therein shall not diminish the obligation of the Borrower to pay such Loan Repayment in the amount and at the time provided herein). Not less than five (5) Business Days prior to each Loan Repayment Date, the Borrower shall pay to the Bond Trustee for the account of the Trust, by wire transfer to such account or otherwise in such manner as the Trust may from time to time designate to the Borrower, the Net Loan Repayment then due on the Loan set forth in Schedule C attached hereto, as such schedule may be amended from time to time as provided in this Section 6. Subject to Paragraphs (c), (e) and (i) of this Section 6, payment on or before a Loan Repayment Date of the Net Loan Repayment payable on such date as aforesaid shall constitute full satisfaction of the obligation of the Borrower to pay on such Loan Repayment Date the Scheduled Loan Repayment otherwise payable on such date in accordance with Paragraph (a) of this Section 6. The Trust and the Borrower acknowledge and agree, subject to Paragraph (j) of this Section 6, that the schedule of Net Loan Repayments set forth in Schedule C hereto results in the Loan, after consideration of the Loan Subsidy Amounts to be applied to the obligations of the Borrower thereon, being the financial equivalent of a grant to the Borrower in an amount not less than the percentage of the eligible Project Costs to be funded by the Loan equal to the Grant Equivalency Percentage set forth in Schedule A hereto.

(c) The Borrower acknowledges that the ability of the Trust to establish the schedule of Net Loan Repayments for the Loan set forth in Schedule C hereto is dependent, in part, upon the application of Equity Earnings to the payment of debt service on the Bonds as provided in the Bond Resolution and in the amounts and at the times set forth in the Equity Allocation Certificate. The Trust and the Borrower further acknowledge that the Borrower is, and assent to the Borrower's status as, a third-party beneficiary with respect to all Investment Obligations from which Equity Earnings allocable to the Loan are to be derived by the Trust pursuant to the Bond Resolution and the Program Resolution. The Borrower further acknowledges that if (x) the obligor on any Investment Obligation from which the Trust expects to derive Equity Earnings allocable to the Loan shall default in any payment due on such Investment Obligation or (y) an Event of Default specified in Section 9(a)(i) hereof shall occur and be continuing and amounts allocable to the Loan held under the Bond Resolution or the Program Resolution are applied by the Bond Trustee to pay all or a portion of the principal or redemption price of, and interest on, the Bonds that would otherwise have been paid through application as provided in the Bond Resolution of the Loan Repayments due and unpaid hereunder, such default or application may reduce the amount of Equity Earnings thereafter available under the Bond Resolution to be applied to pay debt service on the Bonds. If at any time the Trust shall determine that a deficiency will exist in the Debt Service Fund on a Loan Repayment Date due to a reduction in Equity Earnings upon the occurrence of either of the foregoing circumstances, the Trust shall promptly furnish the Borrower with written notice of such deficiency and the resulting increase in the Net Loan Repayments payable hereunder and shall amend Schedule C hereto to reflect such increase. The amount of any increase in any Net Loan Repayment shall be paid by the Borrower on the scheduled Loan Repayment Date therefore (as shown in Schedule C hereto) or, if later, within five (5) Business Days of receipt by the Borrower of notice of an increase in such Loan Repayment.

(d) If Contract Assistance Payments are expected to be received by the Trust with respect to the Loan (as indicated in Schedule C attached hereto), the Trust and the Borrower acknowledge that the Borrower has entered into this Agreement in part in reliance upon the undertakings of the Commonwealth provided in the Commonwealth Assistance Contract to provide such Contract Assistance Payments to the Trust to be applied as provided in the Bond Resolution to pay a portion of the debt service payable on the Bonds and thereby to reduce the Scheduled Loan Repayments otherwise payable by the Borrower on the Loan as provided herein. In such a case, the Trust and the Borrower further acknowledge that the Borrower is, and assent to the Borrower's status as, a third-party beneficiary with respect to such provisions of the Commonwealth Assistance Contract, and the Trust represents and warrants to the Borrower that the Commonwealth Assistance Contract provides (or on or before the Closing Date will provide) for the payment to the Trust by the Commonwealth of Contract Assistance Payments allocable to the Loan in the amounts and payable on or before the dates set forth in Schedule C attached hereto. The Trust further warrants and agrees that so long as the Loan is outstanding all Contract Assistance Payments, if any, payable on account of the Loan under the Commonwealth Assistance Contract shall be applied by the Trust solely to the provision of Loan Subsidy Amounts hereunder or otherwise as provided herein and in the Bond Resolution.

(e) Notwithstanding the foregoing provisions of this Section 6, the Borrower expressly acknowledges that any obligation of the Trust to apply Contract Assistance Payments as provided herein is limited solely to the Contract Assistance Payments allocable to the Loan actually paid to the Trust by the Commonwealth. The Trust agrees to comply with the provisions of the Commonwealth Assistance Contract as they pertain to the Trust and to make timely demand to the Commonwealth for the payment of any Contract Assistance Payments allocable to the Loan thereunder at the times and in the manner provided therein and herein. The Trust further agrees to diligently enforce the provisions of the Commonwealth Assistance Contract and to pursue any and all remedies available to it thereunder and under the Enabling Act upon any failure of the Commonwealth to comply with the provisions of the Commonwealth Assistance Contract. Notwithstanding the foregoing, any failure by the Commonwealth to provide Contract Assistance Payments (if any) in the amounts and at the times contemplated by this Agreement and the Commonwealth Assistance Contract shall not diminish the obligation of the Borrower to repay the Loan and the interest, if any, thereon in the amounts and at the times provided herein and in the Local Governmental Obligations. If at any time the Trust shall determine that a deficiency will exist in the Debt Service Fund on a Loan Repayment Date due to a default by the Commonwealth under the Commonwealth Assistance Contract, the Trust shall promptly furnish the Borrower with written notice of such deficiency and the resulting increase in the Net Loan Repayment next payable hereunder and shall amend Schedule Chereto to reflect such increase. The amount of any increase in such Net Loan Repayment shall be paid by the Borrower on the scheduled Loan Repayment Date therefore (as shown on Schedule C hereto) or, if later, within five (5) Business Days of receipt by the Borrower of notice of such increase as aforesaid.

(f) When and to the extent that any default described in Paragraph (c) of this Section 6 by the obligor on any Investment Obligation shall be cured, or when and to the extent that any default described in Paragraph (e) of this Section 6 by the Commonwealth shall be cured, and, in either case, when the Trust or the Borrower shall recover amounts from such obligor or the Commonwealth on account of such default which amounts are not otherwise required to be applied to the payment of debt service on the Bonds in accordance with the Bond Resolution, the amounts so received (net of any costs to the Trust in recovering the same including reasonable attorneys fees) shall be promptly paid by the Trust to the Borrower (or retained by the Borrower, as the case may be) to the extent of any increased Net Loan Repayments made by the Borrower on account of such defaults as provided in Paragraph (c) or (e) of this Section 6, as applicable.

(g) The Borrower further acknowledges that the Department, in the exercise of its audit procedures under the Project Regulatory Agreement, may reclassify certain Project Costs paid from amounts deposited in the Interim Loan Project Account as ineligible for financial assistance under Section 6 of the Enabling Act. In such event, unless the Borrower shall elect to repay such amount to the Interim Loan Project Account as hereinafter provided, on and after the date of such determination by the Department, Loan Subsidy Amounts shall cease to be applied hereunder on that portion of the Loan Principal Obligation (determined on a Pro-Rata Basis as hereinafter defined) equal to the amount of such ineligible Project Costs. As used in this Paragraph (g), the term "Pro-Rata Basis" means the portion of each Scheduled Loan Repayment allocable to the principal amount of the Loan payable hereunder subsequent to the date of a determination by the Department as described in this Paragraph (g) as is equal, as nearly as practicable, to the ratio by which the amount of ineligible Project Costs paid from the applicable Project Account bears to the total Loan Principal Obligation then outstanding. Upon any such occurrence the Trust shall recalculate the Loan Subsidy Amounts, if any, thereafter available with respect to the Loan, and the Loan Repayments payable thereon, shall certify such amounts to the Borrower and shall amend Schedule C attached hereto to reflect the reduced Loan Subsidy Amounts, if any, and the increased Loan Repayments thereafter payable hereunder, and shall surrender the Local Governmental Obligations to the Borrower in exchange for amended or substitute Local Governmental Obligations reflecting such change in Loan Repayments. Notwithstanding the foregoing, within thirty (30) Business Days of receipt by the Borrower from the Department or the Trust of written notice that an amount of Project Costs paid from the Interim Loan Project Account has been determined by the Department pursuant to the Regulatory Agreement to be ineligible for Loan Subsidy Amounts hereunder the Borrower may (and shall upon demand of the Department with respect to any such amount determined by the Department to be ineligible for funding under the Federal Act) repay such amount to the Trust for redeposit in the Interim Loan Project Account and the amount so repaid shall be deemed to not have been disbursed from the Interim Loan Project Account for ineligible Project Costs for purposes of this Paragraph

(g). Unless then or thereafter applied to eligible Project Costs in accordance with Section 4 hereof, such amount shall be applied as provided in Section 4(d) hereof.

(h) Notwithstanding anything herein or in the Project Regulatory Agreement to the contrary, all amounts received by the Borrower on or after the Closing Date in repayment or prepayment of the obligations of homeowners under underlying betterment agreements made in connection with the Project shall be applied by the Borrower either (i) to assist eligible homeowners to upgrade failing septic systems and otherwise to comply with Title 5 through additional betterment agreements with homeowners, or (ii) to pay or provide for all or a portion of the Loan Repayments due on the Loan hereunder or (iii) to prepay all or a portion of the Loan Principal Obligation as provided in Section 7(b) hereof.

(i) Notwithstanding any provision of this Agreement to the contrary, the Borrower and the Trust acknowledge and agree that this Agreement has been executed and delivered by the parties hereto prior to the sale of the Bonds incorporating in Schedule C hereto a schedule of Loan Repayments calculated on the basis of estimated interest rates on the Bonds and estimated Loan Subsidy Amounts based thereon. On the Closing Date for the Loan the Trust will amend Schedule C hereto (and deliver to the Borrower a copy thereof) to incorporate a schedule of Loan Repayments calculated on the basis of the actual interest rates on the Bonds determined upon their sale and a final schedule of Loan Subsidy Amounts, provided that (i) the first Loan Repayment Date on which the Borrower will be required to make a Loan Repayment to the Trust hereunder will be no earlier than the August 1 next following the Closing Date, and (ii) the Grant Equivalency Percentage of the Loan calculated on the basis of such final schedule of Loan Repayments shall be no less than the Grant Equivalency Percentage set forth in Schedule A hereto.

Section 7. Loan Prepayments. (a) Except as provided in this Section 7, the Loan Principal Obligation shall not be subject to prepayment by the Borrower prior to maturity without the prior written consent of the Trust.

(b) The Loan Principal Obligation, and the corresponding principal amount of the Local Governmental Obligations, shall be subject to prepayment at the option of the Borrower in whole or in part upon not less than sixty (60) days' prior written notice to the Trust at any time on and after that date on which a corresponding principal amount of Bonds is subject to redemption at a prepayment price equal to the Loan Principal Obligation so prepaid, plus interest, if any, accrued to the date of prepayment, plus an amount equal to any costs of the Trust (including without limitation redemption premium, if any, and interest payable on the Bonds net of any Loan Subsidy Amounts available to the Trust to pay the same) incurred in connection with any corresponding redemption of a principal amount of Bonds allocable to the Loan.

(c) Loan Subsidy Amounts available hereunder shall not be subject to acceleration upon prepayment of the Loan and no Loan Subsidy Amounts not then or theretofore payable hereunder shall be available hereunder to be applied to any such prepayment.

Section 8. Closing. The obligation of the Trust to fund the Loan on the Closing Date is expressly conditional upon the receipt by the Trust on or before the Closing Date of the following, each in form and substance satisfactory to the Trust:

(i) A certificate or certificates of Authorized Officers of the Borrower confirming as of the Closing Date the representations and warranties of the Borrower in Section 2 hereof;

(ii) A certificate of Authorized Officers of the Borrower as to the due authorization, execution and delivery of the Local Governmental Obligations and to the effect that (x) this Agreement, the Project Regulatory Agreement and the Local Governmental Obligations have not been amended or supplemented since their date (except such amendments or supplements which have been approved by the Trust or the Department, as applicable, or which under the terms of the applicable instrument may be executed and delivered or adopted by the Borrower without the consent of the Trust or the Department) or repealed and that each such instrument remains in full force and effect as of the Closing Date, and (y) as of the Closing Date, no Event of

Default or Default, as applicable, and no event which with the passage of time or the giving of notice may become or may be declared to be an Event of Default or a Default, shall have happened and shall be continuing under this Agreement or the Project Regulatory Agreement;

(iii) An opinion of Local Bond Counsel to the effect that the Local Governmental Obligations, and the execution and delivery thereof, have been duly authorized by the Borrower in accordance with the Applicable Bond Act; the Local Governmental Obligations have been duly and validly executed by or on behalf of the Borrower and delivered to or upon the order of the Trust in accordance with this Agreement and the Applicable Bond Act; and the Local Governmental Obligations constitute valid and binding general obligations of the Borrower enforceable in accordance with their terms and payable as to principal, premium, if any, and interest (to the extent not paid from other sources) from taxes which may be levied upon all taxable property within the territorial boundaries of the Borrower, subject only to the limit imposed by Chapter 59, Section 21C of the General Laws of the Commonwealth to the extent applicable to the Local Governmental Obligations (in rendering the foregoing opinion, such counsel may take an exception on account of bankruptcy, insolvency and other laws affecting creditors' rights generally and to the exercise of judicial discretion in accordance with general equitable principles);

(iv) The Local Governmental Obligations, in such denominations and registered to such registered owners, as the Trust shall designate pursuant to Section 11 hereof; and

(v) Such further instruments, certificates and opinions as the Trust or its counsel may reasonably request to confirm as of the Closing Date the truth and accuracy of the statements made herein by the Borrower and compliance as of the Closing Date by the Borrower with the provisions hereof and of the Project Regulatory Agreement, the Enabling Act, the Applicable Bond Act and the Federal Act.

Section 9. Particular Covenants of the Borrower. The Borrower covenants and agrees as follows:

(a) The Borrower is duly authorized under the Enabling Act, the Applicable Bond Act and all other applicable law to authorize the execution and delivery of this Agreement, the Project Regulatory Agreement, the Interim Loan Note and the Local Governmental Obligations, to accept the Loan, to undertake the Project and to perform and consummate all transactions contemplated by the foregoing. For so long as the Loan shall be outstanding, the Borrower shall comply with the provisions hereof and the Project Regulatory Agreement and all provisions of law applicable to the Loan, the Project, the Interim Loan Note and the Local Governmental Obligations, including without limitation the Enabling Act, the Applicable Bond Act, the Federal Act and the DEP Regulations, and shall take all actions necessary to fulfill its obligations hereunder and under any of the foregoing.

(b) The Borrower shall apply the proceeds of the Interim Loan solely to the payment or reimbursement of Project Costs, or to the refinancing of the same as provided in the Project Regulatory Agreement, or as otherwise provided herein and in the Project Regulatory Agreement.

(c) So long as any Bonds shall be outstanding and unpaid, the Borrower agrees that it shall not take, or permit to be taken, any action or actions that would cause any Bond to be an "arbitrage bond" within the meaning of Section 148 of the Code or a "private activity bond" within the meaning of Section 141(a) of the Code or that would cause any Bond to be "federally guaranteed" within the meaning of Section 149(b) of the Code, or that would otherwise cause any amounts payable with respect to the Bonds to become included in gross income for federal income tax purposes; the Borrower further agrees that it shall take all actions, and shall maintain all records and accounts, required by any provision of applicable law, necessary to comply with, or necessary to permit the Trust to comply with, the provisions of Section 148(f) of the Code.

(d) For so long as the Interim Loan or the Loan shall be outstanding, the Borrower shall maintain all records and accounts pertaining to the Interim Loan and the Loan and the Project for such period and as otherwise required by the Federal Act, the DEP Regulations and the Project Regulatory Agreement and shall furnish to the Trust and the Department all reports thereon at the times and in the form required by the

Federal Act, the DEP Regulations and the Project Regulatory Agreement or as otherwise reasonably requested by the Trust or the Department. The Borrower shall permit the Trust or any party designated by it upon reasonable prior notice to the Borrower to make copies of any accounts, books and records of the Borrower pertaining to the Project, the Interim Loan, the Loan, the Interim Loan Note or the Local Governmental Obligations.

(e) If any Event of Default described in clause (i) of Paragraph (a) of Section 9 hereof shall occur and be continuing, the Borrower shall promptly upon request of the Trust provide such information to the Trust as shall be necessary for the Trust to exercise the rights provided in Section 11 of the Enabling Act with respect to the Local Aid Distributions of the Borrower.

(f) For so long as the Interim Loan or the Loan shall be outstanding, the Borrower shall duly observe and comply with the additional covenants and conditions, if any, set forth in Schedule B attached hereto.

Section 10. Defaults and Remedies. (a) The occurrence of any of the following events shall constitute, and is herein defined to be, an Event of Default under this Agreement, the Interim Loan Note and the Local Governmental Obligations:

(i) if the Borrower shall fail to pay when due all or any part of any Loan Repayment payable hereunder; provided that a failure by the Borrower to pay the amount of any increase in any Net Loan Repayment payable hereunder as described in Paragraph 6(c) and in Paragraph 6(e) hereof shall not constitute an Event of Default hereunder unless such failure shall continue for a period of five (5) Business Days after receipt by the Borrower from the Trust of written notice of such increase as provided in Paragraph 6(c) or Paragraph 6(e), as applicable;

(ii) if the Borrower shall fail to perform and observe any other covenant, agreement or condition on its part provided in this Agreement or in the Interim Loan Note or the Local Governmental Obligations and such failure shall continue for a period of thirty (30) days after written notice thereof shall be given to the Borrower by the Trust; provided if such failure cannot be remedied within such thirty (30) day period, it shall not constitute an Event of Default hereunder if corrective action satisfactory to the Trust is instituted by the Borrower within such period and diligently pursued until the failure is remedied;

(iii) if any representation or warranty made by or on behalf of the Borrower in this Agreement shall prove to have been incorrect or to be misleading in any material respect as and when made;

(iv) if (x) an order, judgment or decree is entered by a court of competent jurisdiction (a) appointing a receiver, trustee, or liquidator for the Borrower, (b) granting relief in involuntary proceedings with respect to the Borrower under the federal bankruptcy act, or (c) assuming custody or control of the Borrower under the provision of any law for the relief of debtors, and the order, judgment or decree is not set aside or stayed within sixty (60) days from the date of entry of the order, judgment or decree or (y) the Borrower (a) admits in writing its inability to pay its debts generally as they become due, (b) commences voluntary proceedings in bankruptcy or seeking a composition of indebtedness, (c) makes an assignment for the benefit of its creditors, (d) consents to the assumption by any court of competent jurisdiction under any lawfor the relief of debtors of custody or control of the Borrower or (z) legislation shall be enacted by the Commonwealth (a) appointing a receiver or trustee for the Borrower, or (b) assuming custody or control or the Borrower, or (c) providing for a moratorium upon the payment of the principal of or interest on the Interim Loan or the Loan;

(v) if the Borrower shall fail to pay when due (whether at maturity or upon redemption or acceleration or otherwise) any principal of or interest on any indebtedness of the Borrower for borrowed money, other than the Interim Loan, the Loan, the Interim Loan Note and the Local Governmental Obligations and indebtedness described in Chapter 40D of the General Laws of the Commonwealth; and

(vi) if a Default shall occur under the Project Regulatory Agreement (as defined therein) and the Department shall request that the Trust declare an Event of Default under this Agreement.

(b) In addition to its other remedies provided herein, if an Event of Default specified in clause (i) or clause (iv) of Paragraph (a) of this Section 9 shall occur and be continuing, the Trust may proceed to enforce its rights hereunder and under the Interim Loan Note or the Local Governmental Obligations by exercise of the following remedies in such order of priority as the Trust shall determine in its discretion:

(i) the Trust may apply to such default any and all Loan Subsidy Amounts allocable to the Loan then or thereafter held or received by the Trust;

(ii) the Trust may exercise the rights provided in Section 11 of the Enabling Act with respect to the Local Aid Distributions of the Borrower;

(iii) the Trust may apply to such default any or all amounts allocable to the Borrower then on deposit in the Interim Loan Project Account; or

(iv) by notice to the Borrower the Trust may declare the Loan Principal Obligation of the Interim Loan or the Loan, as applicable, and all Scheduled Loan Repayments payable on the Loan, and the corresponding principal amount of the Interim Loan Note or the Local Governmental Obligations, as applicable, to be immediately due and payable and, upon such declaration, the Loan Principal Obligation and all interest, if any, accrued thereon shall be and become immediately due and payable, anything herein or in the Interim Loan Note or the Local Governmental Obligations to the contrary notwithstanding; provided that upon any such declaration there shall be no acceleration in any Loan Subsidy Amounts payable hereunder or in accordance herewith, all such Loan Subsidy Amounts to be payable thereafter solely in accordance with the schedule therefore set forth in Schedule C hereto, as amended from time to time in accordance herewith, and then only to the extent provided in this Agreement.

(c) If an Event of Default specified in clause (vi) of Paragraph (a) of this Section 9 shall occur and be continuing, the Trust shall, if directed by the Department, exercise on behalf of the Department any and all remedies available to the Department upon a Default under the applicable Project Regulatory Agreement.

(d) Notwithstanding anything herein to the contrary, if any Event of Default hereunder shall occur and be continuing, the Trust may proceed to protect its rights hereunder, and may seek to compel compliance by the Borrower with the terms and provisions hereof and of the Interim Loan Noteand the Local Governmental Obligations, by suit or suits in equity or at law, for the specific performance of any covenant, term or condition hereof, or in aid of the execution of any power herein granted, and, except as herein limited, may exercise any other right or remedy upon such default as may be granted to the Trust under the Enabling Act, the Applicable Bond Act or under any other applicable provision of law.

(e) During the continuance of an Event of Default, the Trust shall apply all amounts received upon the exercise of its rights and remedies hereunder as follows and in the following order:

(i) to the payment of the reasonable and proper charges (including attorneys' fees) of the Trust and the Department incurred in the exercise of any right or remedy hereunder or under the Project Regulatory Agreement;

(ii) to the payment and satisfaction of all interest then due and unpaid hereunder upon any defaulted Loan Repayments as provided in Section 6(a) hereof; and

(iii) to the payment and satisfaction of the Interim Loan or to the payment and satisfaction of all Loan Repayments then due and unpaid hereunder, as applicable, as such Loan Repayments may be adjusted as provided in Section 6 hereof, and, if the amount available is not sufficient to pay all Loan Repayments then

due and payable hereunder, first to the payment of the portion of the Loan Repayments due and unpaid representing interest on the Loan and second to the portion of the Loan Repayments due and unpaid representing the principal of the Loan and, in either case, ratably in order of the due dates thereof.

(f) No remedy conferred upon or reserved to the Trust is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement or now or hereafter existing at law or in equity. No delay or omission to exercise any right, remedy or power accruing upon any Event of Default shall impair any such right, remedy or power or shall be construed to be a waiver thereof, but any such right, remedy or power may be exercised from time to time and as often as may be deemed expedient.

Section 11. Assignment, Transfer and Exchange. (a) The Borrower acknowledges that the Trust will pledge and assign this Agreement or all or part of its rights hereunder, and the right, title and interest of the Trust in and to all or part of the Loan and Loan Repayments hereunder to the Bond Trustee in accordance with the Bond Resolution, and in connection with any such assignment may transfer to the Bond Trustee the Loan and any or all Loan Repayments and the Local Governmental Obligations attributable thereto, and the Borrower by its execution and delivery of this Agreement expressly consents to any such assignment and transfer.

(b) In connection with any assignment by the Trust provided herein, the Borrower further agrees to deliver the Local Governmental Obligations to the Trust on the Closing Date, or on any date thereafter when Local Governmental Obligations may be assigned, exchanged or transferred in accordance with their terms and the terms of this Agreement, in such denominations, registered to such owners, in one or more series, and otherwise in such form and tenor as the Trust may request to evidence the Loan made, and the Loan Repayments payable, hereunder, separately or as a whole, or in part one or in part the other, or in any combination thereof, provided that the aggregate principal amount payable on the Local Governmental Obligations shall not exceed the Loan Principal Obligation payable hereunder on the Loan plus interest, if any, accrued and to accrue thereon as provided therein and herein.

(c) Except as hereinabove provided, so long as any Event of Default shall not have occurred hereunder and be continuing, the Trust shall not assign this Agreement or the Interim Loan or the Loan made hereby, or transfer or sell the Interim Loan Note or the Local Governmental Obligations, without the prior written approval of the Borrower.

(d) The Borrower may not assign this Agreement or the Interim Loan, the Loan, the Interim Loan Note or the Local Governmental Obligations, or any of its rights or obligations hereunder or thereunder, without the express prior written consent of the Trust.

Section 12. Action by Parties. Where this Agreement shall provide for any direction, consent, approval or other action to be taken or made by the Borrower, the Trust or the Department hereunder, such direction, consent, approval or other action shall be sufficiently taken or made for all purposes of this Agreement if taken or made by Authorized Officers of the Borrower, the Trust or the Department, as the case may be.

Section 13. Notices. All notices, consents, certificates and other communications hereunder shall be sufficiently given when delivered by hand or courier or photocopied or mailed by registered or certified mail, postage prepaid, addressed to the Addresses for Notice set forth in Schedule A attached hereto or to such further or different address as any of the parties hereto or the Department may designate in writing to the other notice parties indicated in said Schedule A.

Section 14. Severability. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

Section 15. No Right of Set-Off. By their execution and delivery of this Agreement, the Trust and the Borrower agree that, except as otherwise provided in this Agreement, neither the Trust nor the Borrower shall have any right to set-off and apply any amount at any time held, and other indebtedness at any time owing, by the Trust or the Commonwealth to or for the account of the Borrower, or by the Borrower to or for the account of the Trust or the Commonwealth, as applicable, against any and all of the obligations of the Borrower or the Trust, as applicable, now or hereinafter existing under this Agreement.

Section 16. Amendment of Agreement and Other Instruments. Except as expressly provided herein with respect to the amendment of Schedule A, Schedule B and Schedule C hereto, this Agreement, the Interim Loan Note and the Local Governmental Obligations may not be amended, modified or changed in any respect except in writing signed by the parties hereto. No such amendment, modification or change of this Agreement which, in the reasonable opinion of the Department (expressed in a certificate of an Authorized Officer of the Department delivered to the Trust prior to the execution and delivery of such amendment, modification and change by the Trust) materially and adversely affects the rights and obligations of the Department under the Project Regulatory Agreement, shall be effective until the Department shall have consented in writing thereto. The Trust shall deliver a copy of any such proposed amendment, modification or change of this Agreement to the Department at least ten (10) days prior to the execution and delivery thereof by the Trust.

Section 17. Term. The term of this Agreement shall be from the date of execution and delivery hereof by the parties hereto until all Scheduled Loan Repayments payable hereunder shall have been paid in full or provision for the payment thereof shall have been duly provided for in accordance with this Section 17.

Section 18. Execution in Counterparts. This Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Section 19. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth.

Section 20. Further Assurances. The Borrower shall, at the request of the Trust, authorize, execute, acknowledge and deliver such further resolutions, conveyances, transfers, assurances and other instruments as may be necessary or desirable for better assuring, conveying, granting, assigning and confirming the rights, covenants and agreements granted or made or intended to be granted or made by this Agreement, the Interim Loan Note and the Local Governmental Obligations.

Section 21. Prior Agreements. Except as otherwise provided herein, this Agreement merges and supersedes all prior negotiations, representations, and agreements between the parties hereto relating to the subject matter hereof and constitutes the entire agreement between the parties hereto in respect hereof.

IN WITNESS WHEREOF, the Trust and the Borrower have caused this Agreement to be executed by their duly Authorized Officers the day and year first above written.

MASSACHUSETTS WATER POLLUTION
ABATEMENT TRUST

By________________________________
Authorized Officer
Title: Chief Financial Officer

BORROWER

By__________________________________
Authorized Officer
Title:

A. Project Regulatory Agreement - Number and Date: T5-97-1019-B

B. Applicable Bond Act: M.G.L. Ch. 111, Sec. 127B½ and M.G.L. Ch 29C (the "Project")

C: Authorized Officers:

a) Of the Trust: The Chairman and Vice Chairman of the Trust (and each designee thereof pursuant to M.G.L. Ch.30 §6A) and the Executive Director and Treasurer of the Trust.

b) Of the Borrower: Mr. Dale Zacamy, Treasurer
Town of Wareham
54 Marion Road
Wareham, MA 02571

c) Of the Department: The Commissioner, the Deputy Commissioner and the Deputy Assistant Commissioner for Financial and Construction Management of the Department.

D. Grant Equivalency Percentage: 50%

E. Closing Date: December 31, 2003

F. Addresses for Notices:

To the Trust: Massachusetts Water Pollution Abatement Trust
1 Ashburton Place
12th Floor
Boston, MA 02108
Attention: Executive Director

To the Borrower: Mr. Dale Zacamy, Treasurer
Town of Wareham
54 Marion Road
Wareham, MA 02571

To the Department: Department of Environmental Protection
One Winter Street
2nd Floor
Boston, MA 02108
Attention: Commissioner

Initial Loan
Obligation: $____________

Schedule of Loan Repayments

Date	Scheduled Loan Repayments			Loan Subsidy Amounts			Net Loan Repayments		
	Principal	Interest	Total	Equity Earnings	Contract Assistance Payments	Total	Principal	Interest	Total

COMMUNITY SEPTIC MANAGEMENT PROGRAM

SAMPLE

LOAN QUESTIONNAIRE

SAMPLE

Note: The following information must be provided to the Trust with respect to the Borrower's proposed community septic management loan program under M.G.L. Ch. 111, Sec. 127B 1/2 and M.G.L. Ch. 29C (the "Project"). All questions should be completed other than those which are not applicable to the Borrower, the Loan or the Project (if such is the case, indicate "NA"). If certain information requested is unavailable attach an explanation.

If you have any questions on this form please contact your bond counsel or the Trust at 367-9333, Attention: Nancy E. Parrillo, Chief Financial Officer (Extension 508).

* * *

A. GENERAL

1. Name of Local Governmental Unit: Town of Leicester
2. Chief Financial Officer:

   Name:
   Address:

   Telephone:
   Fax:
   E-mail Address:

3. Bond Counsel:
   Attention:
   Address:

   Telephone:
   Fax:

4. Financial Advisor:
   Attention:
   Address:

   Telephone:
   Fax:

5. Wire Transfer Instructions for Loan Disbursements:

   Bank:
   Account No.
   ABA No.

B. THE PROJECT

1. This Questionnaire pertains to a Loan to be issued by the Massachusetts Water Pollution Abatement Trust to finance or refinance Eligible Costs of the community septic management loan program identified in the following Project Approval Certificate and Regulatory Agreement between the Borrower and the Department of Environmental Protection:

PAC/PRA No. ___________

Option: (1)___________ (2)__________

Initial Loan Obligation: $_____________

2. Description of the Project: For purposes of this Questionnaire the Trust assumes that the Borrower's Project is solely the implementation of a community septic management loan program to assist owner-occupants of residential (1 to 4 family) real property pursuant to betterment agreements to upgrade failing septic systems to comply with the requirements of 310 CMR 15.000 et seq. ("Title 5"). The Trust also assumes that the Borrower will implement the Project in accordance with Title 5 and the Department's approval of the Project and its Community Septic Management Program Description and Requirements. If the Project includes any other components or undertakings by the Borrower not described by the foregoing, or the improvement of any other kind of property, please explain:

3. Have any loan/betterment disbursements ("Project Costs") to homeowners been made/ incurred to date? Yes ______ No _______

(a) If Yes, provide details regarding number of betterment agreements, amount disbursed, etc.

(b) If No, state estimated date of commencement of loan/betterment disbursements to homeowners: __________________

4. If loan/betterment disbursements have commenced:

(a) To date, what has been the source of funds to pay Project Costs (check all that apply):

(i)	BAN proceeds	_________
(ii)	Revenue cash	_________
(iii)	Bond proceeds	_________
(iv)	Other (specify)	_________

(b) State date of first payment of Project Costs:

(c) If any Project Costs were paid from revenue cash (even if later reimbursed from borrowed funds), indicate:

(i) Date the Borrower took some form of official action indicating intent to borrow funds to reimburse the Borrower for these Project Costs _____________________ _____________. (Please attach a copy of the vote, resolution or other instrument indicating such official action).

(ii)Purpose, amounts and dates of expenditures, if any, made before official action:

Purpose	Amount	Date

5. Will any portion of the proceeds of the Loan be used to pay (or reimburse the Borrower for the payment of) non-capitalized costs (e.g., salaries, utilities, supplies or other administrative costs including interest on debt)? Yes _____ No _____. If Yes, describe the nature and amount of these costs.

C. REFINANCING OF INDEBTEDNESS

1. Will any proceeds of the Loan be applied to repay any outstanding BAN's or other temporary indebtedness with respect to the Project other than an Interim Loan from the Trust? Yes _____ No _____. Will any proceeds of the Loan be applied to refund, refinance or otherwise pay debt service on any bonds or other long-term indebtedness with respect to the Project? Yes _____ No _____. (If the answer to both of the foregoing questions is No, skip to Paragraph (D) below.)

2. Are there any outstanding BAN's or other temporary indebtedness that will be repaid from proceeds of the Loan? Yes _____ No _____. If Yes, provide the following information separately for each issue of BAN's or other temporary debt to be repaid in whole or in part from the proceeds of the Loan:

(a) Principal amount outstanding:

(b) Issue date (original issue date in the case of temporary debt issued to repay prior temporary debt):

(c) Maturity Date:

(d)Is the temporary debt prepayable prior to maturity? Yes _____ No _____. If Yes, when?

(e) Was the temporary debt issued for purposes in addition to the payment of costs of the Project? Yes _____ No _____. If Yes, what portion of the principal amount of the debt was issued for Project Costs?

(f) If the principal amount of the temporary debt outstanding issued to pay Project Costs is greater than the Initial Loan Obligation of the Loan, what is source of funds to repay the remaining temporary debt?

(g) Do any proceeds of the temporary debt remain unexpended? Yes _____ No _____ If Yes, how much?

(h) To what use or purpose have investment earnings on the proceeds of the temporary debt been applied? Debt Service _______________; Project Costs _______________;

Other (specify): ____________________. What is the total estimated amount of investment earnings?

3. Has any long-term indebtedness (bonds, loans, etc.) been issued or incurred to pay Project Costs? Yes _____ No _____. If Yes, does the Borrower expect to refund or refinance any portion of this indebtedness with proceeds of the Loan? Yes ____ No _____. If Yes, provide the following information separately for each issue of bonds or other long-term indebtedness to be refunded or refinanced:

(a) Principal amount outstanding:

(b) Issue date (original issue date in the case of a series of refundings):

(c) Maturity dates and interest rates (attach schedule):

(d) Redemption provisions including optional and mandatory (i.e., sinking fund) redemption dates and amounts and redemption prices (attach schedule):

(e) Were the bonds or other long-term debt issued for purposes in addition to the payment of costs of the Project (or repayment of BAN's issued for that purpose)? Yes _____ No _____. If Yes, what portion of the principal amount of the debt outstanding was issued for Project Costs?

(f) Do any proceeds of the bonds or other long-term debts remain unexpended? Yes _____ No _____. If Yes, how much?

(g) Were any proceeds of the bonds or other long-term debt invested following issuance? Yes _____ No _____. If Yes, to what purpose were the earnings applied? Debt Service ______________; Project Costs ____________; Other (specify): ________________. What is the total estimated amount of investment earnings?

D. LITIGATION

1. Is any action, suit, proceeding, inquiry or investigation before or by any court, public board or other body presently pending or, to your knowledge, threatened, against or affecting the Borrower seeking to restrain or enjoin the execution and delivery by the Borrower of the Loan Agreement or the issuance and delivery of the Borrower's Interim Loan Note or Local Governmental Obligations to evidence and secure the Interim Loan or the Loan or challenging any proceeding of the Borrower with respect to the Interim Loan or the Loan or the Project, or contesting or affecting the validity or enforceability of the Interim Loan or the Loan or any such proceedings? Yes _____ No _____.

If Yes, attach a detailed description of the litigation or other proceeding or claim and indicate below the name, address and telephone number of your counsel for these purposes.

2. Is any litigation or other proceeding pending or, to your knowledge, threatened against or affecting the Borrower which, if determined adversely to the Borrower, would likely result, either individually or in the aggregate, in final judgments which would materially adversely affect the ability of the Borrower to repay the Interim Loan or the Loan?
Yes _____ No _____.

If Yes, attach a detailed description of the litigation, proceeding or other claim and indicate below the name, address and telephone number of your counsel for these purposes.

To the best of my knowledge and belief, the information set forth above is correct and complete as of the date hereof.

Date:_________________ ____

Chief Financial Officer of Borrower

Name (print): ______________________________

Title (print): _______________________________

COMMUNITY SEPTIC MANAGEMENT PROGRAM

FORM OF LOCAL BOND COUNSEL LEGAL OPINION

(Date of Interim Loan Note)

Massachusetts Water Pollution Abatement Trust
Boston, Massachusetts

Re: $ ________________
__________________ of __________________, Massachusetts
Interim Loan Note

We have examined the law, a certified copy of proceedings and other papers relating to the issue by the __________________ of ____________________, Massachusetts (the "Borrower") of a $ ___ _____ zero percent Interim Loan Note (the "Note") dated __________, _____ under Chapter 29C and Chapter 111, Section 127B ½, of the General Laws of The Commonwealth of Massachusetts (collectively the "Acts") and a vote/loan order of the _______ passed _______, ______. The Note is being issued by the Borrower to evidence and secure its obligations to repay an interim loan made to the Borrower by the Massachusetts Water Pollution Abatement Trust (the "Trust") under the Loan Agreement dated as of __________, ______ (the "Loan Agreement") between the Borrower and the Trust.

We have also examined the Note and the Loan Agreement as executed and an executed copy of the Project Approval Certificate and Regulatory Agreement dated as of _________, ____ (the "Project Regulatory Agreement"), between the Borrower and the Department of Environmental Protection of The Commonwealth of Massachusetts, relating to the community septic management loan program described in the Loan Agreement and the Project Regulatory Agreement.

On the basis of this examination we are of opinion, as of the date hereof and under existing law, as follows:

(1) The Loan Agreement and the Project Regulatory Agreement have been duly authorized, executed and delivered by the Borrower in accordance with the Acts and each constitutes a valid and binding obligation of the Borrower enforceable in accordance with its terms.

(2) The Note has been duly authorized, executed and delivered by the Borrower in accordance with the Loan Agreement and the Acts and constitutes a valid and binding general obligation of the Borrower enforceable in accordance with its terms and payable as to principal and interest (to the extent not paid from other sources) from taxes which may be levied [without limitation as to rate or amount] upon all taxable property within the territorial boundaries of the Borrower [, subject only to the limit imposed by Chapter 59, Section 21C of the General Laws of The Commonwealth of Massachusetts].

The rights of the registered owner of the Note and the enforceability thereof and of the Loan Agreement and the Project Regulatory Agreement may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted to the extent constitutionally applicable and their enforcement may also be subject to the exercise of judicial discretion in appropriate cases.

Very truly yours,

Low interest loans are also available for septic repairs through the Massachusetts Housing Finance Agency (MHFA) and their bank loan program for homeowners. Information on this program and a list of participating banks may be accessed through the website at: http://www.mhfa.com

Similarities and Differences between Community Septic Management Program(CSMP) and the Mass. Housing Finance Agency Homeowner Septic Repair Loan Program (MHFA Bank Program)

Community Septic Management Program (CSMP or Title 5 Betterment Program)	**Homeowner Septic Repair Loan Program (MHFA Bank Loan Program)**
The focus of this program is on protecting environment. Under this program a community identifies environmentally sensitive areas it wants to protect and proactively seeks out homeowner participation to eliminate pollution caused by failed septic systems.	The focus of this program is to offer loans to homeowners who may not readily qualify under CSMP. It is also useful for homeowners who need access to cash in a hurry. It is also useful for homeowners in a community that has chosen not to participate in CSMP.
The interest rates are subsidized by DEP funds.	The interest rates are subsidized by DEP funds.
The loans under this program are not based on household income. The loans may be offered at 2% or 5%. Generally, there is no cost associated with applying for loan (unless local authorities decide otherwise)	The loans are income based. The interest rate depends on the household income. The rates could be 0%, 3% or 5%. There is cost associated with borrowing (application fee.)
These loans generally do not take into consideration the homeowner's credit.	Under this program loans are made after taking homeowner's credit into consideration.
Since this program is community based, there is a real opportunity at the community level to explore alternatives and take a leadership role in solving difficult problems. Areas that have been neglected in the past due to the lack of funding and/or attention can be addressed under this program. The idea of local people solving local problems can be fully implemented under this framework.	
Shared systems, innovative solutions are possible and are encouraged (where applicable) under this program. The loans may be made available to non-owner occupied homes (vacation homes).	The funding under this program is limited to owner occupied units.
Elderly Deferrals are possible under this program. Board of Health must verify that the town has "accepted" the provisions of General Laws Chapter 80 s.13B at the Town meeting or by vote of the City Council. A majority vote is necessary to accept the provisions of the statute.	0% loans are available to homeowners who have fixed incomes (usually $28,500 or less depending on the MHFA's market area and number of members in a household) AND whose systems are deemed as eminent health hazards.

FEDERAL HOUSING FINANCE AGENCY

STATEMENT

For Immediate Release
July 6, 2010

Contact: Corinne Russell (202) 414-6921
Stefanie Mullin (202) 414-6376

FHFA Statement on Certain Energy Retrofit Loan Programs

After careful review and over a year of working with federal and state government agencies, the Federal Housing Finance Agency (FHFA) has determined that certain energy retrofit lending programs present significant safety and soundness concerns that must be addressed by Fannie Mae, Freddie Mac and the Federal Home Loan Banks. Specifically, programs denominated as Property Assessed Clean Energy (PACE) seek to foster lending for retrofits of residential or commercial properties through a county or city's tax assessment regime. Under most of these programs, such loans acquire a priority lien over existing mortgages, though certain states have chosen not to adopt such priority positions for their loans.

First liens established by PACE loans are unlike routine tax assessments and pose unusual and difficult risk management challenges for lenders, servicers and mortgage securities investors. The size and duration of PACE loans exceed typical local tax programs and do not have the traditional community benefits associated with taxing initiatives.

FHFA urged state and local governments to reconsider these programs and continues to call for a pause in such programs so concerns can be addressed. First liens for such loans represent a key alteration of traditional mortgage lending practice. They present significant risk to lenders and secondary market entities, may alter valuations for mortgage-backed securities and are not essential for successful programs to spur energy conservation.

While the first lien position offered in most PACE programs minimizes credit risk for investors funding the programs, it alters traditional lending priorities. Underwriting for PACE programs results in collateral-based lending rather than lending based upon ability-to-pay, the absence of Truth-in-Lending Act and other consumer protections, and uncertainty as to whether the home improvements actually produce meaningful reductions in energy consumption.

Efforts are just underway to develop underwriting and consumer protection standards as well as energy retrofit standards that are critical for homeowners and lenders to understand the risks and rewards of any energy retrofit lending program. However, first liens that disrupt a fragile housing finance market and long-standing lending priorities, the absence of robust underwriting standards to protect homeowners and the lack of energy retrofit standards to assist homeowners, appraisers, inspectors and lenders determine the value of retrofit products combine to raise safety and soundness concerns.

On May 5, 2010, Fannie Mae and Freddie Mac alerted their seller-servicers to gain an understanding of whether there are existing or prospective PACE or PACE-like programs in jurisdictions where they do business, to be aware that programs with first liens run contrary to the Fannie Mae-Freddie Mac Uniform Security Instrument and that the Enterprises would provide additional guidance should the programs move beyond the experimental stage. Those lender letters remain in effect.

Today, FHFA is directing Fannie Mae, Freddie Mac and the Federal Home Loan Banks to undertake the following prudential actions:

1. For any homeowner who obtained a PACE or PACE-like loan with a priority first lien prior to this date, FHFA is directing Fannie Mae and Freddie Mac to waive their Uniform Security Instrument prohibitions against such senior liens.

2. In addressing PACE programs with first liens, Fannie Mae and Freddie Mac should undertake actions that protect their safe and sound operations. These include, but are not limited to:

   - Adjusting loan-to-value ratios to reflect the maximum permissible PACE loan amount available to borrowers in PACE jurisdictions;

   - Ensuring that loan covenants require approval/consent for any PACE loan;

   - Tightening borrower debt-to-income ratios to account for additional obligations associated with possible future PACE loans;

   - Ensuring that mortgages on properties in a jurisdiction offering PACE-like programs satisfy all applicable federal and state lending regulations and guidance.

   Fannie Mae and Freddie Mac should issue additional guidance as needed.

3. The Federal Home Loan Banks are directed to review their collateral policies in order to assure that pledged collateral is not adversely affected by energy retrofit programs that include first liens.

Nothing in this Statement affects the normal underwriting programs of the regulated entities or their dealings with PACE programs that do not have a senior lien priority. Further, nothing in these directions to the regulated entities affects in any way underwriting related to traditional tax programs, but is focused solely on senior lien PACE lending initiatives.

FHFA recognizes that PACE and PACE-like programs pose additional lending challenges, but also represent serious efforts to reduce energy consumption. FHFA remains committed to working with federal, state, and local government agencies to develop and implement energy retrofit lending programs with appropriate underwriting guidelines and consumer protection standards. FHFA will also continue to encourage the establishment of energy efficiency standards to support such programs.

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The Federal Housing Finance Agency regulates Fannie Mae, Freddie Mac and the 12 Federal Home Loan Banks. These government-sponsored enterprises provide more than $5.9 trillion in funding for the U.S. mortgage markets and financial institutions.