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BY ELECTRONIC MAIL AND COURIER

Alfred M. Pollard, Esq.
General Counsel
Office of Federal Housing Enterprise Oversight
1700 G Street NW
Washington, DC 20052

Re: Risk Based Capital Proposal RIN 2550-AA23

Dear Mr. Pollard:

Fannie Mae respectfully submits these comments on the Office of Federal Housing Enterprise Oversight's ("OFHEO") proposal to amend the risk-based capital ("RBC") rule published in the Federal Register on September 13, 2001 (Appendix A to Subpart B of 12 CFR Part 1750 Risk-Based Capital)(the "September 13 Rule").¹ The Preamble to the Proposed Regulation states: "These amendments are intended to refine the stress test model to tie capital more closely to risk."² According to OFHEO, "[t]echnical changes are included in this proposal rather than issued as a final regulation to provide a comprehensive package of changes."³

Fannie Mae has for years fully supported the adoption of a strong and workable RBC test for Fannie Mae and Freddie Mac (the "companies"). Indeed, Fannie Mae has managed to a version of the statutory RBC test since its enactment in the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (the "1992 Act"). Fannie Mae appreciates OFHEO's extraordinary efforts to achieve the important goal of establishing an RBC regulation consistent with the parameters set forth by Congress in the 1992 Act, and the company looks forward to implementation of the RBC requirement after the one-year transition period provided by Congress.

Fannie Mae applauds OFHEO's quick action in addressing revisions and improvements to the September 13 Rule. Fannie Mae appreciates OFHEO's statement in the Preamble to the Proposed

¹ Proposed Regulation, Risk-Based Capital, 66 Fed. Reg. 65,146, 65,153 (December 18, 2001)("Proposed Regulation").

² Id. at 65,147.

³ Although unclear, Fannie Mae assumes for purposes of this letter that OFHEO is seeking public comment on these technical changes.

Regulation that “OFHEO continuously seeks to improve its measurements and formulas to tie capital more closely to risk.” The goal of the RBC standard is to ensure that Fannie Mae and Freddie Mac remain financially strong while enabling the companies to continue achieving their housing mission. While the standard governs the capital that Fannie Mae must hold, homeowners, lenders, homebuilders, realtors and others in the housing industry will feel its impact. Given the importance of the final RBC rule to the national economy, the importance of accurate specification of the stress test cannot be overstated.

We agree generally that OFHEO’s proposed amendments improve the September 13 Rule’s alignment of capital and risk. However, our comments below demonstrate that changes are necessary in the final rule in order for OFHEO to more accurately tie capital to real economic risk. The specifications contained in the September 13 Rule and the Proposed Regulation are extraordinarily stringent. Fannie Mae respectfully notes that OFHEO has, when presented with a range of reasonable choices, chosen very conservative treatments in crafting the stress test. When combined with the statutorily required 30 percent “add on” to capital for “management and operations risk,” the result is a test that requires a significant “cushion” above the capital that would be necessary to align the stress test with real risk. The changes to the stress test proposed by OFHEO or Fannie Mae will not alter the test’s fundamental stringency or conservative nature.

Fannie Mae’s comments also point out that, in several cases, OFHEO’s specifications are not supported by historical experience, as required by the 1992 Act. Both the 1992 Act and its legislative history contain numerous references to use of historical data, use of “reasonable assumptions” and reliance on available information as foundations for the RBC test.⁴ For example, the House Committee Report states: “The Committee intends that any methodology chosen generally be recognized by experts as valid, and that any assumptions employed be, to the extent possible, historically based and internally consistent.”⁵ Similarly, the Senate Committee report says: “Loss rates . . . should be related to loss rates on the ‘standard’ mortgage types according to prevailing practice, or better, the Director’s own careful analysis of the broader historical data.”⁶

Finally, OFHEO’s specifications in the sections entitled “Yields on Debt” and “Currency Swaps” are not supported by any evidence in the record, which raises the specter of possible arbitrary decision-making. The proposed section entitled “New Debt Mix” assumes irrational behavior on the part of Fannie Mae that would run directly contrary to all principles of sound and reasonable business management. The final rule should resolve these issues and contain only specifications that are fully supported by the administrative record and based on historical and actual experience.

⁴ See, e.g., 12 U.S.C. §§ 1361(a)(1), (a)(2)(d), (a)(4) and (b)(2).

⁵ H.R. Rep. No. 102-206 (1991) at 65.

⁶ S. Rep. No. 102-282 (1992) at 21.

This letter is divided into the following parts: (1) a background discussion of the statutory requirements for the RBC rule and a summary of the rule's development; (2) comments on proposed changes to counterparty haircuts; (3) comments on proposed changes to the multifamily model; (4) comments on proposed changes to yields on debt; (5) comments on proposed changes to new debt mix; and (6) comments on technical changes.

I. BACKGROUND

The 1992 Act requires the companies to hold enough capital to withstand a highly stringent 10-year stress period, characterized by unprecedented interest-rate movements and credit losses occurring simultaneously. Based on statutory language, the main components of the test for interest-rate and credit risk are as follows:

- The stress test period is 10 years.
- The test evaluates combined and extreme interest-rate and credit stress for both rising and declining interest-rate scenarios. The more stringent of these two scenarios determines required risk-based capital.
- The test assumes that interest rates increase or decrease by up to 600 basis points over the first year, and remain constant at this new level for the remaining 9 years of the test.
- The test assumes that severe credit conditions, based upon the worst historical regional credit loss experience, apply nationwide.
- The stress test is applied to the existing book-of-business only; no new business is assumed except that associated with outstanding mortgage commitments.

The basic structure of the stress test is very stringent. The combined interest-rate and credit conditions outlined in the statute are unprecedented; they are well in excess of historical experience. The risk-based capital standard also requires a 30 percent add-on for management and operations risk. Thus, total risk-based capital equals 130 percent of the capital required for interest-rate and credit risk.

On April 13, 1999, OFHEO issued for public comment a proposed RBC test for the companies ("NPR 2"). Fannie Mae, Freddie Mac and numerous industry participants submitted extensive comments on NPR 2 on March 10, 2000. In its March 10, 2000 comments, Fannie Mae explained the three fundamental criteria used by the company to evaluate OFHEO's proposed standard:

“Operational workability. The regulation should enable accurate and timely calculation of risk-based capital requirements, and Fannie Mae and Freddie Mac must be able to incorporate the final regulation into their business planning processes.

Ability to accommodate innovation. The regulation should encourage and accommodate ongoing innovation in the mortgage finance system by enabling Fannie Mae and Freddie Mac to know with reasonable certainty the capital treatment of new activities in a timely manner.

Linking capital to risk. As OFHEO itself states,⁷ the regulation should tie capital to risk. Total risk-based capital should not only reflect the economic risk of Fannie Mae and Freddie Mac as a whole, but also incremental risks for activities at the margin.”⁸

These three principles are also crucial to review of the Proposed Regulation and any final regulation adopted by OFHEO. The majority of Fannie Mae's comments below focus on alignment of capital with risk.

On September 13, 2001, OFHEO published in the Federal Register a final risk-based capital rule. OFHEO also made publicly available a computer code to implement the risk-based capital rule.⁹ In addition to interest rate and credit risk specifications, the September 13 Rule also contained several reporting requirements for the companies. The Proposed Regulation, although silent on the issue, will necessarily change the contents of these reports.¹⁰

II. COMMENTS ON PROPOSED REGULATION

A. Counterparty Haircuts

1. Non-derivative Counterparty Risk Haircuts

The Proposed Regulation would modify the following provisions of the September 13 Rule related to non-derivative counterparty risk in that it:

⁷ NPR 2 at 18,088.

⁸ See Fannie Mae Comment Letter, Executive Summary at pp. 1-2 (March 10, 2000).

⁹ Because Fannie Mae has been unable to replicate the text of the rule published on September 13, 2001 or the accompanying computer code, the comments on the Proposed Regulation contained in this letter must necessarily be based on what we believe to be the September 13 Rule's (including the computer code's) implications. OFHEO has not published for notice and comment any computer code that would implement the September 13 Rule or the amendments in the Proposed Regulation. See Fannie Mae Comment Letter on NPR 2 at n.19. The Proposed Regulation itself notes the need for ongoing changes to the software. With respect to netting, OFHEO states that “this technical correction will require an implementation period to allow for development and completion of the software changes that will allow OFHEO to model master netting agreements.” Proposed Regulation at 65,149.

¹⁰ Based on our experience with preparation for filing these reports, Fannie Mae hereby renews its request that OFHEO extend the length of the reporting period from 30 days to at least 60 days following the end of each quarter. We also suggested that explicit guidance as to the timing of reports could be issued once all parties have had significant experience in processing the reports. See Fannie Mae Letter to Alfred Pollard, dated November 22, 2000.

- Reduces the final default rate assumed for Aa counterparties to 12.5 percent from 15 percent.
- Extends the phase-in period for the haircuts from 5 to 10 years, while retaining the straight line phase in.
- Adds a provision for recoveries in the event of default and establishes a recovery rate assumption of 30 percent.

Fannie Mae acknowledges that the changes to the treatment of counterparty risk in the Proposed Regulation move in a direction more consistent with three basic guidelines for the formulation of a capital treatment for counterparty risk, namely that:

- Capital should be aligned with risk.
- Treatment of counterparty risk in the capital standard should be grounded in historical data.
- The capital standard should model the specific terms of the contracts that generate and compensate for counterparty risk to the maximum possible extent.

These guidelines are consistent with the 1992 Act, with the Preamble to both the September 13 Rule and the Proposed Regulation, and with industry best practice.

Fannie Mae believes that the explicit provision of a factor for recoveries is a critical improvement to the structure of the September 13 Rule given the importance of collateral and other contractual provisions to the actual risk of various exposures. However, we also believe that the Proposed Regulation must incorporate additional modifications to achieve greater internal consistency and a closer alignment of capital with economic risk. Fannie Mae finds that the data cited in support of the Proposed Regulation and the September 13 Rule do not support the haircuts that the Proposed Regulation specifies because:

- The default rates and timing of defaults implied for Aaa counterparties are inconsistent with historical data.
- The relationship between the default rates and timing of defaults behavior for Aaa counterparties and those of other rating categories are inconsistent with historical data.
- The severity in the event of default is inconsistent with historical data.
- The generic treatment of severity in the event of default for all non-derivative counterparty exposures is inconsistent with historical data and with the contractual terms defining those exposures.

For these reasons, the proposed haircuts do not conform to the principles expressed in the 1992 Act. In addition, Fannie Mae believes the Proposed Regulation could have negative impacts on the broader mortgage and housing industry, including:

- Creating disincentives for Fannie Mae and Freddie Mac to share credit risk and, as a consequence, incentives for the companies to retain larger amounts of loan credit risk.

- Creating incentives for the companies to focus exposures among a limited number of select counterparties of certain rating levels, irrespective of actual economic risk, the benefits of broader diversification, or the potential impact on industry structure.
- Creating disincentives for the companies to negotiate to obtain contractual terms that provide substantial protection against counterparty risk, including explicit or implicit collateral.

Therefore, Fannie Mae strongly recommends that the Proposed Regulation be further modified so that default levels, timing and severity for all non-derivative counterparty exposures are consistent with the historical data and the contractual terms governing the exposures, and thus with economic risk. Fannie Mae believes that continual enhancements and refinements to this component of the test will be, as OFHEO has stated, critical to ensuring that continued inconsistencies between capital and risk are resolved and that the capital treatment of new types of exposures not contemplated is consistent with the real risk of those exposures.

Fannie Mae's Approach to Counterparty Risk

Fannie Mae follows three fundamental guidelines in evaluating the merits of the Proposed Regulation's counterparty haircut treatment. These guidelines follow from the specification of counterparty risk as the risk that Fannie Mae will not receive all amounts due under various contracts, given the economic scenario of the regulatory stress period.

Fannie Mae recognizes that counterparty risk is an important risk inherent in the business of the companies and one that must be appropriately integrated into the RBC requirement. Fannie Mae incorporates the risk of counterparty failure in its internal risk management and pricing analyses. In developing internal analytics, Fannie Mae adheres to the following principles that are entirely consistent with OFHEO's stated goals.

Counterparty Capital Treatment Should Be Closely Tied to Risk

Fannie Mae shares OFHEO's stated primary policy objective to tie capital requirements to the real risks in the business of the companies. Fannie Mae's internal counterparty risk analytics are calibrated to align the company's assessment of risk to best practices in the industry. To the extent the final rule establishes capital requirements related to counterparty risk that are consistent with the real underlying risk, it will promote safety and soundness of the companies and the effective, efficient and stable functioning of the housing industry.

Treatment of Counterparty Risk Should Be Grounded in Historical Data

The provisions of the Proposed Regulation should be based wherever possible on actual historical data about risks. Fannie Mae's internal counterparty risk analytics are based on historical failure and severity data, as well as market valuations of the amount of risk inherent in traded contracts. Similarly, OFHEO looked to historical data on loan performance to establish the stress loss scenario

for mortgage performance. The 1992 Act does not expressly specify the treatment of lender risk sharing agreements or credit enhancements. The Act does state, however, that “losses occur throughout the United States at a rate of default and severity (based on any measurements of default reasonably related to prevailing practice for that industry in determining capital adequacy) reasonably related to the rate and severity that occurred in [the benchmark loss experience].”¹¹ The same fact-based approach should be applied to the treatment of counterparty haircuts in the Proposed Regulation.

The Contract Should be Modeled

Finally, Fannie Mae shares OFHEO's goal to measure risk accurately and therefore to model the specific terms of the contracts entered into by the company. Modeling the contract supports the goal of tying capital to risk and creates appropriate incentives to mitigate risk economically. For instance, collateral agreements backing non-derivative counterparty exposures are common and integral contractual provisions that have important risk and capital implications that would be ignored if the specific terms of the contract were not modeled.

Proposed Changes to Specification of Counterparty Haircuts

OFHEO Proposal: The Proposed Regulation introduces important structural enhancements to the counterparty haircuts provision relative to the September 13 Rule. Counterparty risk is effectively the probability that a given counterparty will fail to meet its financial obligations multiplied by the percentage of the total exposure that the company will be unable to recover in the event of failure. The September 13 Rule specified the haircut but did not address separately the default rates and the likelihood of recovery. The Proposed Regulation explicitly addresses both the probability of failure of a counterparty and a generic rate of loss or severity in event of failure, making special cases for derivative haircuts and for loss-sharing lenders with reserves.

Analysis: The Proposed Regulation moves closer to the goal of tying capital to economic risk and to modeling the specific terms of contracts that create – and limit – counterparty exposure. While there are any number of approaches to reflect counterparty risk that would be consistent with economic risk, Fannie Mae agrees with OFHEO that the use of “haircuts” applied to cash flows otherwise due from counterparties is a workable approach. This approach to counterparty loss is consistent with industry best practice and will enable OFHEO to reflect the specific provisions of important types of counterparty contracts that increase or decrease either the probability of failure or the severity of loss in the event of default. Already, the Proposed Regulation recognizes the value of collateral with respect to derivative counterparty exposures through a tailored set of assumptions regarding severity in the event of loss, while keeping the assumptions regarding the probability of default unchanged across both derivative and non-derivative counterparties. The alignment to risk of this approach depends critically, however, on the assumptions used to set the default, severity and other terms governing the haircuts.

¹¹ 12 U.S.C. § 4611(a)(1).

Recommendation: We generally support specifying explicit default and severity rates to generate counterparty haircuts, which provide flexibility to reflect in the capital requirement the critical impact of contract terms such as implicit and explicit collateral risk. OFHEO should continue to evaluate the RBC test for further refinements and adjustments, as a number of difficulties with the assumptions used to reflect the historical data underlying the haircuts in the Proposed Regulation remain.

Proposed Default Rates Underlying Counterparty Haircuts

OFHEO Proposal: The Proposed Regulation changes both the Aa failure rate and the timing of all failure rates underlying the calculation of counterparty haircuts. First, the Proposed Regulation modifies the maximum and ultimate 10-year cumulative default rate for counterparties as outlined in Table 1. Second, the Proposed Regulation would phase in default rates evenly throughout the 10-year stress period, rather than over the first five years as specified in the September 13 Rule.

Table 1: Ultimate Corporate Default Rates

	<u>Sept. 13 Rule</u>	<u>Proposed Regulation</u>
Aaa	5%	5.0%
Aa	15%	12.5%
A	20%	20.0%
Baa	40%	40.0%

The September 13 Rule and the Proposed Regulation both approach the issue of counterparty default rates through a three-part methodology. First, OFHEO establishes an ultimate 10-year default rate for Aaa counterparties. Second, OFHEO sets assumptions for the ratio of the default rates of counterparties of each of the other investment grade ratings categories relative to the Aaa standard. Third, OFHEO sets assumptions governing the phase-in of those final default rates throughout the 10-year stress test.

Stated Rationale: The proposed modification to the ratio of Aa to Aaa default rates is primarily based on an additional source for Great Depression bond default rates. OFHEO cites evidence from Moody's for corporate bond issuer defaults for 1929-1931 as the worst annual investment-grade cohorts since 1920. For that limited period, Aa defaults were 2.6 times the Aaa default rate. The conclusion is that the three-times multiple in the September 13 Rule was too large and that a 2.5 times default rate for Aa would be more appropriate.

Other references, including Hickman's study¹² of corporate bond performance and more recent bond data, suggest that there is greater similarity in the performance of Aaa and Aa rating categories. Offsetting the similarity, according to the proposal, is the observation that the timing of defaults is

¹² W. Braddock Hickman, "Corporate Bond Quality and Investor Experience," 190 *National Bureau of Economic Research* (1958).

somewhat slower for Aaa defaults than for Aa defaults. The haircut phase-in (over ten years rather than five years) was changed to reflect the “ability of most highly rated firms to survive severe stresses for many years.”¹³

Analysis: The Proposed Regulation addresses only the relative performance of Aaa and Aa issuers, as captured by the default multiple of Aa to Aaa. With respect to just this single relationship, Fannie Mae finds that the multiple of 2.5 to 1 is too large, based on historical data. Indeed, the historical data suggest that the multiple approach in general is problematic. The multiple is volatile within the Great Depression era, is much lower in the other notable stress period (the 1980s) when at times Aaa defaults are greater than Aa, and is not defined the rest of the time because there are no Aaa defaults at all.

Moreover, Fannie Mae finds that focusing on the ratio of Aa to Aaa defaults alone, while selecting the baseline Aaa default rate separately from the ratio, leads to inaccurate and problematic conclusions. Very high Aaa default rates tend to produce lower multiples for other rating categories, just as lower Aaa default rates tend to produce higher multiples. In the few numbers cited by OFHEO for the most stressful period on record – and a stress scenario significantly more stringent than that defined by statute for loan performance – the relationship of Aa to Aaa varies between approximately 1.5 and 2.6. Examining the longer period of time from 1920-1999 results in even wider disparities in these relationships.

While the Proposed Regulation does not amend rating categories other than Aa, our concern with defining consistent default levels and multiples applies equally if not more so to A and Baa ratings. Even during the Great Depression - the period of highest stress in the historical data - the actual ratios of A and Baa 10-year defaults to Aaa defaults are inconsistent with the ratios prescribed by OFHEO. Multiples as high as those proposed by OFHEO are only supportable at assumed Aaa default rates less than the current 5 percent prescribed in the Proposed Regulation. Multiples of A and Baa ratings to the Aa standard are highest for the cohort year 1925 – at 6 and 10 times Aaa respectively – but the Aaa default level is only 2.2 percent. Multiples for Aaa default rates closest to 5 percent (1931) are 3 and 5.8 for A and Baa, respectively, compared to the September 13 Rule which set the A and BBB multiples at 4 and 8. In order to be supported by the data, either the multiples must be reduced or the Aaa default rate must be reduced.

The September 13 Rule justified the levels of the default rates based on the worst experience for all investment grades, citing Hickman data from 1912-15 and 1932-35. Those 4-year default rates were then extrapolated to 10-year rates with long-term averages for each individual rating category. As with the multiples used by OFHEO, the conversion of 4-year default rates to 10-year default rates combined a baseline observation from one period with a ratio from an entirely different period (in this case a long-term average). That approach again generates inappropriate and unreliable results. The justification cited by OFHEO is an amalgam of conflicting and internally inconsistent

¹³ Proposed Regulation at 65,149.

information. The far better and more logical approach, i.e., to examine the data we do have on 10-year corporate default rates going back to the 1920s, demonstrates that the default rates proposed by OFHEO cannot be supported by the historical record.

Neither the Proposed Regulation nor the September 13 Rule adequately addresses the selection of an appropriate time period on which to base the haircuts. The statute suggests looking to historical experience from the early 1980s for purposes of calibrating the level of stress for mortgages. The justification for the Proposed Regulation combines sketchy data from very different time periods, leaving the impression that extreme values were sought in a layering of disjointed assumptions. Defining the period of stress that the final rule looks to for counterparty risk is important to ensure logical consistency and appropriate application of the best available data. Given the very small number of corporate defaults, particularly at the higher rating categories that dominate the counterparty exposures of Fannie Mae and Freddie Mac, it is especially critical in selecting a benchmark stress period to differentiate between noise in the data and real measures of risk. Real measures of risk are more discernable through the use of averages over time that smooth out the lumpiness of historical counterparty defaults.

The high levels of the rating-specific cumulative default rates are effectively increased by the linear phase-in over the ten years. In terms of default pattern as opposed to level, the rating categories are treated as identical when there is striking dissimilarity in performance over time. Given the rapid runoff of the book of business during the stress period, most of the value of claims against counterparties occur in the first three to five years. As the figure below demonstrates, the proposed haircuts at year 3 are at least 35 percent greater than the appropriate haircut in every rating category for periods from the 1930s or 1980s. The inconsistency between data and the Proposed Regulation early in the stress period is particularly important given the proportion of cash flows that occur early in the 10-year period. A fifty percent phase-in after 5 years is approximately correct for the A and Baa ratings in the 1930s, but again too high based on more recent historical periods and too high in either period for higher rated exposures. The inconsistencies between data and the proposed phase-in remain, but are less serious, at year 7.

Percent of Ultimate Default Rate at Given Years			
	3	5	7
OFHEO			
All ratings	30%	50%	70%
1928-32			
Aaa	0%	22%	48%
Aa	13%	36%	68%
A	16%	48%	73%
Baa	22%	53%	81%
1981-85			
Aaa	0%	10%	67%
Aa	0%	33%	82%
A	11%	30%	59%
Baa	18%	38%	59%

Source: Proposed Regulation and Moody's Credit Risk Calculator

Recommendation: The Aaa level and the default multiples are not independent and the timing of defaults is also significant and important to deriving haircuts aligned with economic risk. Instead of roughly balancing the default rates for Aa and Aaa by referencing differences in timing, it is possible to apply directly the levels and timing of the default rates using Moody's data and develop a comprehensive view of the differences among rating categories.

Direct use of historical data avoids the pitfalls discussed above that are inherent in combining necessarily arbitrary assumptions about baseline Aaa defaults, multiples for other rating categories and timing. This approach of applying historical data directly also has the virtue of being, by definition, entirely consistent with and supported by the historical data. Since this is the analytical approach underlying best practices in the industry, it ensures maximum consistency between capital and risk.

As emphasized above, the selection of the benchmark stress period is critical. Fannie Mae recommends using 5-year cohort groups to normalize relationships and to capture the highest annual default rates across rating categories. Fannie Mae also recommends looking to the same stress period on which the loan performance portions of OFHEO's test are based: the early 1980s. Fannie Mae recommends selecting the worst five year cohort from 1981 to 1985. Not only is this time period consistent with the mortgage benchmark period, but it is also the most stressful five year cohort in the post 1970 data. Data from that period appears below in Table 2.

Table 2: Cumulative Default Rates for Cohorts 1981-1985 (worst post 1970 cohort)

	1	2	3	4	5	6	7	8	9	10
Aaa	0.00%	0.00%	0.00%	0.00%	0.27%	1.05%	1.76%	2.06%	2.36%	2.64%
Aa	0.00%	0.00%	0.00%	0.37%	0.67%	1.17%	1.69%	2.06%	2.06%	2.06%
A	0.05%	0.20%	0.44%	0.74%	1.14%	1.72%	2.26%	2.84%	3.39%	3.84%
Baa	0.14%	0.75%	1.38%	2.28%	2.98%	3.58%	4.65%	5.82%	6.95%	7.86%

Source: Moody's Credit Risk Calculator

What is most striking in the data from the 1980s is that Aa performance is essentially equivalent to Aaa for the specific cohorts analyzed. Indeed, the difference between the two ratings is most apparent in looking over the entire period from 1970: Aaa's do not default except in and around the early 1980s sub-period. These data would argue for treating Aaa and Aa ratings the same during a stress period, just as they are for bank regulatory treatment of counterparty exposures. We also note that the defaults occur more slowly in the 1980s time period than in the Great Depression era. Less than 50 percent of the 10-year cumulative default rate is attained by year 5 for all of the rating categories. This evidence strongly supports OFHEO's observation that highly rated issuers survive for many years despite severe economic conditions and underscores the excessive impact of the current linear phase-in.

Should OFHEO seek a different benchmark stress period, the most conservative historical cohort is for the 1928-32 period, reproduced below in Table 3.

Table 3: Cumulative Default Rates from the Worst Five-Year Cohort Group 1928-1932

	1	2	3	4	5	6	7	8	9	10
Aaa	0.00%	0.00%	0.00%	0.33%	1.10%	1.93%	2.35%	3.34%	4.37%	4.89%
Aa	0.21%	0.81%	1.42%	2.15%	4.12%	5.96%	7.69%	9.39%	10.43%	11.29%
A	0.27%	1.15%	2.50%	5.28%	7.67%	9.75%	11.67%	13.59%	14.97%	16.07%
Baa	0.43%	2.56%	5.91%	10.01%	14.34%	18.66%	21.78%	23.90%	25.30%	26.86%

Source: Moody's Credit Risk Calculator

Proposed Loss Severity Given Default Underlying Counterparty Haircuts

OFHEO Proposal: The Proposed Regulation applies a constant severity rate of 70 percent to all exposures of any contract type (regardless of terms such as collateralization or seniority) and to all counterparties regardless of rating, regulatory status or other factors.

Stated Rationale: OFHEO cites various recovery rates over long periods of time, over the first four decades of the 1900s and over the past 20 years that range from 39 to 44 percent. OFHEO also recognizes that "recoveries on Enterprise holdings of mortgage and other asset-backed securities and on mortgage insurance claims would likely be substantial also, benefiting from asset values in

the former case and premium income in the latter.”¹⁴ However, over more limited stressful periods, OFHEO cites average recovery rates of 34-36 percent for the 1930s, with a low during that period of 20 percent. A low recovery rate of 30 percent was considered appropriate for the stress period.

Analysis: Recovery and loss data are more difficult to obtain than default data and are more challenging to interpret, given the range of bond provisions such as seniority and security. The amendment refers to various sources and time periods:

Reference	Time Period	Recovery Rate
“Corporate bonds”	Long periods of time	40%
Moody’s	Past 20 years	39%
S&P	1981-97	44%
Hickman, large issues	1900-43	43%
Hickman, large issues	1930-43	34%
Moody’s	1930s	20%
Moody’s	1930-43	36%

Recovery rates apparently relate to all corporate bonds, despite strong evidence from Moody’s published sources that recovery rates are importantly related to the security and seniority of bonds. This fact is noted in the Proposed Regulation, but it is argued there that these features affect the *rating* of the bond issue and therefore would not affect the *recovery rate*. The default rates, however, have been chosen for *issuers* and therefore are most consistent with senior unsecured issues. Presumably, secured issues could have higher recovery rates and subordinate issues lower recovery rates, using the same default probability. According to published Moody’s data:

Table 4: Moody's Median Recovery Rates, 1970-98

Claim Type	Recovery Rate
Bank loans – senior secured	75%
Bonds – senior secured	53%
Bonds – senior unsecured	48%
Bonds – subordinated	30%

Source: Moody's Investors Service, “Historical Default Rates Of Corporate Bond Issuers, 1920-1999,” January 2000, p. 18.

Given that OFHEO recognizes that the companies hold high quality securities and have access to premium and servicing streams from a large percentage of their counterparties, a secured issue recovery rate is more appropriate. Of Fannie Mae’s counterparty contracts, nearly 95 percent are credit enhancements provided by private mortgage insurers or lender recourse providers. The remainder are unsecured senior obligations, including instruments held in the liquid investment portfolio. Of the credit enhanced total, measured by the mortgage UPB, almost 80 percent has pool

¹⁴ Proposed Regulation at 65,148.

or primary mortgage insurance with a AAA or AA insurer. Mortgage insurance policy provides effective collateral through the ability to capture the ongoing flow of premium payments, in addition to the strong AAA or AA ratings and regulatory oversight. Another 15 percent is with lenders rated BBB (or unrated but considered BBB by the provisions of the Proposed Regulation).

Data by seniority and security are apparently not available for the Great Depression era. However, Hickman distinguishes among ratings in citing recovery rates:

Table 5: Recovery Rates by Rating Category, 1900-43

Aaa	60%
Aa	52%
A	42%
Baa	34%
Source: Hickman	

Recovery rates are based on the market bond prices at the time of default (as are Moody's recovery rates), and therefore incorporate explicitly any expected costs associated with securing the recoveries as well as the impact of time delays in obtaining the recovered funds. Actual recovery rates may be higher, but require complex calculations, as the payoffs are received over time. The Hickman study, however, also reports on the eventual recovery rates, all of which are higher than the recoveries based on bond prices.¹⁵

Regardless of the source used to gauge recovery rates, the proposed 30 percent recovery rate is low, especially given the prevalence of higher rated counterparties and the use of effective collateral by the companies.

Recommendation: Fannie Mae recommends using a 50 percent generic severity rate. This severity level is consistent with historical data and the composition of Fannie Mae exposures, which are overwhelmingly both to AAA and AA counterparties and secured by collateral and income streams (such as servicing fees or premiums) to offset any potential counterparty default. A rapid move to modeling major categories of contracts specifically is critical and will reinforce the companies' existing incentives to secure counterparty obligations.

In making our recovery recommendation we recognize the effort that would be involved in modeling individual contracts and business relationships. We thus accept that OFHEO may first establish a generic severity assumption for any contract type not modeled specifically. Such a

¹⁵ Hickman reports the value of future receipts on default bonds, assuming discount rates of 3% and 6%.

Value of future receipts	Aaa	Aa	A	Baa
Discounted at 3%	80	76	63	66
Discounted at 6%	64	62	52	55

generic severity assumption, however, should be based on the more recent time period for senior issues.

Resulting Haircut Levels for Non-Derivative Counterparties

OFHEO should replace its various Great Depression era default assumptions with historical default frequencies by year from the post-1970 period. The worst cohort default rates are detailed in Table 2. Default rates from this period are consistent with the bond default rates from the benchmark loss period used to derive mortgage loan performance. This standard for haircuts also provides a more consistent treatment of the risks faced by the companies. Combining the 1981-85 bond default rates by rating with a 50 percent recovery rate produces the following haircuts, phased in according to the default rates over a 10-year time period.

Table 6: Effective Haircuts by Rating under 1980s Assumptions

	1	2	3	4	5	6	7	8	9	10
Aaa	0.00%	0.00%	0.00%	0.00%	0.13%	0.53%	0.88%	1.03%	1.18%	1.32%
Aa	0.00%	0.00%	0.00%	0.18%	0.34%	0.59%	0.84%	1.03%	1.03%	1.03%
A	0.03%	0.10%	0.22%	0.37%	0.57%	0.86%	1.13%	1.42%	1.70%	1.92%
Baa	0.07%	0.37%	0.69%	1.14%	1.49%	1.79%	2.32%	2.91%	3.48%	3.93%

Alternatively, should OFHEO continue to base the final rule on the Great Depression, we then recommend replacing the current set of default, timing and severity assumptions and approximations with the haircuts below. The levels were derived using the annual default frequencies for the 1928-32 cohort from Table 3 and Hickman’s recovery rates by rating category in Table 5. If OFHEO continues to base the haircut standard on data from the Great Depression era, we urge that the data be used consistently, recognizing that this is the period of the most severe economic distress in the past century.

Table 7: Effective Haircuts by Rating under “Great Depression” Assumptions

	1	2	3	4	5	6	7	8	9	10
Aaa	0.00%	0.00%	0.00%	0.13%	0.44%	0.77%	0.94%	1.34%	1.75%	1.96%
Aa	0.10%	0.39%	0.68%	1.03%	1.98%	2.86%	3.69%	4.51%	5.01%	5.42%
A	0.16%	0.67%	1.45%	3.06%	4.45%	5.66%	6.77%	7.88%	8.68%	9.32%
Baa	0.28%	1.69%	3.90%	6.61%	9.46%	12.32%	14.37%	15.77%	16.69%	17.73%

Finally, if OFHEO must make expedient assumptions for modeling simplicity and desires to retain its current structure, Fannie Mae recommends that OFHEO make the following adjustments to its Proposed Regulation. First, the multiples of Aaa defaults should be consistent with the level of Aaa defaults and not be overly influenced by the volatility of the measurement. The level and multiples should reflect that recent experience suggests a different relationship among the rating categories.

Aaa defaults basically only occur in stressful periods. The average Aaa default rate in the 1920s-30s and late 1970-80s is 3.2 percent, and is zero in other years. Multiples consistent with that average are as follows:

Rating Category	Multiple to Aaa Default Rate
Aa	1.7x
A	2.8x
Baa	5.0 x

If the default rate for Aaa entities arbitrarily remains at 5 percent, then the multiples should be 1.1, 1.8 and 3.2 for Aa, A and Baa ratings, respectively. The current multiples are unsupported in the data and, when combined with the linear phase-in, generate excessive haircuts.

Second, the recovery rate assumption should be set at 50 percent for generic exposures, reflecting the overwhelmingly high rating of counterparties and the extensive explicit and implicit (e.g., servicing cash flows, premium cash flows, etc.) collateralization that backs the exposures of Fannie Mae and Freddie Mac. The historical recovery rate of 50 percent for senior bonds is the minimum appropriate assumption supportable by the data given the nature of the exposures. Because the haircuts would not be based on specific, secured claims, the haircuts will result in discounts that are too high for many of the companies' counterparty exposures. As stated earlier, most of the companies' counterparty exposures carry some form of effective collateral. For instance, under typical mortgage instrument and lender contracts, the companies have the right to capture premiums due to a mortgage insurer in the event of default. Similarly, the companies have the right to terminate a servicer and capture the servicing cash flow streams in the event of default on a recourse (or other) obligation.

The effect of collateral and offsetting income streams on recovery rates underscores the critical importance of moving rapidly to specific modeling approaches for the categories of contracts defined above to avoid unintended impacts on the companies' business practices or industry structure. The Proposed Regulation takes a first step toward modeling the specific contractual relationships by recognizing a higher rating than Baa for unrated seller-servicers that "enter into loss-sharing agreements with the Enterprises and collateralize these loss-sharing obligations with fully funded reserved accounts pledged to the Enterprise," as long as the reserve account is "adequate to support the risk borne by the seller-servicer under the loss-sharing agreement,"¹⁶ as determined by OFHEO. Extending the logic of this provision is imperative if the general haircuts are to be based on the Great Depression cohorts.

¹⁶ Proposed Regulation at 65,150.

2. Third-Party Mortgage-Backed Security Haircuts

Fannie Mae believes specification of additional severity factors is necessary in order to address a serious conceptual flaw that remains with the overall haircut regime. As now applied, the rule may require substantially greater capital to support investments in guaranteed mortgage-backed securities (MBS) than would be required for holding the identical unsecured whole loan collateral. In effect, the risk-based capital regulation may well penalize the companies for reducing their exposure to mortgage credit risk.

Disincentives for Credit Risk Diversification Remain

Prudent risk-based capital regulation must promote safety and soundness without unduly restricting the companies' ability to achieve their critical nationwide housing missions. Activities that diversify and transfer credit risk to other institutions should therefore be encouraged, particularly if they provide liquidity to some of the most underserved market segments. While most MBS holdings fall into this category, the companies purchase and investment in mortgage revenue bond issues provides the most striking example of such activity.

Mortgage Revenue Bonds (MRBs) Unduly Penalized

Issued by state and local housing financing authorities, mortgage revenue bonds provide a key source of funds for first-time homebuyers. Proceeds from these mostly tax-exempt bonds are lent to qualifying low- and moderate-income borrowers at below market rates. Importantly, the majority of mortgages originated under these programs are federally insured.

At the end of 2000, more than three-quarters of the collateral backing outstanding MRBs carried some form of federal insurance.¹⁷ In most cases, these loans are packaged and held by the bond trustee in the form of Ginnie Mae securities. For loans not federally insured, issuers often obtain additional credit enhancement by obtaining private bond insurance or by pooling these loans into Fannie Mae or Freddie Mac mortgage-backed securities. Cash flows from these loans or securities are then pledged to support payment on the related mortgage revenue bonds.

Fannie Mae represents the nation's single largest investor in mortgage revenue bonds. The two companies combined purchase about 25 percent of all bonds issued on an annual basis. More significantly, virtually all of these purchases involve long-term bonds for which there are few buyers. Our commitment to the MRB market has thus not only provided much needed liquidity, but also led to a marked increase in MRB prices over recent years, resulting in even lower mortgage rates for first-time borrowers.

¹⁷ *State HFA Factbook: 2000 NCSHA Annual Survey Results*; 2000 Mortgage Revenue Bonds; Table 5: Mortgage Insurance; page 64.

Most mortgage revenue bonds carry the equivalent of a AAA rating due to the quality of mortgage collateral, the presence of substantial cash reserve accounts, and the existence of financial commitments on the part of state and local bodies to the issuing authority.¹⁸ Those that are rated AA generally indicate somewhat less strength in one or more of these three areas. Regardless of rating, the undisputed quality of these bonds is evidenced by the fact that no AAA- or AA-rated mortgage revenue bond has ever defaulted in the history of such issuance.¹⁹

While this simple fact might well argue for exempting MRB cash flows from haircuts entirely, the conceptual flaw in the Proposed Regulation's haircut treatment lies with the difference between projected MBS credit losses versus losses on the underlying collateral if held instead in whole loan form. This difference is due to the fact that haircuts on third-party MBS cash flows are applied without reference to the rule's own mortgage default and severity equations. Consequently, for a given set of loans, estimated whole loan credit losses may vary considerably from projected security credit losses even though the mortgage credit risk is identical.

This disparity is especially pronounced in the case of federally insured mortgages and, therefore, MRB investments. Assuming a worst case cumulative 40 percent mortgage default rate and an average 5 percent severity, these loans would be projected to generate a 2 percent loss rate during the 10-year stress period. However, if held in portfolio as a AAA-rated security, the Proposed Regulation's security haircuts would require risk-based capital to support a 3.5 percent loss rate. This outcome clearly does not align capital to risk, nor does it create incentives for the companies to transfer mortgage credit risk to other institutions.

In actuality, the haircut treatment accorded mortgage revenue bonds is actually more egregious than the example cited above. As indicated, the majority of MRBs are backed by government insured loans that have been placed into Ginnie Mae securities. Others are backed by Fannie Mae issued MBS. In both cases, the purchase of either security as a portfolio investment poses no incremental credit risk (or risk-based capital requirement) and is so reflected by the rule's assignment of a "Cash" ratings designation.²⁰ Still, the proposed haircut treatment assumes a 3.5% MRB loss rate despite adding yet another layer of credit enhancement.

Recommendation - Mortgage-Backed Security Investments

Fannie Mae strongly believes that the final rule should not penalize the companies for engaging in prudent credit risk management activities. Mortgage investments that carry some form of third-

¹⁸ Approximately 60 percent of state HFAs and virtually all local HFAs merit a AAA bond rating.

¹⁹ Between 1991 and 1999, sixteen single-family MRB issues defaulted, all of which carried a rating below AA at time of issuance. Aggregate defaults totaled \$37 million out of approximately \$96 billion issued during this time period (a 3.8 basis point default rate). Fannie Mae does not invest in MRBs rated below AA.

²⁰ Credit exposures tied to Fannie Mae MBS are explicitly modeled whether or not these securities are held as portfolio investments.

party guarantee should never require more risk-based capital than an identical investment without such a guarantee. To avoid this outcome, cash flow haircuts applied to mortgage-backed securities issued by third parties must be “calibrated” so that they fall below (or at least do not exceed) credit losses estimated for similar whole loan investments. Introduction of additional loss severity factors can reasonably perform this calibration function.

Collection of relevant attributes on third-party collateral is sometimes problematic. Further study may be needed to derive acceptable methods of imputing relevant characteristics in order to establish loss severity factors that satisfactorily relate mortgage security and whole loan credit losses. Still, sufficient clarity now exists to calibrate haircut levels applied to MRB investments. Immediate action is warranted given the economic and policy importance of this market segment to the nation’s housing system.

Our specific recommendation involves creation of distinct loss severity assumptions for mortgage revenue bonds. If denoted as such in the RBC Report, MRBs backed by Ginnie Mae or Fannie Mae securities should be assigned a zero percent loss severity assumption (equivalent to a “Cash” ratings designation). For all other MRBs, use of a 30 percent loss severity rate would appear to be quite conservative. A 70 percent recovery rate is justified given that much of the collateral remains federally insured, and the bonds are supported by cash reserve accounts, private bond insurance, financial ties to governing bodies, and perhaps even Freddie Mac PCs.

3. Derivative Haircuts

In recognizing the likely impacts of collateralization on derivatives exposure, OFHEO has taken a key step toward better aligning capital with risk. The resulting capital requirement for collateralized interest rate contracts nonetheless is substantially larger than any expected reasonable loss exposure from collateralized interest rate contracts, and, we believe, is larger than most conservative industry observers would suggest as appropriate.

OFHEO proposes that fully collateralized interest rate derivatives suffer a 10 percent loss severity within the stress test. That severity rate is considerably higher than any likely loss from counterparty failure. All Fannie Mae’s interest rate derivatives contracts are subject to full collateralization requirements, requirements that necessitate one hundred percent collateralization for A-rated counterparties and that require overcollateralization for all lower-rated counterparties. Any ratings downgrades therefore result in either increased collateralization or in assignment of the contract to higher-rated counterparties. In the event of actual counterparty default, Fannie Mae would collect the collateral that had been posted and would have overcollateralization of up to 25 percent to ensure we receive the full value of our claim regardless of interim market value fluctuations.

Fannie Mae marks its collateral requirements to market daily. In the event of large interest rate moves or counterparty problems, the daily mark would result in an immediate call for increased

collateral or for reassignment of the contract. In order for a loss to result from counterparty default, a high-grade counterparty would have to default on its derivatives contracts with Fannie Mae, resulting in a rating of D from a Nationally Recognized Statistical Rating Organization, before Fannie Mae was able to increase the required collateral or assign the contract. In practice, any such time interval before Fannie Mae can require increased collateral or assign the contract is likely to be only one to three days.

OFHEO instead proposes an exposure period of two weeks, which is longer than the maximum possible period of nine business days under ISDA procedures. Historically, no high-grade corporation has ever defaulted without interim downgrades and no high-grade corporation has ever defaulted within two weeks.

In addition, the Proposed Regulation asserts that interest rates will move adversely by the maximum amounts observed historically during the posited two-week period. In adding a further, highly conservative assumption to the assumption of default, OFHEO has created a severity projection that is considerably higher than any likely or reasonable actual loss. We respectfully suggest that OFHEO reduce their collateralized derivative severity projection to a level that is more consistent with likely stress events.

Moreover, the associated 10 percent severity is intended to represent solely the market value exposure. In the event of a counterparty default, Fannie Mae would hold creditor standing equal to other senior debt holders. At least partial recovery of our market value loss is highly likely. We see no rationale in the Proposed Regulation for assuming a zero percent recovery rate on derivative counterparty claims. As detailed above, OFHEO bases its assumed 30 percent recovery rate for non-derivative counterparty claims on historical corporate bond recovery data. Given that our derivative counterparties are large financially strong institutions, we believe the same recovery rate assumption should readily apply to these counterparties as well. In sum, the Proposed Regulation therefore makes two assertions that are nothing short of extreme: (1) that a high-grade counterparty would default within two weeks without any forewarning, and (2) that Fannie Mae would recover nothing on its derivative counterparty claims.

We acknowledge that conservatism is appropriate for determining risk-based capital for derivatives. Because at least two low probability events must both be assumed to occur – the immediate default of a highly-rated counterparty simultaneous with an unprecedented adverse rate movement – for a material credit loss from derivatives to occur, there is a great risk of overstating the probability of such a coincidence through being excessively conservative in estimating the risk of each event independently. The conservative bias for each event occurring is compounded when these events are assumed to occur together. This distortion is particularly critical because each individual event is already several standard deviations from the expected occurrence.

For example, using three standard deviations from the mean to define risk is a common standard among participants in the derivatives market for allocating capital internally. If the coincidence of

two events that individually occur only within three standard deviations of the mean would together be even less probable unless they are perfectly correlated. Intuitively, the events related to derivatives are not so correlated. Not every occurrence of this magnitude of adverse rate volatility will coincide with a high-quality counterparty's default. A high-quality counterparty may default for many reasons or in environments other than a volatile interest rate market; the two need not coincide. To determine the appropriate degree of conservatism, it is therefore the appropriate joint probability of the events coinciding that needs to be set, otherwise the compounding of the conservative bias for each component event results in a level of capital appropriate only for a much lower probability occurrence than intended.

In fact, the conservatism is already extreme for the individual events. The ten percent severity assumes the equivalent of a 250 basis point adverse rate change for a five year security yet, based upon history of the past decade, a three standard deviation event for a two week period would be less than one-fourth of that movement. The apparent absence of any direct defaults of AAA or AA-rated credits within a two week period prevents us from making a similar statistical comparison on the default occurrence, but that as well would appear to be several standard deviations from the mean default rate of zero. The result is a capital allocation at least four times, and very probably eight times or more, larger than what the joint probability of two events was intended. We therefore recommend a reduction in the 10 percent severity to no more than 2.5 percent.

Conclusions – Counterparty Haircuts

The companies are in the business of managing mortgage-related risks. As the risk-based capital rule recognizes, risk management – in contrast to simple risk taking – involves sharing risk with other entities. The ability to transact risk sharing on reasonable economic terms consistent with the market is central to the safe and sound conduct of the companies' business.

The risk-based capital rule should seek to accurately incorporate the real risks, net of risk mitigants, associated with the specific counterparty exposures of the companies. As directed by statute, the approach to counterparty risk should be consistent with historical experience, consistent with the conditions underlying the stress environment defined for mortgage credit performance, and consistent with industry best practices. Most importantly, the final rule should treat economically equivalent exposures the same, regardless of the form in which those exposures are contracted or of the specific type of counterparty.

Implementation of the counterparty haircuts as currently drafted leaves several areas that could be readily refined within the framework of applying the historical data to derive the counterparty haircuts by rating category. Corporate default rates should come from the same benchmark period as the mortgage performance data. If, however, the most conservative default experience is chosen from the Great Depression, other assumptions regarding the timing of the defaults and the recovery should be consistent with that experience, rather than drawing additional conservative assumptions

from disparate sources. Either source period generates lower haircuts at each rating category than currently proposed.

The proposed modifications to the September 13 Rule continue to raise serious questions and implications for the way in which the companies conduct their businesses and the structure of the mortgage and financial services industries in general.

- The haircuts are substantially in excess of those underlying industry best practices, those in the evolving Basel standard, or those suggested by even worst case periods in the historical data.
- The haircuts underestimate the substantial mitigating value of recovery in the event of default and the real differences in recovery value across different ratings when uncollateralized and between contracts with effective collateral values.
- If unchanged, the final rule would create compelling incentives for the companies to retain credit risk rather than to share it, since the regulatory capital cost of sharing the credit risk exceeds the market value of the risk sharing.
- The final rule would create significant incentives for the companies to move away from effective collateralization terms in its counterparty contracts (which provide substantial value).
- The final rule would create incentives to shift exposures among particular counterparties, resulting in potential concentration of risk and dramatic changes to market and industry structure.
- The final rule, even if modified as proposed in the Proposed Regulation, creates significant disincentives to structure loss-sharing arrangements with seller-servicers. This shortcoming will impact especially those arrangements created to access and serve underserved markets unless there is broad and immediate application of the provision for loss-sharing seller-servicers with specific reserves.

Despite these serious shortcomings, OFHEO should be commended for its continuing efforts to examine the treatment of counterparty risk in the rule. We recognize and agree with the urgency of taking a first step towards a more refined counterparty risk approach to avoid further market dislocation and unintended incentives. In order to more closely align capital with risk, OFHEO should make additional refinements to the relative default rates, recovery rates across ratings, and timing over the stress period.

OFHEO's proposed approach for non-derivative counterparties, which defines a single recovery rate, would be appropriate for contracts that depend exclusively on the creditworthiness of the counterparty. This approach however would not align capital as closely to risk for contracts that

involve some form of collateral, as do most of the exposures entered into by the companies. Given that the fixed recovery rates would ignore key collateralization provisions in typical contracts, we believe this generic approach must be paired with rapid development and implementation of specific approaches for standard contract types.

As specific approaches are implemented for categories of contractual exposures, they would be used in lieu of the generic approach. This, indeed, is the course that will be followed for derivative haircuts and has been proposed for certain loss-sharing arrangements with seller-servicers. It is also the approach that we believe reflects the economic risk of mortgage revenue bonds and mortgage- and asset-backed securities.

Some of the other non-derivative contract types that would merit such specific treatment include mortgage insurance, recourse, collateralized obligations (such as recourse backed by explicit collateral), and spread accounts.

B. Proposed Changes to Multifamily Model

With respect to the multifamily model, the Proposed Regulation appears to be an attempt to align capital with risk more accurately than previously, which is encouraging. However, the new Proposed Regulation is exceptionally conservative when compared with actual stress experience for multifamily ARMs. Loss severity has been brought closer to likely conservative levels for stress experiences, but is still at the outer edge of what might be termed a reasonable stress assumption. As discussed below, there is still room for further improvement in several key areas.

Artificial Capital Volatility: Under the previous version of the default model (in the September 13 Rule), highly volatile levels of risk-based capital over the life of a loan were created artificially by a combination of: (1) the underwater debt service coverage flag (UWDCRF); (2) a large jump in the initial vacancy rate under the stress scenarios; and (3) the effect of loan seasoning since the date of its origination. Although it is certainly true that loans are more likely to default as debt service coverage declines, we have not observed the huge incremental risk suggested by the previous version of the model. Re-specifying the model to reduce excessive sensitivity to debt service coverage ratios slightly below 1.0 more accurately reflects the reality that most borrowers continue to support their loans at this level.

By increasing the starting vacancy rate to a level consistent with stress experience in the benchmark region and period, OFHEO has reduced the tremendous level of risk-based capital volatility that existed in the previous version of the model. However, the starting vacancy rate chosen by OFHEO of 10 percent still creates a 3.6 percent change in vacancy as the initial shock in the first month of the stress test. This level of change is consistent with the largest year-to-year change in vacancy rates ever observed in any region of the country, including the benchmark region, and is over twice that observed in any of the Census region data. Thus, the vacancy assumption in the initial year,

while more reflective of the benchmark region's experience, still is highly conservative, but workable.

Loss Severity: Fannie Mae has, throughout development of the RBC rule, strenuously argued that OFHEO chose unreasonably high severity rates for multifamily loans. Because of the reported elements of fraud and underwriting abuses, the pre-1993 Freddie Mac severity experience was clearly not representative of industry loss experience in an economically stressed period. We continue to believe that the additional risk-based capital required for management risk should be adequate to cover these types of highly infrequent events.

Although the Proposed Regulation does not completely discard the pre-1993 Freddie Mac loss severity data, it has been balanced somewhat by including more recent loss experience data of the companies. The amended severity assumptions are a step in the right direction, but are still inappropriately conservative compared to actual severity rates observed in stressful market conditions. We recommend that OFHEO adopt a severity rate more closely aligned with comparable historical experience and thus further reduce the baseline rate used in the September 13 Rule to 40 percent.

Haircuts for Unrated DUS Lenders: The Proposed Regulation allows unrated Delegated Underwriting and Servicing ("DUS") lenders to receive a higher rating than BBB. However, the instrument used as collateral in their funded reserve account also must have a higher rating than BBB and exceed one percent of the unpaid principal balance of the loans covered by the loss sharing agreement at the beginning of the stress test period. While this is an important positive change, we recommend that the substantial value associated with a DUS lender's servicing portfolio also be considered in determining an appropriate rating for purposes of applying the haircuts.

Low Income Housing Tax Credit Loans: Neither the September 13 Rule nor the Proposed Regulation have explicit provisions to adjust loan-to-value and debt service coverage ratios on loans collateralized by properties with Low Income Housing Tax Credits ("LIHTC"). It is generally recognized in the real estate finance industry that these tax credits both increase property value and substantially reduce the likelihood of loan default. We strongly recommend that an adjustment factor be implemented to put the loan-to-value and debt service coverage ratios of these loans on a comparable basis with non-LIHTC loans.

ARM Default Assumptions: The cumulative default rates for ARM loans produced by the Proposed Regulation, while lower than those in the September 13 Rule, are still at very high levels. Although ARM credit performance data have not been plentiful in the industry, it seems somewhat unrealistic to assume cumulative default rates of 40 to 45 percent are inherent to the ARM product, even in a stress environment. Banks and other regulated institutions clearly do not price Multifamily ARM loans for this level of stress defaults. Failure to correct this aberration will likely reduce secondary mortgage market support for this type of financing. A properly underwritten ARM loan with appropriate interest rate and payment adjustment caps can be as safe as a fixed rate loan. We

appreciate OFHEO's stated willingness to keep an open mind on this point and will continue working to provide persuasive ARM default data, which will demonstrate that even the reduced capital levels required under this proposal are inappropriately conservative.

Seasoned Loans: Seasoned loans without updated operating information are adversely treated under the Proposed Regulation, because it fails to account for improvement in net operating income and debt service coverage ratios. The impact of this on the capital requirements for seasoned ARM loans is particularly severe. It has been Fannie Mae's experience that a large percentage of seasoned small loans do not have updated operating information because of their loan size. Fannie Mae's purchases of seasoned product typically provide liquidity for banks and thrifts, which originate the majority of ARM loans in the marketplace.

When annual operating information is not available, we recommend that OFHEO utilize a methodology to approximate the increase in net operating income that is occurring in the marketplace. The proxy, which could be based on objective third-party data, would produce a more appropriate level of capital for seasoned multifamily loans.

Not-Ratio-Updated Fixed Rate Loans: The Proposed Regulation contains a new provision that would increase the conditional default rates of those fixed rate loans, which do not have updated debt service coverage ratios, by 20 percent. We are unclear about the observed statistical basis of the assumption that fixed rate loans lacking current operating data necessarily will be 20 percent more likely to default, particularly when they are underwritten to the same standard. Because this proposal has no factual basis to support it, we recommend it simply be dropped.²¹

Prepayment Penalties: Barring explicit recognition of revenues derived from multifamily prepayment penalties, the Proposed Amendment's elimination of multifamily prepayments for loans subject to yield maintenance provisions is entirely appropriate. OFHEO correctly acknowledges that modeling instrument cash flows according to contractual terms promises to most accurately align capital to risk. Most multifamily loans require a prepayment penalty in order to maintain a minimum mortgage yield over some defined term regardless of whether the loan prepays or not. The existence of these yield maintenance provisions minimizes the companies' exposure to falling-rate environments, allowing for better matched funding and a reduction in mortgage loan rates. To project multifamily prepayments and not recognize attendant penalty payments for loans subject to these provisions would be a complete disregard of contractual terms. Given the complexity of modeling these loan-specific contracts, we support the now consistent characterization of revenues and prepayments achieved through the proposed prepayment lockout for multifamily loans inside the yield maintenance period.

²¹ See note 30, *infra*.

C. Proposed Changes to Yields on Debt

The Proposed Regulation would also add a 10-basis-point premium to the cost of Fannie Mae's newly issued debt during the last nine years of the stress period. According to the proposal, this premium is “a simplifying assumption, which gives some effect to the possibility that stress period market conditions could impact an Enterprise more adversely than the rest of the market.”²² Although OFHEO decided against including such a premium in the September 13 Rule, OFHEO states that it has now determined “[u]pon further study” that “it is appropriate for the stress test to recognize an increased cost of debt of ten basis points for an Enterprise in the stress test vis-à-vis other borrowers in the debt markets.”²³ As explained below, Fannie Mae respectfully believes that this provision is inconsistent with the Congressional mandate in the 1992 Act because it is not based on historical data.²⁴

The 1992 Act requires OFHEO to conform to historical experience in modeling interest rate fluctuations during the simulated stress period. According to the statute, “[y]ields of Treasury instruments” other than the 10-year constant maturity Treasury yield which is established in the statute, “will change relative to the 10-year constant maturity Treasury yield in patterns and for durations that are reasonably related to historical experience and are judged reasonable by the Director.”²⁵ In addition, the statute specifies that “[l]osses or gains on other activities, including interest rate and foreign exchange hedging activities, shall be determined by the Director, on the basis of available information, to be consistent with the stress period.”²⁶

As OFHEO itself essentially concedes, the 10-basis point premium was picked out of a hat; OFHEO is unable to offer any ground – other than conjecture – to support its “simplifying assumption” that: (1) the cost of debt would rise more quickly for the companies than other borrowers during a stress period; and (2) such spreads – if indeed they would occur – would be equal to 10 basis points.

²² Proposed Regulation at 65,146, 65,153. (emphasis added)

²³ Id.

²⁴ Moreover, OFHEO does not have authority under the 1992 Act to impose such a 10-point premium in the absence of historical support, simply because OFHEO thinks it prudent to increase the capital number for Fannie Mae and Freddie Mac. To the contrary, the Act specifies that the only premium that should be added to the test is the 30 percent add-on for “management and operations risk.” 12 U.S.C. § 4611(c). Had Congress intended for OFHEO to impose other types of premiums on the companies, it would have indicated as much in the statute. *See American Petroleum Inst. and Nat’l Petrochemical & Refiners Assoc.*, 198 F.3d 275 (D.C. Cir. 2000) (invalidating order by EPA because Congress “meant what it said” when it listed the eligible areas to participate in program for non-reformulated gasoline; EPA could not interpret the statute to include additional areas).

²⁵ 12 U.S.C. § 4611(a)(2)(D) (emphasis added).

²⁶ 12 U.S.C. § 4611(a)(4) (emphasis added).

Indeed, this is the very reason why OFHEO decided four months ago not to adopt the 50-basis point premium proposed in NPR 2 in the September 13 Rule. As the Preamble to the Proposed Regulation concedes, OFHEO ultimately decided that “data upon which to base such a premium may be too sparse to determine definitively whether other spreads to Treasuries would widen as much as the Enterprises’ spreads or to estimate how much the Enterprises’ spreads would widen.”²⁷ Moreover, as OFHEO recognized in the September 13 Rule (and again in the Proposed Regulation), a premium was also inappropriate because “many of the Enterprises’ hedging instruments are based upon rates other than Treasuries (*e.g.*, LIBOR, COFI).”²⁸

Notably, the Proposed Regulation does not provide any new data that OFHEO has collected in the last two months to support such a premium – or adequately explain why OFHEO changed its mind; rather, OFHEO essentially concedes that like the rejected provision, the new proposal is also based on speculation.²⁹ Put another way: the fact that the scale of the premium is smaller under the new Proposed Regulation than in NPR 2 does not resolve the statutory problem contained in the earlier version. Because OFHEO’s proposal is not based on “data,” “information” or “historical experience,” Fannie Mae believes that OFHEO lacks any basis for including this provision in the amended final rule, and that this “add on” would amount to an unnecessary increase in the costs of homeownership.³⁰ Accordingly, this provision should be removed from the final rule.

D. Proposed Changes to New Debt Mix

Consistent with the September 13 Rule, the Proposed Regulation stipulates that stress test refunding needs attached to end of month cash deficits are to be met using a variable blend of short- and long-term debt issuance. Similarly, the Proposed Regulation establishes a static portfolio short/long ‘target’ blend for use in determining how much short- and long-term debt to issue in any given month. In departing from the September 13 Rule, however, the Proposed Regulation now bases the

²⁷ Proposed Regulation 66 Fed. Reg. at 65,153.

²⁸ Id.

²⁹ The inclusion of the premium is particularly inappropriate, given that the purpose of the amendments is to make “corrections to the Rule to tie capital more closely to risk” – and that the Proposed Regulation corrects similar types of “simplifying assumptions” that were included in the original September 13 Rule.

³⁰ Indeed, we believe that OFHEO’s ten-point premium proposal would be “a classic case of arbitrary and capricious rulemaking,” because it runs counter to the evidence before the agency. *See, e.g., Chemical Manufacturers Association v. EPA*, 217 F.3d 861, 865 (D.C. Cir. 2000) (rejecting EPA rule establishing a schedule for compliance with new emission standards for hazardous waste combustors because EPA had failed to show any benefits from the proposal). *See also National Mining Association v. Babbitt*, 172 F.3d 906 (D.C. Cir. 1999) (rejecting federal regulation where the government did not offer “any support, scientific or otherwise,” to show that its assumptions were “logical”); *Aeronautical Radio v. FCC*, 928 F.2d 428, 447 (D.C. Cir. 1991) (FCC requirement that applicants to a consortium which would be granted spectrum space contribute \$5 million in cash to the consortium was arbitrary and capricious, because “[a]ny financial eligibility requirement imposed upon license applicants must bear some reasonable relationship to true financial fitness”). In short, courts have recognized that regulations based on an agency’s unsupported assumptions – as opposed to true facts – are arbitrary and capricious and must be invalidated.

portfolio target blend on the company's actual short-term/long-term proportions of corporate debt outstanding at quarter end rather than the arbitrary 50/50 blend adopted in the September 13 Rule.

"Improvement" Headed in the Right Direction

The September 13 Rule defended the choice of a 50/50 target portfolio blend as consistent with a desire to avoid modeling company predictions of possible interest rate movements. In actuality, such a debt structure would only make sense if based upon a view that rates were about to undergo a dramatic and sustained decline. Basic risk management practices not only preclude acting on any such rate "view," but also dictate that we base our funding decisions on the duration and convexity properties of our mortgage asset portfolio.

In recognizing that a 50/50 blend would be "unsuitable for funding a portfolio of largely fixed-rate assets," the Proposed Regulation correctly states that Fannie Mae's effective long-term debt ranges between 70 and 90 percent of total debt outstanding. A 50/50 target blend would therefore require us to issue predominantly short-term debt for most of the stress test horizon in order to achieve these target proportions. Though still seriously flawed in its implementation, reliance upon our actual current short-term/long-term proportions clearly moves the stress test toward a "more realistic debt structure." We are strongly supportive of any improvement to the risk-based capital rule that implements realistic economic behavior, since better alignment of capital to risk invariably follows.

Serious Shortcomings Remain

As originally stated in our NPR 2 comment letter, we believe the most realistic and therefore accurate refunding treatment would be to require different debt blends for the two stress test interest rate scenarios in accord with Fannie Mae's risk management practices. Board-approved guidelines require that the duration of portfolio liabilities closely track those of mortgage assets. Refunding opportunities represent one of the key vehicles for maintaining that expected cash flow match. Clearly, portfolio mortgage asset durations would significantly increase in the up-rate path and shorten in the down-rate path. Given that portfolio liabilities typically have fewer embedded options, the existing portfolio's duration match would quickly drift outside acceptable limits. Management would be forced to refund with predominately long-term debt in the up-rate scenario and short-term debt in the down-rate scenario in order to remain within Board mandated guidelines.

Nonetheless, OFHEO has consistently rejected inclusion of a path-dependent refunding assumption on the grounds that it somehow codifies management's successful prediction of future interest rate movements. We respectfully disagree. Though dependent upon the overall level of rates, interest rates in the first year of the stress test are generally projected to move *on a monthly basis* from 20 to 30 basis points in the down-rate scenario, and 30 to 50 basis points in the up-rate scenario. Given the sensitivity of mortgage assets to moves of this magnitude, portfolio risk managers would be

forced to initiate rebalancing actions by the end of the very first month.³¹ Both ongoing OFHEO examination and our voluntary monthly public disclosure of the portfolio's duration gap provide concrete assurance that such action will indeed take place.

Though such rebalancing can be effected using derivative instruments, refunding opportunities represent the primary vehicle for managing portfolio exposures. Since the stress test offers no other opportunity to reflect these practices, we strongly believe that the refunding treatment should recognize this rebalancing activity in order to inject far greater "realism" into the stress test. As proposed in our NPR 2 comment letter, use of a comparatively long duration refunding blend in the up-rate stress test and a short duration mix in the down-rate stress test would embody such recognition.

Unwarranted Volatility in Capital Requirements

It is Fannie Mae's commitment to active risk management that underlies one of our chief concerns with use of a target portfolio debt blend based on a quarter end snapshot of actual debt obligations. Our portfolio's short-term/long-term debt mix at any point in time is driven primarily by the duration of mortgage portfolio assets. The duration of those assets is quite sensitive to the disparity between the relative distribution of mortgage portfolio loan rates versus those currently available in the market. A pronounced move in interest rates will consequently result in a transitory adjustment in the existing debt ratio.

For example, short-term debt proportions generally rise to their highest levels (approximately 30 percent of total debt) following a decline in rates sufficient to spark significant mortgage refinancing activity. As the expected prepayment boom subsides and/or interest rates retrace their move, the short-term debt ratio will tend to fall back to the mid-point of its customary range. Quarter end variation in short-term/long-term debt proportions is therefore entirely consistent with active risk management practice. However, extrapolation of this point-in-time debt mix to a ten-year stress test comprised of two extreme interest rate paths makes no sense. Today's debt mix has no correlation with those hypothetical rate environments, particularly since corresponding mortgage asset properties are not similarly "frozen" in the stress test.

As a consequence, we believe the proposed refunding formula promises to inject unwarranted volatility into the risk-based capital standard. Short-term funding proportions at quarter end could range between 10 and 30 percent with nearly the same portfolio duration gap. Yet, risk-based capital requirements are likely to vary considerably depending upon whether the target portfolio debt blend contains ten or thirty percent short-term obligations. Thus, even though the portfolio's starting duration gap indicates near equivalent risk exposure, the proposed capital standard generates disparate requirements due to this refunding treatment. We strongly believe further modifications are therefore required in order to align capital to risk in a sensible manner.

³¹ As the September 13 Rule itself readily concedes, "Both Enterprises adjust the mix of maturities in their debt portfolios frequently, based upon the anticipated duration of their assets." 66 Fed. Reg. at 47,783.

Recommended Additional Improvements

Despite serious reservations, we agree that the proposed modification to the refunding treatment is indeed an “improvement” as compared to the arbitrary 50/50 short- to long-term debt portfolio target adopted in the September 13 Rule. We also strongly endorse OFHEO’s stated premise of attempting to effect a “more realistic debt structure” as the best way to align capital to risk. We clearly believe the most realistic refunding treatment would be one that embodies our basic risk management practice of using refunding opportunities as a vehicle for bringing the portfolio’s liability durations in line with those of our mortgage assets.

Nonetheless, if implemented correctly, the new refunding rule does appear to offer some promise of effecting a closer alignment of capital to risk. The amendment’s “improvement” lies with looking to Fannie Mae’s actual starting position to establish stress test refunding parameters. While crude, the starting position does provide some relevant “indicators” of how the companies generally choose to fund their mortgage assets. We believe the proposed amendment can be greatly improved if OFHEO were to look more closely at starting position attributes for defining stress test debt issuance.

Accurate Reflection of Long-term Debt Characteristics

Aside from capturing actual portfolio short-term/long-term debt proportions, the final rule should also look to the type of structures that underlie those proportions. OFHEO’s stated objective of creating a “more realistic debt structure” clearly requires that the choice of short-term and long-term securities also reflect actual company debt obligations. We see no logic to target a particular proportion and then issue a security that bears little relation to the general type of instruments that make up that proportion. While we agree that six-month discount note issuance might represent an acceptable proxy for our current short-term liability portfolio, the Proposed Regulation is seriously remiss in its sole reliance on a five-year bond callable in one year (5NC1) for meeting long-term refunding needs.

The 5NC1 structure misrepresents our outstanding long-term debt in several ways. First, the 5NC1’s par issuance duration – just under 3.5 years – is too short relative to actual long-term liabilities. Our long-term portion generally carries a duration that runs between 4.5 and 5 years. Exclusive use of the 5NC1 structure thus effectively “targets” an overall portfolio liability duration that is about a year shorter than that observed in our starting position. OFHEO offers no rationale for why either company should immediately engage in this rebalancing effort. If the refunding treatment is to be based on the starting position, we believe OFHEO should at least apply this principle in a consistent and properly defined manner.

This understatement of long-term funding durations can be directly linked to the fact that actual long-term liabilities are divided among both callable and non-callable bonds. The callable bond proportion (adjusted for swaps and swaptions) typically comprises from 35 to 45 percent of

effective long-term debt.³² Of note, the average callable structure is just marginally longer than the Proposed Regulation's 5NC1 instrument. Though comprised of dozens of structures, the remaining fixed maturity or bullet bonds generally have a combined duration that is equivalent to that of a seven-year security. In sum, our actual long-term debt structure can only realistically be depicted using a long-term portfolio target that is divided between fixed callable and non-callable proportions. In simplistic terms, the 5NC1 structure and a seven-year bullet bond would appear to be reasonable choices for targeting these proportions.

Alignment of Callable Debt Optionality to Mortgage Portfolio Assets

The Proposed Regulation's requirement that the companies issue 100 percent callable long-term debt in the stress test is also seriously deficient when examined from another perspective. The current implementation assumes that we issue 5NC1 bonds at par throughout the stress period. That is, we pay a hefty premium for the purchase of at-the-money call options. At the same time, the mortgage portfolio's embedded prepayment options move quickly and dramatically out-of-the-money and in-the-money in the up-rate and down-rate stress paths, respectively. The refunding treatment thus assumes that we engage in an aggressive campaign to not only replenish, but also greatly increase our current long option position with strikes that bear little relation to our liquidating mortgage book at substantial incremental cost. The assumed 50 basis point call premium is therefore totally without basis (and could be viewed simply as an arbitrary "capital tax"). The proposed refunding rule codifies behavior that would seem to violate basic risk management principles and is not at all consistent with our actual debt structure.

A realistic depiction and projection of that debt structure requires that the callable proportion of the long-term debt target be issued at strikes that maintain the same approximate hedge properties as those present in the starting position. At any point in time, our actual debt structure contains a wide variety of option embedded debt instruments. The distribution of strike rates attached to those securities is managed in order to match the likely pattern of mortgage prepayments. Ongoing issuance of at-the-money par coupon callable bonds is intended to offset current coupon mortgages purchases as well as to maintain and replenish the distribution of options centered around those in the current mortgage portfolio.

No mortgage purchases take place in the stress test. With interest rates projected to move dramatically up and down, embedded mortgage portfolio options move far away from par in both directions. Projected purchase of expensive at-the-money options therefore not only artificially increases refunding costs in the stress test, but also significantly alters the hedging properties of our starting position long option book. Historical data or experience simply does not support stress test

³² Total option embedded debt instruments including short-term positions typically range between 45% and 50% of total debt obligations. Given the great variety in both type and relative value of existing option embedded instruments across the companies, we suggest that OFHEO work closely with both companies to derive a comparable method of defining starting position callable debt proportions.

issuance of current coupon callable debt to finance either extreme discount or premium mortgage assets.

Given no change in starting position mortgage coupons during the stress test, we believe callable debt issuance should carry a strike rate similarly pegged to the starting position. That is, all 5NC1 bonds issued during the stress test should pay a coupon equal to the starting five-year agency rate plus 50 basis points. The effective cost or yield paid to bond investors would be linked to the projected five-year agency rate during the stress period. As the embedded call option moves progressively out-of-the-money in the up-rate test, the 50 basis point call premium should linearly decline to a 5 basis point level by the end of the first year (a very costly premium for an option struck 450 to 500 basis points out-of-the-money).

In the down-rate test, the call premium would vanish as the likelihood of calling the 5NC1 became all but certain. In these cases, investors price the bond off the one-year maturity and add a small premium for extension risk. Given the projected steep yield curve in the down-rate test, the spread between the one- and five-year agency rates is more than 50 basis points. Thus, use of just the five-year agency rate as the 5NC1 yield implies a 50 basis point risk premium in the down-rate path (much too large on a percentage basis). A conservative approximation of this extension risk premium would be to set the down-rate callable yield at the five-year rate minus 25 basis points (equal to the one-year rate plus a 25 basis point premium).

Eliminate Unwarranted Newly Issued Debt Calls

The September 13 Rule assumes that all options are exercised if they uniformly meet a 50 basis point in-the-money threshold when compared to like maturity agency debt. As detailed in our comments on miscellaneous technical changes below, this simplistic trigger mechanism is seriously flawed when applied to European options that are exercisable only at a single point in time. Applied to American and Bermudan options in our starting position, this 50 basis point threshold serves as a crude, but reasonable proxy for how associated time value may delay the option exercise decision.

Regardless of modeling technique, the economic decision as regards option exercise boils down to whether the option holder can terminate or call back the existing obligation and replace it with an identical structure at a lower effective cost. By limiting callable debt issuance to only a single 5NC1 structure, the current stress test perversely distorts this decision rule for newly issued callable debt. Imputed cost savings go unrealized and stress test refunding costs actually rise with each projected affirmative call decision.

This anomaly arises because of the current equivalence between the 50 basis point call premium and the 50 basis point in-the-money call decision threshold. After the one-year lockout, the call decision is thus based on whether the 5NC1 yield (equal to the five-year agency rate plus 50 basis points) is greater than the then four-year agency yield plus the 50 basis point in-the-money

threshold. In effect, the call rule reduces simply to whether the projected five-year agency debt rate lies above the four-year agency rate.

With the agency yield curve upward sloping in both interest rate scenarios, this call rule means that all callable debt issued after the first year is automatically called at lockout expiration. However, its replacement is not the less expensive four-year structure, but the identical yielding 5NC1 instrument. Moreover, we are forced to incur a further 20 basis point issuance fee for repeatedly making this nonsensical call decision. Particularly in the up-rate test where mortgage liquidations are slow and refunding needs are great, this artificial 20 basis point “churning” fee will significantly inflate capital requirements.³³ Proper alignment of capital to risk clearly requires changing the current framework.

To eliminate this distortion, we believe that *newly issued* callable debt should be exempt from the current call decision rule altogether. The absence of any cost savings upon exercise means that such debt should never be called unless such exercise was justified in order to prevent the occurrence of a cash surplus. That is, if our liquidating asset base were to fall below the level of outstanding debt balances during any stress test month, we would then retire newly issued callable securities that were beyond the one year lockout period. Otherwise, newly issued callable debt remains outstanding until each issue’s scheduled maturity date.

This linkage of the call decision to the cash balance account is entirely appropriate. First, the overall volume of monthly debt issuance is set equal to the size of the calculated cash deficit. If the account shows a surplus, logic dictates that debt retirement (or the volume of new issue calls) also be set equal to that amount. Second, and more importantly, no portfolio manager would ever raise “long” funds in order to invest solely in short-term assets at a negative yield spread. Not calling newly issued debt in this situation would be equivalent to raising such funds. In short, tying the call decision to cash account surpluses reintroduces the cost savings dimension missing from the current call decision framework. Applying this alternative call decision rule will result in limited new issue calls in the up-rate test, and fairly routine exercise in the down-rate test.

Summary Recommendation

We still believe that adoption of a refunding treatment that recognizes formally adopted and publicly disclosed duration gap management policies and measures will most closely align capital to risk. Though still seriously deficient, we view the Proposed Regulation as a step in the right direction. The amendment embraces the principle that changes designed to attain a “more realistic debt structure” will result in a better capital-to-risk alignment. OFHEO seems to further accept the premise that a refunding rule that relies upon actual starting position debt attributes is consistent with such realism. While still concerned about how a point-in-time snapshot may be inappropriate for anything other than that particular point-in-time (thereby injecting unnecessary volatility into the

³³ A 20 basis point commission is equivalent to adding another 20 basis points to the call yield premium given the automatic one-year call.

capital standard), we endorse the concept that looking to our actual book-of-business for refunding parameters is better than some arbitrary unrelated formulation.

We specifically recommend that the Proposed Regulation be modified to read as follows:

- All cash deficits should be financed through issuance of either short- or long-term debt so as to maintain the corresponding ratio of short- to long-term debt present in the company's actual debt portfolio.
- Long-term debt issuance should be divided among callable and non-callable securities so as to maintain the corresponding ratio of callable to non-callable debt present in the company's actual long-term debt portfolio.
- Representative debt instruments used to maintain the corresponding ratio of short- to long-term debt will be a six-month discount note for any required short-term issuance, and a five-year bond callable in one year and/or a seven-year maturity bullet bond for any required long-term issuance.
- Long-term callable debt issuance should maintain the same approximate hedge properties as those present in the company's actual long-term debt portfolio. Newly issued 5NC1 instruments therefore carry a fixed coupon or strike rate equal to the starting five-year agency rate plus a 50 basis points call premium.
- Though the callable coupon remains fixed, callable issuance yields follow the stress interest paths. That is, 5NC1 yields are set equal to the periodic five-year agency rate plus a periodic call premium reflective of the instrument's option value. As the embedded option moves markedly out-of-the-money in the up-rate stress test, the 50 basis point call premium declines to a nominal 5 basis point premium by the end of the first year. In the down-rate test, the original call premium ratably declines to become a 25 basis point extension risk premium by the end of the first year (with the 5NC1 instrument's yield set at the five-year agency rate less 25 basis points).
- The option exercise decision for newly issued callable debt is based on the month-end cash account balance. If the account balance shows a surplus subsequent to all postings, newly issued callable debt out of lockout will be retired in volumes up to that amount if available. Among outstanding issues, the order of call will proceed from highest to lowest coupon, with the most seasoned issues selected in tie cases.

E. Miscellaneous Technical Changes

1. Operating Expenses

The Proposed Regulation's recognition of fixed-asset amortization during the stress period is clearly warranted and appropriate. The September 13 Rule held starting position fixed asset balances

constant over the ten-year period even though related depreciation expense was explicitly included in the base used to calculate monthly operating expenses. Given that depreciation expense is directly linked to fixed asset amortization, recognition of the former and not the latter was illogical.

The Proposed Regulation now stipulates that 75 percent of starting position fixed-asset balances amortize to cash over the ten-year period. While this treatment is more reasonable, we believe that the rate of asset decay should accurately reflect the accelerated depreciation schedules that apply to the bulk of fixed asset balances (primarily computer hardware and software). Fannie Mae's reliance upon these schedules means that more than 50 percent of current fixed asset balances disappear within three years. Consequently, we strongly recommend that the stress test adopt either a sum-of-the-year's-digit or double-declining balance method for fixed asset amortization.

Depreciation expense captured in the prior quarter's administrative expense running rate reflects this rapid decay. Even with a gradual one-third reduction in the base rate, extrapolation of these front-loaded depreciation charges over the 10-year stress period means that far more than 100 percent of starting position fixed assets would be amortized over the horizon. Barring further downward adjustments to the base rate, we propose that the final rule apply these "excessive" depreciation expenses to amortization of projected new fixed asset purchases. As a result, starting fixed-asset balances should decline to zero by stress period end rather than the 25 percent level proposed in the amendment.

2. Float Income

We believe that all stress test cash flows should be depicted in an accurate manner. If the final rule or stress test model incorrectly credits the companies with float income on securities held in portfolio, we support its removal from projected stress test revenues.

3. Currency Swaps

The companies issue debt denominated in foreign currencies and eliminate the resulting foreign currency exposure by entering into currency swaps. The Proposed Regulation treats foreign currency (FX) swaps in the manner originally proposed under NPR 2. This treatment called for modeling the cash flows of foreign-denominated debt and related currency swaps together, as a net US dollar denominated synthetic security. Unlike other swap haircuts, which are applied as a reduction to net receipts, currency swap haircuts are applied as an addition to the interest expense on the net US dollar denominated synthetic.

Following publication of NPR 2, Fannie Mae commented on the treatment of foreign currency swaps, citing a gross overstatement of risk. The September 13 Rule did not apply haircuts to these contracts, but instead signaled an intention to study the issue further. Absent the findings of such a

study, the Proposed Regulation offers no support or justification for reinstatement of the original, flawed foreign currency swap haircut treatment.³⁴

Counterparty Netting Must Include FX Swaps

The companies substantially reduce the risk of counterparty losses in their swap books by requiring contractual arrangements to net all swap cash flows with each counterparty before receiving (or making) payment. These arrangements lower risk by reducing the extent and number of occasions on which the companies need to receive funds from their counterparties. While the application of the interim derivative haircut levels will temporarily capture the effective benefits of these arrangements, final implementation of netting must include FX swaps along with other types of derivatives in order to measure counterparty exposure accurately.

Counterparty Risk Still Overstated

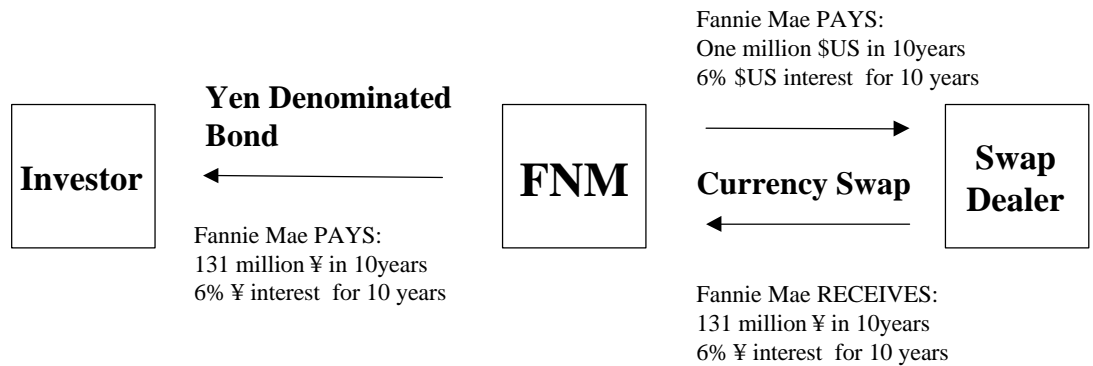
Though derivative haircuts and counterparty netting seem to be moving in the right direction in the Proposed Regulation, the modeling of contract level FX exposures is still seriously flawed. At the contract level, risk is overstated in the way the rule implicitly models cash flows and netting within individual currency swap contracts. This overstatement of risk promises to substantially impair the companies' ability to access low cost foreign funds to support US mortgage market liquidity. In its comments on NPR 2, Fannie Mae proposed an alternative derivative counterparty treatment, which did not require haircuts. OFHEO did not implement this suggestion, and in implementing a haircut-based approach, has overstated risk by haircutting the incorrect stream of FX swap cash flows.

Ideally, a rigorous modeling of foreign currency swap haircuts would include three steps: a modeling of swap leg cash flows in US dollar denominated terms, a netting of those cash flows to produce a net exposure to the company, and a haircutting of the resulting net exposure. The first step, modeling each leg's cash flows, would require some form of currency translation. OFHEO has chosen not to value foreign currency in the stress test, and avoids this issue by modeling the foreign denominated debt and foreign currency swap together as a net US dollar denominated bond. Given the great complexity surrounding FX modeling, Fannie Mae supports this simplification. See Figure FX-1.

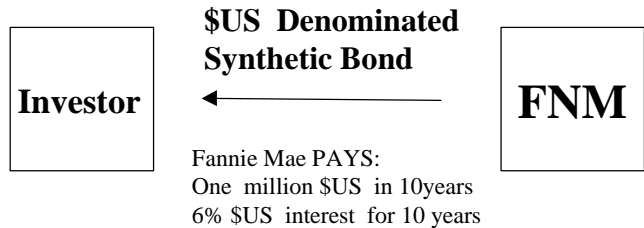
³⁴ See note 30, *supra*.

Figure FX-1.

Example of Foreign Denominated Debt Issuance



OFHEO Modeling: Net Synthetic



While this treatment avoids currency valuation, and accurately models the net economics of the transaction, the netting of debt and swaps together confuses the subsequent haircutting of the swap, because the swap cash flows are not known. OFHEO makes a further simplifying assumption for haircuts, by assessing the haircut on the US dollar denominated PAY leg of the currency swap. This treatment grossly overstates the risk at the contract level. By equating the exposure that needs to be haircut to only one side of the swap, the Proposed Regulation completely ignores the value of any offsetting payments on the other side of the swap.

This treatment is functionally equivalent to valuing the American dollar as worthless against all currencies for all periods during the stress. The companies only engage in currency swaps in order

to swap out of a foreign currency payment and into US dollar payments. As a result, currency swap *payments* are all US dollar denominated, and currency swap *receipts* are all foreign denominated. In order for a net receipt to be due from a counterparty, a depreciation of the US dollar against foreign currencies must occur.

In the 30 years since 1971, the worst ten-year average US dollar decline against a major foreign currency was about 47 percent - a number far sort of the 100% implied by the OFHEO proposal.³⁵ In determining an implicit or explicit modeling of currency swap cash flows, the implied depreciation of the US dollar should clearly be no worse than the historically worst experience. Because the severity of other assumptions in the stress test is sufficiently catastrophic, and because an increasingly globalized economy offers less opportunity for large changes in exchange rates between major currencies, the implied US dollar depreciation should in fact be somewhat less than the worst historical experience.

Recommendation

Fannie Mae supports modeling foreign currency swap cash flows as part of a net US dollar synthetic obligation. However, for the purpose of applying haircuts, the stream of cash flows to be haircut should be different than the net synthetic's cash flow. That is, the derivative haircuts should be applied to the net FX swap cash flows. Because these cash flows are not visible, however, exposure on net swap receipts must be imputed. Based upon empirical data, a 50 percent dollar decline appears highly conservative and improbable. Correspondingly, the FX swap exposure during such a dollar decline would be equal to approximately 50 percent of the FX payment.

Fannie Mae therefore recommends that the stream of cash flows for haircutting purposes should be 50 percent of the net synthetic cash flow. This reduced stream would be multiplied by the interim derivative haircut factors until counterparty netting is implemented. Once counterparty netting is implemented, the reduced stream would be netted along with other counterparty cash flows to produce counterparty level net cash flow receipts, which would then be subject to the post-interim derivative haircuts.

4. American Call Option / European Exercise Decision

We strongly believe the most precise alignment of capital to risk coincides with stress test recognition of the contractual terms that define our business operations. Elimination of the September 13 Rule's simplifying assumption to treat all American style options as Bermudan – exercisable only on scheduled payment dates rather than at any time – certainly falls into this category. Our risk management activities clearly recognize the additional protection American style options provide in volatile rate environments. Indeed, Fannie Mae readily pays a significant American option premium (reflected in our starting position callable debt yields) to retain such

³⁵ Bloomberg Tickers: JPY, FRF, CHF, DEM, GBP (Crncy).

enhanced option exercise flexibility. Given that American-style options represent the vast majority of Fannie Mae's long option position, we view this change as effecting a material improvement in stress test accuracy.

However, stress test accuracy is not reflected in treatment of the European option exercise decision. European options are exercisable only at a point in time. Unlike American or Bermudan options which retain time value (the value attached to probable future payoffs as a result of delaying the decision to exercise), European options possess only positive or zero *intrinsic* value. They are either in- or out-of-the-money at the specified exercise date.

As currently formulated, the stress test requires that all three option exercise types be evaluated using the same decision criteria. That is, options are exercised only if the equivalent-maturity agency debt rate is 50 basis points below (above) the corresponding bond-equivalent yield of the callable (puttable) instrument. Given the lack of stress test option valuation functionality, this 50 basis point "trigger" mechanism represents a reasonable proxy for the implicit time value that might delay immediate exercise of American and Bermudan options with positive intrinsic value.

It is not at all appropriate for use with European options, however. Once the single exercise date is passed, our ability to capture the intrinsic value is lost. In effect, imposing such a delay completely and artificially negates a portion of our option book, thereby exaggerating stress test risks. We strongly recommend that the 50 basis point threshold be removed for purposes of simulating European option exercise across all debt and derivatives structures (e.g., callable bonds as well as swaptions). Such a change will greatly improve stress test accuracy and result in more closely aligning capital to risk.

5. House Price Growth Factor Clarification

No comment.

* * * * *

III. CONCLUSION

In conclusion, Fannie Mae strongly urges OFHEO to adopt the recommendations contained in this comment letter. Such action by OFHEO will further our shared objective of an RBC standard that ties capital closely to actual risk, consistent with the requirements of the 1992 Act and the Administrative Procedure Act.

Comment of Fannie Mae
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January 17, 2002

We appreciate your consideration of our views and look forward to working with you to implement an effective RBC regulation.

Sincerely,

/s/

Ann M. Kappler