

COMMENT ON FHFA PROPOSED RULE ON FANNIE MAE AND FREDDIE MAC CAPITAL REQUIREMENTS

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I am pleased to offer this comment on the proposed rule from the Federal Housing Finance Agency on “Enterprise Capital Requirements,” issued in June.

During my 23 years as a senior executive at Fannie Mae I had responsibility for mortgage performance analysis and the determination of capitalization and target guaranty fees for the company’s single-family credit guaranty business. I worked with former Federal Reserve Board Chairman Paul Volcker to develop the original risk-based capital standard for Fannie and Freddie adopted by Congress in the Federal Housing Enterprises Financial Safety and Soundness Act of 1992.

On March 6, 1990, Volcker sent a letter to Fannie’s chairman David O. Maxwell, summarizing his work on and views about Fannie and Freddie capitalization, including his strong opinion that bank capital standards were not appropriate for and should not be applied to Fannie and Freddie. I did not keep my copy of the “Volcker letter” when I left Fannie, but the company will have the original. I highly encourage senior FHFA officials to ask for a copy of this letter and to read it carefully; it contains much wisdom and valuable insight for the exercise FHFA currently is undertaking, from an individual who at the time was the most respected bank regulator in the country. I also would encourage FHFA to seek the analysis and comment of people on the finance side of Fannie and Freddie, who will have an understanding of the practical realities of the proposed new capital standard.

Fannie and Freddie are not banks. They deal only in a single asset type, residential mortgages, and with the restrictions on the size and purpose of their portfolio holdings imposed by Treasury during their conservatorships they now essentially take only one type of risk, mortgage credit risk. In the 20 years before the 2008 financial crisis, the average credit loss rate at Fannie and Freddie was a mere 4 basis points per year—one-twentieth the average 82 basis-point credit loss rate at FDIC-insured banks over the same period. Even with Fannie and Freddie’s post-2007 credit losses their average 1988-2017 credit loss rate of 14 basis points is just one-sixth the 84 basis point loss rate of the banks over the comparable period. And if you adjust the companies’ 2008-2017 losses to exclude the loan products and risk features they no longer are permitted to finance (as FHFA does in its own analyses), the companies’ 1988-2017 average credit loss rate falls to 8 basis points—one-tenth the comparable average loss rate of commercial banks.

FHFA has devoted considerable time and effort to understanding the features of the Basel III bank capital regime—which at best is only tangentially applicable to Fannie and Freddie—and then attempting to incorporate them into its capital proposal. Yet incongruously FHFA seems to have spent less time and effort on understanding the

unique dynamics of the novel asset-level risk-based standard it proposes to apply to the two companies it regulates.

My comment is aimed at the second half of this imbalance. It focuses on four critical aspects of the proposed single-family credit risk standard I believe must be changed before a final standard is adopted. Assuming that these are addressed—or there is a commitment to fix them—I may have further comments on other aspects of the standard. My four major criticisms of the June proposal are:

- FHFA must use original loan-to-value (LTV) ratios for calculating capital required by the single-family risk-based standard, as the 1992 regulation did. FHFA's proposed use of current value, or "mark-to-market," LTVs would be extremely destabilizing to the companies and the financial system as a whole.
- FHFA must revise its proposed capital standard to eliminate inconsistencies in the relationships between the risk-based capital standard, the minimum capital standard, loss reserves, excess capital, and prompt corrective action authority.
- The framework for FHFA's proposed single-family risk-based standard must be clarified and simplified, and its redundant and excessive conservatism removed, to avoid adding unnecessary costs to Fannie and Freddie's credit guarantees.
- FHFA's proposed capital relief for securitized credit risk transfers (CRTs) is incompatible with the mechanics of the risk-based capital standard, and if not changed will weaken Fannie and Freddie's abilities to withstand credit stress.

The destabilizing effect of using current LTV ratios in the risk-based standard

FHFA properly asks in Question 3 whether it should reconsider its choice of using current loan-to-value (CLTV) ratios instead of original loan-to-value (OLTV) ratios in its single-family credit risk-based capital standard. Not only should it reconsider the use of current LTVs, it must do so.

The main idea behind Fannie and Freddie's 1992 risk-based capital standard was that the companies at all times must hold sufficient capital to withstand a defined adverse credit environment. (The original "Volcker stress standard" was losses on loans originated in 1981 and 1982 in Texas, applied to all years' business originated in all states; this was modified, and made more general, in the final legislation). The capital required to meet this stress standard was determined using OLTVs, so it was unaffected by whether home prices were rising or falling. No matter where home prices were, Fannie and Freddie always had to be able to protect against the defined stress environment, calculated on the OLTVs of the books they had at that moment.

There were, and continue to be, two critically important reasons for using OLTV and not CLTV ratios in a risk-based capital standard: the first economic and the second

systemic. The economic reason relates to pricing. Fannie or Freddie set guaranty fees on pools of loans based on their administrative expenses, the credit losses they expect from these pools, the capital they are required to hold against them, and their target return on capital. At the time of pricing their required amount of risk-based capital based on OLTVs is known, while capital based on CLTVs is unknowable, as it can change over time unpredictably. With a CLTV-based capital standard Fannie and Freddie would have to guess at their required pool capital when setting guaranty fees, leading to inefficiency and adding more cost to the credit guaranty process.

The systemic reason for using OLTVs in a risk-based capital standard is even more important. While OLTVs are relatively stable over time, CLTVs can and do change quickly and markedly, and in the opposite direction of home prices: when home prices are rising CLTVs fall, and when home prices are falling CLTVs rise. Basing Fannie and Freddie's risk-based capital on CLTVs perversely would require them to hold their smallest amounts of capital when home prices are nearing their peaks (and thus most likely to fall, leading to increased credit losses), and to hold their highest amounts of capital when home prices are bottoming out (and thus about to begin rising again, leading to fewer losses).

We don't have to speculate about the impact a CLTV-based capital standard would have on Fannie and Freddie in a crisis; we can illustrate it using FHFA's proposed capital numbers for a single-family mortgage with a credit score between 680 and 699, together with Fannie's CLTV and OLTV data from year-end 2006—shortly after home prices reached their peak—and year-end 2011, near their subsequent trough.

At the end of 2006 Fannie's \$2.38 trillion in single-family conventional mortgages had an average OLTV of 70 percent and an average CLTV of 55 percent. The "look-up" tables in FHFA's proposed capital standard for loans with a 680-699 credit score would have resulted in 262 basis points of required capital using Fannie's OLTVs, but only 165 basis points of capital using its CLTVs. Shifting forward to year-end 2011, Fannie had a somewhat larger book of business, at \$2.76 trillion. That book's average OLTV was up one percentage point from 2006, to 71 percent, but its CLTV had soared 24 percentage points, to 79 percent. Again using FHFA's look-up tables, required capital on Fannie's loans with 680-699 credit scores would have increased by 23 basis points over the five-year stress period under an OLTV standard, from 262 to 285 basis points, while under a CLTV standard required capital for the same loans would have nearly tripled, shooting from 165 to 438 basis points.

An increase in a credit guarantor's risk-based capital requirement during a time of stress of 23 basis points is manageable; an increase of 273 basis points decidedly is not. (On Fannie's December 2011 book, that would have been a difference between an extra \$6 billion and an extra \$75 billion). To stay in compliance with no change in required capital during a severe loss scenario, credit guarantors already will have to use up their excess capital, draw down their loss reserves, and tap the markets for new equity at a time when investors understandably will be reluctant to supply it. It would be virtually impossible for them to raise the massive amounts of additional

equity required by a CLTV-based standard. And even were it possible, this capital would become superfluous almost as soon as it was raised, as the last cycle showed. With rebounding home prices, the CLTV on Fannie's single-family book at the end of 2013 fell to 67 percent, dropping the required CLTV capital on 680-699 credit score loans to 285 basis points—less than it would have been under an OLTV standard.

The economic and systemic arguments against using CLTVs to determine Fannie and Freddie's risk-based capital requirement are overwhelming, and there are no good substantive arguments in favor of it. OLTVs were the basis for calculating the risk-based capital requirement in Fannie and Freddie's 1992 capital legislation, and FHFA must return to using them in the next version of its capital proposal.

Recognizing the links between loss reserves, risk-based capital, minimum capital, excess capital and prompt corrective action

A second serious error in FHFA's current capital proposal is that the multiple layers of conservatism in Fannie and Freddie's risk-based capital standard intended to be cushions against uncertainty in fact cannot perform this role due to the nature of the companies' capital regime. Unless corrected, this flaw will lead Fannie and Freddie to hold far more capital than required for them to comfortably cover their risks, greatly increasing the cost and reducing the availability of the loans they finance.

Fannie and Freddie's *total capital* will be the sum of three components, each one determined differently: (a) *Loss reserves*, intended to cover the expected losses on their loans (which, beginning in 2020, will be determined in accordance with guidance from the FASB for "current expected credit losses"); (b) *Required core capital*, intended to cover the unexpected losses on the companies' loans and set by the regulator; FHFA is proposing to require Fannie and Freddie to hold the greater of a risk-based capital amount, designed to survive a defined environment of credit stress, and a ratio-based minimum amount, and (c) *Excess core capital*, determined by the companies and intended to ensure that they always will have enough core capital to meet their regulatory capital requirements, even during periods of stress.

FHFA does not account for excess capital at all in the June proposal, but it plays a critical role in Fannie and Freddie's capital management, and thus in their total capital holdings. The companies always must meet or exceed both their risk-based and minimum capital requirements to avoid becoming subject to FHFA's prompt corrective action authority. In times of stress they have only three ways of keeping outsized credit losses from pushing them out of capital compliance: first by using up their earnings, then by drawing down their excess capital, and finally by raising new equity in the capital markets. They cannot use any of the "cushions" built into their risk-based or minimum capital standards, because if they do they will fall short of those standards and trigger the prompt corrective action they are trying to avoid.

There is a saying among financial executives that "the best time to raise capital is when you don't need it." For Fannie and Freddie, the practical application of this

aphorism is that it is prudent even in good times to hold excess capital, and when the housing market shows signs of overheating (and there are many such signs) a substantial amount of excess capital becomes all but mandatory. Were I still CFO at Fannie I would advocate excess capital holdings of between 5 and 25 percent of the risk-based capital amount, with a percentage at the lower end of this range early in the cycle and near the upper end as the cycle ages. These are not trivial amounts, and when held they would need to be built in to the company's target guaranty fees.

FHFA needs to reflect the reality that its prompt corrective action authority gives Fannie and Freddie strong incentives to hold a meaningful amount of excess capital. This will be their real capital cushion. The elements of conservatism FHFA has built into its current version of the single-family risk-based capital standard are unusable as cushions, so unless they can be justified in some specific component of the capital framework—discussed below—they must be removed from the next version of the standard in order to avoid adding excessive and unnecessary costs to Fannie and Freddie's credit guarantees.

Removal of excessive and redundant conservatism in the risk-based standard

While the details of FHFA's proposed single-family risk-based capital standard for Fannie and Freddie are complex and seemingly inaccessible, the basic framework of the standard is quite simple. In the next version of its capital proposal, FHFA should take advantage of this fact by presenting and explaining its risk-based standard in terms of the three specific components that comprise it: (1) The *dollar amounts of credit losses* projected for all of the mortgages held or guaranteed by each company during the FHFA-defined stress environment; (2) An *"uncertainty reserve"* intended to account for the possibility that the historical data used by FHFA for the stress environment may not prove adequate for the next crisis, and (3) A *going concern capital buffer* designed to enable the companies to retain the confidence of capital market investors, and thus be able to access the equity markets throughout the stress period. *Other elements of conservatism* in the current proposal not linked to one of these three components should be eliminated, and the *minimum capital ratios* should be reasonably and logically related to the risk-based standard.

Credit losses during the stress test. This component is straightforward, and should be non-controversial. To determine the dollar amount of required risk-based capital for Fannie and Freddie's single-family loans each quarter, FHFA would use loan-level data provided by the companies on mortgage types, characteristics and risk factors, then apply its published "look-up" tables on credit losses and risk multiples to these loans—using OLTVs and not CLTVs, for the reasons discussed earlier. Since Fannie and Freddie are the only ones in a position to opine on whether FHFA's look-up tables on credit losses and risk multipliers produce results that reasonably reflect what might occur during the specified stress environment, FHFA should seek their formal endorsement of these tables before issuing its final regulation.

“Uncertainty reserve.” In its current proposal FHFA uses the assumption of “house price recoveries that are somewhat more conservative than experienced following [the] crisis” as a proxy for this reserve. For the sake of clarity and transparency, FHFA should quantify the difference this assumption makes in its capital numbers. And if FHFA deems other cushions to be necessary for the standard, they should be included in this category, and quantified. A total uncertainty reserve in the range of 5 to 10 percent of the stress test-based capital requirement would be reasonable.

Going concern capital buffer. The stress test capital and uncertainty cushion are intended only to ensure that a credit guarantor’s existing book of business can survive an environment of very severe credit losses; they do not ensure that the guarantor itself can do so. Given the systemic importance of Fannie and Freddie to the mortgage market (and the economy), their capital regime must have features and safeguards that maintain the companies’ financial viability at all times.

Additional capital is not the only way to maintain this viability. FHFA includes, but does not highlight, two others in its current proposal. The first is that Fannie and Freddie’s stress test is run on a liquidating book, whereas in reality the companies will be doing new business throughout the stress period. In past cycles this business has been both significant and profitable. During the five years when Fannie’s losses were at their highest (2008-2012), its post-2007 book of business grew to \$1.9 trillion; guaranty fees on that new book through 2012 totaled \$15 billion, with credit losses less than \$2 billion. Second, as stated earlier FHFA’s prompt corrective action authority gives Fannie and Freddie strong incentives to build excess capital leading into periods of credit stress; this capital is not considered either in the stress test or any of the cushions.

FHFA’s “going-concern buffer component of the proposed risk-based capital framework establishes a 75 basis point requirement for most assets and guarantees, regardless of credit, market, or operational risk capital requirements,” and FHFA notes that this would allow the companies “to continue operating without external capital support for one to two years after a stress event.” In setting the 75 basis-point size of this buffer, however, FHFA assumes no income from new business and no excess capital to absorb stress period losses. Making realistic assumptions for both would reduce the need for additional going concern capital materially.

Yet the biggest problem with FHFA’s proposal for this component is that it includes two going concern buffers: one explicit (the 75 basis-point fixed amount) and the other implicit. The implicit buffer is FHFA’s deliberate choice not to count guaranty fees earned during the stress period as an offset to credit losses. (Guaranty fees do offset credit losses in the stress test in the companies’ 1992 capital legislation, as they should). In explaining this decision, FHFA says it “believes there is greater benefit to having a risk-based capital requirement that ensures sufficient capital without considering new revenue,” adding, “revenue serves to build capital during stress events so that the Enterprises can continue as going concerns.”

The size and value of these disregarded guaranty fees can be readily estimated. Fannie (and FHFA) will have more precise numbers, but based on published data I've calculated that cumulative net guaranty fees (guaranty fees less administrative expenses attributable to the single-family business) on Fannie's 2007 single-family book have been about \$19 billion, or almost exactly 75 basis points of that book's year-end 2007 balance of \$2.55 trillion. And in the future the value of stress-period guaranty fees will be considerably higher. The average net guaranty fee on Fannie's 2007 book was 18 basis points; in 2017 Fannie and Freddie's average net guaranty fee was 31 basis points, and their average net charged fee on new business was 37 basis points. At these higher fee rates, the present value of their guaranty fees not counted in the stress test will be between 125 and 150 basis points.

During the first few years of the next stress environment, therefore, Fannie and Freddie will be receiving the bulk of the 125 to 150 basis points in guaranty fees from the existing book that aren't being counted in the stress test, additional earnings from uncounted net income on their new business, as well as the loss-absorbing benefits of whatever uncounted excess capital they will be able to draw on. In the aggregate, this will be more than twice the 75 basis-point amount FHFA says the companies need to maintain their viability. Given this fact, there is no justification whatsoever for FHFA to require still more "going concern" capital in the form of an additional 75 basis-point fixed charge. This element of the risk-based standard must be dropped from FHFA's next version of the proposal.

Other elements of conservatism. The *reserve for deferred tax assets* included in the current capital proposal is inconsistent with both FHFA's capital framework and current accounting practices. As just discussed, even after eliminating the 75 basis-point fixed charge Fannie and Freddie will have more than sufficient income and capital to maintain themselves as going concerns during FHFA's defined stress environment. Under such circumstances the accounting rules do not require—and indeed do not permit—the establishment of a deferred tax asset reserve. FHFA must remove this reserve from any revised proposal.

There is no need for FHFA to use *lifetime credit losses* in its risk-based standard. As noted above, the companies' stress test is applied to a liquidating book of business, which does not need to be able to survive forever; it only needs to survive until all of its remaining losses can easily be absorbed by net income from new business. In the last cycle, this took six years for Fannie. Net guaranty fee income from Fannie's post-2007 book of business in 2013 (which by then averaged over \$2.0 trillion) was large enough to comfortably cover that year's \$3.7 billion in credit losses from the 2007 book. FHFA may want to use seven-year credit losses or even ten-year losses in its stress test, but lifetime losses are unnecessary and unwarranted.

Minimum capital ratios. It is important for the minimum capital ratios to fit into the overall capital framework. FHFA correctly states that these minimums should not be so high that they frequently become binding on the companies, thus overriding the risk-based standards. To prevent this from occurring, FHFA should set the minimum

single-family credit risk capital ratio to be close to what the companies' risk-based capital requirement would have required when the average OLTV of their books was near the low point of the past two credit cycles. For Fannie, this was 70 percent, reached and maintained for four years in the early 2000s.

The mortgages Fannie and Freddie are allowed to retain in portfolio should have an additional minimum capital requirement to account for their potential interest rate risk. The 200 basis-point charge suggested by FHFA, and also used in the minimum capital standards for the companies in the 1992 legislation, seems reasonable.

Unwise and unwarranted capital relief for securitized credit risk transfers

The credit risk transfers Fannie and Freddie do with counterparties, such as front-end and back-end mortgage insurance or reinsurance, are accounted for defensibly in the proposed capital standard through counterparty risk "haircuts." The problem arises with securitized CRTs, where there is a fundamental incompatibility between the use of a stress test to determine the required risk-based capital for Fannie and Freddie's single-family credit guarantees and FHFA's proposed treatment of their credit risk transfer securities.

A properly designed and implemented credit risk stress test—which sets required capital based on the OLTVs of all of the mortgages guaranteed by a company—takes advantage of the fact that because of their seasoning and price appreciation older books of business will suffer much lower losses than newer books of business in a stress environment. This means that a significant amount of required capital on the older books will be available to absorb the much higher losses on the newer books.

Fannie's experience from the 2008 housing crisis shows how important this "capital transfer" element is. Fannie's \$2.55 trillion December 2007 book of single-family business has suffered \$88.9 billion in losses through 2017. Loans acquired in 2005, 2006 and 2007 accounted for 54 percent of the 2007 book but produced \$78.2 billion, or 88 percent, of that book's losses; just \$10.7 billion in losses, or 12 percent, came from the other 46 percent of the book. A future crisis is likely to have a similar distribution of losses, so to survive that crisis Fannie (or Freddie) will need to use the excess capital from its good books to cover the capital shortfall on its bad ones.

The problem with FHFA's treatment of CRTs is that it would give meaningful capital relief for CRT securities issued on good books of business that end up transferring few if any losses, and in so doing eliminate a large reserve of capital the stress test assumes will be available to cover the outsized losses on the companies' bad books. Starkly stated, FHFA's risk-based capital specification is designed to allow Fannie and Freddie to survive a very severe loss scenario, but the capital relief FHFA proposes to grant for CRTs issued on the companies' lower-loss books could cause them to fail during the same scenario. This almost certainly is unintended.

FHFA needs to separate itself from the advocacy for CRTs it has been engaging in as conservator (in conjunction with Treasury), and in its capital proposal view them from the perspective of a safety and soundness regulator. The inescapable reality is that CRT securities never will be a cost-effective mechanism for Fannie and Freddie (or any credit guarantor) to use to transfer credit risk, for the simple reason that CRT investors price them to produce a generous return on their investment—i.e., so that the interest they receive comfortably exceeds the credit losses they expect to have transferred to them. When investors become concerned that the amount of credit losses might exceed their scheduled interest payments, they first will increase their required yields, then leave the CRT market altogether. Because CRT investors control the pricing of the securities and can exit the market at will, the probability that CRTs ever will be economic for issuers over a full cycle—that is, result in more total credit losses transferred than interest payments made—is vanishingly small.

FHFA notes in its proposal that “U.S. bank regulators have not given banks capital relief for [securitized] credit risk transfers as FHFA has proposed to do in this rule.” One reason may be the extreme difficulty of determining the “equity equivalency” of CRT securities, given that they are linked to a single group of mortgages and, unlike equity, have no value elsewhere. To avoid crippling its own risk-based standard by giving excessive capital credit to CRTs, in the next version of its proposal FHFA must at a minimum deduct their expected interest costs from any capital credit it gives the companies upon issuing them. Even better, it could, like bank regulators, give no capital credit for securitized CRTs, and instead allow the companies to decide on their own when and whether to issue them, based on their economics.

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