FEDERAL HOUSING FINANCE AGENCY

12 CFR Parts 1206, 1225, and 1240

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of Federal Housing Enterprise Oversight

12 CFR Part 1750

RIN 2590–AA95

Enterprise Regulatory Capital Framework

AGENCY: Federal Housing Finance Agency; Office of Federal Housing Enterprise Oversight.

ACTION: Notice of proposed rulemaking; request for comments.

SUMMARY: The Federal Housing Finance Agency (FHFA or the Agency) is seeking comments on a new regulatory capital framework for the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac, and with Fannie Mae, each an Enterprise). The proposed rule would also make conforming amendments to definitions in FHFA's regulations for assessments and minimum capital and would also remove the Office of Federal Housing Enterprise Oversight's (OFHEO) regulation on capital for the Enterprises.

DATES: Comments must be received on or before August 31, 2020.

ADDRESSES: You may submit your comments on the proposed rule, identified by regulatory information number (RIN) 2590–AA95, by any one of the following methods:

- *Agency Website: www.fhfa.gov/open-for-comment-or-input.*
- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. If you submit your comment to the Federal eRulemaking Portal, please also send it by email to FHFA at *RegComments@fhfa.gov* to ensure timely receipt by FHFA. Include the following information in the subject line of your submission: Comments/RIN 2590–AA95.
- *Hand Delivered/Courier:* The hand delivery address is: Alfred M. Pollard, General Counsel, Attention: Comments/RIN 2590–AA95, Federal Housing Finance Agency, Eighth Floor, 400 Seventh Street SW, Washington, DC 20219. Deliver the package at the Seventh Street entrance Guard Desk, First Floor, on business days between 9 a.m. and 5 p.m.
- *U.S. Mail, United Parcel Service, Federal Express, or Other Mail Service:* The mailing address for comments is: Alfred M. Pollard, General Counsel, Attention: Comments/RIN 2590–AA95, Federal Housing Finance Agency, Eighth Floor, 400 Seventh Street SW, Washington, DC 20219. Please note that all mail sent to FHFA via U.S. Mail is routed through a national irradiation facility, a process that may delay delivery by approximately two weeks. For any time-sensitive correspondence, please plan accordingly.

FOR FURTHER INFORMATION CONTACT: Naa Awaa Tagoe, Senior Associate Director, Office of Financial Analysis, Modeling & Simulations, (202) 649–3140, *NaaAwaa.Tagoe@fhfa.gov;* Andrew Varrieur, Associate Director, Office of Financial Analysis, Modeling & Simulations, (202) 649–3141, *Andrew.Varrieur@fhfa.gov;* or Miriam Smolen, Associate General Counsel, Office of General Counsel, (202) 649–3182, *Miriam.Smolen@fhfa.gov.* These are not toll-free numbers. The telephone number for the Telecommunications Device for the Deaf is (800) 877–8339.

SUPPLEMENTARY INFORMATION:

Comments

FHFA invites comments on all aspects of the proposed rule and will take all comments into consideration before issuing a final rule. Copies of all comments will be posted without change, and will include any personal information you provide such as your name, address, email address, and telephone number, on the FHFA website at *http://www.fhfa.gov.* In addition, copies of all comments received will be available for examination by the public through the electronic rulemaking docket for this proposed rule also located on the FHFA website.

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I. Introduction

FHFA is seeking comments on a new regulatory capital framework for the Enterprises. This notice of proposed rulemaking (proposed rule) is a re-proposal of the regulatory capital framework set forth in the notice of proposed rulemaking published in the **Federal Register** on July 17, 2018 (2018 proposal).[1] The 2018 proposal, which remains the foundation of the proposed rule, contemplated risk-based capital requirements based on a granular assessment of credit risk specific to different mortgage loan categories, as well as two alternatives for an updated leverage ratio requirement. With this re-proposal, FHFA is proposing enhancements to establish a post-conservatorship regulatory capital framework that ensures that each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle, in particular during periods of financial stress.[2]

Pursuant to the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 [3] (Safety and Soundness Act), as amended by the Housing and Economic Recovery Act of 2008 [4] (HERA), the FHFA Director's principal duties include, among other duties, ensuring that each Enterprise operates in a safe and sound manner, that the operations and activities of each Enterprise foster liquid, efficient, competitive, and resilient national housing finance markets, and that each Enterprise carries out its statutory mission only through activities that are authorized under and consistent with the Safety and Soundness Act and its charter.[5] Pursuant to their charters, the statutory purposes of the Enterprises are, among other purposes, to provide stability in, and ongoing assistance to, the secondary market for residential mortgages.[6] Consistent with these statutory duties and purposes, FHFA's enhancements contemplated by the proposed rule are intended to achieve three primary objectives:

- Preserve the mortgage risk-sensitive framework of the 2018 proposal, with simplifications and refinements;
- Increase the quantity and quality of the regulatory capital of the Enterprises to ensure that, during and after conservatorship, each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle; and
- Address the pro-cyclicality of the risk-based capital requirements of the 2018 proposal, also in furtherance of the safety and soundness of the Enterprises and their countercyclical mission.

FHFA believes it is important to re-propose the regulatory capital framework to afford interested parties an opportunity to comment on the enhancements contemplated by the proposed rule in its entirety in light of FHFA's intent to responsibly end the conservatorships of the Enterprises. This policy change is a departure from FHFA's stated policy at the time of the 2018 proposal, when the prospects for indefinite conservatorships might have informed the expectations of interested parties, their decision to comment, and the nature of comments submitted. Despite this, the comments received on the 2018 proposal were valuable and important. FHFA emphasizes that the purpose of the proposed rule is to establish a regulatory capital framework that ensures the safety and soundness of each Enterprise and its ability to fulfill its statutory mission across the economic cycle.

II. Overview of the Proposed Rule

A. Regulatory Capital Requirements

In response to the comments and feedback on the 2018 proposal and in furtherance of FHFA's stated objectives, the regulatory capital framework contemplated by the proposed rule would require each Enterprise to maintain the following risk-based capital:

- Total capital not less than 8.0 percent of risk-weighted assets, determined as described below;
- Adjusted total capital not less than 8.0 percent of risk-weighted assets;
- Tier 1 capital not less than 6.0 percent of risk-weighted assets; and
- Common equity tier 1 (CET1) capital not less than 4.5 percent of risk-weighted assets.

Each Enterprise also would be required to satisfy the following leverage ratios:

- Core capital not less than 2.5 percent of adjusted total assets; and
- Tier 1 capital not less than 2.5 percent of adjusted total assets.

Adjusted total assets would be defined as total assets under generally accepted accounting principles (GAAP), with adjustments to include certain off-balance sheet exposures. Total capital and core capital would have the meaning given in the Safety and Soundness Act. Adjusted total capital, tier 1 capital, and CET1 capital would be defined based on the definitions of total capital, tier 1 capital, and CET1 capital set forth in the regulatory capital framework (the Basel framework) developed by the Basel Committee on Bank Supervision (BCBS) that is the basis for the United States banking regulators' regulatory capital framework (U.S. banking framework). These supplemental regulatory capital definitions would fill certain gaps in the statutory definitions of core capital and total capital by making customary deductions and other adjustments for certain deferred tax assets (DTAs), goodwill, intangibles, and other assets that tend to have less loss-absorbing capacity during a financial stress.

To calculate its risk-based capital requirements, an Enterprise would determine its risk-weighted assets under two approaches—a standardized approach and an advanced approach—with the greater of the two used to determine its risk-based capital requirements. Under both approaches, an Enterprise's risk-weighted assets would equal the sum of its credit risk-weighted assets, market risk-weighted assets, and operational risk-weighted assets.

Under the standardized approach, the credit risk-weighted assets for mortgage loans secured by 1–4 unit residences (single-family mortgage exposures) and mortgage loans secured by five or more unit residences (multifamily mortgage exposures) would be determined using lookup grids and multipliers that assign an exposure-specific risk weight based on the risk characteristics of the mortgage exposure. The underlying exposure-specific credit risk capital requirements generally would be similar to those in the grids and multipliers of the 2018 proposal, subject to some simplifications and refinements discussed in Sections VIII.A and VIII.B.[7]

[1] *FHFA Enterprise Capital Requirements,* 83 FR 33312 (Jul. 17, 2018).

[2] Other enhancements to the Enterprises' supervisory and regulatory framework might also be necessary, for example with respect to the Enterprises' liquidity risk management.

[3] Public Law 102–550, 106 Stat. 3941 (1992).

[4] Public Law 110–289, 122 Stat. 2654 (2008).

[5] 12 U.S.C. 4513(a)(1).

[6] *Id.* sections 1451 note, 1716.

[7] This base risk weight would be equal to the unadjusted credit risk capital requirement for the mortgage exposure expressed in basis points and divided by 800, which is the 8.0 percent adjusted total capital requirement also expressed in basis points. For example, the credit risk capital requirement for a mortgage exposure with a base

Continued

Like the 2018 proposal, the base risk weight would be a function of the mortgage exposure's loan-to-value (LTV) ratio with the property value generally marked to market (MTMLTV). For single-family mortgage exposures, the MTMLTV would be subject to a countercyclical adjustment to the extent that national house prices are 5.0 percent greater or less than an inflation-adjusted long-term trend. For both single-family and multifamily mortgage exposures, this base risk weight would then be adjusted to reflect additional risk attributes of the mortgage exposure and any loan-level credit enhancement, with the associated risk multipliers also generally similar to those of the 2018 proposal. To ensure an appropriate level of capital, this adjusted risk weight would be subject to a minimum floor of 15 percent.

As of September 30, 2019, under the proposed rule's standardized approach, the Enterprises' average risk weight for single-family mortgage exposures would have been 26 percent, and the Enterprises' average risk weight for multifamily mortgage exposures would have been 51 percent.[8] The average risk weights for single-family and multifamily mortgage exposures originated and acquired by an Enterprise in the previous six months would have been approximately 36 percent and 67 percent, respectively.[9]

While the standardized approach would utilize FHFA-prescribed lookup grids and risk multipliers, the advanced approach for credit risk-weighted assets would rely on each Enterprise's internal models. The advanced approach requirements would require each Enterprise to maintain its own processes for identifying and assessing credit risk, market risk, and operational risk. These requirements should ensure that each Enterprise continues to enhance its risk management system and also that neither Enterprise simply relies on the standardized approach's lookup grids and multipliers to define credit risk tolerances, measure its credit risk, or allocate capital. In the course of FHFA's supervision of each Enterprise's internal models for credit risk, FHFA also could identify opportunities to update or otherwise enhance the standardized approach's lookup grids and multipliers in a future rulemaking.

Under both the standardized and advanced approaches, an Enterprise would determine the capital treatment for eligible credit risk transfers (CRT) under a securitization framework by assigning risk weights to retained CRT exposures. Under the standardized approach, tranche-specific risk weights would be subject to a 10 percent floor. The proposed rule seeks comment on two approaches to determining the risk-weighted assets for retained CRT exposures, one of which contemplates adjustments to the exposure amounts of the retained CRT exposures to reflect counterparty risk, loss timing risk, and a general adjustment for the differences between CRT and regulatory capital, and the other of which is based on the U.S. banking framework.

Each Enterprise also would determine a market risk capital requirement for spread risk. Market risks other than spread risk would not be assigned a market risk capital requirement, but FHFA is seeking comment on more comprehensive approaches. Under the standardized approach, an Enterprise would determine its market risk-weighted assets using FHFA-specified formulas for some covered positions and its own models for other covered positions. An Enterprise would separately determine its market risk-weighted assets under an advanced approach that relies only on its own internal models for all covered positions.

The proposed rule also would require each Enterprise to determine its operational risk capital requirement utilizing the U.S. banking framework's advanced measurement approach, subject to a floor equal to 15 basis points of the Enterprise's adjusted total assets.

Each of these risk-based and leverage ratio requirements would be enforceable by FHFA under its general authority to order an Enterprise to cease and desist from a violation of law, which would include the proposed rule and its regulatory capital requirements. Pursuant to that authority, FHFA may require an Enterprise to develop and implement a capital restoration plan or take other appropriate corrective action. FHFA also could elect to enforce the risk-based and leverage ratio requirements pursuant to its authority to require an Enterprise to develop a plan to achieve compliance with prescribed prudential management and operational standards, and FHFA also could enforce the core capital leverage ratio requirement or the risk-based total capital requirement pursuant to its separate authority to require prompt corrective action if an Enterprise fails to maintain certain prescribed regulatory levels.

B. Capital Buffers

To avoid limits on capital distributions and discretionary bonus payments, an Enterprise would have to maintain regulatory capital that exceeds each of its adjusted total capital, tier 1 capital, and CET1 capital requirements by at least the amount of its prescribed capital conservation buffer amount (PCCBA). That PCCBA would consist of three separate component buffers—a stress capital buffer, a countercyclical capital buffer, and a stability capital buffer.

- The stress capital buffer would be 0.75 percent of the Enterprise's adjusted total assets, with this buffer in effect replacing the 2018 proposal's going-concern buffer. The 2018 proposal's going-concern buffer was a part of the Enterprise's total capital requirement, such that an Enterprise would be subject to enforcement action if it drew down this going-concern buffer. In contrast, under the proposed rule, drawing down the stress capital buffer generally would trigger only limits on capital distributions and discretionary bonus payments. By prescribing less severe sanctions for drawing down this buffer during a period of financial stress, the proposed rule's approach should help position an Enterprise to fulfill its statutory mission across the economic cycle and also dampen the pro-cyclicality of the aggregate risk-based capital requirements. FHFA is also seeking comment on whether to periodically re-size the stress capital buffer, similar to the approach recently adopted by the U.S. banking regulators,[10] to the extent that FHFA's eventual program for supervisory stress tests determines that an Enterprise's peak capital exhaustion under a severely adverse stress would exceed 0.75 percent of adjusted total assets.
- The countercyclical capital buffer amount initially would be set at 0 percent of the Enterprise's adjusted total assets. FHFA does not expect to adjust this buffer in the place of, or to supplement, the countercyclical adjustment to the risk-based capital requirements. Instead, as under the Basel and U.S. banking frameworks, FHFA would adjust the countercyclical capital buffer taking into account the macro-financial environment in which the Enterprises operate, such that it

risk weight of 50 percent would be 400 basis points (800 multiplied by 50 percent).

[8] These average risk weights are determined based on the credit risk capital requirement for single-family and multifamily mortgage exposures after adjustments for mortgage insurance and other loan-level credit enhancement but before any adjustment for credit risk transfers.

[9] While not shown, new originations are a subset of the mortgage exposures included in Tables 26 and 29.

[10] *See e.g. Federal Reserve Board Regulations Q, Y, and YY: Regulatory Capital, Capital Plan, and Stress Test Rules Final Rule,* 85 FR 15576 (Mar. 18, 2020).

would be deployed only when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk. This focus on excess aggregate credit growth means the countercyclical buffer likely would be deployed on an infrequent basis, and generally only when similar buffers are deployed by the U.S. banking regulators.

• An Enterprise's stability capital buffer would be tailored to the risk that the Enterprise's default or other financial distress could have on the liquidity, efficiency, competitiveness, or resiliency of national housing finance markets. FHFA is proposing a stability capital buffer based on the Enterprise's share of residential mortgage debt outstanding, and seeking comment on an alternative based on the U.S. banking framework's methodology. Under either methodology, the stability capital buffer would be a percent of adjusted total assets. Under the market share approach, as of September 30, 2019, Freddie Mac's and Fannie Mae's stability capital buffers would have been, respectively, 0.64 and 1.05 percent of adjusted total assets.

Fixing the PCCBA at a specified percent of an Enterprise's adjusted total assets, instead of risk-weighted assets, is a notable departure from the Basel framework. FHFA intends a fixed-percent PCCBA, among other things, to reduce the impact that the PCCBA potentially could have on higher risk exposures, to avoid amplifying the secondary effects of any model or similar risks inherent to the calibration of granular risk weights for mortgage exposures, and to further mitigate the pro-cyclicality of the aggregate risk-based capital requirements.

Finally, to avoid limits on capital distributions and discretionary bonus payments, the Enterprise also would be required to maintain tier 1 capital in excess of the amount required under its tier 1 leverage ratio requirement by at least the amount of its prescribed leverage buffer amount (PLBA). The PLBA would equal 1.5 percent of the Enterprise's adjusted total assets, such that the PLBA-adjusted leverage ratio requirement would remain a credible backstop to the PCCBA-adjusted risk-based capital requirements.

C. Key Enhancements

The proposed rule contemplates a number of key enhancements to the 2018 proposal, including:

• Simplifications and refinements of the grids and risk multipliers for the credit risk capital requirements for single-family mortgage exposures, including removal of the single-family risk multipliers for loan balance and the number of borrowers.

• A countercyclical adjustment to the credit risk capital requirements for single-family mortgage exposures.

• A prudential floor on the credit risk capital requirement for mortgage exposures.

• Refinements to the capital treatment of CRT structures, including a minimum capital requirement on senior tranches of CRT retained by an Enterprise and an adjustment to reflect that CRT does not have the same loss-absorbing capacity as equity capital.

• The addition of a credit risk capital requirement for Enterprise crossholdings of mortgage-backed securities (MBS).

• Risk-based capital requirements for a number of other exposures not explicitly addressed by the 2018 proposal.

• Supplemental capital requirements based on the Basel framework's definitions of total capital, tier 1 capital, and CET1 capital.

• Capital buffers that would subject an Enterprise to increasing limits on capital distributions and discretionary bonus payments to the extent that its regulatory capital falls below the prescribed buffer amounts.

• A stability capital buffer tailored to the risk that an Enterprise's default or other financial distress could have on the liquidity, efficiency, competitiveness, and resiliency of national housing finance markets.

• A revised method for determining operational risk capital requirements, as well as a higher floor.

• A requirement that each Enterprise maintain internal models for determining its own estimates of risk-based capital requirements.

D. Sizing of Regulatory Capital Expectations

1. Aggregate Regulatory Capital

Table 1 details how much regulatory capital the Enterprises together would have been required to maintain under the proposed rule as of September 30, 2019 to avoid restrictions on capital distributions and discretionary bonus payments.[11]

[11] The analogous breakdown of requirements by Enterprise is included in Section XII.A.

Table 1: Summary of Risk-Based Capital Requirements for Fannie Mae and Freddie Mac Combined as of September 30, 2019

Enterprises Combined

Risk-based Capital Requirements

$ in billions	Total Capital (Statutory)	CET1	Tier 1	Adjusted Total Capital
Capital Requirement	$135	$76	$101	$135
Prescribed Buffers				
Stress Capital Buffer		46	46	46
Stability Capital Buffer		53	53	53
Countercyclical Capital Buffer Amount		0	0	0
Prescribed Capital Conservation Buffer Amount (PCCBA)	0	99	99	99
Requirement and PCCBA	$135	$175	$200	$234

Leverage Capital Requirements

	Core Capital (Statutory)	Tier 1
Capital Requirement	$152	$152
Prescribed Leverage Buffer Amount (PLBA)	0	91
Requirement and PLBA	$152	$243

Table 1 shows a combined Enterprise statutory total risk-based capital requirement of $135 billion (8 percent of risk-weighted assets). The statutory risk-based capital framework does not include any capital buffers. In contrast, the supplementary risk-based capital framework includes three capital requirements (CET1, tier 1, and adjusted total capital) along with three capital buffers (countercyclical, stress capital, and stability) that comprise the PCCBA. While the capital buffers are not strictly a capital requirement, they would materially increase the regulatory capital that each Enterprise would have to maintain to avoid restrictions on capital distributions and discretionary bonuses.

Focusing on high-quality capital, the combined Enterprise CET1 capital requirement was $76 billion (4.5 percent of risk-weighted assets), the tier 1 capital requirement was $101 billion (6 percent of risk-weighted assets), and the adjusted total capital requirement was $135 billion (8 percent of risk-weighted assets). The combined PCCBA was $99 billion, comprising the $46 billion stress capital buffer, $53 billion stability capital buffer, and $0 countercyclical capital buffer. The capital requirements and PCCBA totaled $175 billion for CET1 capital, $200 billion for tier 1 capital, and $234 billion for adjusted total capital. A more nuanced look at the importance of high-quality capital, and specifically how the Enterprises' supplemental capital measures would have evolved in relation to their statutory capital measures leading up to the 2008 financial crisis, is included in Section III.B.3.

Table 1 then shows a combined leverage ratio requirement of $152 billion under the proposed rule. Both the core capital and supplementary tier 1 leverage ratio requirements are equal to 2.5 percent of adjusted total assets, so there is no difference between the two leverage ratio requirements. However, there are important differences between core capital and tier 1 capital related to the loss-absorbing capacity of each capital metric, as discussed in Section V.B.

The supplementary framework also includes a tier 1 capital PLBA equal to 1.5 percent of adjusted total assets, or $91 billion for the Enterprises combined. In aggregate, the Enterprises' combined tier 1 leverage ratio requirement and PLBA would have been $243 billion as of September 30, 2019.

2. 2018 Proposal's Capital Requirements

Table 2 presents estimates of the Enterprises' combined regulatory capital under the proposed rule broken out by risk category and asset category as of September 30, 2019. Table 2 also presents estimates of the Enterprises' combined capital requirements under the 2018 proposal, both as of September 30, 2017—the as-of date in the 2018 proposal—and as of September 30, 2019.[12]

[12] A more detailed walk-forward from the capital requirements in the 2018 proposal to the capital requirements under the proposed rule is presented for each Enterprise in Section XII.

Table 2: Comparison of Risk-Based Capital Requirements for Fannie Mae and Freddie Mac Combined under the 2018 Proposal and the Proposed Rule, by Risk Category

Enterprises Combined	2018 Proposal As of				Proposed Rule As of		
	9/30/2017		9/30/2019		9/30/2019		
	$ in billions	% of Total	$ in billions	% of Total	$ in billions	% of Total	% of Adjusted Total Assets
Gross Credit Risk			$127.0		$151.9		2.50%
Loan-Level Credit Enhancement			(17.9)		(17.0)		(0.28%)
Net Credit Risk	$112.0		$109.1		$134.9		2.22%
CRT Impact, net	(21.5)		(41.3)		(22.1)		(0.36%)
Post-CRT Net Credit Risk	90.5	50%	67.8	50%	112.8	84%	1.86%
Market Risk	19.4	11%	13.6	10%	13.6	10%	0.22%
Going-Concern Buffer	39.9	22%	43.5	32%	0.0	0%	0.00%
Operational Risk	4.3	2%	4.6	3%	8.7	6%	0.14%
Deferred Tax Assets	26.7	15%	7.4	5%	0.0	0%	0.00%
Total Capital Requirement	$180.9	100%	$136.9	100%	$135.1	100%	2.22%
Prescribed Buffers							
Stress Capital Buffer					45.5		0.75%
Stability Capital Buffer					53.3		0.88%
Countercyclical Capital Buffer Amount					0.0		0.00%
Prescribed Capital Conservation Buffer Amount (PCCBA)					98.8		1.63%
Total Capital Requirement and PCCBA	$180.9		$136.9		$233.9		3.85%
Adjusted Total Assets	$5,619.9		$6,072.0		$6,072.0		
Total Capital Requirement and PCCBA/ Adjusted Total Assets	3.22%		2.25%		3.85%		

Table 2 shows an estimated combined risk-based capital requirement of $135.1 billion, or 2.22 percent of the Enterprises' adjusted total assets, under the proposed rule as of September 30, 2019, then provides a further breakdown by risk category. Net credit risk capital accounts for $134.9 billion before CRT and $112.8 billion after CRT, market risk capital accounts for $13.6 billion, and operational risk capital accounts for $8.7 billion. The DTA requirement is zero as of September 30, 2019.

Using the same September 30, 2019 portfolio date, the combined risk-based capital requirement under the 2018 proposal would have been similar to the combined risk-based capital requirement under the proposed rule. The differences in required regulatory capital between the two proposals are in post-CRT net credit risk capital (+45.0 billion), removal of the going-concern buffer (−$43.5 billion), operational risk (+$4.1 billion), and DTA (−$7.4 billion). The capital requirement for market risk was unchanged. Primary drivers of the $45.0 billion increase in post-CRT net credit risk capital are a new prudential floor on the credit risk capital requirement for mortgage exposures and refinements to the capital treatment of CRT structures, including a minimum capital requirement on senior tranches of CRT retained by an Enterprise. A caveat to this comparison is that the 2018 proposal increased the total capital requirement by a DTA offset, while the proposed rule, consistent with the Basel framework, proposes instead to deduct the amount of that DTA offset from CET1 capital (and therefore tier 1 and adjusted total capital). The 2018 proposal's $136.9 billion combined risk-based capital requirement would have been, in effect, $129.5 billion under the DTA approach of the proposed rule.

In contrast to the 2018 proposal, the proposed rule includes a set of three buffers that would materially increase the regulatory capital that each Enterprise would have to maintain to avoid restrictions on capital distributions and discretionary bonuses. The proposed rule's stress capital buffer of $45.5 billion replaces the 2018 proposal's $43.5 billion going-concern buffer, and is complemented by the stability capital buffer of $53.3 billion and the countercyclical capital buffer that is currently set to zero. The three buffers in aggregate form the PCCBA, which totals $98.8 billion for the Enterprises combined, or 1.63 percent of the adjusted total assets. The aggregate risk-based capital requirement and PCCBA is a combined $234.3 billion under the proposed rule, or 3.86 percent of the Enterprises' adjusted total assets.

Table 3: Comparison of Risk-Based Capital Requirements for Fannie Mae and Freddie Mac Combined under the 2018 Proposal and the Proposed Rule, by Asset Category

Enterprises Combined	2018 Proposal As of				Proposed Rule As of		
	9/30/2017		9/30/2019		9/30/2019		
	$ in billions	% of Total	$ in billions	% of Total	$ in billions	% of Total	% of Adjusted Total Assets
Single-family excluding Going-Concern Buffer	$95.6	53%	67.8	49%			
Single-family Going-Concern Buffer	34.9	19%	36.9	27%			
Single-family	130.5	72%	104.7	76%	$111.0	82%	1.83%
Multifamily excluding Going-Concern Buffer	10.2	6%	12.2	9%			
Multifamily Going-Concern Buffer	3.7	2%	4.7	3%			
Multifamily	13.9	8%	16.9	12%	17.8	13%	0.29%
Deferred Tax Assets	26.8	15%	7.4	5%	0.0	0%	0.00%
Other Assets excluding Going-Concern Buffer*	8.4	5%	6.1	4%			
Other Assets Going-Concern Buffer	1.3	1%	1.8	1%			
Other Assets	9.7	5%	7.9	6%	6.3	5%	0.10%
Total Capital Requirement	$180.9	100%	$136.9	100%	$135.1	100%	2.22%
Prescribed Buffers							
Stress Capital Buffer					45.5		0.75%
Stability Capital Buffer					53.3		0.88%
Countercyclical Capital Buffer Amount					0.0		0.00%
Prescribed Capital Conservation Buffer Amount (PCCBA)					$98.8		1.63%
Total Capital Requirement and PCCBA	$180.9		$136.9		$233.9		3.85%
Adjusted Total Assets	$5,619.9		$6,072.0		$6,072.0		
Total Capital Requirement and Buffer Target/ Adjusted Total Assets	3.22%		2.25%		3.85%		

*Includes PLS, CMBS, Other.

Table 3 again shows an estimated combined risk-based capital requirement of $135.1 billion, or 2.22 percent of the Enterprises' adjusted total assets under the proposed rule as of September 30, 2019, then provides a further breakdown by asset category. The Enterprises' combined risk-based capital requirement for single-family mortgage exposures is $111.0 billion under the proposed rule, while the combined risk-based capital requirement for multifamily mortgage exposures is $17.8 billion. In addition, the combined risk-based capital requirements for DTA and other assets under the proposed rule is zero and $6.3 billion, respectively.

Excluding the going-concern buffer, which was a capital requirement in the 2018 proposal but has been replaced by the stress capital buffer in the proposed rule, the combined risk-based capital requirements under the 2018 proposal for the single-family and multifamily businesses were $67.8 billion and $12.2 billion, respectively, as of September 30, 2019. As discussed above and shown in Table 3, the enhancements in the proposed rule would have increased the required capital for single-family assets and multifamily assets by $43.2 billion and $5.6 billion, respectively. Similarly, the risk-based capital requirement for other assets has increased by $0.2 billion. Finally, the risk-based capital requirement for DTA decreased by $7.4 billion in the proposed rule due to its new capital treatment.

The pro-cyclicality of the 2018 proposal's risk-based capital requirements complicates comparisons to the proposed rule. Under the 2018 proposal, the Enterprises would have likely found it necessary to maintain a considerable capital surplus in anticipation of a financial stress. One Enterprise's comment letter suggested that its total capital requirement would be expected to increase as much as 80

percent in a severely adverse stress.[13] The amount of this managerial cushion would have depended on the extent to which the Enterprises viewed it to be potentially costly or difficult to raise new capital in the midst of a financial stress.[14] The 2018 proposal's enforcement framework amplified the necessity of a managerial cushion by incorporating the going-concern buffer into the capital requirements, a violation of which could trigger significant regulatory sanctions. In contrast, the proposed rule converts the going-concern buffer into a stress capital buffer that an Enterprise may draw down during a period of financial stress. Because a managerial cushion in anticipation of an eventual stress would have been a practical, if not legal, necessity for the Enterprises, comparisons to the 2018 proposal should start with a reasonable assumption regarding the amount of this capital surplus.[15]

FHFA is cognizant that the leverage ratio requirements would currently exceed the risk-based capital requirements. FHFA has settled on this calibration of the leverage ratio requirements after considerable deliberation. The leverage ratio requirements are intended to serve as non-risk-based measures that provide a credible backstop to the risk-based capital requirements to safeguard against model risk and measurement error with a simple, transparent, independent measure of risk. The leverage ratio requirements would have the added benefit of dampening some of the pro-cyclicality inherent in the risk-based capital requirements. As discussed in Section VI.B.3, FHFA has sized the leverage ratio requirements to be a credible backstop to the risk-based capital requirements, taking into account considerations relating to the Enterprises' historical loss experiences, the model and related risks posed by the calibration of the risk-based capital requirements, and the analogous leverage ratio requirements under the U.S. banking framework and of the Federal Home Loan Banks. If the leverage ratio requirements are to be a credible backstop, there will inevitably be periods when leverage ratio requirements require more regulatory capital than the risk-based capital requirements, as is the case as of September 30, 2019. FHFA believes that mortgage market conditions as of September 30, 2019 reflect circumstances consistent with a period under which a credible leverage ratio would be binding, given the exceptional single-family house price appreciation since 2012, the unemployment rate at an historically low level, the strong credit performance of mortgage exposures as of that time, the significant progress by the Enterprises to materially reduce legacy exposure to non-performing loans (NPLs) and re-performing loans, robust CRT market access enabling substantial risk transfer, and the generally strong condition of key counterparties, such as mortgage insurers.

3. 2008 Financial Crisis Loss Experience [16]

This section examines the peak cumulative capital losses of each Enterprise relative to several different regulatory capital metrics: The statutory risk-based and leverage ratio requirements applicable to the Enterprise in 2007; the aggregate risk-based capital (requirement plus the PCCBA) under the proposed rule but without the contemplated single-family countercyclical adjustment; and the aggregate leverage capital (requirement plus the PLBA) under the proposed rule but without the contemplated single-family countercyclical adjustment.[17] As discussed in Section IV.B.2, under the 2018 proposal, Fannie Mae's and Freddie Mac's peak losses would have left, respectively, only $3 billion and $12 billion in remaining capital, not enough to have sustained the market confidence necessary for either Enterprise to continue as a going concern.

[13] *See* Comment Letter from Fannie Mae at 2 (Nov. 15, 2018).

[14] *Id.* at 2 (''To ensure adequate capital in such a scenario, any Regulated Institution would need to hold a sizeable capital surplus during more normal economic environments. The need for such a surplus is real, because consistent with their mission, the Regulated Institutions must maintain a constant presence in the housing market and would want to avoid being forced to raise capital in times of stress.'').

[15] On the one hand, the managerial cushion likely to be held by an Enterprise to mitigate the problem of having to raise regulatory capital in a period of financial stress could be considered a mitigant to safety and soundness risk. On the other hand, significant reductions in credit risk capital requirements due to sustained periods of house price growth and favorable economic conditions could contribute to safety and soundness risk.

[16] In 2008, the entire net worth of both Enterprises was depleted by losses. The U.S. Department of the Treasury (Treasury Department) invested in senior preferred stock of both Enterprises to offset the losses. Fannie Mae drew $116 billion from the Treasury between 2008 and the fourth quarter of 2011, while Freddie Mac drew $71 billion between 2008 and the first quarter of 2012.

[17] Peak cumulative capital losses are defined as cumulative losses, net of revenues earned, between 2008 and the respective date at which an Enterprise no longer required draws under the PSPA.

Table 4: Comparison of Fannie Mae's Capital Requirement as of December 31, 2007 to Peak Cumulative Capital Losses

	$ in billions	% of Adjusted Total Assets as of Dec 31, 2007
Net worth	$44	1.4%
Equity issuance in 2008	7	0.2%
Cumulative Treasury Draws through December 31, 2011	116	3.8%
Peak Cumulative Losses	$167	5.5%
Statutory Risk-Based Capital Requirement	$25	0.8%
...Relative to Peak Capital Losses	($143)	(4.7%)
Statutory Minimum Leverage Requirement	$42	1.4%
...Relative to Peak Capital Losses	($126)	(4.1%)
Adjusted Total Capital Requirement* plus Prescribed Capital Conservation Buffer Amount	$209	6.9%
...Relative to Peak Capital Losses	$42	1.4%
Leverage Capital Requirement plus Prescribed Leverage Buffer Amount (Tier 1 Capital)	$122	4.0%
...Relative to Peak Capital Losses	($45)	(1.5%)

**Excludes impact of proposed countercyclical adjustment*

Table 4 shows that as of December 31, 2007, Fannie Mae's statutory risk-based capital requirement was $25 billion, or 0.8 percent of adjusted total assets. The Enterprise's statutory minimum leverage ratio requirement was $42 billion, or 1.4 percent of adjusted total assets. For comparison, as of the same date, Fannie Mae's proposed risk-based measures (adjusted total capital requirement plus PCCBA) would have been $209 billion or 6.9 percent of adjusted total assets, and the proposed leverage measures (leverage ratio requirement plus PLBA) would have been $122 billion or 4.0 percent of adjusted total assets. While the leverage measure would have fallen $45 billion short of Fannie Mae's peak cumulative capital losses of $167 billion (5.5 percent of adjusted total assets), the proposed risk-based measures would have exceeded those peak losses by $42 billion. These comparisons are subject to the caveat that Fannie Mae's $167 billion in peak cumulative capital losses include a valuation allowance on DTAs of $64 billion. Because much of Fannie Mae's DTAs would have been deducted from adjusted total capital and tier 1 capital, the adjusted total capital and tier 1 capital that actually would have been exhausted during the 2008 financial crisis would have been considerably less than the $167 billion in peak cumulative capital losses reflected in Table 4.

Table 5: Comparison of Freddie Mac's Capital Requirement as of December 31, 2007 to Peak Cumulative Capital Losses

	$ in billions	% of Adjusted Total Assets as of Dec 31, 2007
Net worth	$27	1.2%
Equity issuance in 2008		
Cumulative Treasury Draws through March 31, 2012	71	3.3%
Peak Cumulative Losses	$98	4.5%
Statutory Risk-Based Capital Requirement	$14	0.6%
...Relative to Peak Capital Losses	($84)	(3.9%)
Statutory Minimum Leverage Requirement	$34	1.6%
...Relative to Peak Capital Losses	($64)	(2.9%)
Adjusted Total Capital Requirement* plus Prescribed Capital Conservation Buffer Amount	$128	5.9%
...Relative to Peak Capital Losses	$30	1.4%
Leverage Capital Requirement plus Prescribed Leverage Buffer Amount (Tier 1 Capital)	$87	4.0%
...Relative to Peak Capital Losses	($11)	(0.5%)

**Excludes impact of proposed countercyclical adjustment*

Table 5 shows that as of December 31, 2007, Freddie Mac's statutory risk-based capital requirement was $14 billion, or 0.6 percent of adjusted total assets. The Enterprise's statutory minimum leverage ratio requirement was $34 billion, or 1.6 percent of adjusted total assets. For comparison, as of the same date, Freddie Mac's proposed risk-based measures (adjusted total capital requirement plus PCCBA) would have been $128 billion or 5.9 percent of adjusted total assets, and the proposed leverage measures (leverage ratio requirement plus PLBA) would have been $87 billion or 4.0 percent of adjusted total assets. While the leverage measure would have fallen $11 billion short of Freddie Mac's peak cumulative capital losses of $98 billion (4.5 percent of adjusted total assets), the proposed risk-based measures would have exceeded those peak losses by $30 billion. These comparisons are subject to the caveat that Freddie Mac's $98 billion in peak cumulative capital losses include a valuation allowance on DTAs of $34 billion. Because much of Freddie Mac's DTAs would have been deducted from adjusted total capital and tier 1 capital, the adjusted total capital and tier 1 capital that actually would have been exhausted during the 2008 financial crisis would have been considerably less than the $98 billion in peak cumulative capital losses reflected in Table 5.

As discussed in Section VIII.A.4, FHFA is proposing that the base risk weights for single-family mortgage exposures would be subject to a countercyclical adjustment due to MTMLTV adjustments an Enterprise would be required to make when national house prices deviate by more than 5.0 percent above or below an estimated inflation-adjusted long-term trend. It is important to note that any additional regulatory capital that would have been required under the proposed single-family countercyclical adjustment is not included in the estimates of regulatory capital in either Tables 4 or 5. Looking back, it is likely that, given the considerable house price appreciation in the decade before the financial crisis, this countercyclical adjustment would have been in effect as of December 31, 2007. However, there are too many unknowns to quantify with any reasonable degree of certainty what that effect would have been, how the Enterprises' actions might have changed because of it, and how changes in the actions of the Enterprises might have affected the overall market. Therefore, FHFA is presenting the estimates without including a countercyclical adjustment, and acknowledging that with the countercyclical adjustment in place, the Enterprises would likely have had an even larger capital surplus relative to their peak cumulative capital losses than is presented in Tables 4 and 5.

III. Background

A. Pre-Crisis Regulatory Capital Framework

The Safety and Soundness Act established FHFA's predecessor agency, the Office of Federal Housing Enterprise Oversight (OFHEO), as the safety and soundness regulator of the Enterprises. As originally enacted, the Safety and Soundness Act specified a minimum capital requirement for the Enterprises

in the form of a leverage ratio requirement set in statute at an amount equal to the sum of 2.5 percent of on-balance sheet assets and 0.45 percent of credit guarantees of MBS held by outside investors. OFHEO did not have the authority to adjust this minimum capital requirement.

The Safety and Soundness Act also required OFHEO to establish by regulation a risk-based capital stress test such that each Enterprise could survive a ten-year period with credit losses arising out of a prolonged regional stress [18] and large movements in interest rates.[19] Over a 7-year period, OFHEO issued a series of **Federal Register** notices to solicit public comments on the risk-based capital stress test regulation, eventually finalizing the rule in 2001. The final risk-based capital requirements, however, had little practical impact. The capital required under the statutory leverage ratio requirement consistently exceeded the capital required under OFHEO's risk-based regulation, in large part due to the prescriptive restrictions imposed by statute on the underlying stress scenario and also due to model risk-related failures to update the underlying data and model calibrations.[20] This pre-crisis regulatory capital framework would soon prove inadequate.

B. Lessons of the 2008 Financial Crisis

Starting in 2006, house prices in some regional markets began to decline, mortgage defaults began to rise, and the Enterprises began to incur credit and mark-to-market losses. In 2007, housing price declines spread across the nation, and issuances of private-label securities (PLS) largely ceased. The Enterprises' losses continued to mount into 2008, their share prices rapidly fell, and the spreads on their unsecured debt and mortgage-backed securities (MBS) widened.

In July 2008, following growing concern about the Enterprises' solvency, Congress passed HERA, establishing FHFA as the regulator for the Enterprises and authorizing the Treasury Department to support the Enterprises through purchases of their obligations and other securities. On September 6, 2008, FHFA used its new authorities under HERA to place each Enterprise into conservatorship. The next day, the Treasury Department exercised its HERA authority to enter into Senior Preferred Stock Purchase Agreements (each a PSPA) to support the Enterprises. The Enterprises ultimately required $191.5 billion in cash draws from the Treasury Department under the PSPAs.

1. Capital Adequacy

The scale of the Enterprises' capital exhaustion during the 2008 financial crisis is critically relevant to the capital necessary to ensure that each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle.

As discussed in Section II.D.3, the Enterprises' crisis-era cumulative capital losses peaked at $265 billion, approximately 4.8 percent of their total assets as of December 31, 2007. Setting aside the valuation allowances on their DTAs, which are subject to deductions and other adjustments to regulatory capital under the proposed rule, the Enterprises' peak cumulative capital losses were $167 billion, approximately 3.0 percent of their total assets as of December 31, 2007.

The Enterprises' crisis-era cumulative capital losses, while significant, could have been greater. The Enterprises' losses were likely mitigated by unprecedented federal government support of the housing market and the economy during the crisis, including the Home Affordable Modification Program, the Troubled Asset Relief Program, the 2009 stimulus package,[21] and the Federal Reserve System's purchases of more than $1.2 trillion of the Enterprises' debt and MBS from January 2009 to March 2010. The Enterprises' losses also were likely dampened by the declining interest rate environment of the period, when the interest rates on 30-year fixed-rate mortgage loans declined by approximately 200 basis points through the end of 2011, facilitating re-financings and loss mitigation programs.[22]

The Enterprises did later recoup a portion of the underlying valuation adjustments and other losses. However, peak cumulative capital losses are relevant to assessing the amount of capital that creditors and other counterparties would require to regard the Enterprises as viable going concerns throughout the duration of another severe economic downturn. Indeed, the Enterprises were still operating and able to recoup some of these losses only because the Treasury Department's support through the PSPAs kept them solvent going concerns.

2. Going-Concern Standard

The Enterprises' crisis-era funding difficulties established that each Enterprise must be capitalized to remain a viable going concern both during and after a severe economic downturn. Calibrating capital adequacy based on ''claims paying capacity'' or an insurance-like or similar standard that does not emphasize a going-concern standard is inconsistent with this lesson of the crisis in at least two respects.

First, the Enterprises fund themselves with a significant amount of short-term unsecured debt that must be regularly refinanced. Each Enterprise's funding needs are very likely to increase during an economic downturn, all else equal, as the Enterprise funds purchases of NPLs out of securitization pools. This is a funding need that peaked at $345 billion in 2010.

These ordinary course and pro-cyclical funding needs can be met only if the Enterprise continues to be regarded as a viable going concern by creditors throughout the duration of a financial stress. Creditors will be most skeptical of an Enterprise's continued solvency during periods of market turmoil, and it was the increase in the Enterprises' borrowing costs and the associated difficulties that the Enterprises faced in refinancing their debt that were among the most immediate grounds for FHFA placing the Enterprises into conservatorship.[23]

[18] The statutory stress scenarios contemplated a period in which ''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 contiguous areas of the United States containing an aggregate of not less than 5 percent of the total population of the United States that, for a period of not less than 2 years, experienced the highest rates of default and severity of mortgage losses, in comparison with such rates of default and severity of mortgage losses in other such areas for any period of such duration.'' Safety and Soundness Act section 1361(a) (as in effect before amended by HERA).

[19] The statutory stress scenarios contemplated two periods: (i) A period in which the 10-year Treasury yield decreased to the lesser of 600 basis points below the average yield during the preceding 9 months or 60 percent of the average yield during the preceding three years; and (ii) a period in which the 10-year Treasury yield increased to the greater of 600 basis points above the average yield during the preceding 9 months or 160 percent of the average yield during the preceding three years. *Id.*

[20] *See* W. Scott Frame et al, *The Failure of Supervisory Stress Testing: Fannie Mae, Freddie Mac, and OFHEO* (Working Paper 2015–3) at 3, available at *https://www.frbatlanta.org/-/media/documents/research/publications/wp/2015/03.pdf.*

[21] *See* American Recovery and Reinvestment Act of 2009, Public Law 111–5, 123 Stat. 115 (2009).

[22] The average interest rate on 30-year mortgage loans was approximately 6.14 percent at the end of 2007, and fell to 4.2 percent toward the end of October 2011. Over this period, yields on 10-year Treasuries fell from approximately 3.88 percent at the end of 2008 to 2.06 percent at the end of October 2011.

[23] *See Memorandum dated September 6, 2008 re: Proposed Appointment of the Federal Housing Finance Agency as Conservator for the Fannie Mae* at 29 (''The Enterprise's practice of relying upon repo financing of its agency collateral to raise cash in the current credit and liquidity environment is

Second, only a going-concern capital adequacy standard can ensure that each Enterprise will be positioned to fulfill its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle. The Enterprises were not positioned to effectively support the secondary mortgage market as their financial conditions deteriorated in 2007 and 2008.[24] In an attempt to enable the Enterprises to continue to support the secondary mortgage market, OFHEO relaxed the mortgage portfolio caps and reduced a capital buffer that had been imposed by consent order.[25]

3. High-Quality Capital

Another lesson of the 2008 financial crisis is that it is not only the quantity but also the quality of the regulatory capital, especially its loss-absorbing capacity, that is critical to the Enterprises' safety and soundness. Market confidence in the Enterprises came into doubt in mid-2008 when Fannie Mae and Freddie Mac had total capital of, respectively, $55.6 billion and $42.9 billion. Questions about the Enterprises' solvency likely arose in part due to their sizeable DTAs, which counted toward total capital but had less loss-absorbing capacity during a period of negative income. Freddie Mac would have actually had a negative book value as of June 30, 2008 after deducting its DTAs. Besides the DTA valuation allowances, there was also uncertainty as to the sufficiency of the Enterprises' allowances for loan losses (ALLL).[26] For these and other reasons, the Basel framework includes deductions and other adjustments for DTAs and ALLL, as well as other capital elements that might have less loss-absorbing capacity.[27]

Table 6 illustrates the importance of requiring high-quality capital by showing the evolution of CET1 capital, tier 1 capital, adjusted total capital, core capital, and total capital at each Enterprise leading up to the 2008 financial crisis. As the table indicates, the Enterprises' combined core capital increased from $77.3 billion in 2006 to $84.1 billion in 2008, suggesting at first glance a position of some financial strength. However, over the same time period the Enterprises' combined tier 1 capital decreased markedly from $76.3 billion to $24.1 billion, indicating a capital position with deteriorating and substantially less loss-absorbing capacity. Similarly, the Enterprises' combined total capital increased from $78.7 billion in 2006 to $98.5 billion in 2008, while over the same time period the Enterprises' adjusted total capital decreased from $85.9 billion to $29.6 billion.

an unsafe or unsound practice that has led to an unsafe or unsound condition, given the unavailability of willing lenders to provide secured financing in significant size to reduce pressure on its discount notes borrowings.''); and *Memorandum dated September 6, 2008 re: Proposed Appointment of the Federal Housing Finance Agency as Conservator for the Freddie Mac* at 28 (''The Enterprise's prolonged reliance almost exclusively on 30-day discount notes is an untenable long-term source of funding and an unsafe or unsound practice that poses abnormal risk to the viability of the Enterprise. Operating without an adequate liquidity funding contingency plan is an unsafe or unsound condition to transact business.''); and Fin. Crisis Inquiry Comm'n, The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States at 316 (2011) (the FCIC Report), available at *https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf*; (''In July and August 2008, Fannie suffered a liquidity squeeze, because it was unable to borrow against its own securities to raise sufficient cash in the repo market.''); *see id.* at 316 (''By June 2008, the spread [between the yield on the GSEs' long-term bonds and rates on Treasuries] had risen 65 percent over the 2007 level; by September 5, just before regulators parachuted in, the spread had nearly doubled from its 2007 level to just under 1 percent, making it more difficult and costly for the GSEs to fund their operations.'').

[24] *See* FCIC Report at 311, available at *https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf*; (''Few doubted Fannie and Freddie were needed to support the struggling housing market. The question was how to do so safely. Purchasing and guaranteeing risky mortgage-backed securities helped make money available for borrowers, but it could also result in further losses for the two huge companies later on. 'There's a real tradeoff,' Lockhart said in late 2007—a trade-off made all the more difficult by the state of the GSEs' balance sheets.'''); *Statement of FHFA Director James B. Lockhart at News Conference Announcing Conservatorship of Fannie Mae and Freddie Mac* (Sept. 7, 2008), available at *https://www.fhfa.gov/Media/PublicAffairs/Pages/Statement-of-FHFA-Director-James-B--Lockhart-at-News-Conference-Annnouncing-Conservatorship-of-Fannie-Mae-and-Freddie-Mac.aspx*; (''Unfortunately, as house prices, earnings and capital have continued to deteriorate, their ability to fulfill their mission has deteriorated . . . . The result has been that they have been unable to provide needed stability to the market. They also find themselves unable to meet their affordable housing mission.''); *id.* (''The lack of confidence has resulted in continuing spread widening of their MBS, which means that virtually none of the large drop in interest rates over the past year has been passed on to the mortgage markets.'').

[25] *News Release, OFHEO, Fannie Mae and Freddie Mac Announce Initiative to Increase Mortgage Market Liquidity* (Mar. 19, 2008), available at *https://www.fhfa.gov/Media/PublicAffairs/Pages/OFHEO,-Fannie-Mae-and-Freddie-Mac-Announce-Initiative-to-Increase-Mortgage-Market-Liquidity.aspx*; (''OFHEO estimates that Fannie Mae's and Freddie Mac's existing capabilities, combined with this new initiative and the release of the portfolio caps announced in February, should allow the GSEs to purchase or guarantee about $2 trillion in mortgages this year.'').

[26] *See FCIC Report* at 317, available at *https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf*; (''[T]he Fed found that the GSEs were significantly 'underreserved,' with huge potential losses . . . The OCC rejected the forecasting methodologies on which Fannie and Freddie relied. Using its own metrics, it found insufficient reserves for future losses . . . .'').

[27] *See* BCBS, *The Basel Framework* CAP10 (Dec. 15, 2019), available at *https://www.bis.org/basel_framework/chapter/CAP/10.htm?inforce=20191215&export=pdf; see also* BCBS, *Basel: A Global Regulatory Framework for More Resilient Banks and Banking Systems, paragraphs 8 and 9,* (Dec. 2010; revised June 2011), available at *http://www.bis.org/publ/bcbs189.htm*; (''The crisis demonstrated that credit losses and writedowns come out of retained earnings, which is part of banks' tangible common equity base . . . . To this end, the predominant form of Tier 1 capital must be common shares and retained earnings.'').

Table 6: Comparison of Capital, December 31, 2006 to June 30, 2008

$ in billions	Fannie Mae			Freddie Mac			Enterprises Combined		
	Dec 31, 2006	Dec 31, 2007	Jun 30, 2008	Dec 31, 2006	Dec 31, 2007	Jun 30, 2008	Dec 31, 2006	Dec 31, 2007	Jun 30, 2008
Core Capital	$42.0	$45.4	$47.0	$35.4	$37.9	$37.1	$77.3	$83.2	$84.1
Proposed Tier 1 Capital	40.3	35.7	22.9	36.0	26.0	0.9	76.3	61.7	23.8
Proposed Tier 1 Capital minus Core Capital	($1.7)	($9.7)	($24.1)	$0.6	($11.9)	($36.2)	($1.0)	($21.5)	($60.3)
Proposed Tier 1 Capital/ Core Capital	96%	79%	49%	102%	69%	3%	99%	74%	28%
Total Capital	$42.7	$48.7	$55.6	$36.0	$40.7	$42.9	$78.7	$89.3	$98.5
Proposed Adjusted Total Capital	48.0	42.2	22.9	38.0	29.9	6.8	85.9	72.1	29.6
Proposed Adjusted Total Capital minus Total Capital	$5.3	($6.4)	($32.7)	$2.0	($10.8)	($36.2)	$7.3	($17.2)	($68.9)
Proposed Adjusted Total Capital/ Total Capital	112%	87%	41%	106%	73%	16%	109%	81%	30%
Proposed CET 1 Capital	$31.2	$18.8	$1.2	$25.8	$11.9	($13.2)	$57.0	$30.7	($12.0)

4. Stability of the National Housing Finance Markets

After the taxpayer-funded rescue of the Enterprises in 2008, there can be no doubt as to the risk posed by an insolvent or otherwise financially distressed Enterprise to the stability of the national housing finance markets. The Enterprises were then, and remain today, the dominant participants in the housing finance system, owning or guaranteeing 37 percent of residential mortgage debt outstanding as of December 31, 2007 and 44 percent of residential mortgage debt outstanding as of September 30, 2019. Both then and still today, banks, insurance firms, and securities broker-dealers own significant amounts of the Enterprises' unsecured debt and MBS. Both then and still today, the Enterprises control critical infrastructure for securitizing and administering $5.5 trillion of outstanding single-family and multifamily conventional MBS.[28] Given the nature, scope, size, scale, concentration, and interconnectedness of each Enterprise, the financial distress of an Enterprise could have significant adverse effects on the liquidity, efficiency, competitiveness, or resiliency of national housing finance markets. For these and related reasons, the Treasury Department ultimately invested $191.5 billion under the PSPAs in the Enterprises to keep them solvent going concerns.

C. Post-Crisis Changes to Regulatory Capital Frameworks

After the 2008 financial crisis, financial services regulators in the U.S. and internationally revisited their regulatory capital frameworks to address lessons learned. The international efforts of the leading banking regulators through the BCBS culminated in 2010 in enhancements to the Basel framework.[29] That comprehensive reform package was designed to improve the quality and quantity of regulatory capital and to build additional capacity into the banking system to absorb losses during future periods of financial stress. Revisions to the international capital standards included a more restrictive definition of regulatory capital, higher regulatory capital requirements, a capital conservation buffer that could be drawn down during periods of financial stress, and also capital surcharges for systemic importance.

With respect to the Enterprises, HERA gave FHFA greater authority to determine capital standards for the Enterprises by removing the Safety and Soundness Act's restrictions on the risk-based capital requirements and by giving FHFA authority to increase leverage ratio requirements above the statutory minimum. Each Enterprise was placed into conservatorship shortly after enactment of HERA, and FHFA suspended the Enterprises' statutory capital classifications and regulatory capital requirements. FHFA, in its capacity as conservator, then began to develop a framework known as the Conservatorship Capital Framework to ensure that each Enterprise assumed appropriate regulatory capital requirements in managing their businesses. The Conservatorship Capital Framework was implemented in 2017, and ultimately was the foundation of the 2018 proposal.

IV. Rationale for Re-Proposal

FHFA is re-proposing the regulatory capital framework for the Enterprises for three key reasons:

[28] During the conservatorship, some of that functionality has been moved to the Common Securitization Platform, which is jointly owned and operated by the Enterprises. In January 2020, FHFA announced that it had directed the Enterprises to amend the governance of the entity that operates the Common Securitization Platform to include an independent, non-executive chairman of the board of directors and add up to three additional independent directors.

[29] *See* BCBS, *Basel: A Global Regulatory Framework for More Resilient Banks and Banking Systems* (Dec. 2010; revised June 2011), available at *http://www.bis.org/publ/bcbs189.htm.*

• First, FHFA has begun the process to responsibly end the conservatorships of the Enterprises. This policy change is a departure from the expectations of interested parties at the time of the 2018 proposal, when the prospects for indefinite conservatorships informed comments and perhaps even the decision whether to comment at all.

• Second, FHFA is proposing to increase the quantity and quality of the regulatory capital at the Enterprises to ensure the safety and soundness of each Enterprise and that each Enterprise can fulfill its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle, in particular during periods of financial stress.

• Third, to facilitate regulatory capital planning and also in furtherance of the safety and soundness of the Enterprises and their countercyclical mission, FHFA is proposing changes to mitigate the pro-cyclicality of the aggregate risk-based capital requirements of the 2018 proposal.

While these enhancements preserve the 2018 proposal as the foundation of the Enterprises' regulatory capital framework, FHFA has nonetheless determined to solicit comments on this revised framework in its entirety in light of the changed policy environment, the extent and nature of the enhancements, the technical nature of the underlying issues, the diverse range of interested parties, and the critical importance of the Enterprises' regulatory capital framework to the national housing finance markets.

A. Responsibly Ending the Conservatorships

FHFA stated in the 2018 proposal that ''this proposed rule is not a step towards recapitalizing the Enterprises and administratively releasing them from conservatorship.'' [30] FHFA also noted that ''[p]ublication of this proposed rule will assist with FHFA's administration of the conservatorships of Fannie Mae and Freddie Mac by potentially refining the [Conservatorship Capital Framework].'' [31] It is possible that these and other statements made by FHFA, as well as the generally prevailing uncertainty at the time as to the Enterprises' prospects for exiting conservatorships, might have influenced interested parties' views as to the practical relevance of the 2018 proposal or otherwise dissuaded the submission of some comments. In fact, more than half of the comments on the 2018 proposal related to the ongoing conservatorships rather than the proposed regulatory capital framework.

The policy environment has since changed. In September 2019, the Treasury Department released its housing reform plan that recommended that FHFA begin the process to end each Enterprise's conservatorship in a manner consistent with the preconditions set forth in that plan, and also recommended a recapitalization plan be developed for each Enterprise.[32] Shortly thereafter, the Treasury Department and FHFA, on behalf of each Enterprise in its capacity as conservator, entered into letter agreements permitting the Enterprises to together retain up to $45 billion in capital. In October 2019, FHFA then issued a new Strategic Plan and Scorecard for the Enterprises that stated that ''[e]nding the conservatorships of Fannie Mae and Freddie Mac is a central and necessary element of this new roadmap.''

These developments were important factors in FHFA's decision to re-propose the regulatory capital framework in its entirety. FHFA considered extensively the comments received on the 2018 proposal and made significant adjustments to multiple aspects of the proposed regulatory capital framework in response to the comments received. FHFA now hopes and expects that the clarity as to the Enterprises' eventual exit from conservatorship will lead to new, different, and more extensive comments. To that end, FHFA emphasizes that the purpose of the proposed rule is to establish a regulatory capital framework that ensures the safety and soundness of each Enterprise and that each Enterprise is positioned to fulfill its statutory mission across the economic cycle, in particular during periods of financial stress.

B. Ensuring Capital Adequacy

1. Quality of Capital

As discussed in Section III.B.3, a lesson of the 2008 financial crisis is that the Enterprises' safety and soundness depends not only on the quantity but also on the quality of their regulatory capital. In light of the lessons learned, FHFA has determined enhancements are necessary to address two key concerns with respect to the quality of the Enterprise's regulatory capital.

First, enhancements are necessary to limit the amount of regulatory capital that may consist of certain components of capital such as DTAs that might tend to have less loss-absorbing capacity during a period of financial stress. FHFA noted in the 2018 proposal that the Enterprises' DTAs, which are included in total capital and core capital by statute, ''may provide minimal to no loss-absorbing capability during a period of [financial] stress as recoverability (via taxable income) may become uncertain.'' [33] The 2018 proposal addressed this issue by establishing a risk-based capital requirement for DTAs. However, the 2018 proposal did not include adjustments for other capital elements that tend to have less loss-absorbing capacity during a financial stress (*e.g.,* ALLL, goodwill, and intangibles). The 2018 proposal also did not adjust for accumulated other comprehensive income (AOCI), leaving open the possibility that an Enterprise could have positive total capital and core capital despite being insolvent under GAAP, though FHFA did request comment on whether to include offsetting capital requirements to AOCI similar to the treatment of DTAs.

Second, the statutory definitions of regulatory capital used in the 2018 proposal did not limit the extent to which preferred shares could satisfy the risk-based capital requirements. Specifically, there was neither a risk-based capital requirement for core capital nor a requirement that retained earnings and other common equity be the predominant form of capital, as under the Basel framework.[34] The 2018 proposal sought feedback on this issue and commenters recommended FHFA limit the inclusion of preferred shares in regulatory capital to align with the U.S. banking framework's definition of tier 1 capital.

To address these and related concerns, and as described in more detail in Section V.B., FHFA is proposing to supplement the total capital and core capital requirements with additional capital requirements

[30] 83 FR at 33313.

[31] *Id.*

[32] Treasury, Housing Reform Plan at 27 (Sept. 2019), available at *https://home.treasury.gov/system/files/136/Treasury-Housing-Finance-Reform-Plan.pdf.*

[33] 83 FR at 33388. Deducting the Enterprises' DTAs from their $98.5 billion in total capital in mid-2008 in a manner generally consistent with the U.S. banking regulators' approach would have left the Enterprises with little regulatory capital, reflective of the financial distress that the Enterprises were experiencing at the time and also consistent with the $53.8 billion in capital reductions realized a few months later with the valuation allowances on the Enterprises' DTAs.

[34] *See* BCBS, *Basel: A Global Regulatory Framework for More Resilient Banks and Banking Systems, paragraphs 8 and 9* (*Dec.* 2010; revised June 2011), available at *http://www.bis.org/publ/bcbs189.htm;* (''It is critical that banks' risk exposures are backed by a high quality capital base. The crisis demonstrated that credit losses and writedowns come out of retained earnings, which is part of banks' tangible common equity base . . . . To this end, the predominant form of Tier 1 capital must be common shares and retained earnings.'').

based on the Basel framework's definitions of total capital, tier 1 capital, and CET1 capital. These supplemental capital requirements would include customary deductions and other adjustments for certain DTAs, goodwill, intangibles, and other assets that tend to have less loss-absorbing capacity during a financial stress. The risk-based tier 1 and CET1 capital requirements also would ensure that retained earnings and other high-quality capital are the predominant form of regulatory capital.

2. Quantity of Capital

FHFA has also determined enhancements to the 2018 proposal are necessary to ensure a safe and sound quantity of regulatory capital at each Enterprise. In particular, due in part to the lack of prudential floors on risk-based capital requirements and capital buffers, the 2018 proposal's credit risk capital requirements were insufficient to ensure the safety and soundness of each Enterprise and that each Enterprise could continue to fulfill its statutory mission during a period of financial stress. In determining the need for these enhancements, FHFA considered the following facts, among others:

• *Cumulative Crisis-Era Capital Losses.* Fannie Mae and Freddie Mac's peak cumulative capital losses from 2008 through 2011 and the first quarter of 2012, respectively, were, respectively, $167 billion and $98 billion. Had the 2018 proposal been in effect at the end of 2007, the 2018 proposal's risk-based capital requirements for Fannie Mae and Freddie Mac would have been, respectively, $171 billion and $110 billion. Fannie Mae and Freddie Mac's peak losses would have left, respectively, only $3 billion and $12 billion in remaining capital. At 0.1 percent and 0.5 percent of their total assets and off-balance sheet guarantees respectively, these amounts would not have sustained the market confidence necessary for the Enterprises to continue as going concerns, particularly given the prevailing stress in the financial markets at that time and also given the uncertainty as to the potential for other write-downs and the adequacy of the Enterprises' allowances for loan losses. Indeed, in October 2010, FHFA projected $90 billion in additional PSPA draws through 2013 under the baseline scenario, although only $34 billion in additional draws proved necessary.[35]

• *Single-family Credit Losses.* Freddie Mac's estimated single-family credit risk capital requirement under the 2018 proposal of $59 billion as of December 31, 2007 would have been less than its lifetime single-family credit losses of $64 billion on its December 31, 2007 guarantee portfolio. Even excluding loans that Freddie Mac no longer acquires, Freddie Mac's estimated single-family credit risk capital requirement of $24 billion under the 2018 proposal would have exceeded projected lifetime losses of $20 billion by only $4 billion (0.4 percent of the unpaid principal balance on the single-family book as of December 31, 2007). Fannie Mae's estimated single-family credit risk capital requirement under the 2018 proposal would have exceeded projected lifetime losses on its December 31, 2007 guarantee portfolio whether including or excluding loans that it no longer acquires, but only by $9 billion in both scenarios (0.4 percent and 0.7 percent, respectively, of the unpaid principal balance of the single-family book as of December 31, 2007).

• *Comparison to the Basel and U.S. Banking Frameworks.* Had the 2018 proposal been in effect on September 30, 2019, the average pre-CRT net credit risk capital requirement on the Enterprises' single-family mortgage exposures would have been 1.6 percent of unpaid principal balance, implying an average risk weight of 20 percent.[36] The U.S. banking framework generally assigns a 50 percent risk weight to single-family mortgage exposures to determine the credit risk capital requirement (equivalent to a 4.0 percent adjusted total capital requirement), while the current Basel framework generally assigns a 35 percent risk weight (equivalent to a 2.8 percent adjusted total capital requirement). Before adjusting for the capital buffers under the proposed rule and the Basel and U.S. banking frameworks, the Enterprises' regulatory capital requirements for single-family mortgage exposures under the 2018 proposal would have been 40 percent that of U.S. banking organizations and less than 60 percent that of non-U.S. banking organizations. The BCBS has finalized a more risk-sensitive set of risk weights for residential mortgage exposures, which are to be implemented by January 1, 2022.[37] With those changes, the lowest standardized risk weight would be 20 percent for single-family residential mortgage loans with LTVs at origination less than 50 percent. The 20 percent average risk weight would have been the same as the Basel framework's 20 percent minimum, notwithstanding the Enterprises having an average single-family original loan-to-value (OLTV) of approximately 77 percent as of September 30, 2019. These comparisons are complicated by the fact that the 20 percent average risk weight reflects capital relief for loan-level credit enhancement and MTMLTV. In particular, some meaningful portion of the gap between the credit risk capital requirements of the banking organizations and the Enterprises under the 2018 proposal is due to the 2018 proposal's use of MTMLTV instead of OLTV, as under the U.S. banking framework, to assign credit risk capital requirements for mortgage exposures. In a different house price environment, perhaps after several years of declining house prices, the mark-to-market framework could have resulted in higher credit risk capital requirements than the Basel and U.S. banking frameworks. Similarly, some of this gap might have been expected to narrow had real property prices moved toward their long-term trend. However, the sizing of the current gap under the 2018 proposal is still an important consideration informing the enhancements to the 2018 proposal. Notably, the 20 percent average risk weight would have been the same as the Basel framework's 20 percent risk weight assigned to exposures to sovereigns and central banks with ratings A+ to A− and claims on banks and corporates with ratings AAA to AA−.[38] The 20 percent average risk weight also would have been the same as the 20 percent risk weight assigned under the U.S. banking framework to Enterprise-guaranteed MBS.

• *Monoline businesses.* As discussed in the 2018 proposal, comparisons to the U.S. banking framework's capital requirements are complicated by the different risk profiles of the Enterprises and large banking organizations.[39] The Enterprises, for example, transfer much of the interest rate and funding risk on their mortgage exposures through their sales of their guaranteed MBS, while large banking organizations generally must fund those loans through customer deposits and other sources. While the interest rate and funding risk profiles are different, that difference should not

[35] *See Fed. Hous. Fin. Agency, Projections of the Enterprises' Financial Performance* at 10 (Oct. 2010), available at *https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2010-10_Projections_508.pdf.*

[36] This average risk weight equals the average post-CRT net credit risk capital requirement, excluding the going-concern buffer, under the 2018 proposal of approximately 164 basis points, divided by a total capital requirement of 800 basis points.

[37] BCBS, *Basel III: Finalising Post-Crisis Reforms,* paragraph 64, at 21 (Dec. 2017), available at *https://www.bis.org/bcbs/publ/d424.pdf.*

[38] *See* BCBS, *The Basel Framework,* paragraphs 20.4 and 20.14 (Dec. 15, 2019), available at *https://www.bis.org/basel_framework/index.htm?export=pdf.*

[39] 83 FR at 33323.

preclude comparisons of the *credit risk* capital requirements of the U.S. banking framework to the *credit risk* capital requirements of the Enterprises. The Basel and U.S. banking frameworks generally do not contemplate an explicit capital requirement for interest rate risk on banking book exposures, leaving interest rate risk capital requirements to bank-specific tailoring through the supervisory process.[40] If anything, the monoline nature of the Enterprises' mortgage-focused businesses actually suggests that the concentration risk of an Enterprise might be greater than that of a diversified banking organization with a similar amount of credit risk. FHFA has not attempted to make a specific adjustment to the risk-based capital requirements to mitigate the Enterprises' concentration risk, but the heightened risk associated with the Enterprises' sector-specific concentration is nonetheless an important consideration in determining the need for the enhancements contemplated by the proposed rule.

More generally, enhancements are necessary to mitigate certain risks and limitations associated with the underlying historical data and models used to calibrate the 2018 proposal's credit risk capital requirements. For example:

• *Limitations of crisis-era data.* Under the 2018 proposal, the credit risk capital requirement for a mortgage exposure was calibrated to be sufficient to absorb the lifetime unexpected losses incurred on loans of that type experiencing a shock to house prices similar to that observed during the 2008 financial crisis. As discussed in Section III.B, the Enterprises' financial crisis-era losses likely were mitigated to at least some extent by the unprecedented support by the federal government of the housing market and the economy, and also by the declining interest rate environment of the period. There is therefore some risk that the 2018 proposal's risk-based capital requirements, notwithstanding the required going-concern buffer, were not calibrated to ensure each Enterprise would be regarded as a viable going concern following an economic downturn that potentially entails more unexpected losses, whether because there is less or no Federal support of the economy, because there is less or no reduction in interest rates, or because of other causes. For example, post-crisis changes in federal, state, and local loss mitigation and other foreclosure requirements might increase the uncertainty as to loss estimations.

• *High-risk loan products.* A disproportionate share of the Enterprises' crisis-era credit losses (approximately $108 billion) arose from certain single-family mortgage exposures that are no longer eligible for acquisition by the Enterprises. The calibration of the 2018 proposal's credit risk capital requirements attributed a significant portion of the Enterprises' crisis-era losses to these product characteristics, including ''Alt-A,'' negative amortization, interest-only, and low or no documentation loans, as well as loans with debt-to-income ratio at origination greater than 50 percent, cash out refinances with total LTV greater than 85 percent, and investor loans with LTV greater than or equal to 90 percent. The statistical methods used to allocate losses between borrower-related risk attributes and product-related risk attributes pose significant model risk. To ensure safety and soundness, the capital requirements should mitigate the risk of potential underestimation of credit losses that would be incurred in an economic downturn with national housing price declines of similar magnitude, even absent those loan types and even assuming a repeat of Federal support of the economy and the declining interest rate environment.[41]

• *Gaps in risk coverage.* There are some material risks to the Enterprises that were not assigned a risk-based capital requirement under either the 2018 proposal and the proposed rule—for example, risks relating to uninsured or underinsured losses from flooding, earthquakes, or other natural disasters or radiological or biological hazards. There also is no risk-based capital requirement for the risks that climate change could pose to property values in some localities.

Related to these capital adequacy concerns, the 2018 proposal's required capital was not tailored to the risk that a default or other financial distress of an Enterprise could have on the liquidity, efficiency, competitiveness, or resiliency of national housing finance markets. As described in Section VII.A.3, the absence of a stability capital buffer poses not only a risk to the national housing finance markets but also a risk to the safety and soundness of the Enterprises by perpetuating their funding advantages and undermining market discipline over their risk taking.

To address these and related concerns, and as described in more detail below, FHFA is proposing, among other changes:

• A prudential floor on the credit risk capital requirement for mortgage exposures to mitigate the model and other risks associated with the methodology for calibrating the credit risk capital requirements.

• A credit risk capital requirement on senior tranches of CRT held by an Enterprise, an adjustment to the CRT capital treatment to reflect that CRT is not equivalent in loss-absorbing capacity to equity financing, and operational criteria for CRT structures that together would mitigate the structuring, recourse, and other risks associated with these securitizations.

• Risk-based capital requirements for a number of exposures not expressly addressed by the 2018 proposal, including credit risk on commitments to acquire mortgage loans, counterparty risk on interest rate and other derivatives, and credit risk on an Enterprise's holdings or guarantees of the other Enterprise's MBS.

• A countercyclical adjustment for single-family credit risk that would result in greater capital retention when housing markets may be vulnerable to correction, while better enabling the Enterprises to play a countercyclical role.

• A stress capital buffer that would, among other things, enhance the resiliency of the Enterprises and ensure that each Enterprise would continue to be regarded as a viable going concern by creditors and other counterparties after a severe economic downturn.

• A stability capital buffer tailored to the risk that the Enterprise's default or other financial distress could have on the liquidity, efficiency, competitiveness, and resiliency of national housing finance markets.

• A revised method for determining operational risk capital requirements, as well as a higher floor.

• A requirement that each Enterprise maintain internal models for determining its own risk-based capital requirements that would prompt each Enterprise to develop its own view of credit and other risks and not rely solely on the risk assessments underlying the standardized risk weights assigned under this regulatory capital framework.

• A 2.5 percent leverage ratio and a 1.5 percent PLBA that would together serve as a credible backstop to the risk-based capital requirements and mitigate the inherent risks and limitations of any

[40] *See* BCBS, *Interest Rate Risk in the Banking Book,* paragraph 1 (April 2016), available at *https://www.bis.org/bcbs/publ/d368.pdf*; (''Interest rate risk in the banking book (IRRBB) is part of the Basel capital framework's Pillar 2 (Supervisory Review Process) and subject to the Committee's guidance set out in the 2004 Principles for the management and supervision of interest rate risk (henceforth, the IRR Principles).'').

[41] Reliance on static look-up grids and multipliers might also introduce additional model risk as borrower behavior, mortgage products, underwriting practices, or the national housing markets continue to evolve.

methodology for calibrating those requirements.

C. Addressing Pro-Cyclicality

Consistent with many of the comments on the 2018 proposal, FHFA has determined that mitigating the pro-cyclicality of the 2018 proposal's risk-based capital requirements would facilitate capital management, enhance the safety and soundness of the Enterprises by preventing risk-based capital requirements from decreasing to unsafe and unsound levels, and help position the Enterprises to fulfill their statutory mission to provide stability and ongoing assistance to the national housing finance markets across the economic cycle. A pro-cyclical framework could have incentivized the Enterprises to expand credit when house prices increased, potentially left the Enterprises without regulatory capital that could be drawn down during a period of financial stress, and perhaps even exacerbated the housing price cycle itself. A pro-cyclical framework also could have led to large swings in required capital, leading to the practical necessity that prudent management would maintain a managerial capital surplus well above the capital requirements.

As described in more detail below, FHFA is proposing several enhancements to address this pro-cyclicality while preserving the mortgage risk-sensitive framework of the 2018 proposal. Among other changes, FHFA is proposing:

- A countercyclical adjustment to adjust each single-family mortgage exposure MTMLTV when national housing prices are 5.0 percent above or below the inflation-adjusted long-term trend.
- A stress capital buffer and a separate leverage buffer that will, in addition to enhancing the resiliency of the Enterprises, dampen pro-cyclicality by encouraging each Enterprise to retain capital during good times while remaining able to provide stability and ongoing assistance to the secondary mortgage market during a period of financial stress by utilizing capital buffers as losses are experienced.
- A prudential floor on the credit risk capital requirement for mortgage exposures that, in addition to mitigating the model and other risks associated with the methodology for calibrating the credit risk capital requirements, would also provide further stability to the risk-based capital requirements through the cycle.
- A requirement that each Enterprise maintain its own view of credit and other risks, including as to the relationship between housing prices and market fundamentals, by maintaining its own internal models for determining risk-based capital.

V. Definitions of Regulatory Capital

A. Statutory Definitions

As discussed in Sections VI.A and VI.B, the proposed rule would require each Enterprise to maintain required amounts of core capital and total capital, as defined in the Safety and Soundness Act.

Core capital means, with respect to an Enterprise, the sum of the following (as determined in accordance with GAAP):

- The par or stated value of outstanding common stock;
- The par or stated value of outstanding perpetual, noncumulative preferred stock;
- Paid-in capital; and
- Retained earnings.

Core capital does not include any amounts that the Enterprise could be required to pay, at the option of investors, to retire capital instruments.

Total capital means, with respect to an Enterprise, the sum of the following:

- The core capital of the Enterprise;
- A general allowance for foreclosure losses, which: (i) Includes an allowance for portfolio mortgage losses, an allowance for non-reimbursable foreclosure costs on government claims, and an allowance for liabilities reflected on the balance sheet for the Enterprise for estimated foreclosure losses on mortgage-backed securities; and (ii) does not include any reserves of the Enterprise made or held against specific assets; and
- Any other amounts from sources of funds available to absorb losses incurred by the Enterprise, that the Director by regulation determines are appropriate to include in determining total capital.

Notably, as discussed in Section IV.B.1, these statutory definitions do not include deductions and other adjustments for capital elements that might tend to have less loss-absorbing capacity during a period of financial stress (*e.g.,* DTAs, ALLL, goodwill, and intangibles). These statutory definitions also do not limit the extent to which preferred shares may satisfy the risk-based capital requirements.

B. Supplemental Definitions

1. Loss-Absorbing Capacity

Following HERA's amendments to the Safety and Soundness Act, FHFA has wide authority to prescribe regulatory capital requirements for the Enterprises. The Safety and Soundness Act generally authorizes FHFA to prescribe by regulation risk-based capital requirements for the Enterprises.[42] The Safety and Soundness Act also authorizes FHFA to prescribe minimum capital levels that are greater than the levels prescribed by statute.[43] The FHFA Director has general regulatory authority over the Enterprises, as well as the authority to issue regulations to carry out the duties of the FHFA Director.[44] The FHFA Director also may establish such other operational and management standards as the FHFA Director determines to be appropriate.[45] As amended by HERA, these and other provisions of the Safety and Soundness Act give the FHFA Director generally broad and flexible authority to tailor regulatory capital requirements for the Enterprises, including to prescribe additional capital requirements that supplement the statutory capital classifications based on total capital and core capital.

FHFA is proposing to supplement the statutory definitions of total capital and core capital requirements with additional regulatory capital definitions based on the Basel framework's definitions of total capital, tier 1 capital, and CET1 capital. These supplemental definitions would include customary deductions and other adjustments for certain DTAs, goodwill, intangibles, and other assets that tend to have less loss-absorbing capacity during a financial stress. As discussed in Section IV.B.1, the supplemental definitions of regulatory capital would fill certain gaps in the statutory definitions of core capital and total capital. For example, neither core capital nor total capital adjust for AOCI, leaving open the possibility that an Enterprise could have positive total capital and core capital but yet be insolvent under GAAP. The supplemental tier 1 and CET1 capital requirements also would ensure that retained earnings and other high-quality capital are the predominant form of regulatory capital.

Because the supplemental definitions of regulatory capital in the proposed rule are adopted from the Basel framework, the supplemental definitions would be familiar to market participants. This familiarity should facilitate comparisons between the regulatory capital requirements of the Enterprises, banking organizations, and other market participants. The use of well-understood definitions of regulatory capital should also facilitate market discipline over the Enterprises' risk-taking by positioning future

[42] 12 U.S.C. 4611.

[43] 12 U.S.C. 4612.

[44] 12 U.S.C. 4511, 4526.

[45] 12 U.S.C. 4513b.

shareholders, creditors, and other counterparties to more readily understand the regulatory capital that is available to absorb losses.

Consistent with the 2018 proposal, neither the statutory definitions nor the supplemental definitions of regulatory capital would include a measure of future guarantee fees or other future revenues. Counting future revenues toward capital requirements could be appropriate under a ''claims-paying capacity'' or similar framework that seeks only to ensure that an Enterprise has the ability to perform its guarantee and other financial obligations over time, perhaps subject to a stay or other pause in the payment of claims and other financial obligations during a resolution proceeding. The proposed rule instead seeks to ensure that each Enterprise is capitalized to remain a viable going concern both during and after a severe economic downturn, as discussed in Section III.B.2. Historical experience has established that credit, market, and operational losses can be incurred quickly during a stress, and it is an Enterprise's capacity to absorb those losses as incurred that defines creditors' and other counterparties' views as to whether the financial institution is a viable going concern. As discussed in Sections III.B.2 and III.B.3, market confidence in the Enterprises waned in mid-2008 when Fannie Mae and Freddie Mac had total capital of, respectively, $55.6 billion and $42.9 billion, notwithstanding their right to future guarantee fees.

FHFA's approach does, however, still give consideration to the loss-absorbing capacity of future guarantee fees or other revenues. As discussed in Section VII.A.1, FHFA has calibrated the stress capital buffer as the amount of regulatory capital sufficient for an Enterprise to withstand a severely adverse stress and still remain above the capital requirements.[46] Under this calibration methodology, the stress capital buffer has been sized based on net capital exhaustion in a severely adverse scenario. The determination of net capital exhaustion takes into account the guarantee fees and other revenues received during that stress.

2. Components of Regulatory Capital

a. CET1 Capital

Consistent with the Basel and U.S. banking frameworks, CET1 capital would be the sum of an Enterprise's outstanding CET1 capital instruments that satisfy the criteria set forth below, related surplus (net of treasury stock), retained earnings, and AOCI, less regulatory adjustments and deductions.

The criteria for CET1 capital instruments are intended to ensure that CET1 capital instruments do not possess features that would cause an Enterprise's condition to further weaken during a period of financial stress. The CET1 capital instruments are any common stock instruments (plus any related surplus) issued by the Enterprise, net of treasury stock, that meet the criteria specified at § 1240.20(b)(1).

b. Additional Tier 1 Capital

Consistent with the Basel and U.S. banking frameworks, additional tier 1 capital would equal the sum of the additional tier 1 capital instruments that satisfy the criteria set forth at § 1240.20(c)(1) and related surplus, less applicable regulatory adjustments and deductions. The criteria are intended to ensure that additional tier 1 capital instruments would be available to absorb losses on a going-concern basis.

An Enterprise would not be permitted to include an instrument in its additional tier 1 capital unless FHFA has determined that the Enterprise has made appropriate provision, including in any resolution plan of the Enterprise, to ensure that the instrument would not pose a material impediment to the ability of an Enterprise to issue common stock instruments following any future appointment of FHFA as conservator or receiver under the Safety and Soundness Act.

c. Tier 2 Capital

Adjusted total capital would be the sum of CET1 capital, additional tier 1 capital, and tier 2 capital. Generally consistent with the Basel and U.S. banking frameworks, tier 2 capital would equal the sum of: Tier 2 capital instruments that satisfy the criteria set forth at § 1240.20(d)(1); related surplus; and limited amounts of excess credit reserves, less any applicable regulatory adjustments and deductions.

As under the U.S. banking framework for advanced approaches banking organizations, an Enterprise may include in tier 2 capital only the excess of its eligible credit reserves over its total expected credit loss, provided the amount does not exceed 0.6 percent of its credit risk-weighted assets. The limited inclusion of ALLL in tier 2 capital is a logical outgrowth of FHFA's calibration methodology for mortgage exposures under which the base risk weights and risk multipliers are intended to require credit risk capital sufficient to absorb the lifetime *unexpected* losses incurred on mortgage exposures experiencing a shock to house prices similar to that observed during the 2008 financial crisis. The same is also true for non-mortgage exposures, where FHFA generally has adopted the credit risk capital requirements of the U.S. banking framework, which also calibrates credit risk capital requirements to absorb unexpected losses.

An alternative approach perhaps could be to include general ALLL in adjusted total capital and then calibrate the credit risk capital requirements based on stress losses (*i.e.,* unexpected and expected losses). The resulting required loss-absorbing capacity for a mortgage exposure would be substantially the same. That approach however would raise safety and soundness risk relating to the loss-absorbing capacity of each Enterprise's ALLL in a period of financial stress, particularly if there is no limit on the share of total capital that may be ALLL. An approach that calibrates credit risk capital requirements based on stress losses also would limit FHFA's ability to rely on the credit risk capital requirements under the U.S. banking framework for non-mortgage exposures, an important consideration to the extent that FHFA does not have the data or models to calibrate its own credit risk capital requirements for non-mortgage exposures.

As with additional tier 1 capital, an Enterprise would not be permitted to include an instrument in its tier 2 capital unless FHFA has determined that the Enterprise has made appropriate provision, including in any resolution plan of the Enterprise, to ensure that the instrument would not pose a material impediment to the ability of an Enterprise to issue common stock instruments following any future appointment of FHFA as conservator or

[46] *See* BCBS, *Calibrating Regulatory Minimum Capital Requirements and Capital Buffers: A Top-down Approach,* paragraph I.A. (Oct. 2010) (''[T]he regulatory minimum requirement is the amount of capital needed for a bank to be regarded as a viable going concern by creditors and counterparties, while a buffer can be seen as an amount sufficient for the bank to withstand a significant downturn period and still remain above minimum regulatory levels.''), available at *https://www.bis.org/publ/bcbs180.pdf;* and Regulatory Capital Rules: Regulatory Capital, Enhanced Supplementary Leverage Ratio Standards for Certain Bank Holding Companies and Their Subsidiary Insured Depository Institutions, 78 FR 51101, 51105 (Aug. 20, 2013) (Joint Agency Proposed Rule) (''In calibrating the revised risk-based capital framework, the BCBS identified those elements of regulatory capital that would be available to absorb unexpected losses on a going-concern basis. The BCBS agreed that an appropriate regulatory minimum level for the risk-based capital requirements should force banking organizations to hold enough loss-absorbing capital to provide market participants a high level of confidence in their viability.'').

receiver under the Safety and Soundness Act.

Question 1. Is each of the definitions of CET1 capital, tier 1 capital, and tier 2 capital appropriately formulated and tailored to the Enterprises?

Question 2. Should FHFA include additional amounts of an Enterprise's ALLL or excess credit reserves in any of the components of regulatory capital?

Question 3. Should any other capital elements qualify as CET1 capital, additional tier 1 capital, or tier 2 capital elements?

3. Regulatory Adjustments and Deductions

a. Deductions From CET1 Capital

Under the U.S. banking framework, goodwill and other intangible assets have long been either fully or partially excluded from regulatory capital because of the high level of uncertainty regarding the ability of a banking organization to realize value from these assets, especially under adverse financial conditions. The regulatory capital treatment of DTAs has posed particular safety and soundness risks for the Enterprises, as discussed in Section IV.B.1. The proposed rule would require an Enterprise to deduct from CET1 capital elements:

- Goodwill;
- Intangible assets other than mortgage-servicing assets (MSA) net of associated deferred tax liabilities (DTLs);
- DTAs that arise from net operating loss and tax credit carryforwards net of any related valuation allowances and net of DTLs in accordance with certain restrictions discussed under Section V.B.3.d; and
- Any defined benefit pension fund net asset, net of DTLs in accordance with certain DTL-related restrictions, and subject to certain exceptions with FHFA's approval.

An Enterprise also would deduct from CET1 capital any after-tax gain-on-sale associated with a securitization exposure. Gain-on-sale would be defined as an increase in the equity capital of an Enterprise resulting from a traditional securitization other than an increase in equity capital resulting from (i) the Enterprise's receipt of cash in connection with the securitization or (ii) reporting of a mortgage servicing asset.

Finally, an Enterprise also would deduct from CET1 capital the amount of expected credit loss that exceeds the Enterprise's eligible credit reserves. Eligible credit reserves would be defined as all general allowances that have been established through a charge against earnings to cover estimated credit losses associated with on- or off-balance sheet wholesale and retail exposures, including the ALLL associated with such exposures, but excluding other specific reserves created against recognized losses.

b. Adjustments to CET1 Capital

An Enterprise would subtract from CET1 capital any accumulated net gains and add any accumulated net losses on cash-flow hedges included in AOCI that relate to the hedging of items that are not recognized at fair value on the balance sheet. This adjustment would remove an element that gives rise to artificial volatility in CET1 capital as it would avoid a situation in which the changes in the fair value of the cash-flow hedge are reflected in regulatory capital but the changes in the fair value of the hedged item is not.

An Enterprise also would be required to deduct any net gain and add any net loss related to changes in the fair value of liabilities that are due to changes in the Enterprise's own credit risk. An Enterprise must deduct the difference between its credit spread premium and the risk-free rate for derivatives that are liabilities as part of this adjustment.

To avoid the double-counting of regulatory capital, an Enterprise would deduct the amount of its investments in its own capital instruments, including direct and indirect exposures, to the extent such instruments are not already excluded from regulatory capital. Specifically, an Enterprise would deduct its investment in its own CET1, additional tier 1, and tier 2 capital instruments from the sum of its CET1, additional tier 1, and tier 2 capital, respectively. In addition, any CET1, additional tier 1, or tier 2 capital instrument issued by an Enterprise that the Enterprise could be contractually obligated to purchase also would be deducted from CET1, additional tier 1, or tier 2 capital elements, respectively.

c. Items Subject to the 10 and 15 Percent CET1 Capital Threshold Deductions

An Enterprise would deduct from its CET1 capital the amount of each of the following items that individually exceeds the 10 percent CET1 capital deduction threshold described below:

- DTAs arising from temporary differences that could not be realized through net operating loss carrybacks (net of any related valuation allowances and net of DTLs in accordance with certain restrictions discussed under Section V.B.3.d); and
- MSAs, net of associated DTLs in accordance with certain restrictions discussed under Section V.B.3.d.

An Enterprise would calculate the 10 percent CET1 capital deduction threshold by taking 10 percent of the sum of an Enterprise's CET1 elements, less the adjustments to, and deductions from, CET1 capital discussed above.

The aggregate amount of the items subject to the threshold deductions that are not deducted as a result of the 10 percent CET1 capital deduction threshold must not exceed 15 percent of an Enterprise's CET1 capital, as calculated after applying all regulatory adjustments and deductions required under the proposed rule (the 15 percent CET1 capital deduction threshold). That is, an Enterprise would deduct in full the amounts of the items subject to the threshold deductions on a combined basis that exceed 17.65 percent (the proportion of 15 percent to 85 percent) of CET1 capital, less all regulatory adjustments and deductions required for the calculation of the 10 percent CET1 capital deduction threshold mentioned above, and less the items subject to the 10 and 15 percent deduction thresholds.

d. Netting of Deferred Tax Liabilities Against Deferred Tax Assets and Other Deductible Assets

An Enterprise would be permitted to net DTLs against assets (other than DTAs) subject to deduction under the proposed rule, provided the DTL is associated with the asset and the DTL would be extinguished if the associated asset becomes impaired or is derecognized under GAAP. An Enterprise would be prohibited from using the same DTL more than once for netting purposes.

With respect to the netting of DTLs against DTAs, the amount of DTAs that arise from net operating loss and tax credit carryforwards, net of any related valuation allowances, and the amount of DTAs arising from temporary differences that the Enterprise could not realize through net operating loss carrybacks, net of any related valuation allowances, could be netted against DTLs if certain conditions are met.

VI. Capital Requirements

A. Risk-Based Capital Requirements

1. Supplemental Requirements

FHFA is proposing to require the Enterprises to maintain the following risk-based capital:

- Total capital not less than 8.0 percent of risk-weighted assets;
- Adjusted total capital not less than 8.0 percent of risk-weighted assets;
- Tier 1 capital not less than 6.0 percent of risk-weighted assets; and
- CET1 capital not less than 4.5 percent of risk-weighted assets.

As discussed in Section III.B.3, a lesson of the 2008 financial crisis is that the Enterprises' safety and soundness depends not only on the quantity but also on the quality of their capital. To that end, FHFA is proposing to supplement the risk-based capital requirement based on statutorily defined total capital with additional risk-based capital requirements based on the Basel framework's definitions of total capital, tier 1 capital, and CET1 capital.

As discussed in Section IV.B.1, FHFA noted in the 2018 proposal that the Enterprises' DTAs, which are included in total capital and core capital by statute, ''may provide minimal to no loss-absorbing capability during a period of [financial] stress as recoverability (via taxable income) may become uncertain.'' [47] The 2018 proposal addressed this issue by establishing a risk-based capital requirement for DTAs. However, the 2018 proposal did not include adjustments for other capital elements that tend to have less loss-absorbing capacity during a financial stress (*e.g.,* ALLL, goodwill, and intangibles), although FHFA did request comment on how best to compensate for the loss-absorbing deficiencies of ALLL and preferred stock within the framework of the 2018 proposal. The 2018 proposal also requested comment on, but did not adjust for, AOCI, leaving open the possibility that an Enterprise could have positive total capital and core capital despite being insolvent under GAAP. The supplemental risk-based capital requirements for adjusted total capital, tier 1 capital, and CET1 capital would address these safety and soundness issues to the extent, as discussed in Section V.B, the underlying regulatory capital definitions incorporate deductions and other adjustments for those capital elements that tend to have less loss-absorbing capacity.

Related to this, one of the lessons of the 2008 financial crisis is that retained earnings and other high-quality capital should be the predominant form of regulatory capital. In addition to not limiting the extent to which general ALLL counted toward regulatory capital, the 2018 proposal did not limit the extent to which preferred shares could satisfy the risk-based capital requirements, although FHFA did solicit comment on these issues. Specifically, there was neither a risk-based capital requirement for core capital nor a requirement that retained earnings and other common equity be the predominant form of capital. The risk-based capital requirements for tier 1 capital and CET1 capital would address this safety and soundness issue in a way that should be familiar to market participants.

2. Risk-Weighted Assets

An Enterprise would determine its risk-weighted assets under two approaches—a standardized approach and an advanced approach—with the greater of the two used to determine its risk-based capital requirements. Under both approaches, an Enterprise's risk-weighted assets would equal the sum of its credit risk-weighted assets, market risk-weighted assets, and operational risk-weighted assets.

Specifying each of the aggregate risk-based capital requirements as a percent of risk-weighted assets is a change from the 2018 proposal, but the change itself would not impact the quantity of required total capital. Both under the 2018 proposal and the proposed rule, and consistent with the Basel and U.S. banking frameworks,[48] the risk-based capital requirements should be calibrated to require each Enterprise to hold enough loss-absorbing capital to maintain the confidence of creditors and other counterparties in its viability as a going concern. More specifically, FHFA calibrated the credit risk capital requirements for mortgage exposures to require capital sufficient to absorb the lifetime unexpected losses incurred on exposures experiencing a shock to house prices similar to that observed during the 2008 financial crisis, as discussed in Sections VIII.A.2 and VIII.B.2. The base risk weight for a mortgage exposure is equal to the adjusted total capital requirement for the exposure expressed in basis points and divided by 800, which is the 8.0 percent adjusted total capital requirement also expressed in basis points. Expressing the risk-based capital requirement for an exposure as a risk weight, or the aggregate risk-based capital requirement as a percent of risk-weighted assets, is simply a matter of terminology.

Although the shift to a terminology of risk-weighted assets is more form than substance, FHFA has made this change for at least two reasons. First, the addition of three new risk-based capital requirements raises the need for a straightforward mechanism to specify the aggregate regulatory capital required for each. Risk-weighted assets accomplishes this by offering a common denominator across the 2018 proposal's risk-based total capital requirement and the supplemental risked-based capital requirements contemplated by the proposed rule. Second, this approach and its associated terminology are well-understood by those familiar with the U.S. banking framework. Expressing the risk-based capital requirement for an exposure as a risk-weight will facilitate transparency and comparability with the U.S. banking framework and other regulatory capital frameworks. Because these concepts are well-understood, this approach also should facilitate market discipline over each Enterprise's risk-taking by its creditors and other counterparties.

B. Leverage Ratio Requirements

1. Adjusted Total Assets

Each Enterprise would be required to maintain capital sufficient to satisfy the following leverage ratio requirements:

- Core capital not less than 2.5 percent of adjusted total assets; and
- Tier 1 capital not less than 2.5 percent of adjusted total assets.

Adjusted total assets would be defined as total assets under GAAP, with adjustments to include many of the off-balance sheet and other exposures that are included in the supplemental leverage ratio requirements of the U.S. banking framework.

2. Tier 1 Leverage Ratio Requirement

As with the risk-based capital requirements, and as discussed in Section IV.B.1, the proposed rule would supplement the core capital leverage ratio requirement with a leverage ratio requirement based on a definition of regulatory capital, here tier 1 capital, that has deductions and other adjustments for capital elements that tend to have less loss-absorbing capacity during a period of financial stress. Tier 1 capital is also a well-understood concept for market participants familiar with the U.S. banking framework. That in turn would facilitate transparency and comparability with the leverage ratio requirements for U.S. banking organizations, as well as market discipline by the Enterprises' creditors and other counterparties.

3. Sizing of the Requirements

The primary purpose of the leverage ratio requirements is to provide a credible, non-risk-based backstop to the risk-based capital requirements to safeguard against model risk and

[47] 83 FR at 33388.

[48] 78 FR at 51105 (''In calibrating the revised risk-based capital framework, the BCBS identified those elements of regulatory capital that would be available to absorb unexpected losses on a going-concern basis. The BCBS agreed that an appropriate regulatory minimum level for the risk-based capital requirements should force banking organizations to hold enough loss-absorbing capital to provide market participants a high level of confidence in their viability.'').

measurement error with a simple, transparent, independent measure of risk. From a safety-and-soundness perspective, each type of requirement offsets potential weaknesses of the other, and well-calibrated risk-based capital requirements working with a credible leverage ratio requirement are more effective than either type would be in isolation. The leverage ratio requirements would have the added benefit of dampening some of the pro-cyclicality inherent in the aggregate risk-based capital requirements. The core capital leverage ratio requirement also would replace the current statutory leverage ratio requirement for purposes of the corrective action provisions of the Safety and Soundness Act.

FHFA has sized the leverage ratio requirements to be a credible backstop to the risk-based capital requirements, taking into account the analogous leverage ratio requirements of U.S. banking organizations and the Federal Home Loan Banks, considerations relating to the Enterprises' historical loss experiences, and the model and related risks posed by the calibration of the risk-based capital requirements.

First, the proposed leverage ratio requirements are generally aligned with the analogous leverage ratio requirements of U.S. banking organizations and the Federal Home Loan Banks. The U.S. banking framework's leverage ratio requirement requires banking organizations maintain tier 1 capital no less than 4.0 percent of total assets. Insured depository institutions subsidiaries of certain large U.S. bank holding companies also must maintain tier 1 capital no less than 6.0 percent of total assets to be ''well capitalized.'' [49] Using data for the 18 bank holding companies subject to the Federal Reserve Board's supervisory stress testing program in 2018, FHFA determined that the average risk weight on the assets of these banks was 61 percent in the fourth quarter of 2018. Under the U.S. banking framework, the Enterprises' mortgage assets generally would be assigned a 50 percent risk weight under the standardized approach. This suggests that the average risk weight on the assets of the Enterprises would have been approximately 81 percent (50 percent divided by 61 percent) of that of these large bank holding companies. That in turn implies a risk-adjusted analogous leverage ratio requirement for the Enterprises of 3.3 percent (81 percent of the 4.0 percent leverage ratio requirement for U.S. banking organizations).[50]

While the interest rate and funding risks of the Enterprises and U.S. banking organizations are different, the Basel and U.S. banking frameworks generally do not contemplate an explicit capital requirement for interest rate risk on banking book exposures given the absence of a consensus as to how to quantify that capital requirement, instead leaving interest rate risk capital requirements to bank-specific tailoring through the supervisory process.[51] The differences in the interest rate and funding risk profiles therefore should not preclude comparisons to the U.S. banking framework's leverage ratio requirements, subject to adjustments for the different credit risk profiles of the Enterprises and U.S. banking organizations (as described above). Further, the monoline nature of the Enterprises' mortgage-focused businesses suggests that the concentration risk of an Enterprise is greater than that of a diversified banking organization with a similar amount of mortgage credit risk, perhaps meriting a higher leverage ratio requirement, all else equal.

The Federal Home Loan Banks also must maintain total capital no less than 4.0 percent of total assets. That 4.0 percent leverage ratio requirement should be considered in the context of the safety and soundness benefits of the statutory requirement that each Federal Home Loan Bank advance be fully secured. Related to that, the safety and soundness benefits of that collateral might be furthered by law, as any security interest granted to a Federal Home Loan Bank by a member (or affiliate of a member) is, with some exceptions, entitled by statute to priority over the claims and rights of any other party, including any receiver, conservator, trustee, or similar party having rights of a lien creditor.

Second, the proposed leverage ratio requirements are broadly consistent with the Enterprises' historical loss experiences. As discussed in Sections II.D.3 and III.B.1, the Enterprises' crisis-era cumulative capital losses peaked at the end of 2011 at $265 billion, approximately 4.8 percent of their adjusted total assets as of December 31, 2007. Setting aside the valuation allowances on their DTAs, which are subject to deductions and other adjustments to CET1 capital (and therefore tier 1 and adjusted total capital) under the proposed rule, the Enterprises' crisis-era peak cumulative capital losses were $167 billion, approximately 3.0 percent of their total assets as of December 31, 2007. Notably even these DTA-adjusted capital losses exceeded by $36 billion the tier 1 capital that would have been required under the 2.5 percent leverage ratio requirement as of December 31, 2007.

FHFA recognizes that a portion of the crisis-era losses arose from single-family loans that are no longer eligible for acquisition by the Enterprises. However, the sizing of regulatory capital requirements must take into account the modeling risk posed by the attribution of such losses to specific product characteristics, as discussed in Section IV.B.2. The sizing of the regulatory capital requirements also must guard against potential future relaxation of underwriting standards and regulatory oversight over those underwriting standards.

The Enterprises' historical loss experiences actually might tend to understate the regulatory capital that would be necessary to remain a viable going concern to creditors and other counterparties. As discussed in Section III.B.1, the Enterprises' crisis-era losses likely were mitigated to at least some extent by the unprecedented support by the federal government of the housing market and the economy and also by the declining interest rate environment of the period. The calibration of the leverage ratio requirement and other required capital requirements cannot assume a repeat of those loss mitigants. Also, as discussed in Section IV.B.2, there are some material risks to the Enterprises that are not assigned a risk-based capital requirement—for example, risks relating to uninsured or underinsured losses from flooding, earthquakes, or other natural disasters or radiological or biological hazards. There also is no risk-based capital requirement for the risks that climate change could pose to property values in some localities.

Third, certain risks and limitations associated with the underlying

[49] *See, e.g.,* 12 CFR 6.4(b)(1)(i)(D).

[50] That U.S. banking framework's 3 percent supplemental leverage ratio requirement is an inappropriate comparable for sizing the Enterprises' leverage ratio requirements. Approximately 95 percent of the Enterprises' adjusted total assets are GAAP total assets that are subject to the U.S. banking framework's 4 percent leverage ratio requirement. The primary exception is off-balance sheet guarantees on loans and securities, principally Freddie Mac's K-deals, but these amounts are small relative to the Enterprises' total assets under GAAP.

[51] *See* BCBS, *Interest Rate Risk in the Banking Book,* paragraph 1, (April 2016), available at *https://www.bis.org/bcbs/publ/d368.pdf;* (''Interest rate risk in the banking book (IRRBB) is part of the Basel capital framework's Pillar 2 (Supervisory Review Process) and subject to the Committee's guidance set out in the 2004 Principles for the management and supervision of interest rate risk (henceforth, the IRR Principles).'').

historical data and models used to calibrate the credit risk capital requirements reinforce the importance of leverage ratio requirements that safeguard against model risk and measurement error. There is inevitably a trade-off between, on the one hand, preserving the mortgage risk-sensitive framework of the 2018 proposal and, on the other hand, managing the model and related risks associated with any methodology for developing a granular assessment of credit risk specific to different mortgage loan categories. As discussed in Section IV.B.2, a disproportionate share of the Enterprises' crisis-era losses arose from certain single-family mortgage exposures that are no longer eligible for acquisition by the Enterprises. The calibration of the credit risk capital requirements attributed a significant portion of the Enterprises' crisis-era losses (approximately $108 billion) to these products. The statistical methods used to allocate losses between borrower-related risk attributes and product-related risk attributes pose significant model risk. It is possible that the calibration understates the credit losses that would be incurred in an economic downturn with national housing price declines of similar magnitude, even assuming a repeat of crisis-era Federal support of the economy and the declining interest rate environment. To this point, as discussed in Section VIII.A.7, had the proposed rule been in effect on December 31, 2007, the credit risk capital requirements still would not have been sufficient to absorb the projected lifetime credit losses on Freddie Mac's single-family book. Under a dynamic framework, the aggregate credit risk capital requirements would have increased in subsequent years as losses were incurred, while there also would have been material uncertainty as to an Enterprise's ability to raise sufficient quantities of new capital during a period of financial stress and significant losses.

The risk-based capital requirements should, as a general rule, exceed the regulatory capital required under the leverage ratio requirements. At the same time, if the tier 1 leverage ratio requirement is to be an independently meaningful and credible backstop, there will inevitably be some exceptions in which the tier 1 leverage ratio requirement requires more regulatory capital than the risk-based capital requirements. In FHFA's view, the measurement period of September 30, 2019 is, in fact, consistent with the circumstances under which a credible leverage ratio would be binding, given the exceptional single-family house price appreciation since 2012, the strong credit performance of both single-family and multifamily mortgage exposures, the significant progress by the Enterprises to materially reduce legacy exposure to NPLs and re-performing loans, robust CRT market access enabling substantial risk transfer, and the generally strong condition of key counterparties, such as mortgage insurers.

Question 4. Is the tier 1 leverage ratio requirement appropriately sized to serve as a credible backstop to the risk-based capital requirements?

Question 5. Should the Enterprise's leverage ratio requirements be based on total assets, as defined by GAAP, the Enterprise's adjusted total assets, or some other basis?

C. Enforcement

FHFA may draw upon several authorities to address potential Enterprise failures to meet the proposed rule's capital requirements set forth in VI.A and VI.B. A failure to maintain regulatory capital in excess of each of these capital requirements may result in one or more enforcement consequences. In all cases, the FHFA Director retains the authority to determine the appropriate enforcement consequence.

The Safety and Soundness Act authorizes FHFA to establish capital levels for an Enterprise by regulation.[52] An Enterprise failure to meet a capital threshold that is required by regulation may be addressed through enforcement mechanisms for regulatory violations including procedures for cease and desist and consent orders.[53] Through a cease and desist or consent order, FHFA could require an Enterprise to develop and implement a capital restoration plan, restrict asset growth or activities, and take other appropriate action to remediate the violation of law.

FHFA may also use the enforcement tools available under its authority to prescribe and enforce prudential management and operations standards (PMOS).[54] The proposed rule, other than the PCCBA, the PLBA, and the associated payout restrictions, would be prescribed as a PMOS guideline that may be enforced under these PMOS authorities. The PMOS statute and rule include enforcement remedies similar, although not identical, to those under the Prompt Corrective Action (PCA) framework discussed below, focusing on a remediation plan and such other measures as the Director deems appropriate, but not conservatorship or receivership. The FHFA Director may require as part of a remediation plan (which is to be developed within a timeline in the PMOS regulation) restrictions on capital distributions, restrictions on asset growth, activities, and acquisitions, a requirement for new capital-raising, and other restrictions as appropriate.

The PCA framework set out in the Safety and Soundness Act[55] also provides for enforcement tools when a shortfall occurs in capital requirements that are set forth in the statute, using the statute's prescribed capital concepts. The PCA establishes four capital categories with associated increasingly severe enforcement tools: ''adequately capitalized,'' ''undercapitalized,'' ''significantly undercapitalized,'' and ''critically undercapitalized.'' Under the PCA framework, the principal remedial tool is a recapitalization plan, and other tools include restrictions on capital distributions and asset growth, prior approval of acquisitions and new activities, improvement of management, and restriction on compensation. In serious enough conditions, such as critical undercapitalization, the PCA provides that an Enterprise can be placed in conservatorship or receivership. In addition, the PCA provisions provide for an Enterprise to be downgraded if alternative specified conditions are met. One of those conditions is that an Enterprise is in ''an unsafe or unsound condition,'' as determined by FHFA after notice and opportunity for a hearing.

The proposed rule would include a leverage requirement and a risk-based capital requirement using the concepts of total capital and core capital as defined in the Safety and Soundness Act. The PCA enforcement framework applies to an Enterprise's failure to meet either of these statutorily based capital requirements. In addition, FHFA could enforce the core capital and total capital requirements under its authority to issue an order to cease and desist from a violation of law or under its PMOS authority.

FHFA recognizes that there may be very particular economic circumstances during which an Enterprise may meet its risk-based capital requirement to maintain total capital in excess of 8.0 percent of risk-weighted assets, but fails to meet the leverage ratio requirement of core capital in excess of 2.5 percent of adjusted total assets. This situation falls outside of the PCA capital classifications and enforcement

[52] 12 U.S.C. 4526, 4611, 4612(c).

[53] 12 U.S.C. 4581, 12 CFR part 1209.

[54] 12 U.S.C. 4513b; 12 CFR part 1236.

[55] 12 U.S.C. 4614 *et seq.*

framework, but FHFA could address a shortfall through its PMOS or other regulatory enforcement authorities. If appropriate to provide greater clarity to the Enterprises and other market participants, FHFA may issue supervisory guidance regarding progressive application of its enforcement authorities as the capital position of an Enterprise declines.

Question 6. Should FHFA consider any changes to its contemplated enforcement framework? What supervisory guidance would be helpful to promote market understanding of how FHFA expects to apply its enforcement authorities?

Question 7. Should any of the risk-based capital requirements or leverage ratio requirements be phased-in over a transition period?

Question 8. Alternatively, should the enforcement of the risk-based capital requirements during the implementation of a capital restoration plan be tailored through a consent order or other similar regulatory arrangement, and if so how?

VII. Capital Buffers

A. Prescribed Capital Conservation Buffer Amount (PCCBA)

FHFA is proposing to supplement certain of the risk-based capital requirements with a PCCBA. To avoid limits on capital distributions and discretionary bonus payments, an Enterprise would have to maintain regulatory capital that exceeds each of its adjusted total capital, tier 1 capital, and CET1 capital requirements by at least the amount of its PCCBA. That PCCBA would consist of three separate component buffers—a stress capital buffer, a countercyclical capital buffer, and a stability capital buffer.

The PCCBA would be determined as a percent of an Enterprise's adjusted total assets.[56] Fixing the PCCBA at a specified percent of an Enterprise's adjusted total assets, instead of risk-weighted assets, is a notable departure from the Basel framework. FHFA intends a fixed-percent PCCBA, among other things, to reduce the impact that the PCCBA potentially could have on higher risk exposures, avoid amplifying the secondary effects of any model or similar risks inherent to the calibration of granular risk weights for single-family and multifamily mortgage exposures, and further mitigate the pro-cyclicality of the aggregate risk-based capital requirements.

1. Stress Capital Buffer

An Enterprise's stress capital buffer would equal 0.75 percent of the Enterprise's adjusted total assets. The proposed stress capital buffer is similar in amount and rationale to the 0.75 percent going-concern buffer contemplated by the 2018 proposal. The 2018 proposal acknowledged that each Enterprise is required by charter to provide stability and ongoing assistance to the secondary mortgage market during and after a period of severe financial stress. The 2018 proposal also observed that ''[r]aising new capital during a period of severe housing market stress . . . would be very expensive, if not impossible; therefore, the [2018 proposal] would require the Enterprises to hold additional capital on an on-going basis ('going-concern buffer') in order to continue purchasing exposures and to maintain market confidence during a period of severe distress.''

An important difference is that the 2018 proposal's going-concern buffer would have been a component of the risk-based capital requirement, such that failure to maintain the regulatory capital required by the going-concern buffer could have triggered significant regulatory sanctions. In contrast, the proposed rule converts the 2018 proposal's going-concern buffer into a component of the capital conservation buffer that FHFA intends to be available for an Enterprise to draw down during a period of financial stress. As discussed in Section II.D, the potential for less punitive sanctions for drawing down the capital conservation buffer should position each Enterprise to play a countercyclical role in the market, and would have the further benefit of reducing the managerial capital cushion that an Enterprise might be expected to maintain above the regulatory capital requirements.

For the reasons given in Section III.B.2, and as contemplated for banking organizations by the Basel and U.S. banking frameworks,[57] each Enterprise should be capitalized to remain a viable going concern both during and after a severe economic downturn. While the proposed regulatory capital requirements are sized to ensure an Enterprise would be regarded as a viable going concern by creditors and other counterparties, the stress capital buffer is sized to ensure that the Enterprise would, in ordinary times, maintain regulatory capital that could be drawn down during a financial stress and still be regarded as a viable going concern after that stress.

To a similar end, FHFA sized the 2018 proposal's going-concern buffer based on the Enterprises' Dodd Frank Act Stress Test (DFAST) results for the severely adverse scenario. Specifically, ''FHFA calculated the amount of capital necessary for the Enterprises to meet a 2.5 percent leverage requirement at the end of each quarter of the simulation of the severely adverse DFAST scenario (without DTA valuation allowance) and compared that amount to the aggregate risk-based capital requirement. The difference between these two measures provided an indicator for the size of the going-concern buffer.''

As further validation of the sizing of the stress capital buffer, FHFA's 2018 proposal compared the regulatory capital obtained by applying the going-concern buffer to the 2017 single-family book of business with the regulatory capital required to fund each Enterprise's 2017 new acquisitions. FHFA found the proposed going-concern buffer would provide sufficient capital for each Enterprise to fund an additional one to two years of new acquisitions comparable to their 2017 new acquisitions. FHFA continues to believe that 2018 proposal's approach provides a strong indicator for the appropriate size of the stress capital buffer that replaces the going-concern buffer.

FHFA has also looked to the sizing of analogous buffers under the Basel and U.S. banking frameworks. As recently amended by the Federal Reserve Board, the U.S. banking framework requires each U.S. banking organization to maintain a stress capital buffer that exceeds its regulatory capital requirements by at least 2.5 percent of its risk-weighted assets, potentially more depending on its peak cumulative capital exhaustion under its supervisory stress test. Under the current average risk weight for the Enterprises' exposures of 28 percent, the proposed stress capital buffer is equivalent to 2.68

[56] The stress capital buffer and the countercyclical capital buffer amount could vary, which would then result in a change in the Enterprise's PCCBA when expressed as a percent of the Enterprise's adjusted total assets.

[57] 78 FR at 51105 (''In calibrating the revised risk-based capital framework, the BCBS identified those elements of regulatory capital that would be available to absorb unexpected losses on a going-concern basis. The BCBS agreed that an appropriate regulatory minimum level for the risk-based capital requirements should force banking organizations to hold enough loss-absorbing capital to provide market participants a high level of confidence in their viability. The BCBS also determined that a buffer above the minimum risk-based capital requirements would enhance stability, and that such a buffer should be calibrated to allow banking organizations to absorb a severe level of loss, while still remaining above the regulatory minimum requirements.'').

percent of the Enterprises' risk-weighted assets.

While the proposed rule contemplates a stress capital buffer sized as a fixed-percent of an Enterprise's adjusted total assets, FHFA is also seeking comment on an alternative under which FHFA would implement an approach similar to that of the Federal Reserve Board and periodically re-size the stress capital buffer to the extent that FHFA's eventual program for supervisory stress tests determines that an Enterprise's peak capital exhaustion under a severely adverse stress would exceed 0.75 percent of adjusted total assets. Under this approach, the stress capital buffer would still be determined as a percent of adjusted total assets, not risk-weighted assets. A dynamically re-sized stress capital buffer would be more risk-sensitive than a fixed-percent stress capital buffer, varying in amount across the economic cycle and also varying with the riskiness of the Enterprise's mortgage exposures. An approach that leverages a supervisory stress test could also incorporate assumptions as to the continued availability of CRT during a period of financial stress.

Related to this, FHFA's proposal to incorporate into each Enterprise's PCCBA a stress capital buffer should not be construed to imply or otherwise suggest that a similar buffer would necessarily be appropriate for other market participants in the housing finance system. Some of the Enterprises' counterparties, and some other market participants in the housing finance system, need not necessarily be capitalized to remain a viable going concern both during and after a severe economic downturn. For these market participants, calibrating capital adequacy based on ''claims paying capacity'' or an insurance-like or similar standard might be appropriate in light of their size and role in the housing finance system.

Question 9. Is the stress capital buffer appropriately formulated and calibrated?

Question 10. Should an Enterprise's stress capital buffer be periodically re-sized to the extent that FHFA's eventual program for supervisory stress tests determines that an Enterprise's peak capital exhaustion under a severely adverse stress would exceed 0.75 percent of adjusted total assets?

Question 11. Should an Enterprise's stress capital buffer be adjusted as the average risk weight of its mortgage exposures and other exposures changes?

Question 12. Should an Enterprise's stress capital buffer be based on the Enterprise's adjusted total assets or risk-weighted assets?

2. Countercyclical Capital Buffer

The U.S. banking regulators adopted a countercyclical capital buffer for certain large U.S. banking organizations in June 2013, which has been and remains set at 0 percent of risk-weighted assets. The countercyclical capital buffer aims to ensure that banking sector capital requirements take into account the macro-financial environment in which banks operate.[58] The buffer is to be deployed when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk to ensure the banking system has a buffer of capital to protect it against future potential losses. This focus on excess aggregate credit growth means that the buffer is likely to be deployed on an infrequent basis.

As is currently the case under the U.S. banking framework, the countercyclical capital buffer for the Enterprises would initially be set at 0 percent of adjusted total assets. FHFA does not expect to adjust this buffer in the place of, or to supplement, the countercyclical adjustment to the risk-based capital requirements for single-family mortgage exposures discussed in Section VIII.A.4. Instead, as under the Basel and U.S. banking frameworks, FHFA would adjust the countercyclical capital buffer taking into account the macro-financial environment in which the Enterprises operate, such that it would be deployed only when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk. This focus on excess aggregate credit growth means the countercyclical buffer likely would be deployed on an infrequent basis, and generally only when similar buffers are deployed by the U.S. banking regulators. Any adjustment to the countercyclical capital buffer would be made in accordance with applicable law and after appropriate notice to the Enterprises.

Question 13. Is the countercyclical capital buffer appropriately formulated?

Question 14. What administrative or other process should govern FHFA's adjustments to the countercyclical capital buffer?

Question 15. Should FHFA more explicitly base its determination to adjust the countercyclical capital buffer to the determination of the U.S. banking regulators to adjust their similar buffer?

[58] BCBS, *Basel: A Global Regulatory Framework for More Resilient Banks and Banking Systems,* paragraph 137 (Dec. 2010; revised June 2011), available at *http://www.bis.org/publ/bcbs189.htm.*

3. Stability Capital Buffer

a. Comments on the 2018 Proposal

FHFA received several comment letters on the 2018 proposal that argued that FHFA did not adequately address the risk posed by the size and importance of the Enterprises, particularly in light of the fact that during the 2008 financial crisis, the Enterprises proved to be ''too-big-to-fail.'' Multiple commenters recommended FHFA consider adding a capital buffer due to the size of the Enterprises' footprints. Other commenters suggested FHFA address the Enterprises' size and importance in different ways, such as through the leverage ratio, through the credit risk capital grids, or with an asset-level surcharge that differed by the riskiness of the activity.

b. U.S. Banking Framework

The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) mandates that the Federal Reserve Board adopt, among other prudential measures, enhanced capital standards to mitigate the risk posed to financial stability by systemically important financial institutions. The Federal Reserve Board has implemented a number of measures designed to strengthen firms' capital positions in a manner consistent with the Dodd-Frank Act's requirement that such measures increase in stringency based on the systemic importance of the firm.

The Federal Reserve Board has also finalized capital surcharges for the U.S. banking organizations of the greatest systemic importance that have been deemed global systemically important bank holding companies (GSIBs). These GSIB capital surcharges are calibrated based on the Federal Reserve Board's measures of each GSIB's systemic footprint under an ''expected impact'' framework that considers the harm that the GSIB's failure would cause to the financial system as adjusted by the likelihood that the GSIB will fail. Because the failure of a GSIB might undermine financial stability and thus cause greater negative externalities than might the failure of a firm that is not a GSIB, a probability of default that would be acceptable for a non-GSIB might be unacceptably high for a GSIB. Lowering the probability of a GSIB's default reduces the risk to financial stability. The most straightforward means of lowering the probability of a GSIB's default is to require it to hold more regulatory capital relative to its risk-weighted assets than non-GSIBs are required to hold.

c. Rationale and Sizing

As discussed in Section III.B.4, the lessons of the 2008 financial crisis have established that the failure of an Enterprise could do significant harm to the national housing finance markets, as well as the U.S. economy more generally. The Enterprises remain the dominant participants in the housing finance system, owning or guaranteeing 44 percent of residential mortgage debt outstanding as of September 30, 2019. The Enterprises also continue to control critical infrastructure for securitizing and administering $5.5 trillion of single-family and multifamily MBS. The Enterprises' imprudent risk-taking and inadequate capitalization led to their near collapse and were among the proximate causes of the 2008 financial crisis. The precipitous financial decline of the Enterprises was also among the most destabilizing events of the 2008 financial crisis, leading to their taxpayer-backed rescue in September 2008. Even today, a perception continues to persist that the Enterprises are ''too big to fail.'' This perception reduces the incentives of creditors and other counterparties to discipline risk-taking by the Enterprises. This perception also produces competitive distortions to the extent that the Enterprises can fund themselves at a lower cost than other market participants.

Pursuant to the Safety and Soundness Act, as amended by HERA, the FHFA Director's principal duties are, among other duties, to ensure that each Enterprise operates in a safe and sound manner and that the operations and activities of each Enterprise foster liquid, efficient, competitive, and resilient national housing finance markets.[59] For the reasons below, FHFA is proposing to incorporate into each Enterprise's PCCBA an Enterprise-specific stability capital buffer that is tailored to the risk that the Enterprise's default or other financial distress could have on the liquidity, efficiency, competitiveness, or resiliency of the national housing finance markets (housing finance market stability risk).[60]

First, an Enterprise-specific stability capital buffer would foster liquid, efficient, competitive, and resilient national housing finance markets by reducing the expected impact of the Enterprise's failure on the national housing finance markets. Under a regulatory capital framework in which each Enterprise is subject to the same capital requirements and has the same probability of default, a larger Enterprise's default would nonetheless still pose a greater expected impact due to the greater magnitude of the effects of its default on the national housing finance markets. As a result, a probability of default that might be acceptable for a smaller Enterprise might be unacceptably high for a larger Enterprise. By subjecting a larger Enterprise to a larger capital surcharge, an Enterprise-specific stability capital buffer would reduce the probability of a larger Enterprise's default, aligning the expected impact of its default with that of a smaller Enterprise.

Second, an Enterprise-specific stability capital buffer also would foster liquid, efficient, competitive, and resilient national housing finance markets by creating incentives for each Enterprise to reduce its housing finance market stability risk by curbing its market share and growth in ordinary times, preserving room for a larger role during a period of financial stress.

Third, an Enterprise-specific stability capital buffer could offset any funding advantage that an Enterprise might have on account of being perceived as ''too big to fail.'' That, in turn, would remove the incentive for counterparties to shift risk to the Enterprise, where that incentive not only increases the housing finance market stability risk posed by the Enterprise but also undermines the competitiveness of the national housing finance markets.

Fourth, a larger capital cushion at an Enterprise could afford the Enterprise and FHFA more time to address emerging weaknesses at the Enterprise that could adversely impact the national housing finance markets. In addition to mitigating national housing finance market risk, the additional time afforded by a larger capital cushion could help FHFA ensure that each Enterprise operates in a safe and sound manner.

Finally, again with respect to safety and soundness, any perception that an Enterprise is ''too big to fail'' leads to moral hazard that undermines market discipline by creditors and other counterparties over the risk taking at an Enterprise. By increasing the regulatory capital at an Enterprise, the stability capital buffer would shift more tail risk back to the Enterprise's shareholders, which should have the added benefit of offsetting any ''too big to fail'' funding advantage arising from unpriced tail risk. The resulting enhanced market discipline should enhance safety and soundness by increasing the likelihood that the Enterprise's risks are appropriately managed.

FHFA is proposing a stability capital buffer based on a market share approach. Alternatively, FHFA is seeking comment on an additional approach that would have the Enterprises compute their stability capital buffer in a manner analogous to the U.S. banking approach for determining the GSIB surcharge.

d. Market Share Approach

Under FHFA's market share approach, an Enterprise's stability capital buffer would depend on an Enterprise's share of total residential mortgage debt outstanding that exceeds a threshold of 5.0 percent market share. The stability capital buffer, expressed as a percent of adjusted total assets, would increase by 5 basis points for each percentage point of market share exceeding that threshold. For purposes of determining the stability capital buffer, the Enterprise's mortgage assets would mean the sum of:

- The unpaid principal balance of its single-family mortgage exposures, including any single-family loans that secure MBS guaranteed by the Enterprise;
- The unpaid principal balance of its multifamily mortgage exposures, including any multifamily loans that secure MBS guaranteed by the Enterprise;
- The carrying value of its Enterprise MBS or Ginnie Mae MBS, PLS, and other securitization exposures (other than its retained CRT exposures); and
- The exposure amount of any other mortgage assets.

Residential mortgage debt outstanding would mean the amount of mortgage debt outstanding secured by single-family or multifamily residences that are located in the United States (excluding any mortgage debt outstanding secured by non-farm, non-residential, or farm properties). FHFA would publish the residential mortgage debt outstanding as of the end of each calendar year, potentially using similar data published by the Federal Reserve Board.

Among other considerations, FHFA developed this market share-based calibration of the stability capital buffer based on a linear interpolation between two points. First, FHFA began with an assumption that an Enterprise that has a share of total residential mortgage debt outstanding equal to 5.0 percent—as of September 30, 2019, roughly $632 billion in single-family and multifamily mortgage exposures owned or

[59] 12 U.S.C. 4513(a)(1).

[60] FHFA's proposed stability capital buffer should not be construed to imply or otherwise suggest that a similar capital surcharge would necessarily be appropriate for the Enterprises' counterparties or other market participants in the housing finance system. Some of these market participants do not pose much, if any, risk to the liquidity, efficiency, competitiveness, or resiliency of national housing finance markets.

guaranteed—would not merit a stability capital buffer to mitigate its national housing finance stability risk. An Enterprise with that 5.0 percent market share would have more assets than U.S. Bancorp ($487.6 billion in total assets, as of September 30, 2019), which is not a GSIB, but less assets than the next largest U.S. banking organization, Morgan Stanley ($902.6 billion in total assets as of September 30, 2019), which is a GSIB.

At the other extreme, the largest GSIB surcharge for a U.S. GSIB is that of JPMorgan Chase, at 3.5 percent of risk-weighted assets as of September 30, 2019. An Enterprise would roughly approximate an equivalent stability capital buffer if it had a 25 percent share of total residential mortgage debt outstanding. At that market share, the Enterprise's stability capital buffer would be 1.00 percent of its adjusted total assets, approximately equivalent to the 3.5 percent surcharge expressed as a percent of risk-weighted assets under the September 30, 2019 average net credit risk weight on the Enterprises' mortgage exposures of 28 percent.

Under this market share approach, as of September 30, 2019, Fannie Mae and Freddie Mac would have had stability capital buffers of, respectively, 1.05 and 0.64 percent of adjusted total assets. Under the September 30, 2019 28 percent average risk weight on their exposures, Fannie Mae and Freddie Mac's stability capital buffers would have been 3.8 and 2.3 percent of risk-weighted assets, respectively, roughly in line with U.S. GSIBs of similar size.

The following Table 7 details the calculation of the proposed stability capital buffer as of December 31, 2007, September 30, 2017, and September 30, 2019.

Table 7: Stability Capital Buffer under the Market Share Approach

	In millions of dollars			Data Source*	
	Dec 31, 2007	**Sep 30, 2017**	**Sep 30, 2019**	MDO	Z.1 - L.217
Data Source*	MDO	MDO	Z.1 - L.217	2007 & 2017	2019
Total Market					
Single-Family	$11,253,203	$10,499,810	$11,080,100	Line 2	Line 2
Multifamily	811,417	1,311,309	1,560,900	Line 3	Line 3
Total	$12,064,620	$11,811,119	$12,641,000		
Fannie Mae					
Regular	$403,577	$3,131,487	$3,280,200	Line 39	Line 34
Pools	2,299,072	11,781	7,700	Line 60	Line 42
Total	$2,702,649	$3,143,268	$3,287,900		
Market Share	22%	27%	26%		
less 5%	-5%	-5%	-5%		
Share subject to buffer	17%	22%	21%		
x 5 bps	87	108	105		
Adjusted Total Assets	$3,048,113	$3,357,483	$3,547,447		
Stability Capital Buffer	$26,521	$36,282	$37,266		
Freddie Mac					
Regular	$79,776	$1,828,870	$1,969,300	Line 45	Line 35
Pools	1,717,342	178,738	268,200	Line 57	Line 41
Total	$1,797,118	$2,007,608	$2,237,500		
Market Share	15%	17%	18%		
less 5%	-5%	-5%	-5%		
Share subject to buffer	10%	12%	13%		
x 5 bps	49	60	64		
Adjusted Total Assets	$2,176,201	$2,262,407	$2,524,593		
Stability Capital Buffer	$10,768	$13,572	$16,032		

Sources:
https://www.federalreserve.gov/data/mortoutstand/default.htm
Mortgage Debt Outstanding Table
The MDO table is no longer being updated. All of the series can be found in the Financial Accounts of the United States at
https://www.federalreserve.gov/releases/z1/release-dates.htm
Financial Accounts of the United States - Z.1, L.217 Total Mortgages

Question 16. Is the market share approach appropriately formulated and calibrated to mitigate the national housing finance market stability risk posed by an Enterprise? If not, what modifications should FHFA consider to ensure an appropriate calibration?

Question 17. Is the market share approach appropriately formulated and calibrated to ensure each Enterprise operates in a safe and sound manner? If not, what modifications should FHFA consider to ensure an appropriate calibration?

e. Alternative Approach

FHFA is soliciting comment on whether to replace or supplement the market share approach discussed in Section VII.A.3.d with another approach that considers other indicators of the housing finance market stability risk posed by an Enterprise. Other such indicators could include the ownership of the Enterprise's MBS and debt by other financial institutions, the degree of control by the Enterprise over key securitization infrastructure, the extent of the Enterprise's role in aggregating and distributing credit risk through CRT, the Enterprise's reliance on short-term debt funding, or the Enterprise's expected debt issuances during a financial stress to fund purchases of mortgage exposures out of securitization pools.

One specific alternative approach under consideration by FHFA is to replace or supplement the market share approach with a modified version of the U.S. banking framework's two methods for determining a GSIB's capital

surcharge.[61] Under method 1, a U.S. GSIB determines its capital surcharge using the sum of weighted indicator scores that span five categories correlated with systemic importance—size, interconnectedness, cross-jurisdictional activity, substitutability, and complexity. For each indicator, the U.S. GSIB's indicator score is its own measure of the indicator divided by the aggregate global measure of that indicator, which is based on other GSIBs' measures. Method 2 uses similar inputs but replaces the substitutability indicators with metrics for the U.S. GSIB's reliance on short-term wholesale funding. Method 2 is also calibrated in a manner that generally will result in GSIB capital surcharges that are higher than those calculated under method 1.

FHFA is soliciting comment on whether to calibrate the stability capital buffer based on some subset of the U.S. banking framework's five categories—for example, size, interconnectedness, and substitutability—and exclude the indicators for cross-jurisdictional activity or complexity. In particular, cross-jurisdictional activity might not be an important driver of the national housing finance market stability risk posed by an Enterprise.

FHFA is also soliciting comment on whether modifications to the definitions or calculations of the U.S. banking framework's specific GSIB surcharge indicators would be appropriate to ensure the resulting score or scores are correlated with an Enterprise's national housing finance market stability risk. For example, the Enterprises play an integral role in the national housing finance market, and there are few, if any, natural substitutes for that role, but an Enterprise's amount of underwritten transactions in debt and equity markets, one of the substitutability indicators under the U.S. banking framework, might not be strongly correlated with that risk.

Another approach might be to adopt a modified version of the U.S. banking framework's method and then use a similar measure of an Enterprise's reliance on short-term debt funding (perhaps with adjustments for the expected debt issuances during a financial stress to fund purchases of NPLs out of securitization pools) as the basis for a replacement for the U.S. banking framework's method 2.

Question 18. Should the Enterprise-specific stability capital buffer be determined using the U.S. banking framework's approach to calculating capital surcharges for GSIBs?

Question 19. What, if any, modifications to the U.S. banking framework's approach to calculating capital surcharges for GSIBs are appropriate for determining the Enterprise-specific stability capital buffer?

Question 20. Should the Enterprise-specific stability capital buffer be determined based on a sum of the weighted indicators for size, interconnectedness, and substitutability under the U.S. banking framework?

Question 21. Which, if any, indicators of the housing finance market stability risk posed by an Enterprise, other than its market share, should be used to size the Enterprise's stability capital buffer? How should those other indicators be measured and weighted to produce a score of the housing finance market stability risk posed by an Enterprise?

Question 22. What, if any, measure of the Enterprise's short-term debt funding or expected debt issuances during a financial stress to fund purchases of NPLs out of securitization pools should be used to size the Enterprise's stability capital buffer?

B. Leverage Buffer

In addition to the payout restrictions posed by the PCCBA, to avoid limits on capital distributions and discretionary bonus payments, an Enterprise also would be required to maintain tier 1 capital in excess of the amount required under the tier 1 leverage ratio requirement by at least the amount of a PLBA equal to 1.5 percent of the Enterprise's adjusted total assets. The primary purpose of the PLBA would be to serve as a non-risk-based supplementary measure that provides a credible backstop to the combined PCCBA and risk-based capital requirements. From a safety-and-soundness perspective, each of the risk-based and leverage ratio requirements offsets potential weaknesses of the other. Taken together, well-calibrated risk-based capital requirements working with a credible leverage ratio requirement are more effective than either would be in isolation. FHFA deems it important that the buffer-adjusted risk-based and leverage requirements are also closely calibrated to each other so that they have an effective complementary relationship.

To size the PLBA, FHFA looked first to the PCCBA of each Enterprise. At 1.5 percent of adjusted total assets, the PLBA for Fannie Mae and Freddie Mac would be, respectively, $53 billion and $38 billion as of September 30, 2019. For Fannie Mae, the PLBA would be less than its PCCBA, while for Freddie Mac the reverse is true. These results suggest that 1.5 percent PLBA is calibrated to ensure that the PCCBA and PLBA have an effective complementary relationship such that each is independently meaningful.

FHFA also looked to the sizing of similar leverage buffer requirements under the U.S. banking framework. Some large U.S. banking organizations are required to maintain a supplementary leverage ratio requirement of 3.0 percent of their total leverage exposure and, to avoid restrictions on distributions and discretionary bonuses, a leverage buffer requirement of 2.0 percent of their total leverage exposure. That 2.0 percent total leverage buffer requirement is 40 percent of the 5.0 percent buffer-adjusted leverage ratio requirement to avoid payout restrictions. Similarly, a 1.5 percent PLBA for the Enterprises would be 37.5 percent of the 4.0 percent buffer-adjusted leverage ratio requirement to avoid payout restrictions.

Question 23. Is the PLBA appropriately sized to backstop the PCCBA-adjusted risked-based capital requirements?

Question 24. Should the PLBA for an Enterprise be sized as a fraction or other function of the PCCBA of the Enterprise? If so, how should the PLBA of an Enterprise be calibrated based on the Enterprise's PCCBA?

C. Payout Restrictions

An Enterprise would be subject to limits on its capital distributions and discretionary bonus payments if either its capital conservation buffer is less than its PCCBA, as discussed in Section VII.A, or its leverage buffer is less than its PLBA, as discussed in Section VII.B. An Enterprise also may not make distributions or discretionary bonus payments during the current calendar quarter if, as of the end of the previous calendar quarter: (i) The eligible retained income of the Enterprise was negative; and (ii) either (A) the capital conservation buffer of the Enterprise was less than its stress capital buffer, or (B) the leverage buffer of the Enterprise was less than its PLBA.

The capital conservation buffer is composed solely of CET1 capital. An Enterprise's capital conservation buffer is equal to the lowest of the following, calculated as of the last day of the previous calendar quarter:

- The Enterprise's adjusted total capital minus the minimum amount of adjusted total capital required under the proposed rule;
- The Enterprise's tier 1 capital minus the minimum amount of tier 1

[61] 12 CFR part 217, subpart. H (Federal Reserve Board).

capital required under the proposed rule; or

- The Enterprise's CET1 capital minus the minimum amount of CET1 capital required under the proposed rule.

An Enterprise's maximum payout ratio determines the extent to which it is subject to limits on capital distributions and discretionary bonuses. The maximum payout ratio is the percent of eligible retained income that an Enterprise can pay out in the form of distributions and discretionary bonus payments during the current calendar quarter. The eligible retained income of an Enterprise is the greater of: (i) The Enterprise's net income for the four calendar quarters preceding the current calendar quarter, net of any distributions and associated tax effects not already reflected in net income; and (ii) the average of the Enterprise's net income, as applicable, for the four calendar quarters preceding the current calendar quarter. The maximum payout ratio is itself a function of the extent to which the applicable capital buffer is less than the applicable prescribed buffer amount, as set forth on Table 8.

Table 8: Calculation of Maximum Payout Ratio

Capital buffer[62]	Maximum payout ratio
Greater than or equal to the Enterprise's prescribed buffer amount.[63]	No payout ratio limitation applies
Less than the Enterprise's prescribed buffer amount, and greater than or equal to 75 percent of the Enterprise's prescribed buffer amount.	60 percent
Less than 75 percent of the Enterprise's prescribed buffer amount, and greater than or equal to 50 percent of the Enterprise's prescribed buffer amount.	40 percent
Less than 50 percent of the Enterprise's prescribed buffer amount, and greater than or equal to 25 percent of the Enterprise's prescribed buffer amount.	20 percent
Less than 25 percent of the Enterprise's prescribed buffer amount.	0 percent

If an Enterprise is subject to a maximum payout ratio, the payout restrictions would apply to all capital distributions, which generally extends to dividends or payments on, or repurchases of, CET1, tier 1, or tier 2 capital instruments (except, with respect to a payment on a tier 2 capital instrument, if the Enterprise does not have full discretion to permanently or temporarily suspend such payments without triggering an event of default). The payout restrictions would also extend to discretionary bonuses, broadly defined to include any payment made to an executive officer of an Enterprise where the Enterprise retains discretion as to whether to make, and the amount of, the payment, the amount paid is determined by the Enterprise without prior promise to, or agreement with, the executive officer, and the executive officer has no contractual right to the payment.

FHFA expects that each Enterprise generally will seek to avoid any payout restriction by maintaining regulatory capital in excess of its buffer-adjusted risk-based and leverage ratio requirements during ordinary times. FHFA also expects that, consistent with its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle, each Enterprise might draw down its buffers during a period of financial stress. However, it would not be consistent with the safe and sound operation of an Enterprise for the Enterprise to maintain regulatory capital less than its buffer-adjusted requirements in the ordinary course except for some reasonable period after a financial stress, pending the Enterprise's efforts to raise and retain regulatory capital.

Nothing in this proposed rule limits the authority of FHFA to take action to address unsafe or unsound practices or violations of law, including actions inconsistent with an Enterprise's charter. FHFA could, depending on the facts and circumstances, determine that it is an unsafe or unsound practice, or that it is inconsistent with the Enterprise's statutory mission, for an Enterprise to maintain regulatory capital that is less than its buffer-adjusted requirements during ordinary times. If FHFA were to make that determination, FHFA would have all of its enforcement and other authorities, including its authority to issue a cease-and-desist order, to require the Enterprise to remediate that unsafe or unsound practice—for example, by developing and implementing a plan to raise additional regulatory capital.

FHFA is soliciting comments on whether some or all of the payout restrictions should be phased-in over a transition period. In anticipation of the potential development and implementation of a capital restoration plan by each Enterprise, tailored exceptions to the payout restrictions might be appropriate to facilitate an Enterprise's issuances of equity to new investors, particularly to the extent that any tailored exception would shorten the time required for an Enterprise to achieve the regulatory capital amounts contemplated by the proposed rule or otherwise enhance its safety and soundness. For example, a tailored exception to allow for some distributions on an Enterprise's newly issued preferred stock might increase investor demand for the offerings of those shares. Similarly, a tailored exception for some limited regular dividends on an Enterprise's common stock might increase investor demand for those shares.

Question 25. Are the payout restrictions appropriately formulated and calibrated?

Question 26. Should there be any sanction or consequence other than payout restrictions triggered by an Enterprise not maintaining a capital conservation buffer or leverage buffer in

[62] An Enterprise's ''capital buffer'' means, as applicable, its capital conservation buffer or its leverage buffer.

[63] An Enterprise's ''prescribed buffer amount'' means, as applicable, its PCCBA or its PLBA.

excess of the applicable PCCBA or PLBA?

Question 27. Should the payout restrictions be phased-in over an appropriate transition period? If so, what is an appropriate transition period?

Question 28. Should the payout restrictions provide exceptions for dividends on newly issued preferred stock, perhaps with any exceptions limited to some transition period following conservatorship?

Question 29. Should the payout restrictions provide an exception for some limited dividends on common stock over some transition period?

VIII. Credit Risk Capital: Standardized Approach

A. Single-Family Mortgage Exposures

The standardized credit risk-weighted assets for each single-family mortgage exposure would be determined using grids and risk multipliers that together would assign an exposure-specific risk weight based on the risk characteristics of the single-family mortgage exposure. The resulting exposure-specific credit risk capital requirements generally would be similar to those of the 2018 proposal, subject to some simplifications and refinements. As discussed in Section VIII.A.3, the base risk weight would be a function of the single-family mortgage exposure's MTMLTV, among other things. The MTMLTV would be subject to a countercyclical adjustment to the extent that national house prices are 5.0 percent greater or less than an inflation-adjusted long-term trend, as discussed in Section VIII.A.4. This base risk weight would then be adjusted based on other risk attributes, including any mortgage insurance or other loan-level credit enhancement and the counterparty strength on that enhancement, as discussed in Sections VIII.A.5 and VIII.A.6. Finally, as discussed in Section VIII.A.7, this adjusted risk weight would be subject to a floor of 15 percent.

1. Single-Family Business Models

The core of an Enterprise's single-family guarantee business is acquiring single-family mortgage loans from mortgage companies, commercial banks, credit unions, and other mortgage lenders, packaging those loans into MBS, and selling the MBS either back to the original lenders or to other private investors in exchange for a fee that represents a guarantee of timely principal and interest payments on those MBS.

The Enterprises engage in the acquisition and securitization of single-family mortgage exposures primarily through two types of transactions: Lender swap transactions; and cash window transactions. In a lender swap transaction, lenders pool eligible single-family loans together and deliver the pool of loans to an Enterprise in exchange for an MBS backed by those single-family mortgage loans, which the lenders generally then sell in order to use the proceeds to fund more mortgage loans. In a cash window transaction, an Enterprise purchases single-family loans from a large, diverse group of lenders and then, at a later date, securitizes the acquired loans into an MBS. For MBS issued as a result of either lender swap transactions or cash window transactions, the Enterprises provide investors with a guarantee of the payment of principal and interest payments in exchange for a guarantee fee. Single-family loans that have been purchased but have not yet been securitized are held in the Enterprises' whole loan portfolios. In addition, the Enterprises also repurchase some delinquent loans from their guaranteed MBS subject to certain requirements and restrictions.

Except to the extent that they transfer the risk to private investors, the Enterprises are exposed to credit risk through their ownership of single-family mortgage exposures and their guarantees of MBS. Consequently, the Enterprises attempt to mitigate the likelihood of incurring credit losses in a variety of ways. One way to reduce potential credit losses is through loan-level credit enhancements such as mortgage insurance. Another way of reducing potential credit losses is through the transfer of risk at the pool level through securitization or synthetic securitization transactions.

2. Calibration Framework

In general, FHFA calibrated the base risk weights and risk multipliers for single-family mortgage exposures to require credit risk capital sufficient to absorb the lifetime unexpected losses incurred on single-family mortgage exposures experiencing a shock to house prices similar to that observed during the 2008 financial crisis. Lifetime unexpected losses are the difference between lifetime credit losses in such conditions (also known as stress losses) and expected losses.

As adverse economic conditions are not explicitly defined, the loss projections that underpin the credit risk capital requirements in the proposed rule are based on several different economic scenarios. Each Enterprise used economic scenarios that it defined to project loan-level credit risk capital. In addition, FHFA used the baseline and severely adverse scenario defined in DFAST to project unexpected losses. FHFA used these pre-existing scenarios as a starting point for its estimations in order to provide economic scenarios consistent with those of the U.S. banking framework for stress tests required under DFAST. FHFA also used these scenarios to ensure a straightforward, transparent approach to the proposed rule's capital requirements. The DFAST scenarios include forecasts for macroeconomic variables, including house prices, interest rates, and unemployment rates.

House prices are used to define the MTMLTV ratio, where the likelihood of a loss occurring upon default increases as the proportion of equity to loan value decreases. Therefore, the projected house price path is the predominant macroeconomic driver of single-family stress scenarios.

The Enterprises used similar house price paths to project stress losses. In the stress scenarios used by FHFA and the Enterprises, nationally averaged house prices declined by 25 percent from peak to trough (the period of time between the shock and the recovery), which is consistent with the decline in house prices observed during the 2008 financial crisis. The 25 percent house price decline is also broadly consistent with assumptions used in the DFAST severely adverse scenario over the past several years, although the 2020 DFAST cycle assumes a 28 percent house price decline in its severely adverse scenario. However, the trough and recovery assumptions used by FHFA and the Enterprises are somewhat more conservative than the observed house price recoveries post crisis.

Using these stress scenarios, the single-family grids were, as a general rule, calibrated based on estimates of unexpected losses from the Enterprises' internal models and FHFA's publicly available model.[64] The Enterprises and FHFA ran synthetic and actual loans with a baseline risk profile through their own credit models using these stress scenarios. Each single-family segment has its own baseline risk profile, which is discussed segment-by-segment in VIII.A.3. Consequently, each cell of each single-family grid represents projected unexpected losses, converted to a risk weight, for a baseline loan with a

[64] FHFA's single-family loss model is available on its website at *fhfa.gov*. For performing loans, all three models were used to construct the single-family grid. For single-family mortgage exposures other than performing loans, FHFA relied primarily on the Enterprises' estimates of unexpected losses.

particular combination of primary risk factors.

The risk multipliers were similarly calibrated based on estimates of unexpected losses from the Enterprises' internal models and FHFA's publicly available model. The Enterprises varied the secondary risk factors, specific to each single-family segment, to estimate each risk factor's multiplicative effects on estimates of unexpected losses for the baseline loan in each single-family segment. FHFA considered the risk multipliers estimated by the Enterprises, which were generally consistent in magnitude and direction, in conjunction with its own estimated values in determining the proposed single-family risk multipliers.

Question 30. Is the methodology used to calibrate the credit risk capital requirements for single-family mortgage exposures appropriate to ensure that the exposure is backed by capital sufficient to absorb the lifetime unexpected losses incurred on single-family mortgage exposures experiencing a shock to house prices similar to that observed during the 2008 financial crisis?

Question 31. What, if any, changes should FHFA consider to the methodology for calibrating credit risk capital requirements for single-family mortgage exposures?

3. Base Risk Weights

The proposed rule would require an Enterprise to determine a base risk weight for each single-family mortgage exposure using one of four grids, one for each single-family segment. These segments are based on payment performance because as a risk factor it is a material determinant of projected unexpected loss. Additional risk factors affect unexpected losses differently depending on where a single-family mortgage exposure is in its life cycle. The base risk weight for a single-family mortgage exposure would therefore change over the life cycle of the single-family mortgage exposure, generally decreasing when the single-family mortgage exposure is seasoned and performing, and increasing when the single-family mortgage exposure is delinquent or recently delinquent.

The four single-family segments would be:

- Non-performing loan (NPL): A single-family mortgage exposure that is 60 days or more past due.
- Modified re-performing loan (modified RPL): A single-family mortgage exposure that is not an NPL and has previously been modified or entered a repayment plan.
- Non-modified re-performing loan (non-modified RPL): A single-family mortgage exposure that is not an NPL, has not been previously modified or entered a repayment plan, and has been an NPL at any time in the last 48 calendar months.
- Performing loan: A single-family mortgage exposure that is not an NPL, a modified RPL, or a non-modified RPL. A non-modified RPL generally transitions to a performing loan after not being an NPL at any time in the prior 48 calendar months.

Each single-family segment would have a unique, two-dimensional risk weight grid (single-family grid) that an Enterprise would use to determine its base risk weight before subsequently applying risk multipliers. The dimensions of the single-family grids would vary by single-family segment to allow the single-family grids to differentially incorporate key risk drivers into the base risk weights on a segment-by-segment basis.

The single-family grids reflect several notable differences from the single-family grids in the 2018 proposal. First, FHFA combined the ''New Originations'' and ''Performing Seasoned'' base grids into one single-family grid for performing loans. Commenters recommended that the single-family segmentation could be simplified in this way without a meaningful loss of accuracy.

Second, for purposes of the definition of NPL, the proposed rule would define delinquency as 60 days or more past due, while the 2018 proposal defined delinquency as 30 days past due. Commenters recommended this change in order to mitigate variations in regulatory capital requirements, and because a significant portion of 30-day past due loans become current in the following month or do not become more delinquent. The practical effect of this change is that the projected unexpected losses on 30-day past due loans has been reallocated from the single-family grid for NPLs to the single-family grid for performing loans, increasing the base credit risk capital requirements for performing loans above where they were in the 2018 proposal. In addition, following the redefinition of delinquency, the proposed rule does not contemplate a return to performing loan status for a non-modified RPL with 36 consecutive timely payments and no more than 1 missed payment in the 12 months preceding that 36-month period.

Third, the single-family grids would reflect credit risk capital that was allocated using the ''number of borrowers'' and ''loan balance'' single-family risk multipliers of the 2018 proposal. As discussed in Section VIII.A.5, these risk multipliers are not included in the proposed rule. In order to ensure the risk-based capital requirements do not decrease by the amount of capital that would have otherwise been required due to these risk factors, FHFA has redistributed the capital requirements across cells of the single-family grids.

Fourth, the MTMLTVs used to assign base risk weights in the proposed single-family grids would be subject to a countercyclical adjustment as described in VIII.A.4.

Performing Loans

The primary risk factors for performing loans are credit score and MTMLTV (after factoring in the loan-level countercyclical adjustment). Credit score correlates strongly with the likelihood of a borrower default, while MTMLTV relates to both the likelihood of default and the severity of a potential loss should a borrower default (loss given default).[65] For the first five scheduled payment dates, an Enterprise would use the credit score at origination to determine the base risk weight. After that time, an Enterprise would use the refreshed or updated credit score. As discussed in Section VIII.A.4, an Enterprise would use the adjusted or unadjusted MTMLTV, depending on whether the loan-level countercyclical adjustment is non-zero (except that for the first five scheduled payment dates after the origination of a single-family mortgage exposure, an Enterprise would use OLTV rather than MTMLTV). The single-family grid for performing loans is presented below in Table 9. For purposes of this table, credit score means the original credit score of the single-family mortgage exposure if the loan age is less than 6, or the refreshed credit score otherwise.

[65] As in the 2018 proposal, FHFA notes that the Enterprises currently rely on Classic FICO for product eligibility, loan pricing, and financial disclosure purposes, and therefore the single-family grid for performing loans was estimated using Classic FICO credit scores. Throughout the proposed rule, the use of term ''credit score'' should be interpreted to mean Classic FICO credit scores. If the Enterprises were to begin using a different credit score for these purposes, or multiple scores, the single-family grids and multipliers might need to be recalibrated. Related to that, in February 2020, the Enterprises published a Joint Credit Score Solicitation that describes the process for credit score model developers to submit applications to the Enterprises. The validation and approval of credit score models will be a multi-year effort by the Enterprises under requirements established by FHFA's final rule on the process for validation and approval of credit score models. 84 FR 41886 (Aug. 16, 2019).

Table 9: Performing Loan Base Risk Weights

	Adjusted MTMLTV											
Credit Score	<= 30%	> 30%, <= 60%	> 60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%, <= 95%	> 95%, <= 100%	> 100%, <= 110%	> 110%, <= 120%	> 120%
< 620	2%	18%	49%	72%	105%	129%	159%	188%	218%	247%	275%	317%
>=620, < 640	2%	14%	39%	58%	84%	102%	127%	151%	178%	208%	237%	282%
>=640, < 660	2%	12%	34%	51%	73%	89%	111%	133%	159%	186%	214%	258%
>=660, < 680	2%	10%	29%	44%	63%	78%	98%	119%	141%	168%	194%	236%
>=680, < 700	2%	9%	26%	38%	55%	67%	88%	109%	125%	150%	176%	215%
>=700, < 720	2%	8%	22%	33%	47%	57%	75%	94%	110%	134%	158%	194%
>=720, < 740	2%	6%	19%	28%	41%	50%	66%	84%	96%	118%	140%	172%
>=740, < 760	2%	5%	16%	23%	33%	40%	54%	69%	80%	99%	119%	147%
>=760, < 780	2%	4%	13%	19%	27%	32%	43%	56%	65%	82%	99%	122%
>= 780	2%	3%	10%	14%	21%	25%	33%	43%	50%	63%	77%	96%

Credit scores have values ranging from 300 to 850, and OLTVs typically range from 10 percent to 97 percent. MTMLTVs typically range from 10 percent to upwards of 120 percent. The Enterprises conduct most of their new single-family businesses within an OLTV range of 70 percent to 95 percent. FHFA included MTMLTV buckets beyond 95 percent to account for adverse changes in home prices subsequent to origination, as well as to account for the inclusion of streamlined refinance loans in the single-family segment.

In the 2018 proposal, the single-family grid for new originations had a distinct treatment for loans with an 80 percent OLTV to account for the high volume and distinct features of these particular loans. FHFA determined that including 80 percent OLTV loans with other single-family mortgage exposures with LTVs between 75 percent and 80 percent did not result in a meaningful loss of accuracy, so the single-family grid for performing loans has combined their treatment. As previously discussed, the base risk weights for performing loans include projected unexpected losses for single-family mortgage exposures that are between 30 and 60 days past due.

The base risk weights for performing loans do not reflect credit enhancements such as mortgage insurance, which would generally lower an Enterprise's risk-based capital requirement for a single-family mortgage exposure with an LTV greater than 80 percent. Risk weight adjustments for credit enhancements are discussed in Section VIII.A.6.

Aside from the primary risk factors represented in the dimensions of the single-family grid for performing loans, there are several secondary risk factors accounted for in the risk profile of the synthetic loan used in the calibration of the base risk weights. Those secondary risk factors, along with the values that determine the baseline risk profile for performing loans, are: Loan age less than 24 months; 30-year fixed-rate; purchase; owner-occupied; single-unit; retail channel sourced; debt-to-income ratio between 25 percent and 40 percent; no second lien; full documentation; non-interest-only; not streamlined refinance loans; and zero cohort burnout (described below).[66]

[66] The CFPB's ability-to-repay rule generally prohibits interest-only and low-documentation loans. However, these risk factors may be present on single-family mortgage exposures originated prior to the 2008 financial crisis.

Unlike the 2018 proposal, neither loan size (greater than $100,000) nor the number of borrowers (multiple) is a secondary risk factor. Variations in the credit risk capital requirements due to these secondary risk factors are captured using risk multipliers, as discussed in Section VIII.A.5.

Non-Modified RPLs

The primary risk factors for non-modified RPLs are MTMLTV (after factoring in the loan-level countercyclical adjustment) and the re-performing duration. The re-performing duration is the number of scheduled payment dates since the non-modified RPL was last an NPL (60 days or more past due), and is a strong predictor of the likelihood of a subsequent default. MTMLTV is a strong predictor of the likelihood of default and loss given default for single-family mortgage exposures in this segment. The proposed single-family grid for non-modified RPLs is presented below in Table 10. For purposes of this table, non-modified re-performing duration means the number of scheduled payment dates since the non-modified RPL was last an NPL.

Table 10: Non-modified RPL Base Risk Weights

	Adjusted MTMLTV											
Non-modified re-performing duration	<= 30%	> 30%, <= 60%	>60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%, <= 95%	> 95%, <= 100%	> 100%, <= 110%	> 110%, <= 120%	> 120%
<= 3	2%	20%	50%	69%	84%	105%	122%	135%	149%	160%	174%	180%
>3, <= 12	2%	14%	39%	54%	67%	84%	100%	113%	127%	141%	160%	177%
> 12, <= 36	2%	11%	32%	46%	57%	69%	84%	97%	111%	127%	150%	175%
> 36, <= 48	2%	7%	21%	32%	46%	56%	72%	88%	103%	123%	143%	174%

Re-performing duration is divided into four categories such that the base risk weights would generally decrease as re-performing duration increases. When the re-performing duration is greater than three years, the base risk weight for the non-modified RPL would begin to approximate the base risk weight for a performing loan. A single-family mortgage exposure that re-performs for greater than four years, and has not been modified, would revert to being classified as a performing loan.

Aside from the primary risk factors represented in the single-family grid for non-modified RPLs, there are many secondary risk factors accounted for in the risk profile of the synthetic loan used in the calibration of the base risk weights. These secondary risk factors, along with the values that determine the baseline risk profile for non-modified RPLs, are the same as those for performing loans with the inclusion of two additional features—refreshed credit scores between 660 and 700, and a maximum previous delinquency of less than 60 days—and the exclusion of loan age and cohort burnout. Variations in the credit risk capital requirements due to these secondary risk factors would be captured using risk multipliers, as discussed in Section VIII.A.5.

Modified RPLs

The primary risk factors for modified RPLs are similar to non-modified RPLs. However, along with MTMLTV (after factoring in the loan-level countercyclical adjustment), the second primary risk factor in the segment would be either the re-performing duration or the performing duration, whichever is less. The re-performing duration is the number of scheduled payment dates since the modified RPL was last an NPL (60 days or more past due), while the performing duration measures the number of scheduled payment dates since the last modification of a modified RPL. The proposed single-family grid for modified RPLs is presented below in Table 11. For purposes of this table, modified re-performing duration means the lesser of: (i) The number of scheduled payment dates since the modified RPL was last modified; and (ii) the number of scheduled payments dates the modified RPL was last an NPL.

Table 11: Modified RPL Base Risk Weights

	Adjusted MTMLTV											
Modified re-performing duration	<= 30%	> 30%, <= 60%	>60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%, <= 95%	> 95%, <= 100%	> 100%, <= 110%	> 110%, <= 120%	> 120%
<= 3	2%	31%	76%	98%	115%	129%	145%	159%	170%	179%	189%	196%
>3, <= 12	2%	25%	62%	81%	95%	109%	124%	139%	152%	164%	178%	195%
> 12, <= 36	2%	19%	50%	66%	79%	92%	107%	123%	136%	152%	169%	194%
> 36	2%	13%	35%	50%	68%	80%	98%	117%	133%	150%	168%	193%

Aside from the primary risk factors represented in the dimensions of the single-family grid for modified RPLs, there are many secondary risk factors accounted for in the risk profile of the synthetic loan used in the calibration of the base risk weights. These secondary risk factors, along with the values that determine the baseline risk profile for modified RPLs, are the same as those for non-modified RPLs with one addition; a payment change from modification greater than or equal to -20 percent and less than 0 percent. Variations in the credit risk capital requirements due to these secondary risk factors would be captured using risk multipliers, as discussed in Section VIII.A.5.

Unlike non-modified RPLs, modified RPLs never revert to being classified as performing loans, even after four or more years of re-performance.

NPLs

The primary risk factors for NPLs are the days past due and MTMLTV (after factoring in the loan-level countercyclical adjustment). Days past due is the number of days a single-family mortgage exposure is past due and is a strong predictor of the likelihood of default for NPLs. MTMLTV is a strong predictor of loss given default for exposures in this segment. The proposed single-family grid for NPLs is presented below in Table 12.

Table 12: NPLs Base Risk Weights

	Adjusted MTMLTV							
Days past due	<= 30%	> 30%, <= 60%	>60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%
60 to 89 days	8%	71%	173%	193%	205%	215%	226%	238%
90 to 209 days	11%	85%	184%	201%	211%	218%	224%	230%
>= 210 days	28%	124%	219%	227%	231%	233%	234%	221%

The base risk weights detailed in the single-family grid for NPLs are noticeably non-monotonic as the number of days past due increases, particularly in the highest (right-most) MTMLTV column. This is because as the number of days past due increases for an NPL with higher LTV, so does the expected loss. Because the credit risk capital requirement has been calibrated as the difference between stress loss and expected loss, when expected loss increases and grows closer to stress loss, the projected unexpected loss (reflected by the base risk weight) decreases. The increase in expected loss should be reflected in commensurately higher ALLL.

Aside from the primary risk factors represented in the single-family grid for NPLs, there are several secondary risk factors accounted for in the risk profile of the synthetic loan used in the calibration of the base risk weights. These secondary risk factors, along with the values that determine the baseline risk profile for NPLs, are: 30-year fixed-rate; owner-occupied; single-unit; retail channel sourced; and a refreshed credit score between 640 (inclusive) and 700. Variations in the credit risk capital requirements due to these secondary risk factors would be captured using risk multipliers, as discussed in Section VIII.A.5.

Question 32. Are the base risk weights for single-family mortgage exposures appropriately formulated and calibrated to require credit risk capital sufficient to ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle?

Question 33. Are there any adjustments, simplifications, or other refinements that FHFA should consider for the base risk weights for single-family mortgage exposures?

Question 34. Should the base risk weight for a single-family mortgage exposure be assigned based on OLTV or MTMLTV of the single-family mortgage exposure, or perhaps on the LTV of the single-family mortgage exposure based on the original purchase price and after adjusting for any paydowns of the original principal balance?

Question 35. Should the base risk weight for a single-family mortgage exposure be assigned based on the original credit score of the borrower or the refreshed credit score of the borrower?

Question 36. What steps, including any process for soliciting public comment on an ongoing basis, should FHFA take to ensure that the single-family grids and the real house price trend are updated from time to time as market conditions evolve?

Question 37. Should a delinquency associated with a COVID–19-related forbearance cause a single-family mortgage exposure to become an NPL?

Question 38. Which, if any, types of forbearances, payment plans, or modifications should be excluded from those that cause a single-family mortgage exposure to become a modified RPL? Should a forbearance, payment plan, or modification arising out of a COVID–19-related forbearance request cause a single-family mortgage exposure to become a modified RPL?

4. Countercyclical Adjustment

The MTMLTVs used to assign base risk weights to single-family mortgage exposures in the single-family grids would be subject to a countercyclical adjustment an Enterprise would be required to make when national house prices increase or decrease by more than 5.0 percent from an estimated inflation-adjusted long-term trend. Many commenters noted the pro-cyclical nature of the aggregate risk-based capital requirements of the 2018 proposal. Certain commenters recommended FHFA replace MTMLTV and refreshed credit scores with OLTV and original credit scores to reduce pro-cyclicality. Other commenters recommended FHFA continue to use MTMLTV and refreshed credit scores in order to provide a more accurate view of risk and achieve rational pricing and proper incentives. Additional commenters recommended FHFA base capital requirements on fundamental house values, while still other commenters suggested FHFA introduce a countercyclical requirement either through a countercyclical capital buffer or a countercyclical risk-based capital requirement.

The proposed formulaic countercyclical adjustment to loan-level single-family MTMLTVs would be based on FHFA's U.S. all-transactions house price index (HPI). The adjustment would restrict decreases in MTMLTV during periods of rising vulnerabilities in house prices and limits increases in MTMLTV when vulnerabilities recede. The adjustment is designed to increase the resilience of the Enterprises when there is an elevated risk of above-normal losses and to reduce the need for additional capital during a period of financial stress.

An Enterprise would calculate the MTMLTV adjustment by first estimating a long-term trend of FHFA's quarterly, not-seasonally-adjusted HPI using a prescribed trough-to-trough methodology, deflated by the Consumer Price Index for All Urban Consumers, All Items Less Shelter in U.S. City Average. If the deflated all-transactions HPI exceeds the estimated long-term trend by more than 5 percentage points, the Enterprise would adjust upward the MTMLTV of every single-family mortgage exposure by the difference between the deflated all-transactions HPI and 5.0 percent. Otherwise, the Enterprise would use the unadjusted MTMLTV. On the other hand, if the deflated all-transactions HPI falls below the estimated long-term trend by more than 5 percentage points, the Enterprise would adjust downward the MTMLTV of every single-family mortgage exposure by the difference between the deflated all-transactions HPI and 5.0 percent. Otherwise, the Enterprise would use the unadjusted MTMLTV.

In other words, if the HPI exceeds its long-term trend by more than 5 percentage points, the Enterprise would adjust upward the MTMLTV by the ratio of the HPI index actual value to the HPI index if it were at 5.0 percent over long-term trend. This adjustment, in effect, would reduce the house price used to calculate MTMLTV to the level expected if all house prices nationally adjusted downward by the percent the index exceeds 5.0 percent above trend.

FHFA chose collars of 5.0 percent above and below the long-term trend in house prices because it would allow for MTMLTVs to reflect the best estimate of

market value most of the time, while restricting excessive MTMLTV increases or decreases during periods where house prices appear to deviate more materially from their long-term trend. The figure below presents the historical deflated all-transactions HPI series with both an estimated long-term trend and 5.0 percent collars above and below the trendline. When the HPI series is above or below the collars, the MTMLTV adjustment would be non-zero.

The following Figure 1 and Table 13 provide an illustration of the historical data used to calculate the long-term trend in HPI, along with the plus/minus 5.0 percent collars, as well as examples of how single-family MTMLTVs would be adjusted under the proposed framework.[67]

Figure 1: Real National HPI 1975 Q1 to 2019 Q3, Long-term Trend (1975 – 2012), and Collar

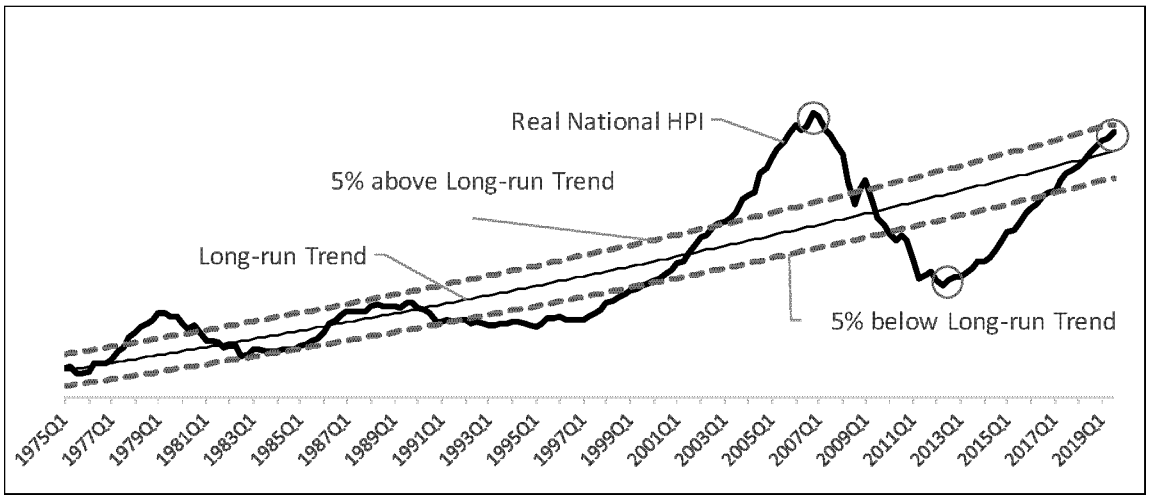

Table 13: Examples of Countercyclical Adjustments to Single-family LTV

	Dec 31, 2006	Jun 30, 2012	Sept 30, 2019
Real National HPI	1.97	1.38	1.91
Long-run trend HPI	1.59	1.69	1.84
Change from the long-run trend to real HPI	24%	-18%	3%
Long-run trend HPI/Real National HPI	80%	123%	97%
Countercyclical Adjustment*	-16%	16%	0%

Adjusted MTMLTV = MTMLTV/(1 + Countercyclical Adjustment)

	Adjusted MTMLTV		
	Dec 31, 2006	Jun 30, 2012	Sept 30, 2019
MTMLTV = 60%	71%	52%	60%
MTMLTV = 80%	95%	69%	80%
MTMLTV = 95%	113%	82%	95%

*If the change from the long-run trend to HPI is:
Greater than 5%, Countercyclical Adjustment = 1.05 x Long-run trend HPI/Real National HPI -1
Less than -5%, Countercyclical Adjustment = 0.95 x Long-run trend HPI/Real National HPI -1
Between 5% and -5%, Countercyclical Adjustment = 0

[67] The parameters of the long-run trend are estimated using linear regression on the natural logarithm of real HPI from the Q3 1975 trough to the Q2 2012 trough. Figure 1 shows the fitted values from the estimated long-run trend from Q1 1975 to Q3 2019. FHFA might need to revisit the calibration of the parameters in the event of future troughs.

Table 13 illustrates three scenarios. Under the first scenario, 2006, Real HPI exceeds the long-term trend by more than 5.0 percent, so single-family house prices would be adjusted downward such that adjusted MTMLTV would be greater than MTMLTV. A single-family mortgage exposure with a 60 percent MTMLTV would be assigned a base risk weight using its adjusted MTMLTV of 71 percent. Similarly, an 80 percent MTMLTV would correspond to a 95 percent adjusted MTMLTV, while a 95 percent MTMLTV would correspond to a 113 percent adjusted MTMLTV. Under the second scenario, 2012, Real HPI is less than the long-term trend by more than 5.0 percent, so single-family house prices would be adjusted upward such that adjusted MTMLTV would be less than MTMLTV. For example, a single-family mortgage exposure with an 80 percent MTMLTV would be assigned a base risk weight using its adjusted MTMLTV of 69 percent. In the final scenario, September 30, 2019, Real HPI exceeds the long-term trend by 3.0 percent. In this case, because 3.0 percent is less than 5.0 percent, single-family house prices would not be adjusted, and adjusted MTMLTV would equal MTMLTV for all values of MTMLTV.

Question 39. Is the MTMLTV adjustment appropriately formulated and calibrated to require credit risk capital sufficient to ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle? If not, what modifications should FHFA consider to ensure an appropriate formulation and calibration?

Question 40. Does the MTMLTV adjustment strike an appropriate balance in mitigating the pro-cyclicality of the aggregate risk-based capital requirements while preserving a mortgage risk-sensitive framework? Are the collars set appropriately at 5.0 percent above or below the long-term index trend?

Question 41. How should the long-term house price trend be determined for the purpose of any countercyclical adjustment to a single-family mortgage exposure's credit risk capital requirement?

5. Risk Multipliers

The proposed rule would require an Enterprise to adjust the base risk weight for a single-family mortgage exposure to account for additional loan characteristics using a set of single-family-specific risk multipliers. The risk multipliers would refine the base risk weights to account for risk factors beyond the primary risk factors reflected in the single-family grids, and for variations in secondary risk factors not captured in the risk profiles of the synthetic loans used to calibrate the single-family grids. The adjusted risk weight for a single-family mortgage exposure would be the product of the base risk weight, the combined risk multiplier, and any credit enhancement multiplier, which is discussed in Section VIII.A.6.

The risk multipliers correspond to common characteristics that increase or decrease the projected unexpected losses of a single-family mortgage exposure. Although the specified risk characteristics are not exhaustive, they capture key real estate loan performance drivers, and are commonly used in mortgage pricing and underwriting.

The risk multipliers are substantially the same as those of the 2018 proposal, with some simplifications and refinements. In particular, FHFA eliminated the single-family risk multipliers for ''number of borrowers'' and ''loan balance,'' and reallocated the associated unexpected losses across the single-family grids. The practical effect of this change is that the base risk weights in the single-family grids are greater than they otherwise would have been if the two risk multipliers had not been eliminated.

TABLE 14—RISK MULTIPLIERS

Risk factor	Value or range	Single-family segment			
		Performing loan	Non-modified RPL	Modified RPL	NPL
Loan Purpose	Purchase	1	1	1	
	Cashout Refinance	1.4	1.4	1.4	
	Rate/Term Refinance	1.3	1.2	1.3	
Occupancy Type	Owner Occupied or Second Home	1	1	1	1
	Investment	1.2	1.5	1.3	1.2
Property Type	1 Unit	1	1	1	1
	2–4 Unit	1.4	1.4	1.3	1.1
	Condominium	1.1	1	1	1
	Manufactured Home	1.3	1.8	1.6	1.2
Origination Channel	Retail	1	1	1	1
	TPO	1.1	1.1	1.1	1
DTI	DTI ≤25%	0.8	0.9	0.9	
	25% <DTI ≤40%	1	1	1	
	DTI >40%	1.2	1.2	1.1	
Product Type	FRM30	1	1	1	1
	ARM1/1	1.7	1.1	1	1.1
	FRM15	0.3	0.3	0.5	0.5
	FRM20	0.6	0.6	0.5	0.8
Subordination	No subordination	1	1	1	
	30% <OLTV ≤60% and 0% <subordination ≤5%.	1.1	0.8	1	
	30% <OLTV ≤60% and subordination >5%.	1.5	1.1	1.2	
	OLTV >60% and 0% <subordination ≤5%.	1.1	1.2	1.1	
	OLTV >60% and subordination >5%	1.4	1.5	1.3	
Loan Age	Loan age ≤24 months	1			
	24 months <loan age ≤36 months	0.95			
	36 months <loan Age ≤60 months	0.8			
	Loan age >60 months	0.75			

TABLE 14—RISK MULTIPLIERS—Continued

Risk factor	Value or range	Single-family segment			
		Performing loan	Non-modified RPL	Modified RPL	NPL
Cohort Burnout	No Burnout	1			
	Low	1.2			
	Medium	1.3			
	High	1.4			
Interest-only	No IO	1	1	1	
	Yes IO	1.6	1.4	1.1	
Loan Documentation	Full	1	1	1	
	None or low	1.3	1.3	1.2	
Streamlined Refi	No	1	1	1	
	Yes	1	1.2	1.1	
Refreshed Credit Score for Modified RPLs and Non-modified RPLs	Refreshed credit score <620		1.6	1.4	
	620 ≤refreshed credit score <640		1.3	1.2	
	640 ≤refreshed credit score <660		1.2	1.1	
	660 ≤refreshed credit score <700		1	1	
	700 ≤refreshed credit score <720		0.7	0.8	
	720 ≤refreshed credit score <740		0.6	0.7	
	740 ≤refreshed credit score <760		0.5	0.6	
	760 ≤refreshed credit score <780		0.4	0.5	
	Refreshed credit score ≥780		0.3	0.4	
Payment Change from Modification	Payment change ≥0%			1.1	
	−20% ≤payment change <0%			1	
	−30% ≤payment change <−20%			0.9	
	Payment change <−30%			0.8	
Previous Maximum Days Past Due	0–59 days		1	1	
	60–90 days		1.2	1.1	
	91–150 days		1.3	1.1	
	151+ days		1.5	1.1	
Refreshed Credit Score for NPLs	Refreshed credit score < 580				1.2
	580 ≤refreshed credit score <640				1.1
	640 ≤refreshed credit score <700				1
	700 ≤refreshed credit score <720				0.9
	720 ≤refreshed credit score <760				0.8
	760 <refreshed credit score <780				0.7
	Refreshed credit score ≥780				0.5

Table 14 is structured in the following way: the first column represents secondary risk factors, the second column represents the values or ranges each secondary risk factor can take, and the third through sixth columns represent risk multipliers for performing loans, non-modified RPLs, modified RPLs, and NPLs, respectively. Thus, there would be a different set of risk multipliers for each of the four single-family segments.

Each secondary risk factor could take multiple values, and each value or range of values would have a risk multiplier associated with it. For any particular single-family mortgage exposure, each risk multiplier could take a value of 1.0, above 1.0, or below 1.0. A risk multiplier of 1.0 would imply that the risk factor value for a single-family mortgage exposure is similar to, or in a certain range of, the particular risk characteristic found in the single-family segment's synthetic loan. A risk multiplier value above 1.0 would be assigned to a risk factor value that represents a riskier characteristic than the one found in the single-family segment's synthetic loan, while a risk multiplier value below 1.0 would be assigned to a risk factor value that represents a less risky characteristic than the one found in the single-family segment's synthetic loan. Finally, the risk multipliers would be multiplicative, so each single-family mortgage exposure in a single-family segment would receive a risk multiplier for every risk factor pertinent to that segment, even if the risk multiplier is 1.0 (implying no change to the base risk weight for that risk factor). The total combined risk multiplier for a single-family mortgage exposure would be, in general, the product of all individual risk multipliers pertinent to the single-family segment in which the exposure is classified.

There are two general types of single-family risk factors for which risk multipliers are applied: Risk factors determined at origination and risk factors that change as a loan seasons or ages.

Risk factors determined at origination include common characteristics such as loan purpose, occupancy type, and property type. The impacts of this type of risk factor on single-family mortgage performance and credit losses are generally well understood and commonly used in mortgage pricing and underwriting. Many of these risk factors can be quantified and applied in a straightforward manner using the proposed risk multipliers. The full set of single-family risk factors determined at origination for which the proposed rule would require risk multipliers is:

- *Loan purpose.* Loan purpose reflects the purpose of the single-family mortgage exposure at origination. The risk multiplier would be at least 1.0 for any purpose other than ''purchase.''
- *Occupancy type.* Occupancy type reflects the borrower's intended use of the property, with an owner-occupied property representing a baseline level of risk across all single-family segments (a risk multiplier of 1.0), and an investment property being higher risk (a risk multiplier greater than 1.0).
- *Property type.* Property type describes the physical structure of the property, with a 1-unit property representing a baseline level of risk (a

risk multiplier of 1.0), and other property types such as 2–4 unit properties or manufactured homes being higher risk (a risk multiplier greater than 1.0).

• *Origination channel.* Origination channel is the type of institution that originated the single-family mortgage exposure, and whether or not it originated from a third-party, including a broker or correspondent. Single-family mortgage exposures that did not originate from a third-party represent a baseline level of risk (a risk multiplier of 1.0).

• *Product type.* Product type reflects the contractual terms of the single-family mortgage exposure as of the origination date, with a 30-year fixed-rate mortgage and select adjustable-rate mortgages (including, for example, ARM 5/1 and ARM 7/1) representing a baseline level of risk (a risk multiplier of 1.0). Adjustable-rate loans with an initial one-year fixed-rate period followed by a rate that adjusts annually (ARM 1/1) are considered higher risk (a risk multiplier greater than 1.0), while shorter-term fixed-rate loans are considered lower risk (a risk multiplier less than 1.0).

• *Interest-only.* Interest-only reflects whether or not a loan has an interest-only payment feature during all or part of the loan term. Interest-only loans are generally considered higher risk (a risk multiplier greater than 1.0) than non interest-only loans due to their slower principal accumulation and an increased risk of default driven by the potential increase in principal payments at the expiration of the interest-only period.

• *Loan documentation.* Loan documentation refers to the completeness of the documentation used to underwrite the single-family mortgage exposure, as determined under the Guide of the Enterprise. Loans with low or no documentation have a high degree of uncertainty around a borrower's ability to pay, and are considered higher risk (a risk multiplier greater than 1.0) than loans with full documentation where a lender is able to verify the income, assets, and employment of a borrower.

• *Streamlined refinance.* Streamlined refinance is an indicator for a single-family mortgage exposure that was refinanced through a streamlined refinance program of an Enterprise, including HARP. These loans generally cannot be refinanced under normal circumstances due to high MTMLTV, and therefore would be considered higher risk (a risk multiplier greater than 1.0).

Risk factors that change dynamically and are updated as a single-family mortgage exposure seasons include characteristics such as loan age, current credit score, and delinquency or modification history. These risk factors are correlated with probability of default and/or loss given default, and are therefore important in projecting unexpected losses. The full set of dynamic single-family risk factors for which the proposed rule would require risk multipliers is:

• *DTI.* DTI is the ratio of the borrower's total monthly obligations (including housing expense) divided by the borrower's monthly income, as calculated under the Guide of the Enterprise. DTI affects and reflects a borrower's ability to make payments on a single-family mortgage exposure. A DTI between 25 percent and 40 percent would reflect a baseline level of risk (a risk multiplier of 1.0), and as a borrower's income rises relative to the borrower's debt obligations (a lower DTI), the single-family mortgage exposure would be considered lower risk (a risk multiplier less than 1.0). If a borrower's income falls relative to the borrower's debt obligations (a higher DTI), the single-family mortgage exposure would be considered higher risk (a risk multiplier greater than 1.0).

• *Subordination.* Subordination is the amount equal to the original unpaid principal balance of any second lien single-family mortgage exposure divided by the lesser of the appraised value or sale price of the property that secures the single-family mortgage exposure. Single-family mortgage exposures with no subordination would represent a baseline level of risk (a risk multiplier of 1.0), whereas single-family mortgage exposures with varying combinations of OLTV and subordination percentage would be generally considered higher risk (a risk multiplier greater than 1.0).

• *Loan age.* Loan age is the number of scheduled payment dates since the single-family mortgage exposure was originated. Older single-family mortgage exposures are considered less risky because in general as loans age the likelihood of events occurring that would trigger mortgage default decreases.

• *Cohort burnout.* Cohort burnout reflects the number of refinance opportunities since the single-family mortgage exposure's sixth scheduled payment date. A refinance opportunity is any calendar month in which the Primary Mortgage Market Survey (PMMS) rate for the month and year of the origination of the single-family mortgage exposure exceeds the PMMS rate for that calendar month by more than 50 basis points. Cohort burnout is an indicator that a borrower is less likely to refinance in the future given the opportunity to do so. Borrowers that demonstrate a lower propensity to refinance have higher credit risk, and a single-family mortgage exposure with a cohort burnout greater than zero would receive a risk multiplier greater than 1.0.

• *Refreshed credit score for RPLs and NPLs.* Refreshed credit scores refer to the most recently available credit scores as of the capital calculation date. In general, a credit score reflects the credit worthiness of a borrower, and a higher credit score implies lower risk and a lower risk multiplier. For RPLs, a refreshed credit score between 660 and 700 reflects a baseline level of risk (a risk multiplier of 1.0). For NPLs, a refreshed credit score between 640 and 700 represents a baseline level of risk (a risk multiplier of 1.0).

• *Payment change from modification.* For modified RPLs, the payment change from modification reflects the change in the monthly payment, as a percent of the original monthly payment, resulting from a modification. In general, higher payment reductions tend to reduce the likelihood of future default, so single-family mortgage exposures with higher payment reductions from modifications would have a lower capital requirement (a risk multiplier less than 1.0).

• *Previous maximum days past due.* For RPLs, previous maximum number of days past due reflects the maximum number of days a single-family mortgage exposure has been past due in the last 36 months. Days past due is positively correlated with the likelihood of future default. Therefore, a single-family mortgage exposure with a previous maximum delinquency between 0 and 59 days represent a baseline level of risk (a risk multiplier of 1.0), and a single-family mortgage exposure with a maximum delinquency greater than 59 days month would be considered higher risk (a risk multiplier greater than 1.0).

Not all risk multipliers would apply to every single-family segment, because the risk multipliers were estimated separately for each single-family segment. In cases where a risk factor did not influence the projected unexpected loss of single-family mortgage exposures in a single-family segment, or a risk factor did not apply at all (payment change from modification, in the performing loan segment, for example), there would be no risk multiplier for that risk factor in that single-family segment.

Question 42. Are the risk multipliers for single-family mortgage exposures appropriately formulated and calibrated

to require credit risk capital sufficient to ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle?

Question 43. Are there any adjustments, simplifications, or other refinements that FHFA should consider for the risk multipliers for single-family mortgage exposures?

Question 44. Should the combined risk multiplier for a single-family mortgage exposure be subject to a cap (*e.g.,* 3.0, as contemplated by the 2018 proposal)?

6. Credit Enhancement Multipliers

The Enterprises' charter acts generally require single-family mortgage exposures with an unpaid principal balance exceeding 80 percent of the value of the property to have one of three forms of loan-level credit enhancement at the time of acquisition. This requirement can be satisfied through:

- The seller retaining a participation of at least 10 percent in the single-family loan (participation agreement);
- The seller agreeing to repurchase or replace the single-family mortgage exposure, or reimburse losses, in the event of default (a recourse agreement); or
- A guarantee or insurance on the unpaid principal balance which is in excess of 80 percent LTV (mortgage insurance or MI). Mortgage insurance is the most common form of loan-level credit enhancement.

Loan-level credit enhancements sometimes provide credit enhancement beyond that required by the charter acts.

To account for the decrease in an Enterprise's exposure to unexpected loss on a single-family mortgage exposure subject to loan-level credit enhancement, an Enterprise would adjust the base risk weight using an adjusted credit enhancement multiplier. That adjusted credit enhancement multiplier would be based on a credit enhancement multiplier (CE multiplier) for the single-family mortgage exposure and then adjusted for the strength of the counterparty providing the loan-level credit enhancement. A smaller CE multiplier (and therefore a smaller adjusted credit enhancement multiplier) would correspond to a loan-level credit enhancement that transfers more of the projected unexpected loss to the counterparty and thus requires less credit risk capital of the Enterprise for the single-family mortgage exposure. For example, before any adjustment for counterparty strength, a CE multiplier of 0.65 for a single-family mortgage exposure subject to loan-level credit enhancement means that an Enterprise is exposed to 65 percent of the projected unexpected loss of the single-family mortgage exposure and that the counterparty providing the loan-level credit enhancement is projected to absorb, assuming it is an effective counterparty, the remaining 35 percent of the projected unexpected loss.

Participation agreements are rarely utilized by the Enterprises, and for reasons of simplicity, the proposed rule would not assign any benefit for these agreements (*i.e.,* a CE multiplier of 1.0).

Recourse agreements may be unlimited or limited. Full recourse agreements provide full coverage for the life of the loan, while partial recourse agreements provide partial coverage or have a limited duration. Because a counterparty would be responsible for all credit risk pursuant to a full recourse agreement, the single-family mortgage exposure would be assigned a CE multiplier of zero, subject to a counterparty haircut. For partial recourse agreements, the proposed rule would require an Enterprise to take into account the percent coverage, adjusted for the term of coverage, to determine the appropriate benefit.

The CE multiplier for a single-family mortgage exposure subject to mortgage insurance would vary based on the mortgage insurance coverage and loan characteristics, including (i) whether the mortgage insurance is cancellable or non-cancellable, (ii) whether the mortgage insurance coverage is charter-level or guide-level, and (iii) the loan characteristics, including OLTV, loan age, amortization term, and single-family segment.

- *Cancellation option.* Non-cancellable mortgage insurance (non-cancellable MI) provides coverage for the life of the single-family mortgage exposure. Cancellable mortgage insurance (cancellable MI) allows for the cancellation of coverage upon a borrower's request when the unpaid principal balance falls to 80 percent or less of the original property value, or automatic cancellation when either the loan balance falls below 78 percent of the original property value or the loan reaches the midpoint of the loan's amortization schedule, if the loan is current. Due to the longer period of coverage, non-cancellable MI provides more credit risk protection than cancellable MI. CE multipliers for non-cancellable MI therefore would be lower than CE multipliers for cancellable MI.
- *Coverage.* Charter-level coverage provides mortgage insurance that satisfies the minimum requirements of the Enterprises' charter acts. Guide-level coverage provides deeper coverage, roughly double the coverage provided by charter-level coverage. Therefore, the CE multipliers for guide-level coverage would be lower than the CE multipliers for charter-level coverage.
- *Original LTV.* Single-family mortgage exposures with higher OLTV generally have greater coverage levels than loans with lower OLTV. Higher coverage levels imply greater credit risk protection. Therefore, single-family mortgage exposures with higher OLTVs would have lower CE multipliers.
- *Amortization term.* For cancellable MI, single-family mortgage exposures with a 15- to 20-year amortization period might have cancellation triggered earlier than loans with a 30-year amortization period. Therefore, single-family mortgage exposures with longer amortization terms have a longer period of credit risk protection from mortgage insurance. Single-family mortgage exposures with a 30-year amortization period therefore have a lower CE multiplier than single-family mortgage exposures with a 15- to 20-year amortization period with cancellable mortgage insurance.
- *Single-family segment.* Mortgage insurance coverage on delinquent loans cannot be cancelled. Cancellation of mortgage insurance coverage on modified RPLs is based on the modified LTV and the modified amortization term, which are typically higher than the OLTV and the original amortization term. In both of these cases, the mortgage insurance coverage is extended for a longer period, resulting in greater credit risk protection, relative to mortgage insurance coverage on performing loans. Therefore, in the proposed rule, delinquent and modified loans would have a lower CE multiplier than performing loans.
- *Loan age.* Mortgage insurance cancellation is often triggered sooner for older loans than for younger loans. Therefore, older loans with cancellable MI generally have a shorter period of remaining mortgage insurance coverage and thus have less credit risk protection from mortgage insurance. Older single-family mortgage exposures with cancellable MI therefore have higher CE multipliers than younger single-family mortgage exposures.

The following Tables 15 through 19 present the CE multipliers for single-family mortgage exposures subject to mortgage insurance.

Table 15 contains CE multipliers for all single-family mortgage exposures subject to non-cancellable MI, except NPLs. The table differentiates CE multipliers by type of coverage (charter-level and guide-level), OLTV,

amortization term, and coverage percent.

Table 15: CE Multipliers for Single-family Mortgage Exposures Subject to Non-Cancellable MI (Except NPLs)

Amortization Term/ Coverage Type	OLTV	Coverage Percent	CE Multiplier
15/20 Year Amortizing Loan with Guide-level Coverage	>80%, <=85%	6%	0.846
	>85%, <=90%	12%	0.701
	>90%, <=95%	25%	0.408
	>95%, <=97%	35%	0.226
	>97%	35%	0.184
30 Year Amortizing Loan with Guide-level Coverage	>80%, <=85%	12%	0.706
	>85%, <=90%	25%	0.407
	>90%, <=95%	30%	0.312
	>95%, <=97%	35%	0.23
	>97%	35%	0.188
15/20 Year Amortizing Loan with Charter-level Coverage	>80%, <=85%	6%	0.846
	>85%, <=90%	12%	0.701
	>90%, <=95%	16%	0.612
	>95%, <=97%	18%	0.57
	>97%	20%	0.535
30 Year Amortizing Loan with Charter-level Coverage	>80%, <=85%	6%	0.85
	>85%, <=90%	12%	0.713
	>90%, <=95%	16%	0.627
	>95%, <=97%	18%	0.59
	>97%	20%	0.558

The proposed rule would have three sets of multipliers for cancellable MI. Table 16 contains CE multipliers for performing loans and non-modified RPLs subject to cancellable MI. The table differentiates CE multipliers by type of coverage (charter-level and guide-level), OLTV, coverage percent, amortization term, and loan age.

Table 16: CE Multipliers for Performing Loans and Non-Modified RPLs Subject to Cancellable MI

			Loan Age											
	OLTV	Coverage Percent	<= 5	>5, <= 12	>12, <= 24	>24, <= 36	>36, <= 48	>48, <= 60	> 60, <= 72	> 72, <= 84	> 84, <= 96	>96, <=108	>108, <=120	>120
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	25%	0.826	0.853	0.912	0.973	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.732	0.765	0.848	0.936	0.986	0.998	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	35%	0.630	0.673	0.762	0.865	0.945	0.980	0.996	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	12%	0.867	0.884	0.928	0.962	0.994	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	25%	0.551	0.584	0.627	0.679	0.785	0.893	0.950	0.986	0.998	1.000	1.000	1.000
Loan with	>90%, <=95%	30%	0.412	0.440	0.456	0.484	0.547	0.654	0.743	0.845	0.932	0.969	0.992	1.000
Guide-level	>95%, <=97%	35%	0.322	0.351	0.369	0.391	0.449	0.535	0.631	0.746	0.873	0.925	0.965	1.000
Coverage	>97%	35%	0.272	0.295	0.314	0.353	0.410	0.462	0.515	0.607	0.756	0.826	0.887	1.000
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.887	0.904	0.943	0.983	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.854	0.874	0.918	0.966	0.992	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	20%	0.788	0.810	0.859	0.922	0.969	0.989	0.998	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	6%	0.934	0.943	0.964	0.981	0.997	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.780	0.795	0.819	0.845	0.896	0.948	0.976	0.993	0.999	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.679	0.690	0.703	0.719	0.755	0.813	0.861	0.916	0.963	0.983	0.995	1.000
Charter-level	>95%, <=97%	18%	0.642	0.652	0.662	0.676	0.708	0.756	0.806	0.866	0.933	0.960	0.981	1.000
Coverage	>97%	20%	0.597	0.607	0.617	0.629	0.658	0.686	0.715	0.765	0.845	0.882	0.914	1.000

Table 17 contains CE multipliers for the modified RPLs with 30-year post-modification amortization and subject to cancellable MI. The table differentiates risk multipliers by type of coverage (charter-level and guide-level), OLTV, coverage percent, amortization term, and loan age.

Table 17: CE Multipliers for Modified RPLs with 30-Year Post-Modification Amortization Subject to Cancellable MI

			Months Since Last Modification											
	OLTV	Coverage Percent	<= 5	>5, <= 12	>12, <= 24	>24, <= 36	>36, <= 48	>48, <= 60	> 60, <= 72	> 72, <= 84	> 84, <= 96	>96, <=108	>108, <=120	>120
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	25%	0.826	0.853	0.912	0.973	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.732	0.765	0.848	0.936	0.986	0.998	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	35%	0.630	0.673	0.762	0.865	0.945	0.980	0.996	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	12%	0.867	0.906	0.978	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	25%	0.551	0.568	0.653	0.839	0.968	0.992	0.998	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	30%	0.412	0.426	0.470	0.601	0.794	0.889	0.951	0.981	0.992	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.322	0.337	0.380	0.492	0.689	0.810	0.899	0.945	0.965	1.000	1.000	1.000
Coverage	>97%	35%	0.272	0.284	0.334	0.436	0.561	0.682	0.791	0.857	0.887	1.000	1.000	1.000
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.887	0.904	0.943	0.983	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.854	0.874	0.918	0.966	0.992	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	20%	0.788	0.810	0.859	0.922	0.969	0.989	0.998	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	6%	0.934	0.954	0.989	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.780	0.788	0.832	0.922	0.985	0.996	0.999	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.679	0.685	0.711	0.784	0.889	0.940	0.973	0.989	0.995	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.642	0.647	0.669	0.732	0.836	0.900	0.947	0.971	0.981	1.000	1.000	1.000
Coverage	>97%	20%	0.597	0.602	0.623	0.672	0.740	0.805	0.864	0.898	0.914	1.000	1.000	1.000

Table 18 contains CE multipliers for modified RPLs with 40-year post-modification amortization and subject to cancellable MI. Here, CE multipliers are differentiated by type of coverage (charter-level and guide-level), OLTV, coverage percent, and loan age.

Table 18: CE Multipliers for Modified RPLs with 40-Year Post-Modification Amortization Subject to Cancellable MI

			Months Since Last Modification											
	OLTV	Coverage Percent	<= 5	>5, <= 12	>12, <= 24	>24, <= 36	>36, <= 48	>48, <= 60	> 60, <= 72	> 72, <= 84	> 84, <= 96	>96, <=108	>108, <=120	>120
15/20 Year	>80%, <=85%	6%	0.997	0.998	0.999	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.971	0.971	0.980	0.988	0.994	0.999	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	25%	0.826	0.853	0.853	0.853	0.883	0.912	0.943	0.973	0.996	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.732	0.765	0.765	0.765	0.807	0.848	0.892	0.936	0.986	0.998	1.000	1.000
Coverage	>97%	35%	0.630	0.673	0.673	0.673	0.718	0.762	0.814	0.865	0.945	0.980	0.996	1.000
30 Year	>80%, <=85%	12%	0.867	0.884	0.928	0.962	0.994	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	25%	0.551	0.584	0.627	0.679	0.785	0.893	0.950	0.986	0.998	1.000	1.000	1.000
Loan with	>90%, <=95%	30%	0.412	0.440	0.456	0.484	0.547	0.654	0.743	0.845	0.932	0.969	0.992	1.000
Guide-level	>95%, <=97%	35%	0.322	0.351	0.369	0.391	0.449	0.535	0.631	0.746	0.873	0.925	0.965	1.000
Coverage	>97%	35%	0.272	0.295	0.314	0.353	0.410	0.462	0.515	0.607	0.756	0.826	0.887	1.000
15/20 Year	>80%, <=85%	6%	0.997	0.998	0.998	0.999	0.998	0.998	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.971	0.971	0.980	0.988	0.994	0.999	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.887	0.904	0.904	0.904	0.924	0.943	0.963	0.983	0.997	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.854	0.874	0.874	0.874	0.896	0.918	0.942	0.966	0.992	0.999	1.000	1.000
Coverage	>97%	20%	0.788	0.810	0.810	0.810	0.835	0.859	0.891	0.922	0.969	0.989	0.998	1.000
30 Year	>80%, <=85%	6%	0.934	0.943	0.964	0.981	0.997	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.780	0.795	0.819	0.845	0.896	0.948	0.976	0.993	0.999	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.679	0.690	0.703	0.719	0.755	0.813	0.861	0.916	0.963	0.983	0.995	1.000
Charter-level	>95%, <=97%	18%	0.642	0.652	0.662	0.676	0.708	0.756	0.806	0.866	0.933	0.960	0.981	1.000
Coverage	>97%	20%	0.597	0.607	0.617	0.629	0.658	0.686	0.715	0.765	0.845	0.882	0.914	1.000

Table 19, contains proposed CE multipliers for NPLs. Mortgage insurance on delinquent loans cannot be cancelled; therefore, there is no differentiation between cancellable MI and non-cancellable MI for the NPL segment. The table differentiates CE multipliers by type of coverage (charter-level and guide-level), OLTV, amortization term, and coverage percent.

Table 19: CE Multipliers for NPLs Subject to Cancellable MI or Non-Cancellable MI

Original Amortization Term/Coverage Type	OLTV	Coverage Percent	CE Multiplier
15/20 Year Amortizing Loan with Guide-level Coverage	>80%, <=85%	6%	0.893
	>85%, <=90%	12%	0.803
	>90%, <=95%	25%	0.597
	>95%, <=97%	35%	0.478
	>97%	35%	0.461
30 Year Amortizing Loan with Guide-level Coverage	>80%, <=85%	12%	0.813
	>85%, <=90%	25%	0.618
	>90%, <=95%	30%	0.530
	>95%, <=97%	35%	0.490
	>97%	35%	0.505
15/20 Year Amortizing Loan with Charter-level Coverage	>80%, <=85%	6%	0.893
	>85%, <=90%	12%	0.803
	>90%, <=95%	16%	0.775
	>95%, <=97%	18%	0.678
	>97%	20%	0.663
30 Year Amortizing Loan with Charter-level Coverage	>80%, <=85%	6%	0.902
	>85%, <=90%	12%	0.835
	>90%, <=95%	16%	0.787
	>95%, <=97%	18%	0.765
	>97%	20%	0.760

Counterparty Credit Risk Adjustments

Sharing losses with counterparties through loan-level credit enhancement exposes an Enterprise to counterparty credit risk. To account for this exposure, the proposed rule would reduce the recognized benefits from loan-level credit enhancement to incorporate the risk that a counterparty is unable to perform its claim obligations. To accomplish this, the proposed rule would implement a counterparty haircut risk multiplier (CP haircut multiplier) to be applied to the CE multiplier. The CP haircut multiplier would take values from zero to one. A value of zero, the smallest haircut, would mean a counterparty is expected to fully perform its claim obligations, while a value of one, the largest haircut, would mean a counterparty is not expected to perform its claim obligations. A value between zero and one would mean a counterparty is expected to perform a portion of its claim obligations.

The CP haircut multiplier would depend on a number of factors that reflect counterparty risk. The three main factors are the creditworthiness of the counterparty, the counterparty's level of concentration in mortgage credit risk, and the counterparty's status as an approved insurer under an Enterprise's counterparty standards for private mortgage insurers.

The proposed rule would require an Enterprise to assign counterparty financial strength ratings using a provided rating framework. In assigning a rating, an Enterprise would assign the counterparty financial strength rating that most closely aligns to the assessment of the counterparty from the Enterprise's internal counterparty risk framework. Descriptions of the 8 different counterparty financial strength ratings are presented below in Table 20.

Table 20: Counterparty Financial Strength Ratings

Counterparty Rating	Description
1	The Enterprise has determined that the counterparty is expected to perform all of its contractual obligations under foreseeable adverse events.
2	The Enterprise has determined that there is negligible risk the counterparty may not be able to perform all of its contractual obligations under foreseeable adverse events.
3	The Enterprise has determined that there is a slight risk the counterparty might not be able to perform all of its contractual obligations under foreseeable adverse events.
4	The Enterprise has determined that foreseeable adverse events will have a greater impact on '4' rated counterparties than higher rated counterparties.
5	The Enterprise has determined that the counterparty might not perform all of its contractual obligations under foreseeable adverse events.
6	The Enterprise has determined that the counterparty is not expected to meet its contractual obligations under foreseeable adverse events.
7	The Enterprise has determined that the counterparty's ability to perform its contractual obligations is questionable.
8	The Enterprise has determined that the counterparty is in default on a material contractual obligation or is under a resolution proceeding or similar regulatory proceeding.

Similarly, the proposed rule would require an Enterprise to utilize its counterparty risk management framework to assign each counterparty a rating of ''not high'' or ''high'' to reflect the counterparty's concentration in mortgage credit risk. During the 2008 financial crisis, three out of the seven mortgage insurance companies were placed in run-off by their state regulators, and payments on the Enterprises' claims were deferred by the state regulators. This exposed the Enterprises to counterparty risk and potential financial losses. More generally, the 2008 financial crisis highlighted that counterparty risk can be amplified when the counterparty's credit exposure is highly correlated with an Enterprise's credit exposure.

Counterparties whose primary lines of business are more concentrated in mortgage credit risk have a higher probability to default on payment obligations when the mortgage default rate is high. The proposed rule would assign larger haircuts to counterparties with higher levels of mortgage credit risk concentration relative to diversified counterparties. An Enterprise would assess the level of mortgage credit risk concentration for each individual counterparty to determine whether the insurer is well diversified or whether it has a high concentration risk.

Finally, an Enterprise would determine whether a mortgage insurance counterparty is in compliance with its own private mortgage eligibility standards. If the counterparty satisfies the set of requirements to be approved to insure loans acquired by an Enterprise, the insurer would be assigned a smaller counterparty haircut.

To calculate the CP haircut, the proposed rule would use a modified version of the Basel framework's IRB approach. The modified version leverages the IRB approach to account for the creditworthiness of the counterparty, but makes changes to reflect the level of mortgage credit risk concentration and the counterparty's status as an approved insurer. The Basel IRB framework provides the ability to differentiate haircuts between counterparties with different levels of risk. The proposed rule would augment the IRB approach to capture risk across counterparties. In this way, the proposed adjustment would help capture wrong-way risk between the Enterprises and their counterparties.

In particular, the proposed approach would calculate the counterparty haircut by multiplying stress loss given default by the probability of default and a maturity adjustment for the asset. The following Figure 2 details the counterparty haircut calculation, as well as the parameterization of the proposed approach:

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Figure 2: Parameterization of the Single-family Counterparty Haircut Risk Multipliers

$$CP\ Haircut = LGD_{stress} * PD_{stress} * MA$$

where LGD_{stress} denotes stress loss given default, PD_{stress} is stress default probability, and MA is maturity adjustment. MA is calculated as follows:

$$MA = \left(\frac{1+(M-2.5)*b}{1-1.5*b}\right),$$

where
$b = [0.11852 - 0.05478 * \ln(PD)]^2$.

PD_{stress} is a function of expected probability of default PD, asset value correlation ρ, and an asset value correlation multiplier ($AVCM$). PD_{stress} is calculated as follows:

$$PD_{stress} = \left[N\left(\left(\frac{1}{\sqrt{1-AVCM*\rho}}\right) * G(PD) + \left(\sqrt{\frac{AVCM*\rho}{1-AVCM*\rho}}\right) * G(SCI)\right)\right],$$

$$\rho = \left[0.12 * \left(\frac{1-\exp(-50*PD)}{1-\exp(-50)}\right) + 0.24 * \left(1 - \frac{1-\exp(-50*PD)}{1-\exp(-50)}\right)\right]$$

where SCI is supervisory confidence interval, N(.) is the standard normal distribution, and G(.) is the inverse standard normal distribution.

Parameters	Proposed Values
LGD_{Stress}	45%
SCI	99.9%
Correlation function (ρ)	Basel (PD)
AVCM for High Mortgage Concentration Risk and non-Compliant Insurer	175%
AVCM for High Mortgage Concentration Risk and Compliant Insurer	150%
AVCM for Not High Mortgage Concentration Risk	125%
Maturity 30yr (M)	5
Maturity 15/20yr (M)	3.5
NPL Maturity (M)	1.5

As shown, stress loss given default (LGD) is calibrated to 45 percent according to the historic average stress severity rates. The maturity adjustment is calibrated to 5 years for 30-year products and to 3.5 years for 15- to 20-year single-family mortgage exposures to approximately reflect the average life of the assets. The expected probability of default (PD) is calculated using a historical 1-year PD matrix for all financial institutions.

As discussed above, counterparties with a lower concentration of mortgage credit risk and therefore a lower potential for wrong-way risk would be afforded a lower haircut relative to the counterparties with higher concentrations of mortgage credit risk. Similarly, approved insurers would be afforded a lower haircut relative to counterparties that do not satisfy an Enterprise's eligibility requirements. These differences would be captured through the asset valuation correlation risk multiplier, AVCM. An AVCM of 1.75 would be assigned those counterparties which are not an approved insurer and have high exposure to mortgage credit risk, an AVCM of 1.50 would be assigned those counterparties which are an approved insurer and have high exposure to mortgage credit risk, and an AVCM of 1.25 would be assigned to diversified counterparties which do not have a high exposure to mortgage credit risk. The parameters of the Basel IRB formula, including the AVCM, were augmented to best fit the internal counterparty credit risk haircuts developed by the Enterprises.

The proposed counterparty haircut would also differ by product type and segment. Performing loans, modified RPLs, and non-modified RPLs would be treated differently than NPLs, and within 30-year performing loans, modified RPLs, and non-modified RPLs would receive a larger haircut than 15- or 20-year single-family mortgage exposures.

The NPL segment represents a different level of counterparty risk relative to the performing and re-performing segments. Unlike performing loans, modified RPLs, and non-modified RPLs, an Enterprise would expect to submit claims for NPLs in the near future. The proposed rule would reduce the Basel framework's effective maturity from 5 (or 3.5 for 15/20Yr) to 1.5 for all loans in the NPL segment. The reduced effective maturity would lower counterparty haircuts on loans in the NPL segment.

The proposed rule would utilize the following CP haircut multipliers in Table 21.

Table 21: Single-Family CP Haircut Multipliers

	Mortgage Concentration Risk: Not High			High Mortgage Concentration Risk and Approved Insurer			High Mortgage Concentration Risk and Not an Approved Insurer		
Counterparty Rating	Performing Loans and RPLs		NPLs	Performing Loans and RPLs		NPLs	Performing Loans and RPLs		NPLs
	30 Year Product	20/15 Year Product		30 Year Product	20/15 Year Product		30 Year Product	20/15 Year Product	
1	1.8%	1.3%	0.6%	2.3%	1.6%	0.7%	2.8%	2.0%	0.9%
2	4.5%	3.5%	2.0%	5.9%	4.5%	2.6%	7.3%	5.6%	3.2%
3	5.2%	4.0%	2.4%	6.7%	5.1%	3.1%	8.3%	6.4%	3.9%
4	11.4%	9.5%	6.9%	14.2%	11.8%	8.5%	17.2%	14.3%	10.4%
5	14.8%	12.7%	9.9%	17.8%	15.2%	11.9%	20.9%	18.0%	14.0%
6	21.2%	19.1%	16.4%	24.0%	21.7%	18.6%	26.8%	24.2%	20.8%
7	40.0%	38.2%	35.7%	42.0%	40.1%	37.5%	43.7%	41.7%	39.0%
8	47.6%	46.6%	45.3%	47.6%	46.6%	45.3%	47.6%	46.6%	45.3%

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Finally, FHFA notes that the proposed rule's approach generally assigns more credit risk mitigation benefit to mortgage insurance and other loan-level credit enhancement than would be assigned under the U.S. banking framework, in particular with respect to those counterparties eligible to provide guarantees or insurance. FHFA is soliciting comment on the appropriateness of the differences between the proposed rule and the regulatory capital treatment of loan-level credit enhancement (including with respect to the U.S. banking regulators' stress test assumptions).

Question 45. Are the CE multipliers and CP haircut multipliers for single-family mortgage exposures appropriately formulated and calibrated to require credit risk capital sufficient to ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle?

Question 46. Are there any adjustments, simplifications, or other refinements that FHFA should consider for the CE multipliers and the CP haircut multipliers for single-family mortgage exposures?

Question 47. Are the differences between the proposed rule and the U.S. banking framework with respect to the credit risk mitigation benefit assigned to loan-level credit enhancement appropriate? Which, if any, specific aspects should be aligned?

7. Minimum Adjusted Risk Weight

The proposed rule would establish a floor on the adjusted risk weight for a single-family mortgage exposure equal to 15 percent. FHFA has determined that a minimum risk weight is necessary to ensure the safety and soundness of each Enterprise and that each Enterprise is positioned to fulfill its statutory mission across the economic cycle, including during a period of financial stress.

First, absent this 15 percent risk weight floor, the proposed rule's credit risk capital requirements as of the end of 2007 would not have been sufficient to absorb each Enterprise's crisis-era cumulative capital losses on its single-family book. Absent the 15 percent risk weight floor, Freddie Mac's estimated single-family credit risk capital requirement of $61 billion as of December 31, 2007 under the proposed rule would have been less than its crisis-era single-family cumulative capital losses. With the addition of the 15 percent risk weight floor, Freddie Mac's estimated single-family credit risk capital requirement would have exceeded its crisis-era single-family cumulative capital losses. Absent the 15 percent risk weight floor, Fannie Mae's estimated single-family credit risk capital requirement would have exceeded its crisis-era single-family cumulative capital losses, but by a relatively small amount. The addition of the 15 percent risk weight floor would have added approximately $8 billion to Fannie Mae's single-family credit risk capital requirement, clearing cumulative capital losses by a more comfortable margin.

Second, as discussed in Section IV.B, a risk weight floor is appropriate to mitigate certain risks and limitations associated with the underlying historical data and models used to calibrate the credit risk capital requirements. These risks and limitations are perhaps inherent to any methodology for calibrating granular credit risk capital requirements. In particular:

- A disproportionate share of the Enterprises' crisis-era credit losses arose from certain single-family mortgage exposures that are no longer eligible for acquisition by the Enterprises. The calibration of the credit risk capital requirements attributed a significant portion of the Enterprises' crisis-era losses to these products. The statistical methods used to allocate losses between borrower-related risk attributes and product-related risk attributes pose significant model risk. The sizing of the regulatory capital requirements also

must guard against potential future relaxation of underwriting standards and regulatory oversight over those underwriting standards.

• The Enterprises' crisis-era losses likely were mitigated to at least some extent by the unprecedented support by the federal government of the housing market and the economy and also by the declining interest rate environment of the period. There is therefore some risk that the risk-based capital requirements are not specifically calibrated to ensure each Enterprise would be regarded as a viable going concern following a future severe economic downturn that potentially entails more unexpected losses, whether because there is less or no Federal support of the economy, because there is less or no reduction in interest rates, or because of other causes.

• There are some potentially material risks to the Enterprises that are not assigned a risk-based capital requirement—for example, risks relating to uninsured or underinsured losses from flooding, earthquakes, or other natural disasters or radiological or biological hazards. There also is no risk-based capital requirement for the risks that climate change could pose to property values in some localities.

Third, comparison to the Basel and U.S. banking framework's credit risk capital requirements for similar exposures reinforces FHFA's view that a risk weight floor is appropriate to mitigate certain risks and limitations associated with the underlying historical data and models used to calibrate the credit risk capital requirements.[68] Absent this risk weight floor, as of September 30, 2019, the average pre-CRT net credit risk capital requirement on the Enterprises' single-family mortgage exposures (which reflects the benefit of private mortgage insurance but no adjustments for CRT) would have been 1.7 percent of unpaid principal balance, implying an average risk weight of 21 percent. With the 15 percent risk weight floor, the average requirement would have increased by approximately 0.5 percent of unpaid principal balance to an average risk weight of 26 percent. The U.S. banking framework generally assigns a 50 percent risk weight to these exposures to determine the credit risk capital requirement (equivalent to a 4.0 percent adjusted total capital requirement), while the current Basel framework generally assigns a 35 percent risk weight (equivalent to a 2.8 percent adjusted total capital requirement). Before the risk weight floor, before adjusting for CRT, and before adjusting for the capital buffers under the proposed rule and the Basel and U.S. banking frameworks, the Enterprises' credit risk capital requirements for single-family mortgage exposures would have been roughly 40 percent that of U.S. banking organizations and roughly 60 percent that of non-U.S. banking organizations.

The BCBS has finalized a more risk-sensitive set of risk weights for residential mortgage exposures, which are to be implemented by January 1, 2022. With those changes, the lowest standardized risk weight would be 20 percent for single-family residential mortgage loans with OLTVs less than 50 percent. The 21 percent average risk weight would have been about the same as this 20 percent minimum, notwithstanding the Enterprises having an average single-family OLTV of approximately 75 percent as of September 30, 2019.

These comparisons are complicated by the fact that the 21 percent and 26 percent average risk weights reflect loan-level credit enhancement and adjustments for MTMLTV. In particular, some meaningful portion of the gap currently between the credit risk capital requirements of the Enterprises and banking organizations under the proposed rule is due to the proposed rule's use of MTMLTV instead of OLTV, as under the U.S. banking framework, to assign credit risk capital requirements for mortgage exposures. On the one hand, the comparison illustrates how low risk-based capital requirements can become in a mark-to-market framework without prudential floors. On the other hand, in a different house price environment, perhaps after several years of declining house prices, the mark-to-market framework could have resulted in higher credit risk capital requirements than the Basel and U.S. banking frameworks.[69] Some of this gap might be expected to narrow were real property prices to move toward their long-term trend.

However, the current sizing of that gap between the credit risk capital requirements of banking organizations and the Enterprises under the proposed rule is an important consideration informing the enhancements to the 2018 proposal.

Reinforcing that point, the 21 percent average risk weight would have been about the same as the Basel framework's 20 percent risk weight assigned to exposures to sovereigns and central banks with ratings A+ to A− and claims on banks and corporates with ratings AAA to AA−.[70] The 21 percent average risk weight also would have been about the same as the 20 percent risk weight assigned under the U.S. banking framework to Enterprise-guaranteed MBS.

In light of these considerations, FHFA has determined that a minimum risk weight is necessary to ensure the safety and soundness of each Enterprise and that each Enterprise is positioned to fulfill its statutory mission during a period of financial stress. FHFA sized the 15 percent risk weight floor taking into consideration the 20 percent minimum risk weight contemplated by the amendments to the Basel framework for similar exposures, while also seeking to preserve the mortgage risk-sensitive framework by avoiding a risk weight floor that was, in effect, the binding constraint for a substantial portion of single-family mortgage exposures. FHFA is soliciting comment on the sizing of the risk weight floor, including whether to perhaps align the floor with the more risk-sensitive standardized risk weights assigned to similar exposures under the Basel framework.

Question 48. Is the minimum floor on the adjusted risk weight for a single-family mortgage exposure appropriately calibrated to mitigate model and related risks associated with the calibration of the underlying base risk weights and risk multipliers and to otherwise ensure each Enterprise operates in a safe and sound manner and is positioned to

[68] As discussed in Section IV.B.2, while the interest rate and funding risk profiles of the Enterprises and large banking organizations are different, that difference should not preclude comparisons of the credit risk capital requirements of the U.S. banking framework to the credit risk capital requirements of the Enterprises.

[69] In consideration that the U.S. banking and Basel frameworks utilize OLTVs, a comparison of the credit risk capital requirements for newly acquired single-family mortgage exposures under the 2018 proposal and the proposed rule provides the most direct comparison of credit risk capital requirements for new originations. Under the proposed rule, gross credit risk capital (prior to adjustments for credit enhancements and CRT) on newly originated (*i.e.,* loan age less than six months) single-family mortgage exposures as of September 30, 2019, with an average OLTV of 77 percent, would have been 3.8 percent of unpaid principal balance, implying an average risk weight of 47 percent. This compares to the 50 percent risk weight under the U.S. banking framework and 30 percent under the newest BCBS framework for loans with OLTV of 60 to 80 percent. After consideration of charter-required credit enhancements, the average net credit risk capital requirement on the Enterprises' newly originated single-family mortgage exposures as of September 30, 2019 would have been 2.8 percent of unpaid principal balance, implying an average risk weight of 36 percent. These risk weights would then decline to the extent house prices appreciate or increase to the extent house prices depreciate.

[70] *See* BCBS, *The Basel Framework,* paragraphs 20.4 and 20.14 at 181 and 185 (Dec. 15, 2019), available at *https://www.bis.org/basel_framework/index.htm?export=pdf.*

fulfill its statutory mission across the economic cycle?

Question 49. Should the minimum floor on the adjusted risk weight for a single-family mortgage exposure be decreased or increased, perhaps to align the minimum floor with the more risk-sensitive standardized risk weights assigned to similar exposures under the Basel framework (*e.g.,* 20 percent for a single-family residential mortgage loan with LTV at origination less than 50 percent)?

Question 50. Should the floor or other limit used to determine a single-family mortgage exposure's credit risk capital requirement be assessed against the base risk weight, the risk weight adjusted for the combined risk multipliers, or some other input used to determine that credit risk capital requirement?

B. Multifamily Mortgage Exposures

The standardized credit risk-weighted assets for each multifamily mortgage exposure would be determined using grids and risk multipliers that together would assign an exposure-specific risk weight based on the risk characteristics of the multifamily mortgage exposure. The resulting exposure-specific credit risk capital requirements generally would be similar to those in the 2018 proposal, subject to some simplifications and refinements. As discussed in Section VIII.B.3, the base risk weight generally would be a function of the multifamily mortgage exposure's MTMLTV, among other things. This base risk weight would then be adjusted based on other risk attributes, as discussed in Section VIII.B.5. Finally, as discussed in Section VIII.B.6, this adjusted risk weight would be subject to a minimum floor of 15 percent.

1. Multifamily Business Models

The proposed rule would apply to both Enterprises. However, when appropriate, the proposed rule would account for differences in the Enterprises' multifamily business models. These differences are evident, for example, when considering certain elements of the proposed rule related to credit risk transfer.

Multifamily mortgage exposures finance the acquisition and operation of commercial property collateral, typically apartment buildings. This section discusses multifamily mortgage exposures that take the form of whole loans and guarantees. Multifamily whole loans are those that an Enterprise keeps in its portfolio after acquisition. Multifamily guarantees are guarantees provided by an Enterprise of the payment of principal and interest payments to investors in MBS that have been issued by an Enterprise or another security issuer and are backed by previously acquired multifamily whole loans. Except to the extent an Enterprise transfers credit risk to third-party private investors, the credit risk from multifamily mortgage exposures is retained.

Fannie Mae's multifamily business historically has generally relied on the Delegated Underwriting and Servicing (DUS) program. The DUS program is a loss-sharing program that seeks to facilitate the implementation of common underwriting and servicing guidelines across a defined group of multifamily lenders. The number of multifamily lenders in the DUS program has historically ranged between 25 and 30 since the program's inception in the late 1980s. Fannie Mae typically transfers about one-third of the credit risk to those lenders, while retaining the remaining two-thirds of the credit risk and the counterparty risk associated with the DUS lender business relationship. The proportion of risk transferred to the lender may be more or less than one-third under a modified version of the typical DUS loss-sharing agreement. Fannie Mae has also reduced its exposure to the credit risk retained on DUS loans through programmatic ''back-end'' risk transfer activities, including reinsurance transactions (MCIRT) on multifamily mortgages with unpaid principal balances (UPBs) generally smaller than $30 million and note offerings (MCAS) on multifamily mortgages with UPBs generally greater than or equal to $30 million.

In contrast, Freddie Mac's multifamily model has focused on structured, multi-class securitizations. While Freddie Mac has a number of securitization programs for multifamily loans, the largest is the K-Deal program. Under the K-Deal program, which started in 2009, Freddie Mac sells a portion of unguaranteed bonds (mezzanine and subordinate), generally 10 to 15 percent, to private market participants. These sales typically result in a transfer of a high percentage of the credit risk. Freddie Mac generally assumes credit and market risk during the period between loan acquisition and securitization. After securitization, Freddie Mac generally retains a portion of the credit risk through ownership or guarantee of senior K-Deal tranches.

As of 2019, the differences between the two business models have become somewhat less pronounced. The proposed rule is tailored to each Enterprise's current lending practices, and would not preclude either from evolving its business model in the future.

Commenters on the 2018 proposal supported the inclusion of multifamily-specific credit risk capital requirements in order to capture the unique nature of each Enterprise's multifamily business and its particular risk drivers. In addition, commenters generally supported the structure and methodology of those proposed requirements. However, commenters also provided FHFA with critical feedback. Foremost among commenters' concerns was a perceived imbalance of the 2018 proposal as related to the Enterprises' different multifamily business models.

Commenters on the 2018 proposal stressed the importance of having a multifamily market with multiple viable and competing execution methods. To this end, some commenters raised concerns that the multifamily capital requirements in the 2018 proposal would disadvantage the loss sharing business model relative to the securitization business model, potentially to the point where the loss sharing model would no longer be viable. Commenters suggested that the 2018 proposal did not sufficiently account for certain benefits or risk mitigants of the loss sharing business model, particularly relative to the historical loss experience of Fannie Mae's DUS loans. Commenters also suggested that the 2018 proposal's different market risk treatment of multifamily mortgage exposures compared to Enterprise- or Ginnie Mae-backed MBS provided a further disadvantage to using a loss sharing model relative to a securitization model.

FHFA has considered the commenters' feedback and believes that the framework for calculating multifamily credit risk capital requirements under the 2018 proposal was generally appropriately tailored to accommodate both Enterprises' historical business practices.

However, FHFA has addressed the commenters' concerns in two ways. First, FHFA has revised the capital treatment for contractual claims to at-risk servicing rights and clarified the capital treatment for restricted liquidity in Fannie Mae's loss sharing model. The 2018 proposal would have afforded capital relief in multifamily loss sharing transactions by including restricted liquidity as collateral, and by reducing uncollateralized exposure to a counterparty by 50 percent if the Enterprise had a contractual claim to at-risk servicing rights. The proposed rule would retain this treatment of restricted liquidity, but would implement an

updated treatment of servicing rights such that in the counterparty haircut calculation, an Enterprise may reduce uncollateralized exposure by 1 year of estimated servicing revenue if the Enterprise has a contractual claim to the at-risk servicing rights.

Second, the proposed rule would introduce a prudential floor of 10 percent for the risk weight assigned to each tranche in a CRT. Such a floor would mitigate potential risks associated with CRT, including the structuring, recourse, and other risks associated with these securitizations.

2. Calibration Framework

As with single-family mortgage exposures, FHFA generally calibrated the base risk weights and risk multipliers for multifamily mortgage exposures to require credit risk capital sufficient to absorb the lifetime unexpected losses incurred on multifamily mortgage exposures experiencing a shock to property values similar to that observed during the 2008 financial crisis. The multifamily-specific stress scenarios used to generate the base risk weights and risk multipliers involve two parameters: (i) Net operating income (NOI), where NOI represents gross potential income (gross rents) net of vacancy and operating expenses, and (ii) property values.

Adverse economic conditions are generally accompanied by either a decrease in expected property revenue or an increase in perceived risk in the multifamily asset class, or both. A decrease in expected occupancy would lead to a decline in income generated by the property, or a lower NOI, while an increase in perceived risk would lead to an increase in the capitalization rate used to discount the NOI when assessing property value. A capitalization rate is defined as NOI divided by property value, so if NOI is held constant, an increase in the capitalization rate is directly related to a decrease in property values. For the purpose of the proposed rule, the multifamily-specific stress scenario assumes an NOI decline of 15 percent and a property value decline of 35 percent. This stress scenario is consistent with market conditions observed during the recent financial crisis, views from third-party market participants and data vendors, and assumptions behind the DFAST severely adverse scenario. Using this stress scenario, the multifamily grids and multipliers were calibrated based on estimates of unexpected losses from the Enterprises' internal models.

Question 51. Is the methodology used to calibrate the credit risk capital requirements for multifamily mortgage exposures appropriate to ensure that the exposure is backed by capital sufficient to absorb the lifetime unexpected losses incurred on multifamily mortgage exposures experiencing a shock to house prices similar to that observed during the 2008 financial crisis?

Question 52. What, if any, changes should FHFA consider to the methodology for calibrating credit risk capital requirements for multifamily mortgage exposures?

3. Base Risk Weights

The proposed rule would require an Enterprise to determine a base risk weight for each multifamily mortgage exposure using a set of two multifamily grids—one for multifamily mortgage exposures with fixed rates (multifamily FRMs), and one for multifamily mortgage exposures with adjustable rates (multifamily ARMs). A multifamily mortgage exposure that has both a fixed-rate period and an adjustable-rate period (hybrid loans) would be deemed a multifamily FRM during the fixed-rate period and a multifamily ARM during the adjustable-rate period.

The multifamily grids reflect two important multifamily mortgage exposure characteristics: Debt-service-coverage-ratio (DSCR) and MTMLTV. These two risk factors are key drivers of the future performance of multifamily mortgage exposures. DSCR is the ratio of property NOI to the loan payment. A DSCR greater than 1.0 indicates that the property generates funds sufficient to cover the loan obligation, while the opposite is true for a DSCR less than 1.0.

The multifamily grids are quantitatively identical to the multifamily grids in the 2018 proposal, except the credit risk capital requirements are presented as base risk weights relative to the 8.0 percent adjusted total capital requirement rather than as a percent of UPB. The multifamily FRM grid was populated using projected unexpected losses for a multifamily FRM with varying DSCR and MTMLTV combinations and the following risk characteristics: $10 million loan amount, 10-year balloon with a 30-year amortization period, non-interest-only, not a special product, and never been delinquent or modified. Similarly, the multifamily ARM grid was populated using projected unexpected losses for a multifamily ARM with varying DSCR and MTMLTV combinations and the following risk characteristics: 3.0 percent origination interest rate, $10 million loan amount, 10-year balloon with a 30-year amortization period, non-interest-only, not a special product, and never been delinquent or modified. Thus, each cell of the multifamily grid represents the average estimated difference, in basis points, between stress losses and expected losses for these synthetic loans with a DSCR and LTV in the tabulated ranges, converted to a risk weight.

For the first five scheduled payment dates after a multifamily mortgage exposure is acquired, an Enterprise would use the multifamily mortgage exposure's LTV at acquisition or origination to determine the base risk weight. After that point, an Enterprise would use the multifamily mortgage exposure's MTMLTV, which would be calculated by adjusting the acquisition LTV using a multifamily property value index or property value estimate based on net operating income and capitalization rate indices. Unlike single-family mortgage exposures, an Enterprise would not make a countercyclicality adjustment to a multifamily mortgage exposure's MTMLTV. For the purposes of the multifamily grids, LTV means either MTMLTV or LTV at acquisition or origination, and DSCR means either MTMDSCR or DSCR at acquisition, depending on the age of the multifamily mortgage exposure.

The multifamily grids for the multifamily FRM and multifamily ARM segments are presented in the following Table 22 and Table 23, respectively.

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Table 22: Multifamily FRM Base Risk Weights

		LTV									
		<=35%	> 35%, <=45%	> 45%, <=55%	> 55%, <=65%	> 65%, <=70%	> 70%, <=75%	> 75%, <=80%	> 80%, <=90%	> 90%, <=100%	>100%
DSCR	<1.00	52%	60%	76%	109%	125%	140%	153%	166%	172%	182%
	>= 1.00, <1.15	45%	52%	65%	92%	105%	118%	129%	140%	145%	153%
	>=1.15, < 1.20	40%	46%	58%	81%	93%	103%	112%	122%	127%	134%
	>=1.20, < 1.25	37%	42%	52%	72%	83%	92%	97%	107%	112%	119%
	>=1.25, < 1.30	33%	38%	47%	65%	74%	81%	86%	94%	99%	105%
	>=1.30, < 1.35	31%	35%	43%	59%	66%	71%	76%	84%	88%	93%
	>=1.35, < 1.50	29%	32%	39%	54%	59%	64%	69%	76%	80%	86%
	>=1.50, < 1.65	25%	27%	31%	39%	43%	47%	51%	57%	62%	70%
	>=1.65, < 1.80	22%	23%	26%	31%	34%	37%	41%	47%	53%	61%
	>=1.80, < 1.95	16%	17%	19%	24%	26%	29%	32%	41%	47%	56%
	>=1.95, < 2.10	15%	15%	16%	20%	23%	26%	28%	37%	44%	54%
	>=2.10, < 2.25	13%	14%	15%	19%	21%	24%	25%	36%	42%	53%
	>=2.25	13%	13%	14%	18%	20%	23%	24%	35%	42%	52%

Table 23: Multifamily ARM Base Risk Weights

		LTV									
		<=35%	> 35%, <=45%	> 45%, <=55%	> 55%, <=65%	> 65%, <=70%	> 70%, <=75%	> 75%, <=80%	> 80%, <=90%	> 90%, <=100%	>100%
DSCR	<1.00	81%	86%	93%	133%	153%	172%	189%	211%	229%	255%
	>=1.00, <1.25	71%	75%	80%	113%	129%	145%	158%	178%	193%	215%
	>=1.25, < 1.30	63%	67%	71%	100%	114%	127%	138%	156%	169%	188%
	>=1.30, < 1.36	57%	60%	63%	88%	101%	113%	120%	136%	149%	168%
	>=1.36, < 1.42	51%	54%	57%	79%	90%	99%	106%	120%	131%	148%
	>=1.42, < 1.47	45%	49%	51%	71%	80%	86%	93%	107%	116%	131%
	>=1.47, < 1.53	37%	42%	47%	64%	71%	77%	84%	97%	106%	120%
	>=1.53, < 1.70	30%	33%	37%	47%	51%	56%	63%	72%	83%	98%
	>=1.70, < 1.87	23%	26%	30%	36%	40%	45%	51%	60%	70%	86%
	>=1.87, < 2.03	19%	21%	22%	28%	31%	35%	40%	52%	62%	79%
	>=2.03, < 2.21	17%	18%	19%	24%	26%	31%	34%	47%	58%	75%
	>=2.21, < 2.38	16%	17%	17%	22%	24%	28%	31%	45%	56%	73%
	>=2.38	16%	16%	16%	21%	23%	27%	30%	44%	55%	72%

In both the multifamily FRM and multifamily ARM grids, the base risk weight would increase as DSCR decreases (moving toward the top of a grid) and as MTMLTV increases (moving toward the right of the grid). Thus, an Enterprise would generally be required to hold more credit risk capital for a higher-risk multifamily mortgage exposure with a low DSCR and a high MTMLTV (the upper-right corner of each grid) than for a lower-risk multifamily mortgage exposure with a high DSCR and a low MTMLTV (the lower-left corner of each grid). The DSCR and MTMLTV breakpoints and ranges represented along the dimensions of the multifamily grids combine to form granular buckets without sacrificing simplicity or mortgage risk sensitivity.

An Enterprise also would use the multifamily grids to calculate the base risk weight for interest-only loans. Interest-only loans allow for payment of interest without any principal amortization during all or part of the loan term, potentially creating increased amortization risk and additional leveraging incentives for the borrower. To partially capture these increased risks, the proposed rule would require an Enterprise to use an interest-only loan's fully amortized payment to calculate DSCR during the interest-only period in order to calculate the multifamily mortgage exposure's base risk weight. That is, an Enterprise would assign each multifamily interest-only mortgage exposure into a multifamily segment, either multifamily FRM or multifamily ARM, and calculate the base risk capital requirement using the corresponding segment-specific multifamily grid, where the DSCR is based on the interest-only loan's fully amortized payment.

FHFA received a number of comments on the multifamily grids in the 2018 proposal. Some commenters stated that the multifamily credit risk capital requirements in the 2018 proposal were too high given the Enterprises' historical multifamily losses. Similarly, some commenters suggested that the credit risk capital required under the 2018 proposal's multifamily grids might be appropriate if FHFA included revenue as a source of

loss-absorbing capital, or if FHFA benchmarked its credit risk capital requirements to those published by the National Association of Insurance Commissioners (NAIC), which include revenue offsets.

After consideration of the commenters' suggestions, FHFA believes the calibration of the multifamily grids is appropriate. The base risk weights in the multifamily grids represent estimates of lifetime losses (net of expected losses), so one should expect the base risk weights in the multifamily grids to be larger than observed losses experienced during the recent financial crisis. As discussed in Section V.B.1, consistent with the 2018 proposal, neither the statutory definitions nor the supplemental definitions of regulatory capital include a measure of future guarantee fees or other future revenues.

One commenter recommended FHFA add granularity to the multifamily grids, particularly in the high MTMLTV ranges. FHFA notes that the multifamily grids were constructed using synthetic loans at acquisition, so data in the high MTMLTV range is limited due to the Enterprises' acquisition history. Adding granularity to the outer ranges of the multifamily grids would necessitate further assumptions and extrapolations.

Question 53. Are the base risk weights for multifamily mortgage exposures appropriately formulated and calibrated to require credit risk capital sufficient to ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle?

Question 54. Are there any adjustments, simplifications, or other refinements that FHFA should consider for the base risk weights for multifamily mortgage exposures?

Question 55. Should the base risk weight for a multifamily mortgage exposure be assigned based on OLTV or MTMLTV of the multifamily mortgage exposure, or perhaps on the LTV of the multifamily mortgage exposure based on the original purchase price and after adjusting for any paydowns of the original principal balance?

Question 56. What steps, including any process for soliciting public comment on an ongoing basis, should FHFA take to ensure that the multifamily grids are updated from time to time as market conditions evolve?

4. Countercyclical Adjustment

In contrast to the single-family framework, the proposed multifamily credit risk capital framework does not include an adjustment to mitigate the pro-cyclicality of the aggregate risk-based capital requirements, although FHFA believes such an adjustment could be merited. The proposed single-family countercyclical adjustment is based on an estimated long-term trend in FHFA's inflation-adjusted all-transactions HPI. FHFA does not currently produce a comparable multifamily series, and it is unclear whether there is sufficient data from which to develop a reliable long-term trend in multifamily property values. FHFA is aware of the pro-cyclicality that would be introduced by its multifamily credit risk capital framework, and FHFA could see considerable merit to a countercyclical or similar adjustment. FHFA is soliciting comments on options and available data for a countercyclical adjustment to the credit risk capital requirements for multifamily mortgage exposures.

Question 57. What approach, if any, should FHFA consider to mitigate the pro-cyclicality of the credit risk capital requirements for multifamily mortgage exposures?

5. Risk Multipliers

As with single-family mortgage exposures, the proposed rule would require an Enterprise to adjust the base risk weight for each multifamily mortgage exposure to account for additional loan characteristics using a set of multifamily-specific risk multipliers. The risk multipliers would refine the base risk weights to account for risk factors beyond the primary risk factors reflected in the multifamily grids, and for variations in secondary risk factors not captured in the risk profiles of the synthetic loans used to calibrate the multifamily grids. The adjusted risk weight for a multifamily mortgage exposure would be the product of the base risk weight and the combined risk multiplier.

The risk multipliers represent common loan characteristics that increase or decrease the projected unexpected losses of a multifamily mortgage exposure. Although the specified risk characteristics are not exhaustive, they capture key commercial real estate loan performance drivers, and are commonly used in commercial real estate loan underwriting and rating.

The risk multipliers are substantially the same as those of the 2018 proposal, with some simplifications and refinements. In particular, FHFA enhanced the risk multiplier for loan size to simultaneously make it more granular and less prone to large jumps in credit risk capital from moving from one bracket to the next. FHFA also removed the risk multiplier for multifamily loans with a government subsidy. The multifamily risk multipliers are presented below in Table 24.

Table 24: Multifamily Risk Multipliers

Risk Factor	Value or Range	Risk Multiplier
Payment Performance	Performing	1.00
	Delinquent more than 60 days	1.10
	Re-performing (without modification)	1.10
	Modified	1.20
Interest-only	No	1.00
	Yes (during the interest-only period)	1.10
Loan Term	Loan term <= 1Yr	0.70
	1Yr < loan term <= 2Yr	0.75
	2Yr < loan term <= 3Yr	0.80
	3Yr < loan term <= 4Yr	0.85
	4Yr < loan term <= 5Yr	0.90
	5Yr < loan term <= 7Yr	0.95
	7Yr < loan term <= 10Yr	1.00
	Loan term > 10Yr	1.15
Original Amortization Term	Original amortization term <= 20Yr	0.70
	20Yr < original amortization term <= 25Yr	0.80
	25Yr < original amortization term <= 30Yr	1.00
	Original amortization term > 30Yr	1.10
Original Loan Size (in millions)	Loan size <= $2m	1.45
	$2m < loan size <= $3m	1.35
	$3m < loan size <= $4m	1.25
	$4m < loan size <= $5m	1.15
	$5m < loan size <= $6m	1.08
	$6m < loan size <= $7m	1.02
	$7m < loan size <= $8m	0.96
	$8m < loan size <= $9m	0.92
	$9m < loan size <= $10m	0.88
	$10m < loan size <= $11m	0.86
	$11m < loan size <= $12m	0.84
	$12m < loan size <= $13m	0.82
	$13m < loan size <= $14m	0.81
	$14m < loan size <= $15m	0.81
	$15m < loan size <= $16m	0.80
	$16m < loan size <= $17m	0.80
	$17m < loan size <= $18m	0.80
	$18m < loan size <= $19m	0.80
	$19m < loan size <= $20m	0.80
	$20m < loan size <= $21m	0.80
	$21m < loan size <= $22m	0.80
	$22m < loan size <= $23m	0.79
	$23m < loan size <= $24m	0.78
	$24m < loan size <= $25m	0.76
	Loan size >$25m	0.70
Special Products	Not a special product	1.00
	Student housing	1.15
	Rehab/value-add/lease-up	1.25

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As with the single-family risk multipliers, each risk factor could take multiple values, and each value or range of values would have a risk multiplier associated with it. For any particular multifamily mortgage exposure, each risk multiplier could take a value of 1.0, above 1.0, or below 1.0. A risk multiplier of 1.0 would imply that the

risk factor value for a multifamily mortgage exposure is similar to, or in a certain range of, the particular risk characteristic found in the multifamily segment's synthetic loan. A risk multiplier value above 1.0 would be assigned to a risk factor value that represents a riskier characteristic than the one found in the multifamily segment's synthetic loan, while a risk multiplier value below 1.0 would be assigned to a risk factor value that represents a less risky characteristic than the one found in the multifamily segment's synthetic loan. Finally, the risk multipliers would be multiplicative, so each multifamily mortgage exposure in a multifamily segment would receive a risk multiplier for every risk factor pertinent to that multifamily segment, even if the risk multiplier is 1.0 (implying no change to the base risk weight for that risk factor). The total combined risk multiplier for a multifamily mortgage exposure would be, in general, the product of all individual risk multipliers pertinent to the multifamily segment in which the exposure is classified. The proposed multifamily risk multipliers are:

• *Payment performance.* The payment performance risk multiplier would capture risks associated with historical payment performance. Multifamily mortgage exposures would be assigned one of four values: Performing, delinquent, re-performing (without modification), and modified. A performing loan would be one that has never been delinquent in its payments; a delinquent loan would be one that is 60 days or more past due; a re-performing loan would be one that is current in its payments, but has been delinquent in its payments at least once since origination and has cured without modification; and a modified loan would be one that is current in its payments, but has been modified at least once since origination or has gone through a workout plan. An Enterprise would be required to hold more credit risk capital for multifamily mortgage exposures that have a delinquency and/or modification history than for those that do not. Specifically, performing multifamily mortgage exposures would receive a risk multiplier of 1.0, while delinquent, re-performing, and modified exposures would receive a risk multiplier greater than 1.0.

• *Interest-only.* The interest-only risk multiplier would capture risks associated with interest-only exposures during the interest-only period. Interest-only loans are generally riskier than non-interest-only loans, all else equal, and the proposed rule would partially account for this increased amortization and leveraging risk by requiring an Enterprise to use its fully amortized payments to calculate DSCR. Using amortized payment would lower the DSCR, resulting in a higher credit risk capital requirement all else equal. In addition, the proposed rule would further account for interest-only risk with a risk multiplier. Specifically, non-interest-only exposures would receive a risk multiplier of 1.0, while interest-only exposures would receive a risk multiplier of 1.1 during the interest-only period.

• *Loan term.* The loan term risk multiplier would capture risks associated with the remaining term of a multifamily mortgage exposure. The majority of the Enterprises' multifamily mortgage exposures have a loan term of five years or longer, and in general, multifamily mortgage exposures with a shorter term are less risky than those with a longer term. Multifamily mortgage exposures with shorter loan terms carry relatively less uncertainty about eventual changes in property performance and future refinancing opportunities, while multifamily mortgage exposures with longer loan terms carry relatively higher uncertainty about the borrower's ability to refinance in the future. In the proposed rule, a 10-year loan term would be considered a baseline risk, so exposures with a remaining loan term between 7 years and 10 years would receive a risk multiplier of 1.0. The 7- to-10-year range represents a conservative range FHFA believes is appropriate. Multifamily mortgage exposures with remaining loan terms shorter than 7 years would receive risk multipliers less than 1.0, and multifamily mortgage exposures with remaining loan terms longer than 10 years would receive a risk multiplier greater than 1.0. At origination, the remaining loan term would equal the original loan term.

• *Original amortization term.* The amortization term risk multiplier would capture risks associated with the amortization term of a multifamily mortgage exposure. In general, a multifamily mortgage exposure with a shorter repayment period faces less risk of a borrower defaulting on its payments than does a multifamily mortgage exposure with a longer repayment period. The most common amortization term for multifamily mortgage exposures is 30 years, even though most have an original loan term with a balloon payment due earlier, often in 10 years. While amortization terms can potentially take any value, FHFA believes that given the high number of multifamily mortgage exposures with an amortization term between 25 and 30 years, the values represented in the risk multiplier table would sufficiently account for the differences in risk associated with amortization term. In the proposed rule, a 30-year amortization term would represent a baseline level of risk, and a multifamily mortgage exposure with a 30-year amortization term would receive a risk multiplier of 1.0. A multifamily mortgage exposure with an amortization term less than 25 years would receive a risk multiplier less than 1.0, while a multifamily mortgage exposure with an amortization term greater than 30 years would receive a risk multiplier of 1.1.

• *Original loan size.* Multifamily mortgage exposures with larger original loan balances are generally considered less risky than those with smaller balances, because larger balances are commonly associated with larger investors with more access to capital and experience. In addition, the collateral securing a large loan is often a larger, more established, and/or newer property. Alternatively, multifamily mortgage exposures with smaller original balances are often associated with investors with limited funding and smaller, less competitive properties. An original loan size of $10 million would represent a baseline level of risk, and multifamily mortgage exposures meeting that criterion would receive a risk multiplier of 1.0. In a change from the 2018 proposal, and in response to commenters that recommended FHFA add granularity to the loan size risk multiplier in part to avoid large jumps in the credit risk capital requirement when moving from one risk multiplier bucket to the next, multifamily mortgage exposures above or below $10 million would receive a loan size risk multiplier that changes in $1 million increments between $3 million and $25 million. The loan size risk multipliers in the proposed rule were calculated by extrapolating between the loan size risk multiplier breakpoints in the 2018 proposal. Multifamily mortgage exposures with an original loan balance greater than $10 million would receive a risk multiplier less than 1.0, and multifamily mortgage exposures with an original loan balance less than $10 million would receive a risk multiplier greater than 1.0.

• *Special products.* The multifamily special products that would receive a multifamily risk multiplier were selected for their importance based on FHFA staff analysis and expertise, pursuant to discussions with the Enterprises and their collective multifamily business experiences, and in recognition of commenter feedback on the 2018 proposal. The special

products, discussed individually below, are student housing and rehab/value-add/lease-up loans.

Student housing loans provide financing for the operation of apartment buildings for college students. The rental periods for units in these properties often correspond to the institution's academic calendar, so the properties have a high annual turnover of occupants. Student renters, by and large, might not be as careful with the use and maintenance of the rental units as more mature households. As a result, apartment buildings focusing on student housing customarily have more volatile occupancy and less predictable maintenance expenses. In the proposed rule, this would imply higher risk, which leads to a risk multiplier greater than 1.0 for student housing exposures.

The second type of special product includes loans issued to finance rehab/value-add/lease-up projects. Rehab and value-add projects refer to types of renovations, where a rehab project is a like-for-like renovation and a value-add project is one that increases a property's value by adding a new feature to an existing property or converts one component of a property into a more marketable feature, such as converting unused storage units into a fitness center. A lease-up property is one that is recently constructed and still in the process of securing tenants for occupancy. Recently built properties, and those subject to improvements, typically require more intense marketing efforts in the early stages of property operation. It often takes longer for these properties to reach and stabilize at reasonable occupancy levels. These factors elevate the property's risk, which in the proposed rule would lead to a risk multiplier greater than 1.0 for exposures backing these properties.

Although not requiring a risk multiplier, a special type of multifamily mortgage exposure contemplated by the proposed rule is a supplemental loan. Supplemental loans refer to multifamily loans issued to a borrower for a property against which the borrower has previously received a loan. There can be more than one supplemental loan for any borrower/property combination. These loans, by definition, increase loan balances, which lead to higher LTVs and could lead to lower DSCRs, which could lead to higher risk. Therefore, the proposed rule would require an Enterprise to account for this potentially higher risk by recalculating DSCRs and LTVs for the original and supplemental loans using combined loan balances and income/payment information. The Enterprise would calculate risk weights for the original and supplemental loans using the aggregate LTV and DSCR and the separate loan characteristics of each loan, with the exception of the loan size risk multiplier which would be determined using the aggregate UPB of the original loan and all supplemental loans.

In a change from the 2018 proposal, the proposed rule would not include a risk multiplier for multifamily mortgage exposures with a government subsidy. FHFA sought feedback on the government subsidy risk multiplier in the 2018 proposal, and commenters recommended FHFA consider implementing the risk multiplier based on the level of subsidy. FHFA analyzed the available performance data for government-subsidized multifamily mortgage exposures, due to the relatively low instances of loss across multifamily loan programs that include a government subsidy, FHFA determined it was not feasible to accurately calibrate thresholds at which the level of government subsidy impacted the probability of loss occurring or the severity of that loss. As a result of that analysis, FHFA has determined to take the approach of eliminating the government subsidy risk multiplier from the proposed rule to avoid instances where a loan with a limited subsidy would qualify for the risk multiplier.

FHFA received several additional comments on the multifamily risk multipliers in the 2018 proposal. Two commenters recommended FHFA add granularity to the interest-only risk multiplier, with one commenter suggesting gradations be added to the risk multiplier for the length of the interest-only term, or at least a differentiation for a partial interest-only versus a full interest-only. FHFA is proposing the interest-only risk multiplier as in the 2018 proposal because FHFA continues to believe in the validity of the analysis supporting the interest-only risk multiplier. In that analysis, historical data with which to calibrate an interest-only risk multiplier by interest-only term length was limited, and feedback from the industry participants with whom FHFA consulted disagreed as to the nature of a more granular risk multiplier. Another commenter recommended FHFA add risk multipliers for additional product types such as construction and mod-rehab loans, for loan features such as cross-collateralization, and for non-financial structural terms such as borrower covenants. While FHFA acknowledges different product types and features may represent differential levels of risk, the risk multipliers were selected in part due to data availability, and in part because FHFA concluded that the risk multipliers would represent a simple and transparent way to adjust the base capital requirements for the most important multifamily risks faced by an Enterprise in a regulatory capital framework.

Question 58. Are the risk multipliers for multifamily mortgage exposures appropriately formulated and calibrated to require credit risk capital sufficient to ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle?

Question 59. Are there any adjustments, simplifications, or other refinements that FHFA should consider for the risk multipliers for multifamily exposures?

Question 60. Should the combined risk multiplier for a multifamily mortgage exposure be subject to a floor or a cap?

6. Minimum Adjusted Risk Weight

The 2018 proposal acknowledged that combinations of overlapping characteristics could potentially result in unduly low credit risk capital requirements for certain multifamily mortgage exposures. Under the 2018 proposal, the Enterprises were required to impose a floor of 0.5 to any combined multifamily risk multiplier. FHFA has taken a somewhat different approach in the proposed rule. As for single-family mortgage exposures, the proposed rule would establish a floor on the adjusted risk weight for a multifamily mortgage exposure equal to 15 percent.

First, as discussed in Section IV.B, a risk weight floor is appropriate to mitigate certain risks and limitations associated with the underlying historical data and models. These risks include the potential that crisis-era losses were mitigated by the unprecedented federal government support of the economy and the impact of lower interest rates. In addition, they include potentially material risks that are not assigned a risk-based requirement, for example those that might arise from natural or other disasters.

Second, comparison to the U.S. banking framework's credit risk capital requirements for similar exposures contributed to FHFA's view that a risk weight floor is appropriate, while also raising important questions as to the sizing of that risk weight floor. As of September 30, 2019, with the proposed 15 percent risk weight floor, the average pre-CRT net credit risk capital requirement on the Enterprises' multifamily mortgage exposures would have been 4.1 percent of unpaid

principal balance, implying an average risk weight of 51 percent. That 51 percent average risk weight is only modestly greater than the 50 percent average risk weight without the floor. The U.S. banking framework generally assigns a 100 percent risk weight to multifamily mortgage exposures to determine the credit risk capital requirement (equivalent to an 8.0 percent adjusted total capital requirement), although some multifamily mortgage exposures are eligible for a 50 percent risk weight. Before adjusting for the capital buffers under the proposed rule and the U.S. banking framework, the Enterprises' credit risk capital requirements for multifamily mortgage exposures would have been roughly half that of the default risk weight under the U.S. banking framework.

This comparison is complicated by the fact that the 51 percent average risk weight reflects adjustments for MTMLTV. In particular, some meaningful portion of the gap currently between the credit risk capital requirements of the Enterprises and U.S. banking organizations under the proposed rule is due to the proposed rule's use of MTMLTV instead of OLTV, as under the U.S. banking framework, to assign credit risk capital requirements for mortgage exposures. In a different economic environment, perhaps after several years of declining multifamily property prices, the mark-to-market framework could have resulted in higher credit risk capital requirements than the U.S. banking framework.[71]

However, the current gap between the credit risk capital requirements of U.S. banking organizations and the Enterprises under the proposed rule is still informative to the calibration of an appropriate risk weight floor. FHFA sized the 15 percent risk weight floor to mirror the risk weight floor for single-family mortgage exposures. FHFA is soliciting comment on that sizing, in particular whether a multifamily-specific risk-weight floor might be more appropriate.

Question 61. Is the minimum floor on the adjusted risk weight for a multifamily mortgage exposure appropriately calibrated to mitigate model and related risks associated with the calibration of the underlying base risk weights and risk multipliers and to otherwise ensure each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission across the economic cycle?

Question 62. Should the minimum floor on the adjusted risk weight for a multifamily mortgage exposure be decreased or increased, perhaps to align the minimum floor with the more risk-sensitive standardized risk weights assigned to similar exposures under the Basel or U.S. banking framework?

Question 63. Should the risk weight floor for a multifamily mortgage exposure be different from the risk weight floor for a single-family mortgage exposure?

Question 64. Should the floor or other limit used to determine a multifamily mortgage exposure's credit risk capital requirement be assessed against the base risk weight, the risk weight adjusted for the risk multipliers, or some other input used to determine that credit risk capital requirement?

C. CRT and Other Securitization Exposures

1. Background

a. PLS and CMBS Investments

The Enterprises have exposure to PLS and commercial mortgage-backed securities (CMBS) to the extent that they invest in PLS or CMBS or guarantee PLS or CMBS that have been re-securitized by an Enterprise. In the lead up to the 2008 financial crisis, each Enterprise substantially increased its investments in PLS, and those PLS investments were a source of a meaningful portion of each Enterprise's initial crisis-era capital exhaustion. The Enterprises have not acquired material amounts of PLS since 2008. However, the Enterprises do retain some relatively small amount of legacy PLS, and each Enterprise might acquire PLS in the future, subject to any regulations that FHFA may prescribe. The proposed rule therefore contemplates regulatory capital requirements for the credit, spread, and operational risk posed by these PLS and CMBS exposures.

b. Single-Family CRT

CRT transactions provide credit protection beyond that provided by loan-level credit enhancements. CRT can be viewed as an Enterprise paying a portion of its guarantee fee as a cost of transferring credit risk to private sector investors. To date, single-family CRT have included transferring expected and unexpected losses. The Enterprises have developed a variety of single-family CRT product types, including structured debt issuances (known as Structured Agency Credit Risk (STACR) for Freddie Mac and Connecticut Avenue Securities (CAS) for Fannie Mae), insurance/reinsurance transactions (known as Agency Credit Insurance Structure (ACIS) for Freddie Mac and Credit Insurance Risk Transfer (CIRT) for Fannie Mae), and senior-subordinate securities.

The STACR and CAS securities account for the majority of single-family CRT to date. These securities are issued as notes from a trust and do not constitute the sale of mortgage loans or their cash flows. Instead, STACR and CAS are considered to be synthetic notes because their cash flows are determined by the credit risk performance of a notional reference pool of mortgage loans. For the STACR and CAS transactions, the Enterprises receive the proceeds of the note issuance at the time of sale to investors. The Enterprises pay interest to investors on a monthly basis and allocate principal to investors based on the repayment and credit performance of the single-family mortgage exposures in the underlying reference pool. Investors ultimately receive a return of their principal, less any covered credit losses. The transactions are fully collateralized since investors pay for the notes in full. Thus, the Enterprises do not bear any counterparty credit risk on debt transactions.

Pool-level reinsurance transactions such as CIRT and ACIS, which generally cover hundreds or thousands of single-family mortgage loans, are considered CRT. Pool insurance transactions are typically structured with an aggregated loss amount. The Enterprises, as policy holders, typically retain some portion (or all) of the first loss. The cost of pool-level insurance is generally paid by the Enterprise, not the lender or borrower. In general, an Enterprise may bear counterparty credit risk because insurance transactions are not fully collateralized. This counterparty credit risk may be somewhat mitigated, however, by conducting transactions with diversified reinsurers that have books of business that may be less correlated with the Enterprises or with insurers in compliance with an Enterprise's insurer eligibility standards.

In a senior-subordinate (senior-sub) securitization, the Enterprise sells a

[71] In consideration that the U.S. banking framework utilizes OLTVs, a comparison of the credit risk capital requirements for newly acquired multifamily mortgage exposures under the 2018 proposal and the proposed rule provides the most direct comparison of credit risk capital requirements for new originations. Under the proposed rule, gross credit risk capital (prior to adjustments for CRT) on newly acquired multifamily mortgage exposures as of September 30, 2019, with an average MTMLTV of approximately 67 percent, would have been approximately 5.3 percent of unpaid principal balance, implying an average risk weight of 67 percent. This compares to the 100 percent default risk weight generally applicable under the U.S. banking framework. These risk weights would then decline to the extent multifamily property prices appreciate or increase to the extent multifamily property prices depreciate.

pool of single-family mortgage exposures to a trust that securitizes cash flows from the pool into several tranches of bonds, similar to PLS transactions. The subordinated bonds, also called mezzanine and first-loss bonds, provide the credit protection for the senior bond. Unlike STACR and CAS, the bonds created in a senior-sub transaction are MBS, not synthetic securities. In addition, unlike typical MBS issued by the Enterprises, generally only the senior tranche is guaranteed by the Enterprise.

Historically the Enterprises have also engaged in front-end (or upfront) lender risk sharing transactions similar to CRT, but the single-family lender risk sharing programs will be discontinued by year-end 2020.

c. Multifamily CRT

The Enterprises also reduce the credit risk on their multifamily guarantee books of business by transferring and sharing risk through multifamily CRT. As discussed in Section VIII.B.1, the Enterprises have historically operated different multifamily business models, which has led to the utilization of two broad types of multifamily CRT: Loss sharing and securitizations. Within each type, individual CRT transactions can have unique structures. The proposed rule's approach would be general enough to accommodate the full range of multifamily CRT currently utilized by the Enterprises.

The loss sharing CRT structure is a front-end risk transfer, which is defined as a CRT an Enterprise enters into with a lender before the lender delivers the loan to the Enterprise. The Enterprise and lender share future losses according to a specified arrangement, commonly from the first dollar of loss, and in exchange the lender is compensated for taking on credit risk. Because these transactions are not always fully collateralized, a loss sharing CRT generally exposes the Enterprise to counterparty credit risk.

In the multiclass securitization CRT structure, an Enterprise sells a pool of multifamily mortgage exposures to a trust that securitizes cash flows from the pool into several tranches of bonds. The subordinated bonds, also called mezzanine and first-loss bonds, are sold to market participants. These subordinated bonds provide credit protection for the senior bond, which is the only tranche that is guaranteed by the Enterprise. These sales typically result in a significant transfer of the credit risk on the underlying multifamily mortgage exposures.

In addition to, and often on top of, loss sharing and securitization CRT structures, the Enterprises also transfer multifamily credit risk using reinsurance CRT transactions. In these back-end transactions, such as Fannie Mae's CIRT program, an Enterprise enters into agreements with third parties to cover losses on a pool of multifamily mortgage exposures up to a certain percentage. The Enterprise, as policy holder, typically retains some portion (or all) of the first losses on the pool and compensates the third parties, generally reinsurers, for bearing subsequent losses up to a detachment point. To the extent that these deals are not fully collateralized, the proposed rule would increase an Enterprise's post-deal exposure to reflect counterparty risk.

2. PLS and Other Non-CRT Securitization Exposures

As contemplated by the 2018 proposal, an Enterprise would determine its credit risk capital requirement for PLS and other securitization exposures under a securitization framework that would be substantially the same as that of the U.S. banking framework. As discussed in Section VIII.C.3, an Enterprise may elect to determine its credit risk capital requirement for a retained CRT exposure under a somewhat different framework, even if that retained CRT exposure might be similar to an exposure to a traditional or synthetic securitization under the securitization framework.

The exposure amount of an Enterprise's on-balance sheet securitization exposure generally would be the carrying value of the exposure, while the exposure amount of an off-balance sheet securitization exposure generally would be the notional amount of the exposure.[72]

An Enterprise generally would assign a risk weight for a PLS or other securitization exposure using the simplified supervisory formula approach (SSFA). Pursuant to the SSFA, an Enterprise would determine the risk weight for a securitization exposure using a formula that is based, among other things, on the subordination level of the securitization exposure and the adjusted aggregate credit risk capital requirement of the underlying exposures. A 1,250 percent risk weight would be assigned to any securitization exposure that absorbs losses up to the adjusted aggregate credit risk capital requirement of the underlying exposures. After that point, the risk weight for a securitization exposure would be assigned pursuant to an exponential decay function that decreases as the detachment point or attachment point increases, subject to a minimum risk weight of 20 percent.

At the inception of a securitization, the SSFA's exponential decay function for risk weights, together with the 20 percent risk weight floor, would require more regulatory capital on a transaction-wide basis than would be required if the underlying exposures had not been securitized. That is, if the Enterprise held every tranche of a securitization, its overall regulatory capital requirement would be greater than if the Enterprise owned all of the underlying exposures. Like the U.S. banking regulators, FHFA believes this outcome is important to reduce regulatory capital arbitrage through securitizations and to manage the structural and other risks that might be posed by a securitization.[73]

3. Retained CRT Exposures

a. Assessment Framework

As discussed in the 2018 proposal, FHFA has established certain core principles to guide the developments of the Enterprises' CRT programs. Each CRT must transfer a meaningful amount of credit risk to private investors to reduce risk to the Enterprises, and the cost of the CRT must be economically sensible. In addition, a CRT must not interfere with the Enterprise's core business, including the ability of borrowers to access credit. The CRT programs have been intended to attract a broad investor base, be scalable, and incorporate a regular program of issuances. In transactions where credit risk may not be fully collateralized, the CRT counterparties must be financially strong, post collateral for a portion of their exposure, and be expected to fulfill

[72] For both on- and off-balance sheet securitization exposures, there would be special rules for determining the exposure amount and risk weights for repo-style transactions, eligible margin loans, OTC derivative contracts, and derivatives that are cleared transactions (other than credit derivatives).

[73] *See Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule,* 78 FR 62018, 62119 (Oct. 11, 2013) (hereinafter Joint Agency Regulatory Capital Final Rule) (''At the inception of a securitization, the SSFA requires more capital on a transaction-wide basis than would be required if the underlying assets had not been securitized. That is, if the banking organization held every tranche of a securitization, its overall capital requirement would be greater than if the banking organization held the underlying assets in portfolio. The agencies believe this overall outcome is important in reducing the likelihood of regulatory capital arbitrage through securitizations.'').

their commitments in adverse market conditions.

FHFA has continued to refine the assessment framework based on its understanding of the safety and soundness risks and limits relating to the effectiveness of CRT in transferring credit risk on the underlying exposures. Commenters on the 2018 proposal argued that CRT has less loss-absorbing capacity than an equivalent amount of equity financing. FHFA agrees that CRT transfers credit risk only on a specified reference pool, while equity financing is available to ''cross cover'' credit risk on other exposures of the Enterprise. FHFA also agrees that CRT transfers only credit risk, while equity financing can absorb losses arising from operational and market risks. Related to this, an Enterprise generally may pause distributions on equity financing during a financial stress but typically must continue debt service or other payments on CRT instruments. Therefore, equity financing provides more robust safety and soundness benefits across exposures and risks than a similar amount of credit exposure transferred through CRT.

One of the lessons of the 2008 financial crisis is that securitization structures, especially complex securitizations, might not perform as expected during a financial stress, with some large banking organizations even electing to reconsolidate some of their securitizations.[74] Similarly, there might be unique legal risks posed by the contractual terms of CRT structures and by the practices associated with contractual enforcement. While the 2018 proposal already contemplated reductions to the capital relief provided by a CRT based on the counterparty risk and maturity-related risk of CRT, FHFA agrees that there are structural and other risks that were not reflected in those adjustments that could further limit the effectiveness of CRT in transferring credit risk. FHFA continues to look to opportunities to enhance its framework for assessing the Enterprises' CRT programs to mitigate these safety and soundness risks.

Besides safety and soundness, FHFA's assessment framework also considers the extent to which an Enterprise's CRT program could limit the Enterprise's ability to fulfill its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle. As discussed in the 2018 proposal, a financial stress could reduce investor demand for, or increase the cost of, new CRT issuances or undermine the financial strength of some existing CRT counterparties. The pro-cyclicality of some CRT structures could adversely impact an Enterprise's ability to support the secondary mortgage market if an Enterprise were not to have sufficient equity financing to support new acquisitions of mortgage exposures. To fulfill its mission, an Enterprise should avoid overreliance on CRT and should maintain at least enough equity capital to support new originations during a period of financial stress, when new CRT issuances might not be available. For these and other reasons, capital relief for CRT under the 2018 proposal did not extend to the going- concern buffer, and the proposed rule also would not provide CRT capital relief for the capital conservation buffer.

FHFA's assessment framework also seeks to prevent each Enterprise's CRT program from undermining the liquidity, efficiency, competitiveness, or resiliency of the national housing finance markets. Some CRT structures might tend to increase the leverage in the housing finance system, especially to the extent some CRT investors themselves rely on short-term debt funding. The disruption in the CRT markets during the recent COVID–19-related financial stress might have been driven in part by leveraged market participants that had invested in CRT rapidly de-levering when confronted by margin calls on short-term financing.

b. Enhancements to the 2018 Proposal

FHFA is proposing enhancements to the 2018 proposal's regulatory capital treatment of CRT to refine its balancing of the safety and soundness benefits of CRT against the potential safety and soundness, mission, and housing market stability risks that might be posed by CRT.

Consistent with the U.S. banking framework, FHFA is proposing operational criteria to mitigate the risk that the terms or structure of the CRT would not be effective in transferring credit risk. FHFA's proposed operational criteria would provide capital relief on a CRT only if certain conditions are satisfied, including:

- The CRT is of a category of CRT structures that has been approved by FHFA as effective in transferring credit risk.
- The terms and conditions in the CRT do not include provisions that might undermine the effectiveness of the transfer of the credit risk (*e.g.,* by allowing for the termination of the CRT due to deterioration in the credit quality of the underlying exposures).
- Clean-up calls relating to the CRT are limited to specified circumstances.
- The Enterprise publicly discloses—
  - The material recourse or other risks that might reduce the effectiveness of the CRT in transferring credit risk; and
  - Each operational criterion for a traditional securitization or a synthetic securitization that is not satisfied by the CRT and the reasons that each such condition is not satisfied.

These operational criteria for CRT are less restrictive than those applicable to traditional or synthetic securitizations under the U.S. banking framework. For example, a senior/subordinated structure need not be off-balance sheet under GAAP, as required for traditional securitizations under the U.S. banking framework, while a financial guarantee need not be provided by a company that is not predominantly engaged in the business of providing credit protection, as required for an eligible guarantee under the U.S. banking framework. To partially mitigate the safety and soundness risks posed by this less restrictive approach, FHFA would require an Enterprise to publicly disclose material risks to the effectiveness of the CRT so as to foster market discipline and FHFA's supervision and regulation. FHFA is also seeking comment on other operational criteria it might adopt for CRT.

[74] *See Risk-Based Capital Guidelines; Capital Adequacy Guidelines; Capital Maintenance: Regulatory Capital; Impact of Modifications to Generally Accepted Accounting Principles; Consolidation of Asset-Backed Commercial Paper Programs; and Other Related Issues,* 74 FR 47138, 47142 (Sept. 15, 2009) (''In the case of some structures that banking organizations were not required to consolidate prior to the 2009 GAAP modifications, the recent turmoil in the financial markets has demonstrated the extent to which the credit risk exposure of the sponsoring banking organization to such structures (and their related assets) has in fact been greater than the agencies estimated, and more associated with non-contractual considerations than the agencies had expected. For example, recent performance data on structures involving revolving assets show that banking organizations have often provided non-contractual (implicit) support to prevent senior securities of the structure from being downgraded, thereby mitigating reputational risk and the associated alienation of investors, and preserving access to cost-effective funding.''); *see also* FCIC Report at 246, available at *https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf* (''When the mortgage securities market dried up and money market mutual funds became skittish about broad categories of ABCP, the banks would be required under these liquidity puts to stand behind the paper and bring the assets onto their balance sheets, transferring losses back into the commercial banking system. In some cases, to protect relationships with investors, banks would support programs they had sponsored even when they had made no prior commitment to do so.''); *see also FCIC Report* at 138–139 (''The events of 2007 would reveal the fallacy of those assumptions and catapult the entire $25 billion in commercial paper straight onto the bank's balance sheet, requiring it to come up with $25 billion in cash as well as more capital to satisfy bank regulators.'').

FHFA is also proposing to prescribe the regulatory capital consequences of an Enterprise providing support to a CRT in excess of the Enterprise's pre-determined contractual obligations. As under the U.S. banking framework, if an Enterprise provides implicit support for a CRT, the Enterprise would be required to include in its risk-weighted assets all of the underlying exposures associated with the CRT as if the exposures were not covered by the CRT. The Enterprise also would be required to disclose publicly (i) that it has provided implicit support to the CRT and (ii) the risk-based capital impact to the Enterprise of providing that implicit support. These requirements are intended to discourage an Enterprise from providing implicit support during a financial stress or otherwise, for example by providing financing to CRT investors or by repurchasing CRT exposures during a financial stress.

Generally consistent with the U.S. banking framework, FHFA also is proposing a prudential floor of 10 percent on the risk weight assigned to any retained CRT exposure. Under the 2018 proposal, a retained CRT exposure with a detachment point less than the net credit risk capital requirement of the underlying mortgage exposures would, in effect, have had a risk weight of 1,250 percent, while a retained exposure with an attachment point only marginally greater than that net credit risk capital requirement would have had a risk weight of 0 percent. A retained CRT exposure with an attachment point just beyond that cut-off point likely still would pose some credit risk as a result of the model risks associated with the calibration of the credit risk capital requirement of the underlying exposures, and also the risk that a CRT will not perform as expected in transferring credit risk to third parties.[75] The prudential floor for a retained CRT exposure avoids treating that exposure as posing no credit risk.

The 10 percent minimum risk weight is less than the 20 percent minimum risk weight under the U.S. banking framework for securitization exposures. FHFA's sizing of the minimum risk weight seeks to strike an appropriate balance between permitting CRT while also mitigating the safety and soundness, mission, and housing stability risk that might be posed by some CRT. FHFA is soliciting comment on whether to align the risk weight floor for retained CRT exposures with the various different floors for securitizations exposures under the Basel and U.S. banking frameworks.

Finally, FHFA is proposing refinements to the adjustments to the regulatory capital treatment of CRT for the counterparty, loss-timing, and other risks that a CRT might not be effective in transferring credit risk to third parties. As discussed in Section VIII.C.3.c, FHFA is proposing to refine the 2018 proposal's adjustments for counterparty risk and loss-timing risk, and proposing to add a general adjustment for the differences between CRT and regulatory capital. These CRT-specific adjustments do introduce some complexity, and as discussed in Section VIII.C.3.d, FHFA is also soliciting comment on an alternative approach based on the U.S. banking framework's SSFA that is simpler but also less tailored.

Under either FHFA's proposed or alternative approach, at the inception of a CRT, FHFA generally would require more credit risk capital on a transaction-wide basis than would be required if the underlying mortgage exposures had not been made subject to a CRT. That is, if an Enterprise held every tranche of a CRT, its credit risk capital requirement on the retained CRT exposures generally would be greater than the credit risk capital requirement of the underlying mortgage exposures. As under the securitization framework, this departure from strict capital neutrality is important to manage the potential safety and soundness risks of CRT. This approach would help mitigate the model risk associated with the calibration of the credit risk capital requirements of the underlying exposures and also the model risk posed by the calibration of the adjustments for loss-timing and counterparty risks.[76] Complex CRT also may pose structural risk and other risks that merit a departure from capital neutrality.[77] This departure from capital neutrality also is important to reducing the likelihood of regulatory capital arbitrage through CRT.[78]

One implication of departing from capital neutrality is that an Enterprise might have some existing CRT structures for which the aggregate credit risk capital requirement of the retained CRT exposures actually would be greater than the aggregate credit risk capital requirement of the underlying exposures. This outcome might be more likely, all else equal, where the underlying exposures have a lower average risk weight, for example, a CRT with respect to seasoned single-family mortgage exposures. As under the U.S. banking framework, an Enterprise may elect to not recognize a CRT for purposes of the credit risk capital requirements and instead hold risk-based capital against the underlying exposures. FHFA has assumed for purposes of the proposed rule that an Enterprise would make this election in those cases where the aggregate credit risk capital requirement of the underlying exposures is less than that of the retained CRT exposures.

Question 65. What changes, if any, should FHFA consider to the operational criteria for CRT?

Question 66. What changes, if any, should FHFA consider to the regulatory consequences of an Enterprise providing implicit support to a CRT?

Question 67. Is the 10 percent prudential floor on the risk weight for a retained CRT exposure appropriately calibrated?

Question 68. Should FHFA increase the prudential floor on the risk weight for a retained CRT exposure, for example so that it aligns with the 20

[75] For these and other reasons, the Basel and U.S. banking frameworks impose a prudential floor on the risk weight for any securitization exposure. BCBS, *Revisions to the Securitisation Framework Consultative Document* at 17 (Dec. 2013; final July 2016), available at *https://www.bis.org/publ/bcbs269.pdf.* (''The objectives of a risk-weight floor are: [m]itigate concerns related to incorrect model specifications and error from banks' estimates of inputs to capital formulas ([*i.e.*] model risk); and [r]educe the variation in outcomes for similar risks.'').

[76] BCBS, *Revisions to the Securitisation Framework Consultative Document* at 4 (Dec. 2013; final July 2016), available at *https://www.bis.org/publ/bcbs269.pdf.* (''Capital requirements should be calibrated to reasonably conservative standards. This requires the framework to account for the model risk of determining the risks of specific exposures. Models for securitisation tranche performance depend in turn on models for underlying pools. In addition, securitisations have a wide range of structural features that do not exist for banks holding the underlying pool outright and that are impossible to capture in models. This layering of models and simplifying assumptions can exacerbate model risk, justifying a rejection of a strict ''capital neutrality'' premise ([*i.e.*] the total capital required after securitisation should not be identical to the total capital before securitisation).'').

[77] BCBS, *Revisions to the Securitisation Framework* at 6 (Dec. 2014; rev. July 2016), available at *https://www.bis.org/bcbs/publ/d374.pdf* (''All other things being equal, a securitisation with lower structural risk needs a lower capital surcharge than a securitisation with higher structural risk; and a securitisation with less risky underlying assets requires a lower capital surcharge than a securitisation with riskier underlying assets.'').

[78] *See* Joint Agency Regulatory Capital Final Rule, 78 FR at 62119 (''At the inception of a securitization, the SSFA requires more capital on a transaction-wide basis than would be required if the underlying assets had not been securitized. That is, if the banking organization held every tranche of a securitization, its overall capital requirement would be greater than if the banking organization held the underlying assets in portfolio. The agencies believe this overall outcome is important in reducing the likelihood of regulatory capital arbitrage through securitizations.'').

percent minimum risk weight under the U.S. banking framework?

Question 69. Should FHFA take a different approach to an Enterprise's existing CRT?

c. Adjustments to CRT Capital Relief

The proposed rule would implement a framework through which an Enterprise would determine its credit risk-weighted assets for any retained CRT exposures and any other credit risk that might be retained on its CRT. An Enterprise would calculate credit risk-weighted assets for retained credit risk in a CRT using risk weights and exposure amounts for each CRT tranche. The exposure amount of the retained CRT exposures for each tranche would be increased by adjustments to reflect counterparty credit risk and the length of CRT coverage (*i.e.,* remaining time until maturity). The proposed rule would also set a credit risk capital requirement floor for retained risk effectuated through a tranche-level risk weight floor.

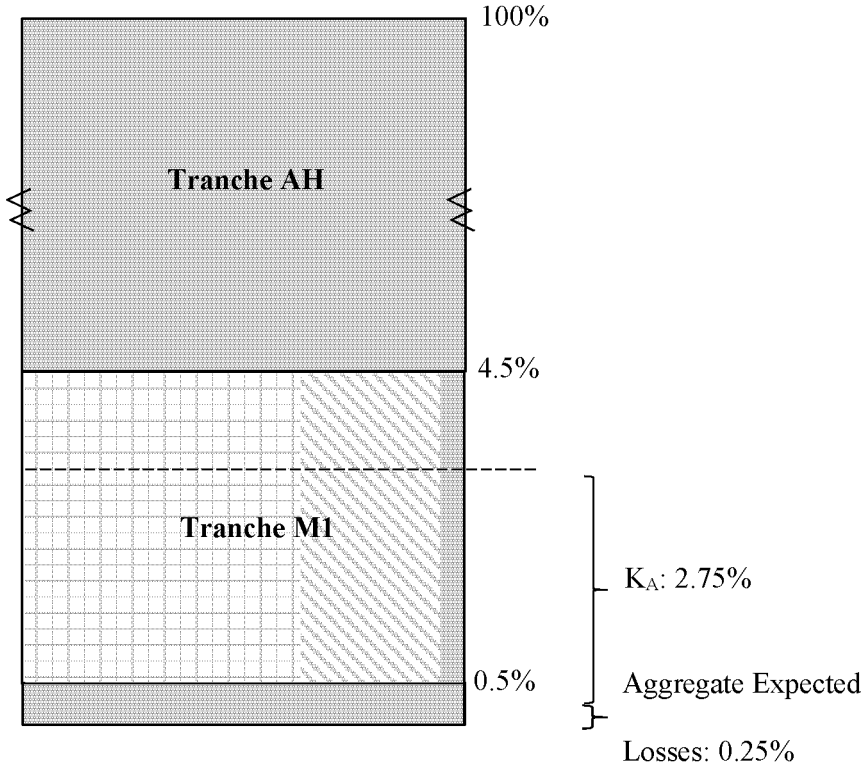
In addition, the approach would reduce the risk-weighted assets for risk sold by 10 percent to account for the fact that CRT transactions do not provide the same protection as regulatory capital. As discussed by several commenters on the 2018 proposal, the credit protection from a CRT is not fungible to cover losses on other exposures. Furthermore, during a financial stress the Enterprises can stop equity dividend payments whereas the cost of CRT credit protection, in many cases, is an ongoing liability. Therefore, for each tranche, an Enterprise would reduce the risk-weighted assets assigned to private investors or covered by a loss sharing agreement by 10 percent and add the reduction to the Enterprise's apportioned exposure amount in the tranche.

Overall, the proposed rule would require each Enterprise to hold either: (i) Credit risk capital on any credit risk which it has retained or to which it is otherwise exposed (including non-transferable counterparty credit risk on the CRT's underlying mortgage exposures); or (ii) the aggregate credit risk capital on the CRT's underlying mortgage exposures. If the Enterprise chooses the former, then in general, an Enterprise would be required to hold less regulatory capital for CRT transactions that provide coverage (i) on a higher percentage of unexpected losses, (ii) for a longer period, and (iii) with lower levels of counterparty credit risk.

The following example provides an illustration of the proposed rule's capital requirements if an Enterprise elects to hold capital against the credit risk from its retained CRT exposures. Consider the following inputs from an illustrative CRT (see Figure 3):

- $1,000 million in unpaid principal balance of performing 30-year fixed rate single-family mortgage exposures with OLTVs greater than 60 percent and less than or equal to 80 percent;
- CRT coverage term of 10 years;
- Three tranches—B, M1, and AH—where tranche B attaches at 0% and detaches at 0.5%, tranche M1 attaches at 0.5% and detaches at 4.5%, and tranche AH attaches at 4.5% and detaches at 100%;
- Tranches B and AH are retained by the Enterprise, and ownership of tranche M1 is split between capital markets (60 percent), a reinsurer (35 percent), and the Enterprise (5.0 percent);
- The aggregate credit risk-weighted assets on the single-family mortgage exposures underlying the CRT are $343.8 million;
- Aggregate expected losses on the single-family mortgage exposures underlying the CRT of $2.5 million; and
- The reinsurer posts $2.8 million in collateral, has a counterparty financial strength rating of 3, and does not have a high level of mortgage concentration risk.

Figure 3: Single-Family CRT Example



Ownership:

Tranche AH: 100% retained (in solid gray).

Tranche M1: 60% to capital markets (gray grid lines), 35% reinsured (in gray diagonal

The Enterprises would first calculate the risk weights for each tranche assuming full effectiveness of the CRT in transferring credit risk on the underlying mortgage exposures. In general, tranche risk weights are the highest for the riskiest, most junior tranches (such as tranche B), and lower for the more senior tranches (such as tranches M1 and AH). For the illustrative CRT, the overall risk weights for tranches AH, M1, and B are 10%, 781%, and 1,250%, where 10% reflects the minimum risk weight.

$$RW_{\%,AH} = 10\% \; because \; K_A + AggEL_{\%} \leq 4.5\%$$

$$RW_{\%,M1} = 1250\% * \frac{K_A + AggEL_{\%} - 0.5\%}{4.5\% - 0.5\%} = 781\% \; because \; 0.5\% < K_A + AggEL_{\%} < 4.5\%$$

$$RW_{\%,B} = 1250\% \; becasue \; K_A + AggEL_{\%} \geq 0.5\%$$

where

$$K_A = 100\% * \frac{RWA_{\$} * 8\%}{AggUPB_{\$}} = 100\% * \frac{\$343.8m * 8\%}{\$1000m} = 2.75\%$$

$$AggEL_{\%} = 100\% * \frac{EL\$}{AggUPB_{\$}} = 100\% * \frac{\$2.5m}{\$1000m} = 0.25\%.$$

Next, the Enterprise would calculate the adjusted exposure amount of its retained CRT exposures to reflect the effectiveness of the CRT in transferring credit risk on the underlying mortgage exposures. For the illustrative CRT, tranches AH and B are retained by the Enterprise, and do not need further adjustment. Risk associated with tranche M1 is transferred through a capital markets transaction and a loss sharing agreement. Risk transfer on this tranche is subject to the following three effectiveness adjustments, which are reflected in the Enterprise's adjusted exposure amount: Loss sharing effectiveness adjustment (LSEA), loss timing effectiveness adjustment (LTEA), and overall effectiveness adjustment (OEA).

To account for the effectiveness of loss sharing on tranche M1, the proposed rule would adjust its exposure amount on tranche M1 to reflect the retention of some of the counterparty credit risk that was nominally transferred to the counterparty. The proposed rule adjusts effectiveness for (i) uncollateralized unexpected loss (UnCollatUL) and (ii) uncollateralized risk-in-force above stress loss (SRIF). For the illustrative CRT, the counterparty haircut is 5.2% as per the proposed single-family CP haircuts, from Table 21, UnCollatUL is 42.5%, and SRIF is 37.5%. The proposed rule's LTEA on tranche M1 would be 96.4%.

$$LSEA_{\%,M1} = \left(1 - 5.2\% * \frac{\left(UnCollatUL_{\%,M1} * 1250\% + SRIF_{\%,M1} * 10\%\right)}{RW_{\%,M1}}\right) = 96.4\%$$

where

$$UnCollatUL_{\%,M1} = 100\% * \left(\frac{K_A + AggEL_{\%} - A}{D - A}\right) - Collat_{\%RIF,M1}$$

$$UnCollatUL_{\%,M1} = 100\% * \left(\frac{3\% - 0.5\%}{4.5\% - 0.5\%}\right) - 100\% * \frac{\$2.8m}{\$1{,}000 * (4.5\% - 0.5\%) * 35\%} = 42.5\%$$

$$SRIF_{\%,M1} = 100\% - 100\% * \max\left(\left(\frac{3\% - 0.5\%}{4.5\% - 0.5\%}\right), \frac{\$2.8m}{\$1{,}000 * (4.5\% - 0.5\%) * 35\%}\right) = 37.5\%$$

To account for effectiveness from the timing of coverage, the proposed rule would adjust the Enterprise's exposure amount for tranche M1 to reflect the retention of some loss timing risk that was nominally transferred. The loss timing factor addresses the mismatch between lifetime losses on the 30-year fixed-rate single-family mortgage exposures underlying the CRT and the CRT's coverage. The loss timing factor for the illustrative CRT with 10 years of coverage and backed by 30-year fixed-rate single-family whole loans and guarantees with OLTVs greater than 60 percent and less than or equal to 80 percent is 88 percent for both the capital markets transaction and loss sharing agreement. For the illustrative CRT, tranche M1's LTEA is 85.6% and is derived by scaling stress loss by the 88% loss timing factor.

$$LTEA_{\%,M1} = 100\% * \frac{LTK_{A,LS} + AggEL_{\%} - A}{K_A + AggEL_{\%} - A} = 100\% * \frac{2.39\% + 0.25\% - 0.5\%}{2.75\% + 0.25\% - 0.5\%} = 85.6\%$$

where

$LTK_{A\,\%} = \max((2.75\% + 0.25\%) * 88\% - 0.25\%, 0\%) = 2.39\%$

For the last adjustment, the proposed rule would include a 10% overall reduction in capital relief to reflect for the fact that CRT transactions do not provide the same loss-absorbing capacity as regulatory capital (OEA).

$OEA_{\%} = (1 - 10\%) = 90\%$

The adjusted exposure amounts (AEAs) combine the effectiveness adjustments, aggregate UPB, tranche thickness, and an adjustment for expected losses (to tranche B in the example). For the illustrative CRT, the proposed rule would calculate AEAs as follows:

$$AEA_{\%,AH} = EAE_{\%,AH} * AggUPB_{\$} * (D - A) = \$1{,}000m * (100\% - 4.5\%) = \$955m$$

$$AEA_{\%,M1} = EAE_{\%,M1} * AggUPB_{\$} * (D - A) = 27.8\% * \$1{,}000m * (4.5\% - 0.5\%) = \$11.1m$$

$$AEA_{\%,B} = EAE_{\%,B} * AggUPB_{\$} * (D - A) * \left(1 - \frac{AggEL_{\%} - A}{D - A}\right)$$

$$= \$1{,}000m * (0.5\% - 0\%) * 50\% = \$2.5m$$

where the Enterprise's adjusted exposures (EAEs) for tranches A and B are 100% and

$EAE_{\%,M1} = 100\% - (60\% * 85.6\% * 90\%) - (35\% * 96.4\% * 85.6\% * 90\%) = 27.8\%$.

Finally, to calculate risk weighted assets after CRT, the proposed rule combines AEAs with the tranche-level risk weights. For the illustrative CRT, the proposed rule would calculate risk weighted assets (RWA) as follows:

$RWA_{\$,AH} = AEA_{\$,AH} * RW_{\%,AH} = \$955m * 10\% = 95.5m$

$RWA_{\$,M1} = AEA_{\$,M1} * RWA_{\%,M1} = 11.1m * 781\% = 86.7m$

$RWA_{\$,B} = AEA_{\$,B} * RW_{\%,B} = 2.5m * 1250\% = \$31.3m$

with total RWAs on the retained CRT exposures at $213.5 million, a decline of $130.3 million from the aggregate credit risk-weighted assets on the underlying single-family mortgage exposures of $343.8 million.

Seasoned CRT

A seasoned CRT differs from when it was newly issued due to the changing risk profile on the mortgage exposures underlying the CRT, and changes to the CRT structure which may have developed since issuance. Therefore, an Enterprise would be required to periodically re-calculate capital adjustments on its seasoned CRT transactions.

For each seasoned CRT, the proposed rule would require the Enterprise to update the data elements originally considered. In particular, the proposed rule would require the Enterprise to update credit risk capital and expected losses on the underlying whole loans and guarantees, tranche structure, ownership, and counterparty credit risk.

CRT Prepayments

The rate at which principal on a CRT's underlying exposures is paid down (principal paydowns) affects the allocation of credit losses between the Enterprises and investors/reinsurers. Principal paydowns include regularly scheduled principal payments and unscheduled principal prepayments. In general, a CRT's tranches are paid down in the order of their seniority outlined in the CRT's transaction documents. For tranches with shared ownership, principal paydowns are allocated on a pro-rata basis. Under certain conditions unusually fast prepayments can erode the credit protection provided by the CRT by paying down the subordinate tranches and leave the Enterprises more vulnerable to credit losses. In particular, unexpectedly high prepayments can compromise the protection afforded by CRT and reduce the CRT's benefit or capital relief.

FHFA reviewed the effect on capital relief of applying stressful prepayment and loan delinquency projections to recent CRT. FHFA concluded that deal features, specifically triggers, mitigate the effects of fast prepayments by diverting unscheduled principal prepayments to the Enterprise-held senior tranche. For example, a minimum credit enhancement trigger redirects prepayments to the senior tranche when the senior credit enhancement falls below a pre-specified threshold. Similarly, a delinquency trigger diverts prepayments when the average monthly delinquency balance (*i.e.,* underlying single-family mortgage exposures that are 90 days or more delinquent, in foreclosure, bankruptcy, or REO) exceeds a pre-specified threshold.

FHFA considered whether it would be desirable to include language in the proposed rule requiring specific triggers in CRT transactions. However, FHFA decided against such language because variations across transactions complicate the establishment of fixed triggers that could be prudently applied uniformly across deals. Further, mandating a fixed set of triggers could reduce innovation in managing principal paydowns. For these reasons, FHFA believes that the proposed rule would appropriately consider single-family CRT prepayments.

Multifamily Loss-Timing Factors

One notable enhancement in the proposed CRT capital framework for multifamily mortgage exposures would be the application of multifamily loss timing factors. The loss timing factor would address the mismatch between lifetime multifamily losses on the whole loans and guarantees underlying a CRT and the term of coverage on the CRT. In the 2018 proposal, FHFA sought comment on how to implement a multifamily loss timing adjustment, but commenters did not suggest an approach. The proposed rule would implement a simple adjustment based on the contractual maturity of the CRT and the maturities of the underlying multifamily mortgage exposures.

Multifamily Counterparty Risk

In multifamily CRT transactions involving loss sharing and/or reinsurance agreements, an Enterprise is exposed to counterparty credit risk. In such instances, the Enterprise would consider posted collateral, concentration risk, and the financial strength of the counterparty before applying the counterparty haircut. In multifamily loss sharing agreements, the Enterprise would also consider at-risk servicing rights before applying the haircut.

In the proposed CRT capital framework, an Enterprise would be permitted to offset counterparty credit risk with collateral by reducing the Enterprise's uncollateralized exposure subject to a counterparty haircut. Fannie Mae has historically required DUS lenders to post collateral subject to certain terms and conditions, referred to as restricted liquidity, which Fannie Mae can access in the event of a lender default. In the proposed rule, restricted liquidity would be considered equivalent to other forms of collateral. In addition, as part of its DUS loss sharing agreements, Fannie Mae generally retains a contractual claim to the lenders' at-risk servicing rights that can be exercised by Fannie Mae under different circumstances. The 2018 proposal included a provision for an Enterprise to decrease its uncollateralized exposure by 50 percent if the Enterprise had any contractual claim to at-risk servicing rights. In response to comments that suggested FHFA should clarify the treatment of

servicing rights, the proposed rule would include an updated treatment of servicing rights such that in the counterparty haircut calculation, an Enterprise may reduce its uncollateralized exposure by 1 year of estimated future servicing revenue if the Enterprise has a contractual claim to the at-risk servicing rights. FHFA believes that this more explicit accounting of the value of lender servicing rights would reduce the possibility of manipulation without materially affecting the magnitude of the adjustment to uncollateralized exposure in the CRT capital calculation.

In response to comments on the 2018 proposal, FHFA considered additional potential risk mitigants that may be present in loss-sharing CRT transactions such as entity-based capital, lender CRT transactions, and intrinsic risk-retention benefits, but opted not to include counterparty credit risk offsets for these features in the proposed rule. While these features may lead to benefits that decrease the credit risk faced by an Enterprise, FHFA does not have sufficient information to accurately quantify the magnitude of these potential benefits. However, to the extent that features such as entity-based capital and lender CRT transactions lead to stronger counterparty financial strength ratings, these loss mitigating factors would be reflected in an Enterprise's risk-based capital requirements in the form of smaller counterparty haircuts.

To calculate the counterparty haircut in the proposed rule, an Enterprise would use a modified version of the Basel IRB approach that considers the creditworthiness of the counterparty. Similar to the single-family discussion of how counterparty risk is amplified due to the correlation between a counterparty's credit exposure and the Enterprises' credit exposure (concentration risk), the proposed rule would assign larger haircuts to multifamily counterparties with higher levels of concentration risk relative to diversified counterparties. An Enterprise would assess the level of multifamily mortgage risk concentration for each individual counterparty to determine whether the counterparty is well diversified or whether it has a high concentration risk, and counterparties with a lower concentration risk would be assigned a smaller counterparty haircut relative to counterparties with higher concentration risk. This difference is captured through the asset valuation correlation multiplier, AVCM. An Enterprise would assign an AVCM of 1.75 to counterparties with high concentration risk and an AVCM of 1.25 to more well-diversified counterparties.

The counterparty haircut would be calculated as the product of stress loss given default (LGD), stress probability of default (PD), and a maturity adjustment for the asset. Along with the AVCM, other parameterization assumptions in the proposed rule include a stress LGD of 45 percent, a maturity adjustment calibrated to five years, a stringency level of 99.9 percent, and expected PDs calculated using an historical one-year PD matrix for all financial institutions. For each CRT that involves counterparty credit risk, an Enterprise would select a counterparty haircut and apply it to the uncollateralized exposure in the CRT. The proposed multifamily counterparty risk haircut multipliers are presented below in Table 25.

Table 25: Multifamily Counterparty Risk Haircut Multipliers by Concentration Risk

Counterparty Rating	CP Haircut for Concentration Risk: Not High	CP Haircut for Concentration Risk: High
1	2.1%	3.4%
2	5.3%	8.5%
3	6.0%	9.6%
4	12.7%	19.2%
5	16.2%	22.9%
6	22.5%	28.5%
7	41.2%	45.1%
8	48.2%	48.2%

Question 70. Is the proposed approach to determining the credit risk capital requirement for retained CRT exposures appropriately formulated?

Question 71. Are the adjustments for counterparty risk appropriately calibrated?

Question 72. Are the adjustments for loss-timing and other maturity-related risk appropriately calibrated?

Question 73. Is the 10 percent adjustment for the general effectiveness of CRT appropriately calibrated?

Question 74. Is the 10 percent adjustment for the general effectiveness of CRT appropriate in light of the proposed rule's prudential floor on the risk weight for retained CRT exposures?

Question 75. Should FHFA impose any restrictions on the collateral eligible to secure CRT that pose counterparty risk?

d. Alternative Approach

The proposed approach to CRT described under VIII.C.3.c has significant advantages over the approach to CRT taken by the Basel and U.S. banking framework's SSFA to the extent that it provides a more granular and mortgage risk-sensitive framework for determining the capital relief from CRT. There is, however, a trade-off between a more risk-sensitive approach

and the complexity and other operational burdens of that more granular approach. FHFA is also soliciting comment on a simpler but less tailored alternative approach under which the Enterprise would determine the risk weight for a retained CRT exposure using the SSFA of the securitization framework. A 1,250 percent risk weight would be assigned to any retained CRT exposure that absorbs losses up to the adjusted aggregate credit risk capital requirement of the underlying exposures. After that point, the risk weight for the retained CRT exposure would be assigned pursuant to an exponential decay function that decreases as the detachment point or attachment point increases. The key difference from the SSFA under the securitization framework would be that the prudential floor for the risk weight for a retained CRT exposure would be 10 percent instead of 20 percent.

Under this approach, there would be no specific, tailored adjustment for counterparty risk or loss-timing risk or a general adjustment for the differences between CRT and equity financing. Instead, as under the Basel and U.S. banking framework's SSFA, FHFA proposes to use a supervisory adjustment factor, the constant term *p,* to determine the overall level of regulatory capital required for all tranches of a CRT under the SSFA. A higher value of *p* would increase the amount of regulatory capital required under the SSFA with detachment points beyond the adjusted aggregate credit risk capital requirement of the underlying exposures. As described by the BCBS, ''[t]he supervisory adjustment factor in the SSFA is intended to reduce cliff effects and apply conservatism for tranches with detachment points beyond [the adjusted aggregate credit risk capital requirement of the underlying exposures]. In addition, the supervisory adjustment factor can be seen to account for imprecision or uncertainty associated with using standardized approach risk weights for underlying exposures. . . .'' [79]

Question 76. Should FHFA require an Enterprise to determine the credit risk capital requirement for retained CRT exposures using a modified version of the SSFA?

Question 77. Is the SSFA properly formulated for retained CRT exposures or should other risk drivers, such as maturity, be incorporated?

Question 78. Is the SSFA (particularly the supervisory adjustment factor, *p*) appropriately calibrated for retained CRT exposures?

D. Other Exposures

While substantially all of an Enterprise's credit risk is posed by its single-family and multifamily mortgage exposures, each Enterprise does have some amount of credit risk arising from a wide variety of other exposures, including non-traditional mortgage exposures and non-mortgage exposures. Some of these non-mortgage exposures—for example, an Enterprise's OTC and cleared derivatives and repo-style transactions—raise complex and technical issues to calibrating credit risk capital requirements. FHFA believes it is important to assign a credit risk capital requirement to all material exposures, even if small in amount relative to an Enterprise's aggregate credit risk exposure. As under the 2018 proposal, FHFA proposes to incorporate into the proposed rule the extensive expertise of the U.S. and international banking regulators in calibrating credit risk capital requirements for these other exposures, with adjustments as appropriate for the Enterprises. The Basel framework has evolved over almost four decades of debate and collaboration among the world's experts in regulatory capital. That framework also has been revamped to incorporate the lessons of the 2008 financial crisis. Moreover, the complex and technical issues posed by these other exposures risk distracting FHFA from its core area of relative expertise—fashioning a mortgage risk-sensitive framework for the Enterprises—were FHFA to endeavor to develop its own framework for assigning credit risk capital requirements for these other exposures.

As discussed in this Section VIII.D, an Enterprise generally would assign risk weight for exposures other than mortgage exposures using the same risk weights assigned under the U.S. banking framework's standardized approach, in particular the Federal Reserve Board's regulatory capital requirements at subpart D of 12 CFR part 217 (Regulation Q).[80] Exposures that would be assigned risk weights under the U.S. banking framework include corporate exposures, exposures to sovereigns, OTC derivatives, cleared transactions, collateralized transactions, and off-balance sheet exposures.

Similarly, some exposures that were assigned credit risk capital requirements under the 2018 proposal would instead have a risk weight assigned under the U.S. banking framework. These would include some DTAs, municipal debt, reverse mortgage loans, reverse MBS, and cash and cash equivalents.

For any exposure that is not assigned a specific risk weight under the proposed rule, the default risk weight would be 100 percent, consistent with the U.S. banking framework.

1. Commitments and Other Off-Balance Sheet Exposures

As under the U.S. banking framework, the proposed rule would require an Enterprise to calculate the exposure amount of an off-balance sheet item by multiplying the off-balance sheet component, which is usually the notional amount, by the applicable credit conversion factor (CCF). Off-balance sheet items subject to this approach would include guarantees, mortgage commitments, contingent items, certain repo-style transactions, financial standby letters of credit, and forward agreements.

An Enterprise would apply a zero percent CCF to the unused portion of commitments that are unconditionally cancelable by the Enterprise. A commitment would be any legally binding arrangement that obligates an Enterprise to extend credit or to purchase assets.

The CCF would increase to 20 percent for a commitment with an original maturity of one year or less that is not unconditionally cancelable by the Enterprise. The CCF would increase to 50 percent for a commitment with an original maturity of more than one year that is not unconditionally cancelable by the Enterprise. An Enterprise would apply a 100 percent CCF to off-balance sheet guarantees, repurchase agreements, securities lending or borrowing transactions, financial standby letters of credit, and forward agreements.

The off-balance sheet component of a repurchase agreement would equal the sum of the current market values of all positions the Enterprise has sold subject to repurchase. The off-balance sheet component of a securities lending transaction would equal the sum of the current fair values of all positions the Enterprise has lent under the transaction. For securities borrowing transactions, the off-balance sheet component would equal the sum of the current fair values of all non-cash

[79] BCBS, *Revisions to the Basel Securisation Framework Consultative Document* at 23 (Dec. 2012; final Dec. 2014) available at *https://www.bis.org/publ/bcbs236.pdf.*

[80] The proposed rule cross-references relevant sections of 12 CFR part 217 as in effect on April 23, 2020. For the final rule, FHFA will assess whether the final rule will cross-reference sections of 12 CFR part 217 as of that same date or as of a later date, taking into account the materiality and nature of any amendments to that part after April 23, 2020 and any restrictions under applicable law.

positions the Enterprise has posted as collateral under the transaction.

2. Exposures to Sovereigns

Consistent with the U.S. banking framework, exposures to the U.S. government, its central bank, or a U.S. government agency and the portion of an exposure that is directly and unconditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency would receive a zero percent risk weight. The portion of a deposit insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA) also may be assigned a zero percent risk weight. An exposure conditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency would receive a 20 percent risk weight.

3. Crossholdings of Enterprise MBS

Under the 2018 proposal, an MBS guaranteed by an Enterprise would have had a credit risk capital requirement of 0 percent. Consistent with the U.S. banking framework, the proposed rule would assign a 20 percent risk weight to the exposures of an Enterprise to the other Enterprise or another GSE (other than equity exposures and acquired CRT exposures). The 20 percent risk weight would extend to an Enterprise's exposures to MBS guaranteed by the other Enterprise.

The Enterprises currently are in conservatorship and benefit from Treasury support under the PSPA. However, the Enterprises remain privately-owned corporations, and their obligations do not have the explicit guarantee of the full faith and credit of the United States. The U.S. banking regulators ''have long held the view that obligations of the GSEs should not be accorded the same treatment as obligations that carry the explicit guarantee of the U.S. government.'' [81] FHFA agrees that the MBS and other obligations of an Enterprise should be subject to a credit risk capital requirement that is greater than that assigned to those obligations that have an explicit guarantee of the full faith and credit of the United States.

Under the direction of FHFA, the Enterprises have implemented a single security initiative that is intended to increase the liquidity of the to-be-announced (TBA) market. Under the initiative, each Enterprise has begun issuing a single MBS known as the Uniform Mortgage-Backed Security (UMBS). On March 12, 2019, UMBS trading began in the forward TBA market, marking the consolidation of the formerly distinct markets for each Enterprise's MBS. In June 2019, settlement of TBA trades for UMBS began.

FHFA believes that the new, consolidated UMBS market will lead to a more efficient, resilient, and liquid secondary mortgage market and further FHFA's statutory obligation and the Enterprises' charter obligations to support the liquidity of U.S. housing finance markets. For the UMBS market to continue to work, market participants must continue to view UMBS as fungible with respect to the issuing Enterprise. That is, investors must generally agree that a UMBS of a certain coupon and maturity issued by one Enterprise is roughly equivalent to the corresponding UMBS issued by the other.[82]

To foster that fungibility, each Enterprise may issue a ''Supers'' mortgage-related security, which is a re-securitization of UMBS and certain other TBA-eligible securities, including other Supers. If an Enterprise guarantees a security backed in whole or in part by securities of the other Enterprise, the Enterprise is obligated under its guarantee to fund any shortfall in the event that the other Enterprise fails to make a payment due on its securities. The Enterprises have entered into an indemnification agreement relating to commingled securities issued by the Enterprises. The indemnification agreement obligates each Enterprise to reimburse the other for any such shortfall.

Question 79. Should FHFA adjust the regulatory capital treatment for exposures to MBS guaranteed by the other Enterprise to mitigate any risk of disruption to the UMBS?

Question 80. Should FHFA consider a different risk weight for second-level re-securitizations backed by UMBS?

Question 81. What should be the regulatory capital treatment of any credit risk mitigation effect of any indemnification or similar arrangements between the Enterprises relating to UMBS re-securitizations?

Question 82. Should FHFA adopt different risk weights for MBS guaranteed by an Enterprise and the unsecured debt of an Enterprise?

4. Corporate Exposures

Consistent with the U.S. banking framework, credit exposures to companies that are not depository institutions or securitization vehicles generally would be assigned a 100 percent risk weight. A corporate exposure is an exposure to a company that is not an exposure to a sovereign, the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, the European Financial Stability Facility, a multi-lateral development bank (MDB), a depository institution, a foreign bank, a credit union, or a public sector entity (PSE), a GSE, a mortgage exposure, a cleared transaction, a default fund contribution, a securitization exposure, an equity exposure, or an unsettled transaction.

5. OTC Derivative Contracts

An Enterprise would determine its credit risk capital requirement for the counterparty risk for OTC derivative contracts as if it were a banking organization subject to the Federal Reserve Board's risk-based capital requirements, in particular 12 CFR 217.34. An OTC derivative contract generally would not include a derivative contract that is a cleared transaction, which would be subject to a different approach as discussed in Section VIII.D.6.

A derivative contract is a financial contract whose value is derived from the values of one or more underlying assets, reference rates, or indices of asset values or reference rates. Derivative contracts include interest rate derivative contracts, exchange rate derivative contracts, equity derivative contracts, commodity derivative contracts, credit derivative contracts, and any other instrument that poses similar counterparty credit risks. Derivative contracts also include unsettled securities, commodities, and foreign exchange transactions with a contractual settlement or delivery lag that is longer than the lesser of the market standard for the particular instrument or five business days.

To determine the risk-weighted assets for an OTC derivative contract, an Enterprise would first determine its exposure amount for the OTC derivative contract and then apply to that amount a risk weight based on the counterparty, eligible guarantor, or recognized collateral.

For a single OTC derivative contract that is not subject to a qualifying master netting agreement, the exposure amount would be the sum of (i) the current

[81] 77 FR 52888, 52896 (Aug. 30, 2012).

[82] To support investor confidence in that fungibility, FHFA promulgated a final rule governing Enterprise actions that affect UMBS cash flows to investors, issues quarterly prepayment monitoring reports, and has used its powers as the Enterprises' conservator to limit certain pooling practices with respect to the creation of UMBS. In November 2019, FHFA issued a request for input on Enterprise UMBS pooling practices.

credit exposure, which would be the greater of the mark-to-market value or zero, and (ii) the potential future exposure (PFE), which would be calculated by multiplying the notional principal amount of the OTC derivative contract by a prescribed conversion factor.

For multiple OTC derivative contracts subject to a qualifying master netting agreement, the exposure amount would be calculated by adding the net current credit exposure and the adjusted sum of the PFE amounts for all OTC derivative contracts subject to the qualifying master netting agreement. The net current credit exposure would be the greater of zero and the net sum of all positive and negative mark-to-market values of the individual OTC derivative contracts subject to the qualifying master netting agreement.

If an OTC derivative contract is collateralized by financial collateral, an Enterprise may recognize the credit risk mitigation benefits of the financial collateral pursuant to the rules governing collateralized transactions, as discussed in Section VIII.D.7.

6. Cleared Transactions

An Enterprise would determine its credit risk capital requirement for the counterparty risk for derivatives and repo-style transactions cleared through a central counterparty as if it were a banking organization subject to the Federal Reserve Board's risk-based capital requirements, in particular 12 CFR 217.35. To determine the risk-weighted assets for a cleared transaction, an Enterprise that is a clearing member client or a clearing member would multiply the trade exposure amount for the cleared transaction by the appropriate risk weight. An Enterprise also would be subject to a credit risk capital requirement for default fund contributions to CCPs.

7. Credit Risk Mitigation

An Enterprise may recognize the risk-mitigation effects of guarantees, credit derivatives, and collateral for purposes of its risk-based capital requirements in the same way a banking organization may under the Federal Reserve Board's risk-based capital requirements, in particular 12 CFR 217.36 and 217.37. Under that approach, an Enterprise generally may use the substitution approach to recognize the credit risk-mitigation effect of an eligible guarantee from an eligible guarantor or eligible credit derivative and the simple approach to recognize the effect of eligible collateral. Under the substitution approach, if the protection amount of an eligible guarantee or eligible credit derivative is greater than or equal to the exposure amount of the hedged exposure, an Enterprise generally may substitute the risk weight applicable to the guarantor or credit derivative protection provider for the risk weight assigned to the hedged exposure. Under the simple approach, the collateralized portion of the exposure generally would receive the risk weight applicable to the eligible collateral (with an exception for repo-style transactions, eligible margin loans, collateralized derivative contracts, and single-product netting sets of such transactions).

IX. Credit Risk Capital: Advanced Approach

The proposed rule would require an Enterprise to comply with the risk-based capital requirements using the higher of its risk-weighted assets calculated under the standardized approach and the advanced approach, where risk-weighted assets include credit risk, operational risk, and market risk components. The advanced approach requirements would require each Enterprise to maintain its own processes for identifying and assessing credit risk, market risk, and operational risk. These requirements should ensure that each Enterprise continues to enhance its risk management system and also that neither Enterprise simply relies on the standardized approach's lookup grids and multipliers to define credit risk tolerances, measure its credit risk, or allocate economic capital. In the course of FHFA's supervision of each Enterprise's internal models for credit risk, FHFA also could identify opportunities to update or otherwise enhance the standardized approach's lookup grids and multipliers through future rulemakings as market conditions evolve.

Under the proposed rule's advanced approach requirements, an Enterprise would be required to have a process for assessing its overall capital adequacy in relation to its risk profile and maintain infrastructure with risk measurement and management processes that are appropriate given the Enterprise's size and complexity. An Enterprise's senior management would be required to ensure that the Enterprise's internal models, operational risk quantification systems, and related advanced systems functions comply with the proposed rule's minimum requirements. The Enterprise's board of directors (or a designated committee of the board) would be required to at least annually review the effectiveness of, and approve, the Enterprise's advanced systems.

An Enterprise's advanced systems would be required to include an internal risk rating and segmentation system that differentiates among degrees of credit risk for the Enterprise's mortgage and other exposures. An Enterprise also would be required to have a process that estimates risk parameters for the Enterprise's exposures. An Enterprise's estimates of risk parameters must incorporate relevant and available data, and an Enterprise generally must demonstrate, among other things, that its estimates are representative of long run experience and take into account any changes in underwriting or recovery practices. Default, loss severity, and exposure amount data generally must include periods of economic downturn conditions. An Enterprise would be required to review—at least annually—its reference data.

An Enterprise would be required to conduct an independent validation, on an ongoing basis, of its advanced systems. The validation must include an evaluation of the conceptual soundness of the advanced systems, an ongoing monitoring process that includes verification of processes and benchmarking, and an outcomes analysis process that includes backtesting.

An Enterprise also would be required to periodically stress test its advanced systems including a consideration of how economic cycles, especially downturns, affect risk-based capital requirements.

An Enterprise would be required to meet these minimum requirements on an ongoing basis. An Enterprise also would be required to notify FHFA when the Enterprise makes any material change to its advanced systems.

In addition to the proposed rule's requirements, an Enterprise's advanced systems would be implemented under FHFA's supervisory review. As part of that review process, FHFA issues advisory bulletins to communicate its supervisory expectations to FHFA supervision staff and to the Enterprises on specific supervisory matters and topics. Through FHFA's supervision program, FHFA on-site examiners conduct supervisory activities to ensure safe and sound operations of the Enterprises. These supervisory activities may include the examination of the Enterprises to determine whether they meet the expectations set in the advisory bulletins. Examinations may also be conducted to determine whether the Enterprises comply with their own policies and procedures, regulatory and

statutory requirements, or FHFA directives.

FHFA's 2013–07 Advisory Bulletin reflects supervisory expectations for an Enterprise's model risk management. The Advisory Bulletin sets minimum thresholds for model risk management and differentiates between large, complex entities and smaller, less complex entities. As the Enterprises are large complex entities, the Advisory Bulletin subjects them to heightened standards for internal audit, model risk management, model control framework, and model lifecycle management.

The proposed rule would not provide a comprehensive set of guardrails and prescriptions for an Enterprise's internal models outside of the minimum requirements discussed above and FHFA's supervision.

Question 83. Should FHFA require an Enterprise to separately determine its credit risk-weighted assets using its own internal models?

Question 84. Should there be a prudential floor on the credit risk capital requirement for a mortgage exposure determined by an Enterprise using its internal models?

Question 85. Should FHFA prescribe more specific requirements and restrictions governing the internal models and other procedures used by an Enterprise to determine its advanced credit risk-weighted assets?

Question 86. Should FHFA require an Enterprise to determine its advanced credit risk-weighted assets under subpart E of the Federal Reserve Board's Regulation Q? If so, what changes to that subpart E would be appropriate?

Question 87. Alternatively, should compliance with subpart E of the Federal Reserve Board's Regulation Q offer a safe harbor for compliance with the proposed rule's advanced approaches requirements?

Question 88. Should FHFA preserve the U.S. banking framework's scalar factor of 1.06 for determining advanced credit risk-weighted assets calculated?

Question 89. What transition period, if any, is appropriate for an Enterprise to comply with the proposed rule's requirements governing the determination of the Enterprise's advanced credit risk-weighted assets?

Question 90. What transition period would be appropriate if an Enterprise were required to determine its advanced credit risk-weighted assets under subpart E of the Federal Reserve Board's Regulation Q?

Question 91. Should there be an additional capital requirement to mitigate any model risk associated with the internal models used by an Enterprise to determine its advanced credit risk-weighted assets?

X. Market Risk Capital

The proposed rule would require an Enterprise to calculate its market risk-weighted assets for mortgage exposures and other exposures with spread risk. Single-family and multifamily loans and investments in securities held in an Enterprise's portfolio have market risk from changes in value due to movements in interest rates and credit spreads, among other things. As the Enterprises currently hedge interest rate risk at the portfolio level, and under the assumption that the Enterprises' hedging effectively manages that risk, the market risk capital requirements would be limited only to spread risk.[83]

This proposed approach is considerably different from that of the U.S. banking framework. Under the U.S. banking framework, covered banking organizations are required to measure and otherwise manage market risk and hold a commensurate amount of capital. Generally, an asset held by a covered banking organization for trading purposes is not included in the calculation of credit risk-weighted assets. Instead, the covered banking organization determines the market risk capital requirement for its trading assets using prescribed methodologies, multiplies that market risk capital requirement by 12.5 to determine the market risk-weighted assets for its covered positions, and then adds the market risk-weighted assets to its credit risk-weighted assets to determine its risk-based capital requirements. The prescribed methodologies under the U.S. banking framework determine market risk capital requirements for trading assets based on the general and specific market risk of the assets. General risk is the risk of loss in the market value of positions resulting from broad market movements (*e.g.,* changes in interest rates), while specific risk is the risk of loss in the market value of positions due to factors other than broad market movements, including event risk or default risk. Notably, the U.S. banking framework's approach to market risk capital is not limited only to spread risk, as is contemplated by the proposed rule. FHFA is seeking comment on whether to adopt a different approach, perhaps one more similar to that of the U.S. banking framework.

Exposures subject to the market risk capital requirement would include any tangible asset that has more than *de minimis* spread risk, regardless of whether the position is marked-to-market for financial statement reporting purposes and regardless of whether the position is held by the Enterprise for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements, or to lock in arbitrage profits. Covered positions include:

- Any NPL, re-performing loan (RPL), reverse mortgage loan, or other mortgage exposure that, in any case, does not secure an MBS guaranteed by the Enterprise;
- Any MBS guaranteed by an Enterprise, MBS guaranteed by Ginnie Mae, reverse mortgage security, PLS, CRT exposure, or other securitization exposure; and
- Any other trading asset or trading liability, whether on- or off-balance sheet.

A. Standardized Approach

Under the standardized approach, an Enterprise would calculate market risk-weighted assets using a prescribed single point approach, a spread duration approach, or the Enterprise's internal models depending on the risk characteristics of the covered position.

1. Single Point Approach

An Enterprise would utilize the single point approach for any RPL, NPL, reverse mortgage loan, or reverse mortgage security. The primary risk for these assets generally is credit risk. The underlying borrowers may have limited refinancing opportunities due to recent or current delinquencies, and these covered positions are often relatively insensitive to prepayment risk. For these reasons, FHFA believes the spread risk profile of these covered positions would be sufficiently represented by a single point estimate.

An Enterprise would calculate the market risk-weighted assets for these covered positions as the product of the market value of the covered position, the applicable single point shock assumption for the covered position, and 12.5. The applicable single point shock assumptions would be:

- 0.0475 for an RPL or an NPL;
- 0.0160 for a reverse mortgage loan; and
- 0.0410 for a reverse mortgage security.

2. Spread Duration Approach

An Enterprise would utilize the spread duration approach for any multifamily mortgage exposure, any PLS, or any MBS guaranteed by an Enterprise or Ginnie Mae and secured

[83] FHFA's supervision of each Enterprise includes examinations of the effectiveness of the Enterprise's hedging of its interest rate risk.

by multifamily mortgage exposures due to their increased complexity relative to exposures in the single point approach category. Despite their complexity, PLS represent only a small portion of the Enterprises' portfolios, as the Enterprises' purchases of PLS have been restricted during conservatorship. Under the spread duration approach, an Enterprise would multiply the amount of the applicable spread shock by the spread duration of the covered position. Spread shock is typically based on historical spread shocks. Spread duration, or the sensitivity of the market value of an asset to changes in the spread, is often determined by using models that involve assumptions about interest rate movements and prepayment sensitivity.

An Enterprise would calculate the market risk-weighted assets for each of these covered positions as the product of the market value of the covered position, the spread duration as estimated by the Enterprise using its internal models, the applicable spread shock for the covered position, and 12.5. The applicable spread shocks would be:

- 0.0015 for a multifamily mortgage exposure that does not secure an MBS guaranteed by an Enterprise;
- 0.0265 for a PLS; and
- 0.0100 for an MBS guaranteed by an Enterprise or by Ginnie Mae and secured by multifamily mortgage exposures (other than interest-only (IO) securities guaranteed by an Enterprise or Ginnie Mae).

FHFA received a comment on the 2018 proposal suggesting the multifamily mortgage exposure spread shock of 15 basis points was too low relative to the 100 basis point spread shock prescribed for Enterprise- and Ginnie Mae-guaranteed multifamily MBS, considering that the Enterprises' MBS are pass-through securities and that historically, multifamily mortgage exposures have been less liquid than multifamily MBS. The commenter recommended that FHFA, at a minimum, equate the spread shocks.

FHFA analyzed the impact of increasing the multifamily mortgage exposure spread shock from 15 basis points to 100 basis points. In addition to a market risk capital requirement, multifamily mortgage exposures would also have a credit risk capital requirement, and in practice, perceptions of credit risk might be a component of market risk. In the proposed rule, Ginnie Mae-guaranteed MBS would not have a credit risk capital requirement, while Enterprise-guaranteed MBS would have a 20 percent risk weight for purposes of the credit risk capital requirements. FHFA determined that if the market risk capital requirement for multifamily mortgage exposures were increased through the imposition of a 100 basis point spread shock, the total risk-based capital requirement (credit risk capital plus market risk capital plus operational risk capital) for multifamily mortgage exposures would exceed, to an undesirable degree, the total risk-based capital requirement for Enterprise- and Ginnie Mae-guaranteed multifamily MBS. For this reason, FHFA is opting not to implement the commenter's recommendation.

3. Internal Models Approach

An Enterprise would utilize the internal models approach for covered positions with spread risk not covered under the single point approach or the spread duration approach. This would include an Enterprise's CMBS exposures, which in the 2018 proposal would have received a combined single-point capital requirement for credit risk and spread risk. In general, an Enterprise would use the internal models approach for covered positions with relatively higher levels of complexity or higher prepayment sensitivity.

Single-family exposures in this category would include performing loans and Enterprise- and Ginnie Mae-guaranteed single-family MBS. The spread risk profile on performing loans is relatively complex due to high prepayment sensitivity. Prepayment risk on performing loans might vary significantly across amortization terms, vintages, and mortgage rates. The high prepayment sensitivity might suggest that more simplified approaches, such as the single point approach, would not capture key risk drivers. Also, spread shocks may vary across a variety of single-family mortgage exposure characteristics. Thus, the spread duration approach, which relies on a constant spread shock, might not capture key single-family market movements. An internal models approach, however, would allow the Enterprises to differentiate spread risk across multiple risk characteristics such as amortization term, vintage, and mortgage rates. Further, the Enterprises could account for important market risk factors, such as updated spread shocks, to reflect market changes.

Similarly, the spread risk profile on Enterprise- and Ginnie Mae-guaranteed single-family MBS is relatively complex due to high prepayment sensitivity of the underlying collateral. Further, CMOs can often contain complex features and structures that alter prepayments across different tranches based on the CMO's structure. As a result, spread durations might vary significantly across mortgage products, amortization terms, vintages and mortgage rates and tranches. The use of an Enterprise's internal models to calculate market risk capital requirements would allow the Enterprise to account for important market risk factors that affect spreads and spread durations.

One commenter on the 2018 proposal recommended FHFA allow the Enterprises to utilize internal models for complex multifamily MBS in order to maintain flexibility in allowing the spread shocks to vary according to each security's features and structure, as well as underlying market conditions. FHFA determined that multifamily IO securities represent, in general, the more complex of Enterprise-guaranteed MBS. In consideration of the commenter's suggestion and in alignment with the proposed market risk capital requirement for Enterprise- and Ginnie Mae-guaranteed single-family IO securities, the proposed rule would require an Enterprise to use its internal models to calculate the market risk-weighted assets for Enterprise- and Ginnie Mae-guaranteed multifamily IO securities.

Because an Enterprise would calculate the market risk-weighted assets for these covered positions using its internal models, the Enterprise would be subject to certain model risk management requirements, as discussed in Section X.B. In addition, an Enterprise utilizing its internal models would be subject to FHFA's general regulatory oversight and supervisory review.

Question 92. Are the point and spread measures used to determine spread risk capital requirements for certain covered positions appropriately calibrated for that purpose?

Question 93. Should there be a minimum floor on the spread risk capital requirement for any covered position subject to the internal models approach?

Question 94. Should FHFA adopt an approach to market risk capital that is more similar to the Basel framework, for example by limiting the scope of the market risk capital requirements to a smaller set of positions (*e.g.,* those positions analogous to the trading book) or by requiring market risk capital for market risks other than spread risk (*e.g.,* value-at-risk, stress value-at-risk, incremental risk, etc.)? If so, what positions and activities of the Enterprises should be subject to that approach?

Question 95. Should the spread risk and other market risks for single-family and multifamily whole loans instead be set in an Enterprise-specific manner through the supervisory process, taking into account the market risk management strategies employed by the Enterprise?

Question 96. Should FHFA assume interest rate risk is fully hedged for purposes of determining market risk capital requirements?

Question 97. What requirements and restrictions should apply to the internal models used to determine standardized market risk-weighted assets?

B. Advanced Approach

An Enterprise also would calculate its advanced market risk-weighted assets using its own internal models. An Enterprise would have significant latitude in the scope and design of those internal models for measuring spread risk on its covered positions. FHFA is soliciting comment on whether to adopt a more prescriptive approach, perhaps requiring an Enterprise to determine a measure of market risk that includes a VaR-based capital requirement, a stressed VaR-based capital requirement, specific risk add-ons, incremental risk capital requirements, and comprehensive risk capital requirements, as under the U.S. banking framework.

Given the central role of the Enterprises' internal models in determining both standardized and advanced market risk capital requirements, the proposed rule includes a number of requirements and restrictions relating to the management of the related model risks. An independent risk control unit would be required to approve any internal model to calculate its risk-based capital requirement. An Enterprise must notify FHFA when the Enterprise plans to extend the use of a model to an additional business line or product type or the Enterprise makes any material change to its internal models.

The Enterprise would be required to periodically review (and at least annually) its internal models, and enhance those models as appropriate. The Enterprise also must integrate the internal models used for calculating its spread risk measure into its daily risk management process.

More generally, the sophistication of an Enterprise's internal models would have to be commensurate with the complexity and amount of its covered positions. The Enterprise's internal models must properly measure all the material risks. The Enterprise would be required to have a process for updating its internal models to ensure continued applicability and relevance.

The Enterprise also must have an independent risk control unit that reports directly to senior management. The Enterprise must have an independent validation process that includes an evaluation of the conceptual soundness of the internal models, an ongoing monitoring process that includes verification of processes and the comparison of the Enterprise's model outputs with relevant internal and external data sources or estimation techniques, and an outcomes analysis process that includes backtesting.

Question 98. Are the requirements governing an Enterprise's internal models for determining spread risk capital requirements appropriately formulated?

Question 99. Should FHFA adopt a more prescriptive approach to the determination of advanced market risk-weighted assets, perhaps requiring an Enterprise to determine a measure of market risk that includes a VaR-based capital requirement, a stressed VaR-based capital requirement, specific risk add-ons, incremental risk capital requirements, and comprehensive risk capital requirements, as under the U.S. banking framework?

C. Market Risk Management

The reliability of the internal models used in determining an Enterprise's standardized and advanced market risk-weighted assets will depend in part on the Enterprise's market risk management practices more generally. Consistent with the U.S. banking framework, the proposed rule includes a number of requirements and restrictions relating to the management of spread risk and also other market risks.

An Enterprise would be required to have a process for assessing its overall capital adequacy in relation to its market risk. An Enterprise also would be required to have policies and procedures for actively managing all covered positions. At a minimum, these policies and procedures must require, among other things, marking covered positions to market or to model on a daily basis, daily assessment of the Enterprise's ability to hedge position and portfolio risks, and establishment and daily monitoring of limits on covered positions by an independent risk control unit.

An Enterprise also would be required to have a process for valuation of its covered positions that includes policies and procedures on marking positions to market or to model, independent price verification, and valuation adjustments or reserves.

An Enterprise would be required to periodically (and at least quarterly) stress test the market risk of its covered positions. The stress tests must take into account concentration risk, illiquidity under stressed market conditions, and risks arising from the Enterprise's trading activities that may not be adequately captured in its internal models.

An Enterprise also must have an internal audit function that at least annually assesses the effectiveness of the controls supporting the Enterprise's market risk measurement systems and reports its findings to the Enterprise's board of directors (or a committee thereof).

XI. Operational Risk Capital

The proposed rule would establish an operational risk capital requirement to be calculated using the advanced measurement approach of the U.S. banking framework, but with a floor set at 15 basis points of adjusted total assets. The operational risk capital requirement would be included in an Enterprise's risk-weighted assets for the purposes of calculating risk-based capital requirements. This approach has been developed in response to comments on the 2018 proposal. Commenters on the 2018 proposal suggested that the proposed Basel basic indicators approach was insufficient because the Enterprises were too complex to justify such a simple approach and also because FHFA's implementation did not allow the requirement to vary appropriately under the basic indicators approach.

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (including legal risk but excluding strategic and reputational risk). Under the proposed rule, the Enterprise's risk-based capital requirement for operational risk generally would be its operational risk exposure minus any eligible operational risk offsets. That amount would potentially be subject to adjustments if the Enterprise qualifies to use operational risk mitigants. An Enterprise's operational risk exposure would be the 99.9th percentile of the distribution of potential aggregate operational losses, as generated by the Enterprise's operational risk quantification system over a one-year horizon (and not incorporating eligible operational risk offsets or qualifying operational risk mitigants).

While the advanced measurement approach is risk-sensitive, the proposed

operational risk capital requirement would be subject to a floor of 15 basis points of adjusted total assets. It is important that operational risk capital does not fall below a meaningful, credible amount. Fifteen (15) basis points of adjusted total assets would represent approximately double what FHFA originally proposed in the 2018 proposal, and approximately double the amount of operational risk capital estimated internally by the Enterprises using the Basel standardized approach. FHFA believes doubling the internally estimated figure is appropriate given the estimates were calculated using historical results achieved exclusively while in conservatorship. FHFA also calibrated this floor taking into account the operational risk capital requirements of large U.S. banking organizations. Of the U.S. bank holding companies with at least $500 billion in total assets at the end of 2019, the smallest operational risk capital requirement was 0.69 percent of that U.S. banking organization's total leverage exposure.

Question 100. Is the advanced measurement approach appropriately formulated and calibrated as a measure of operational risk capital for the Enterprises?

Question 101. Should FHFA consider other approaches to calculating operational risk capital requirements (*e.g.,* the Basel standardized approach)?

Question 102. Is the minimum floor on an Enterprise's operational risk capital appropriately calibrated?

XII. Impact of the Enterprise Capital Rule

A. Enterprise-Wide

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Table 1a: Capital Requirements for Fannie Mae as of September 30, 2019

Fannie Mae

Risk-based Capital Requirements

$ in billions	Total Capital (Statutory)	CET1	Tier 1	Adjusted Total Capital
Capital Requirement	$81	$46	$61	$81
Prescribed Buffers				
Stress Capital Buffer		27	27	27
Stability Capital Buffer		37	37	37
Countercyclical Capital Buffer Amount		0	0	0
Prescribed Capital Conservation Buffer Amount (PCCBA)	0	64	64	64
Requirement and PCCBA	$81	$110	$125	$145

Leverage Capital Requirements

	Core Capital (Statutory)	Tier 1
Capital Requirement	$89	$89
Prescribed Leverage Buffer Amount (PLBA)	0	53
Requirement and PLBA	$89	$142

Table 1b: Capital Requirements for Freddie Mac as of September 30, 2019

Freddie Mac

Risk-based Capital Requirements

$ in billions	Total Capital (Statutory)	CET1	Tier 1	Adjusted Total Capital
Capital Requirement	$54	$30	$40	$54
Prescribed Buffers				
Stress Capital Buffer		19	19	19
Stability Capital Buffer		16	16	16
Countercyclical Capital Buffer Amount		0	0	0
Prescribed Capital Conservation Buffer Amount (PCCBA)		35	35	35
Requirement and PCCBA	$54	$65	$75	$89

Leverage Capital Requirements

	Core Capital (Statutory)	Tier 1
Capital Requirement	$63	$63
Prescribed Leverage Buffer Amount (PLBA)	0	38
Requirement and PLBA	$63	$101

Table 2a: Comparison of Risk-Based Capital Requirements for Fannie Mae under the 2018 Proposal and the Proposed Rule, by Risk Category

Fannie Mae	2018 Proposal As of				Proposed Rule As of		
	9/30/2017		9/30/2019		9/30/2019		
	$ in billions	% of Total	$ in billions	% of Total	$ in billions	% of Total	% of Adjusted Total Assets
Gross Credit Risk			$76.5		$90.8		2.56%
Loan-Level Credit Enhancement			(11.0)		(10.4)		(0.29%)
Net Credit Risk	$70.5		$65.4		$80.3		2.26%
CRT Impact, net	(11.5)		(19.8)		(10.5)		(0.30%)
Post-CRT Net Credit Risk	59.0	51%	45.6	53%	69.8	86%	1.97%
Market Risk	9.5	8%	6.2	7%	6.2	8%	0.18%
Going-Concern Buffer	24.0	21%	25.7	30%	0.0	0%	0.00%
Operational Risk	2.6	2%	2.7	3%	5.1	6%	0.14%
Deferred Tax Assets	19.9	17%	5.6	6%	0.0	0%	0.00%
Total Capital Requirement	$115.0	100%	$85.8	100%	$81.2	100%	2.29%
Prescribed Buffers							
Stress Capital Buffer					26.6		0.75%
Stability Capital Buffer					37.3		1.05%
Countercyclical Capital Buffer Amount					0.0		0.00%
Prescribed Capital Conservation Buffer Amount (PCCBA)					63.9		1.80%
Total Capital Requirement and PCCBA	$115.0		$85.8		$145.1		4.09%
Adjusted Total Assets	$3,357.5		$3,547.4		$3,547.4		
Total Capital Requirement and PCCBA/ Adjusted Total Assets	3.42%		2.42%		4.09%		

Table 2b: Comparison of Risk-Based Capital Requirements for Freddie Mac under the 2018 Proposal and the Proposed Rule, by Risk Category

Freddie Mac	2018 Proposal As of				Proposed Rule As of		
	9/30/2017		9/30/2019		9/30/2019		
	$ in billions	% of Total	$ in billions	% of Total	$ in billions	% of Total	% of Adjusted Total Assets
Gross Credit Risk			$50.6		$61.2		2.42%
Loan-Level Credit Enhancement			(6.9)		(6.6)		(0.26%)
Net Credit Risk	$41.5		$43.7		$54.6		2.16%
CRT Impact, net	(10.0)		(21.5)		(11.6)		(0.46%)
Post-CRT Net Credit Risk	31.5	48%	22.2	43%	43.0	80%	1.70%
Market Risk	9.9	15%	7.4	14%	7.4	14%	0.29%
Going-Concern Buffer	15.9	24%	17.8	35%	0.0	0%	0.00%
Operational Risk	1.7	3%	1.9	4%	3.6	7%	0.14%
Deferred Tax Assets	6.8	10%	1.8	4%	0.0	0%	0.00%
Total Capital Requirement	$65.9	100%	$51.1	100%	$53.9	100%	2.13%
Prescribed Buffers							
Stress Capital Buffer					18.9		0.75%
Stability Capital Buffer					16.0		0.64%
Countercyclical Capital Buffer Amount					0.0		0.00%
Prescribed Capital Conservation Buffer Amount (PCCBA)					35.0		1.39%
Total Capital Requirement and PCCBA	$65.9		$51.1		$88.9		3.52%
Adjusted Total Assets	$2,262.4		$2,524.6		$2,524.6		
Total Capital Requirement and PCCBA/ Adjusted Total Assets	2.91%		2.02%		3.52%		

Table 3a: Comparison of Risk-Based Capital Requirements for Fannie Mae under the 2018 Proposal and the Proposed Rule, by Asset Category

Fannie Mae	2018 Proposal As of				Proposed Rule As of		
	9/30/2017		9/30/2019		9/30/2019		
	$ in billions	% of Total	$ in billions	% of Total	$ in billions	% of Total	Adjusted Total
Single-family excluding Going-Concern Buffer	$58.6	51%	$41.6	48%			
Single-family Going-Concern Buffer	21.5	19%	22.4	26%			
Single-family	80.1	70%	64.0	75%	$66.5	82%	1.88%
Multifamily excluding Going-Concern Buffer	7.4	6%	9.1	11%			
Multifamily Going-Concern Buffer	2.0	2%	2.5	3%			
Multifamily	9.4	8%	11.6	13%	10.7	13%	0.30%
Deferred Tax Assets	19.9	17%	5.6	6%	0.0	0%	0.00%
Other Assets excluding Going-Concern Buffer*	5.1	4%	3.9	5%			
Other Assets Going-Concern Buffer	0.5	0%	0.8	1%			
Other Assets	5.6	5%	4.7	5%	4.0	5%	0.11%
Total Capital Requirement	$115.0	100%	$85.8	100%	$81.2	100%	2.29%
Prescribed Buffers							
Stress Capital Buffer					26.6		0.75%
Stability Capital Buffer					37.3		1.05%
Countercyclical Capital Buffer Amount					0.0		0.00%
Prescribed Capital Conservation Buffer Amount (PCCBA)					$63.9		1.80%
Total Capital Requirement and PCCBA	$115.0		$85.8		$145.1		4.09%
Adjusted Total Assets	$3,357.5		$3,547.4		$3,547.4		
Total Capital Requirement and Buffers/ Adjusted Total Assets	3.43%		2.42%		4.09%		

*Includes PLS, CMBS, Other.

Table 3b: Comparison of Risk-Based Capital Requirements for Freddie Mac under the 2018 Proposal and the Proposed Rule, by Asset Category

Freddie Mac	2018 Proposal As of				Proposed Rule As of		
	9/30/2017		9/30/2019		9/30/2019		
	$ in billions	% of Total	$ in billions	% of Total	$ in billions	% of Total	% of Adjusted Total Assets
Single-family excluding Going-Concern Buffer	$37.0	56%	$26.2	51%			
Single-family Going-Concern Buffer	13.4	20%	14.5	28%			
Single-family	50.4	77%	40.7	80%	$44.5	83%	1.76%
Multifamily excluding Going-Concern Buffer	2.8	4%	3.1	6%			
Multifamily Going-Concern Buffer	1.7	3%	2.2	4%			
Multifamily	4.5	7%	5.3	10%	7.1	13%	0.28%
Deferred Tax Assets	6.8	10%	1.8	4%	0.0	0%	0.00%
Other Assets excluding Going-Concern Buffer*	3.3	5%	2.2	4%			
Other Assets Going-Concern Buffer	0.8	1%	1.0	2%			
Other Assets	4.1	6%	3.3	6%	2.3	4%	0.09%
Total Capital Requirement	$65.9	100%	$51.1	100%	$53.9	100%	2.13%
Prescribed Buffers							
Stress Capital Buffer					18.9		0.75%
Stability Capital Buffer					16.0		0.64%
Countercyclical Capital Buffer Amount					0.0		0.00%
Prescribed Capital Conservation Buffer Amount (PCCBA)					$35.0		1.39%
Total Capital Requirement and PCCBA	$65.9		$51.1		$88.9		3.52%
Adjusted Total Assets	$2,262.4		$2,524.6		$2,524.6		
Total Capital Requirement and Buffers/ Adjusted Total Assets	2.91%		2.02%		3.52%		

*Includes PLS, CMBS, Other.

B. Single-Family Business

Table 26: Comparison of Single-family Risk-based Capital Requirements under the 2018 Proposal and the Proposed Rule, as of September 30, 2019

$ in billions	Fannie Mae		Freddie Mac		Enterprises Combined			
	2018 Proposal	Proposed Rule	2018 Proposal	Proposed Rule	2018 Proposal	Risk Weight	Proposed Rule	Risk Weight
Gross Credit Risk	$61.8	$75.1	$38.0	$47.4	$99.9	25%	$122.4	31%
Loan Level Enchancement	(11.0)	(10.4)	(6.9)	(6.6)	(17.9)		(17.0)	
Net Credit Risk	50.8	64.6	31.2	40.8	82.0	20%	105.4	26%
CRT Impact, net	(15.2)	(6.2)	(12.0)	(4.7)	(27.2)		(10.9)	
Post-CRT Net Credit Risk	35.6	58.4	19.1	36.1	54.7	14%	94.5	24%
Market Risk	3.6	3.6	5.5	5.5	9.1		9.1	
Operational Risk	2.4	4.5	1.5	2.9	3.9		7.4	
Subtotal	41.6	66.5	26.2	44.5	67.8		111.0	
Going-concern Buffer	22.4	0.0	14.5	0.0	36.9		0.0	
Total Capital Requirement	$64.0	$66.5	$40.7	$44.5	$104.7		$111.0	
Total UPB	$2,944.9	$2,944.9	$2,058.8	$2,058.8	$5,003.8		$5,003.8	

Includes single-family whole loans, Fannie Mae and Freddie Mac guarantees of single-family securities held by third parties, and investments in single-family securities guaranteed by Fannie Mae, Freddie Mac or Ginnie Mae.

Table 27: Walk-forward of Single-family Risk-based Capital Requirements from the 2018 proposal to the Proposed Rule, as of September 30, 2019

$ in billions	Fannie Mae		Freddie Mac		Enterprises Combined	
	2018 Proposal	Proposed Rule	2018 Proposal	Proposed Rule	2018 Proposal	Proposed Rule
Gross Credit Risk	$61.8		$38.0		$99.9	
Consolidate Grids, drop 2 SF multipliers		(0.5)		(0.0)		(0.6)
20% RW on cross holding/wrap of MBS		0.5		0.4		0.9
Counterparty credit risk for derivatives		0.1		0.3		0.4
Loan level capital floor		13.2		8.6		21.9
Gross Credit Risk - New Proposal		75.1		47.4		122.4
Loan Level Credit Enhancement	(11.0)		(6.9)		(17.9)	
Reduce MI Haircuts		(0.4)		(0.3)		(0.7)
Loan level capital floor		1.0		0.6		1.6
Loan Level Enhancement - New Proposal		(10.4)		(6.6)		(17.0)
Net Credit Risk	50.8	64.6	31.2	40.8	82.0	105.4
CRT - Original Proposal	(15.2)		(12.0)		(27.2)	
10% haircut on CRT capital relief		1.6		1.3		2.8
CRT tranche capital floor and all other changes		7.4		6.0		13.5
CRT Impact, net - New Proposal		(6.2)		(4.7)		(10.9)
Post-CRT Net Credit Risk	35.6	58.4	19.1	36.1	54.7	94.5
Market Risk	3.6	3.6	5.5	5.5	9.1	9.1
Operational Risk	2.4		1.5		3.9	
Operational Risk floor		2.1		1.4		3.4
Operational Risk - New Proposal		4.5		2.9		7.4
Going-concern buffer	22.4	0.0	14.5	0.0	36.9	0.0
Total Capital Requirement	$64.0	$66.5	$40.7	$44.5	$104.7	$111.0

Includes single-family whole loans, Fannie Mae and Freddie Mac guarantees of single-family securities held by third parties, and investments in single-family securities guaranteed by Fannie Mae, Freddie Mac or Ginnie Mae.

Table 28: Credit Risk Capital Requirements for Single-family Mortgage Exposures, as of September 30, 2019

	Enterprises Combined				
	Capital, $billions	RWA, $billions	Risk Weight	UPB, $billions	Capital, bps
Gross Credit Risk					
Performing Loans	$104.7	$1,309	28%	$4,661.6	225
Re-Performing Loans	8.5	106.8	55%	195.4	437
Non-Performing Loans	5.6	70.3	166%	42.4	1,326
Gross Credit Risk	$118.9	$1,486.1	30%	$4,899.4	243
Net Credit Risk					
Performing Loans	$89.3	$1,116	24%	$4,661.6	192
Re-Performing Loans	7.9	99.2	51%	195.4	406
Non-Performing Loans	4.7	58.3	138%	42.4	1,101
Net Credit Risk	$101.9	$1,273.7	26%	$4,899.4	208
CRT Impact, net	(10.9)				
Post CRT Net Credit Risk	$91.0	$1,136.9	23%	$4,899.4	

Includes single-family whole loans and Fannie Mae and Freddie Mac guarantees of single-family securities held by third parties.

Table 28a: Credit Risk Capital Requirements for Fannie Mae's Single-family Mortgage Exposures, as of September 30, 2019

	Fannie Mae				
	Capital, $billions	RWA, $billions	Risk Weight	UPB, $billions	Capital, bps
Gross Credit Risk					
Performing Loans	$64.2	$803	29%	$2,813.7	228
Re-Performing Loans	5.7	$71	55%	130.0	439
Non-Performing Loans	3.6	$45	169%	26.8	1,352
Gross Credit Risk	73.6	$919	31%	$2,970.4	248
Net Credit Risk					
Performing Loans	$54.6	$683	24%	$2,813.7	194
Re-Performing Loans	5.3	$66	51%	130.0	408
Non-Performing Loans	3.2	$40	149%	26.8	1,192
Net Credit Risk	63.1	$789	27%	2,970.4	213
CRT Impact, net	(6.2)				
Post CRT Net Credit Risk	$56.9	$711	24%	$2,970.4	

Includes single-family whole loans and Fannie Mae guarantees of single-family securities held by third parties.

Table 28b: Credit Risk Capital Requirements for Freddie Mac's Single-family Mortgage Exposures, as of September 30, 2019

	Freddie Mac				
	Capital, $billions	RWA, $billions	Risk Weight	UPB, $billions	Capital, bps
Gross Credit Risk					
Performing Loans	$40.5	$506	27%	$1,847.9	219
Re-Performing Loans	2.8	$35	54%	65.5	433
Non-Performing Loans	2.0	$25	160%	15.6	1,283
Gross Credit Risk	45.3	$567	29%	$1,928.9	235
Net Credit Risk					
Performing Loans	$34.7	$433	23%	$1,847.9	188
Re-Performing Loans	2.6	$33	50%	65.5	401
Non-Performing Loans	1.5	$18	118%	15.6	944
Net Credit Risk	38.8	$485	25%	1,928.9	201
CRT Impact, net	(4.7)				
Post CRT Net Credit Risk	$34.0	$426	22%	$1,928.9	

Includes single-family whole loans and Freddie Mac guarantees of single-family securities held by third parties.

C. Multifamily Business

Table 29: Comparison of Multifamily Risk-based Capital Requirements under the 2018 Proposal and the Proposed Rule, of September 30, 2019

$ in billions	Fannie Mae		Freddie Mac		Enterprises Combined			
	2018 Proposal	Proposed Rule	2018 Proposal	Proposed Rule	2018 Proposal	Risk Weight	Proposed Rule	Risk Weight
Net Credit Risk	$12.8	$13.9	$11.8	$13.1	$24.7	47%	$27.0	51%
CRT Impact, net	(4.6)	(4.3)	(9.5)	(6.9)	(14.1)		(11.2)	
Post-CRT Net Credit Risk	8.2	9.6	2.4	6.2	10.6	20%	15.8	30%
Market Risk	0.6	0.6	0.5	0.5	1.1		1.1	
Operational Risk	0.3	0.5	0.2	0.4	0.5		0.9	
Subtotal	9.1	10.7	3.1	7.1	12.2		17.8	
Going-Concern Buffer	2.5	0.0	2.2	0.0	4.7		0.0	
Total Capital Requirement	$11.6	$10.7	$5.3	$7.1	$16.9		$17.8	
Total UPB	$352.3	$352.3	$303.2	$303.2	$655.5		$655.5	

Includes multifamily whole loans, Fannie Mae and Freddie Mac guarantees of multifamily securities held by third parties, and investments in multifamily securities guaranteed by Fannie Mae, Freddie Mac or Ginnie Mae.

Table 30: Walk-forward of Multifamily Risk-based Capital Requirements from the 2018 Proposal to Proposed Rule, as of September 30, 2019

$ in billions	Fannie Mae		Freddie Mac		Enterprises Combined	
	2018 Proposal	Proposed Rule	2018 Proposal	Proposed Rule	2018 Proposal	Proposed Rule
Net Credit Risk	$12.8		$11.8		$24.7	
Eliminate Govt. Subsidy Multiplier and Adjust the Orig Loan Size Multipliers		0.9		0.7		1.6
Loan-level capital floor		0.2		0.6		0.8
Net Credit Risk - New Proposal		13.9		13.1		27.0
CRT - Original Proposal	(4.6)		(9.5)		(14.1)	
Change in capital relief associated with pre-deal capital		(0.3)		(0.6)		(0.9)
Loan-level Risk Sharing Capital Relief		0.1		0.0		0.1
10% haircut on CRT capital relief		0.5		1.0		1.5
CRT tranche capital floor and all other changes		0.02		2.14		2.2
CRT Impact, net - New Proposal		(4.3)		(6.9)		(11.2)
Post-CRT Net Credit Risk - New Proposal	8.2	9.6	2.4	6.2	10.6	15.8
Market Risk	0.6	0.6	0.5	0.5	1.1	1.1
Operational Risk	0.3		0.2		0.5	
Operational Risk floor		0.2		0.2		0.4
Operational Risk - New Proposal		0.5		0.4		0.9
Going-Concern Buffer	2.5	0.0	2.2	0.0	4.7	0.0
Total Capital Requirement	$11.6	$10.7	$5.3	$7.1	$16.9	$17.8

Includes multifamily whole loans, Fannie Mae and Freddie Mac guarantees of multifamily securities held by third parties, and investments in multifamily securities guaranteed by Fannie Mae, Freddie Mac or Ginnie Mae.

D. Other Assets

Table 31: Risk-based Capital Requirements for Other Assets, of September 30, 2019

	Fannie Mae			Freddie Mac			Enterprises Combined		
	Capital, $billions	UPB, $billions	Capital, bps	Capital, $billions	UPB, $billions	Capital, bps	Capital, $billions	UPB, $billions	Capital, bps
Other Assets									
Private-label Securities	$0.7	$2.4	2,753	$0.4	$1.7	2,430	$1.1	$4.1	2,619
CMBS	0.0	$0.0	-	0.0	$0.2	202	$0.0	$0.2	202
Other	3.3	$180.3	183	1.9	$122.1	154	$5.2	$302.4	172
Total Capital Requirements	$4.0	$182.7	217	$2.3	$124.0	186	$6.3	$306.7	204

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XIII. Comparisons to the U.S. Banking Framework

As discussed in Section V.B.2 and also in the 2018 proposal, comparisons to the U.S. banking framework's capital requirements are complicated by the different risk profiles of the Enterprises and large banking organizations.[84] The Enterprises, for example, transfer much of the interest rate and funding risk on their mortgage exposures through their sales of guaranteed MBS, while banking organizations generally fund themselves through customer deposits and other sources. On the other hand, the monoline nature of the Enterprises' mortgage-focused businesses suggests that the concentration risk profile of an Enterprise is generally greater than that of a diversified banking organization

[84] 83 FR at 33323.

with a similar amount of mortgage credit risk.

While the Enterprises and large banking organizations' risk profiles are different with respect to some risks, those differences should not preclude a comparison of the credit risk capital requirement of a large U.S. banking organization for a specific mortgage exposure to the credit risk capital requirement of an Enterprise for a similar mortgage exposure. Under both frameworks, the credit risk capital requirements for mortgage exposures are calibrated to absorb unexpected losses. Comparisons of credit risk capital requirements of the large U.S. banking organizations to credit risk capital requirements of the Enterprises under the proposed rule are, however, still complicated by the fact that the proposed rule's requirements could be very different depending on the economic environment. In a favorable economic environment, particularly after sustained periods of house price growth and strong employment such as experienced in the U.S. prior to the first quarter of 2020, the proposed rule's mortgage risk-sensitive framework is likely to show lower credit risk capital requirements than the U.S. banking framework. Conversely, in a period of financial stress, the proposed rule's mortgage risk-sensitive framework could show higher credit risk capital requirements than the U.S. banking framework.

FHFA's mortgage risk-sensitive framework results in a more granular calibration of credit risk capital requirements for mortgage exposures, and some meaningful portion of the current gap between the credit risk capital requirements of the Enterprises and large banking organizations under the proposed rule is due to the proposed rule's use of MTMLTV instead of OLTV, as under the U.S. banking framework, to assign credit risk capital requirements. Adjusting for the appreciation in the value of the underlying real property generally has led to lower actual credit risk capital requirements at the Enterprises, and some of the gap between the credit risk capital requirements of the Enterprises and large U.S. banking organizations might be expected to narrow were real property prices to move toward their long-term trend.

With that context, FHFA is seeking comment on the appropriateness of key differences between the credit risk capital requirements for mortgage exposures under the proposed rule and the U.S. banking framework.

• *Risk-based credit risk capital requirements.* As discussed in Sections VIII.A.7 and VIII.B.6, as of September 30, 2019 and before adjusting for CRT or the buffers under both frameworks, the average credit risk capital requirements for the Enterprises' single-family and multifamily mortgage exposures generally were roughly half those of similar exposures under the U.S. banking framework. Those lower average credit risk capital requirements are before any capital relief afforded through CRT.

• *CRT capital treatment.* As discussed in Sections VIII.C.3.c and VIII.C.3.d, the proposed rule solicits comments on two different approaches to determining the remaining credit risk on exposures of a CRT that are retained by the Enterprise and any credit risk in effect retained by the Enterprise as a result of the potential ineffectiveness of CRT in transferring credit risk. Under both approaches, the minimum risk weight assigned to retained CRT exposures would be 10 percent, which is less than the 20 percent risk weight floor for securitization exposures under the U.S. banking framework.

• *CRT eligibility.* As discussed in Section VIII.C.3.b, the proposed rule provides credit risk capital relief for a number of CRT structures that would not be eligible for capital relief under the U.S. banking framework. The proposed rule also generally subjects CRT structures to less restrictive operational criteria.

• *Mortgage insurance.* Similarly, as discussed in Section VIII.A.6, the proposed rule generally provides more credit risk capital relief for mortgage insurance and other loan-level credit enhancement, and for a broader range of counterparties, than the U.S. banking framework.

In addition to these different credit risk capital requirements for mortgage exposures, FHFA is seeking comment on other aspects in which the proposed rule and the U.S. banking framework differs. For example:

• *Leverage ratio requirements.* Under the proposed rule's leverage ratio requirement, an Enterprise would be required to maintain tier 1 capital in excess of 2.5 percent of its adjusted total assets. An Enterprise also would be required to maintain tier 1 capital in excess of 4.0 percent of its adjusted total assets to avoid restrictions on capital distributions and discretionary bonus payments. A U.S. banking organization is required to maintain tier 1 capital greater than 4.0 percent of its total assets. A large U.S. banking organization also must maintain tier 1 capital in excess of 5.0 percent of its total leverage exposure to avoid restrictions on capital distributions and discretionary bonus payments.[85]

• *Market risk capital.* The proposed rule and U.S. banking framework take considerably different approaches to market risk capital requirements. As discussed in Section X, the proposed rule generally assigns market risk capital requirements to a broader set of exposures, including ones already subject to credit risk capital requirements, while the U.S. banking framework requires market risk capital not just for spread risk but also a broader range of market risks.

• *Capital conservation buffer.* As discussed in Section VII.A, the proposed rule's PCCBA is assessed against adjusted total assets, not risk-weighted assets. This risk-insensitive approach reduces the impact that the PCCBA potentially could have on higher risk exposures, avoids amplifying the secondary effects of any model or similar risks inherent to the calibration of granular risk weights for mortgage exposures, and further mitigates the pro-cyclicality in aggregate risk-based capital requirements.

• *Stability capital buffer.* The proposed rule's stability capital buffer is tailored to the risk that an Enterprise's default or other financial distress could have on the liquidity, efficiency, competitiveness, and resiliency of national housing finance markets. The U.S. banking framework's GSIB surcharge is tailored to equalize the expected impact on the stability of the financial system of the failure of a GSIB with the expected systemic impact of the failure of a large bank holding company that is not a GSIB. Because the stability capital buffer is a component of the capital conservation buffer, the stability capital buffer is assessed against an Enterprise's adjusted total assets, while the GSIB surcharge is more risk-sensitive in that it is assessed against risk-weighted assets.

• *Internal-ratings approach.* Like the U.S. banking framework, each Enterprise would be required to determine its risk-weighted assets under two approaches—a standardized approach and an advanced approach—with the greater of the two risk-weighted assets used to determine its risk-based capital requirements. Unlike the U.S. banking framework, the proposed rule would be significantly less prescriptive as to requirements and restrictions governing the internal models used to

[85] Insured depository institutions subsidiaries of certain large U.S. bank holding companies must maintain tier 1 capital of 6.0 percent or greater of total assets to be ''well capitalized.'' *See, e.g.,* 12 CFR 6.4(b)(1)(i)(D).

determine the advanced risk-weighted assets.

Question 103. Are the differences between the credit risk capital requirements for mortgage exposures under the proposed rule and the U.S. banking framework appropriate?

Question 104. Which, if any, aspects of the proposed rule should be further aligned with the U.S. banking framework?

XIV. Compliance Period

This proposed rule would establish a post-conservatorship regulatory capital framework that ensures that each Enterprise operates in a safe and sound manner and is positioned to fulfill its statutory mission to provide stability and ongoing assistance to the secondary mortgage market across the economic cycle. Given the Enterprises' current conservatorship status and capitalization, certain sections and subparts of the proposed rule would be subject to delayed compliance dates as set forth in § 1240.4. The capital requirements and buffers set out in subpart B of the proposed rule would have a delayed compliance date, unless adjusted by FHFA as described below, of the later of one year from publication of the final rule or the date of the termination of conservatorship. FHFA recognizes that the path for transition out of conservatorship and meeting the full capital requirements and buffers is not settled at this time. Therefore, the proposed rule would provide FHFA with the discretion, based on FHFA's assessment of capital market conditions and the likely feasibility of an Enterprise to achieve capital levels sufficient to comply with the capital requirements proposed at § 1240.10, to defer compliance with the capital requirements and thereby not subject an Enterprise to statutory prohibitions on capital distributions that would apply if those requirements were not met. During that deferral period, the PCCBA would be the CET1 capital that would otherwise be required under § 1240.10 plus the PCCBA that would otherwise apply under normal conditions under § 1240.11(a)(5); and the PLBA would be 4.0 percent of the adjusted total assets of the Enterprise. To benefit from the deferral period, an Enterprise would be required to comply with any corrective plan or agreement or order that sets out the actions by which an Enterprise will achieve compliance with the capital requirements by a specified date.

In addition, the proposed rule would delay compliance for reporting under § 1240.1(f) for one year from the date of publication of the final rule.

Question 105. Are the delayed compliance dates tailored in a manner to promote the ability of an Enterprise to achieve compliant regulatory capital levels?

XV. Temporary Increases of Minimum Capital Requirements and Other Conforming Amendments

To reinforce its reserved authorities under § 1240.1(d), FHFA is proposing to amend its existing rule, 12 CFR part 1225, ''Minimum Capital—Temporary Increase,'' to clarify that the authority implemented in that rule to temporarily increase a regulated entity's required capital minimums applies to risk-based minimum capital levels as well as to minimum leverage ratios. This amendment aligns the scope of this regulation, adopted under 12 U.S.C. 4612(d), with the FHFA Director's authority under 12 U.S.C. 4612(e) to establish additional capital and reserve requirements for particular purposes, which authorizes risk-based adjustments to capital requirements for particular products and activities and is not limited to adjustments to the leverage ratio. FHFA is also proposing to amend the definition of ''total exposure'' in § 1206.2 to have the same meaning as ''adjusted total assets'' as defined in § 1240.2. FHFA is also proposing to remove 12 CFR part 1750.

Question 106. Should FHFA conform the definition of ''total exposure'' in § 1206.2 to have the same meaning as ''adjusted total assets'' as defined in § 1240.2?

Question 107. In addition to the questions asked above, FHFA requests comments on any aspect of the proposed rule.

XVI. Paperwork Reduction Act

The Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*) requires that regulations involving the collection of information receive clearance from the Office of Management and Budget (OMB). The proposed rule contains no such collection of information requiring OMB approval under the PRA. Therefore, no information has been submitted to OMB for review.

XVII. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires that a regulation that has a significant economic impact on a substantial number of small entities, small businesses, or small organizations must include an initial regulatory flexibility analysis describing the regulation's impact on small entities. FHFA need not undertake such an analysis if the agency has certified that the regulation will not have a significant economic impact on a substantial number of small entities. 5 U.S.C. 605(b). FHFA has considered the impact of the proposed rule under the Regulatory Flexibility Act. The General Counsel of FHFA certifies that the proposed rule, if adopted as a final rule, would not have a significant economic impact on a substantial number of small entities because the proposed rule is applicable only to the Enterprises, which are not small entities for purposes of the Regulatory Flexibility Act.

List of Subjects

12 CFR Part 1206

Assessments, Federal home loan banks, Government-sponsored enterprises, Reporting and recordkeeping requirements.

12 CFR Part 1225

Federal home loan banks, Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Capital, Filings, Minimum capital, Procedures, Standards.

12 CFR Part 1240

Capital, Credit, Enterprise, Investments, Reporting and recordkeeping requirements.

12 CFR Part 1750

Banks, banking, Capital classification, Mortgages, Organization and functions (Government agencies), Risk-based capital, Securities.

Authority and Issuance

For the reasons stated in the preamble, under the authority of 12 U.S.C. 4511, 4513, 4513b, 4514, 4515–17, 4526, 4611–4612, 4631–36, FHFA proposes to amend chapters XII and XVII, of title 12 of the Code of Federal Regulation as follows:

CHAPTER XII—FEDERAL HOUSING FINANCE AGENCY

SUBCHAPTER A—ORGANIZATION AND OPERATIONS

PART 1206—ASSESSMENTS

■ 1. The authority citation for part 1206 continues to read as follows:

Authority: 12 U.S.C. 4516.

■ 2. Amend 12 CFR 1206.2 by revising the definition of ''*Total exposure*'' to read as follows:

§ 1206.2 Definitions.

* * * * *

Total exposure has the same meaning given to adjusted total assets in 12 CFR 1240.2.

* * * * *

SUBCHAPTER B—ENTITY REGULATIONS

PART 1225—MINIMUM CAPITAL—TEMPORARY INCREASE

■ 3. The authority citation for part 1225 continues to read as follows:

Authority: 12 U.S.C. 4513, 4526 and 4612.

■ 4. Amend 12 CFR 1225.2 by revising the definition of ''*Minimum capital level*'' to read as follows:

§ 1225.2 Definitions.

* * * * *

Minimum capital level means the lowest amount of capital meeting any regulation or orders issued pursuant to 12 U.S.C. 1426 and 12 U.S.C. 4612, or any similar requirement established by regulation, order or other action.

* * * * *

SUBCHAPTER C—ENTERPRISES

■ 5. Add part 1240 to subchapter C to read as follows:

PART 1240—CAPITAL ADEQUACY OF ENTERPRISES

Sec.

Subpart A—General Provisions

1240.1 Purpose, applicability, reservations of authority, and reporting.
1240.2 Definitions.
1240.3 Operational requirements for counterparty credit risk.
1240.4 Compliance dates.

Subpart B—Capital Requirements and Buffers

1240.10 Capital requirements.
1240.11 Capital conservation buffer and leverage buffer.

Subpart C—Definition of Capital

1240.20 Capital components and eligibility criteria for regulatory capital instruments.
1240.21 [Reserved]
1240.22 Regulatory capital adjustments and deductions.

Subpart D—Risk-Weighted Assets—Standardized Approach

1240.30 Applicability.

Risk-Weighted Assets for General Credit Risk

1240.31 Mechanics for calculating risk-weighted assets for general credit risk.
1240.32 General risk weights.
1240.33 Single-family mortgage exposures.
1240.34 Multifamily mortgage exposures.
1240.35 Off-balance sheet exposures.
1240.36 Derivative contracts.
1240.37 Cleared transactions.
1240.38 Guarantees and credit derivatives: Substitution treatment.
1240.39 Collateralized transactions.

Risk-Weighted Assets for Unsettled Transactions

1240.40 Unsettled transactions.

Risk-Weighted Assets for CRT and Other Securitization Exposures

1240.41 Operational requirements for CRT and other securitization exposures.
1240.42 Risk-weighted assets for CRT and other securitization exposures.
1240.43 Simplified supervisory formula approach (SSFA).
1240.44 Credit risk transfer approach (CRTA).
1240.45 Securitization exposures to which the SSFA and the CRTA do not apply.
1240.46 Recognition of credit risk mitigants for securitization exposures.

Risk-Weighted Assets for Equity Exposures

1240.51 Exposure measurement.

Subpart E—Risk-Weighted Assets—Internal Ratings-Based and Advanced Measurement Approaches

1240.100 Purpose, applicability, and principle of conservatism.
1240.101 Definitions.
1240.121 Minimum requirements.
1240.122 Ongoing qualification.
1240.123 Advanced approaches credit risk-weighted asset calculations.
1240.161 Qualification requirements for incorporation of operational risk mitigants.
1240.162 Mechanics of operational risk risk-weighted asset calculation.

Subpart F—Risk-Weighted Assets—Market Risk

1240.201 Purpose, applicability, and reservation of authority.
1240.202 Definitions.
1240.203 Requirements for managing market risk.
1240.204 Measure for spread risk.

Subpart G—Stability Capital Buffer

1240.400 Stability capital buffer.

Authority: 12 U.S.C. 4511, 4513, 4513b, 4514, 4515, 4517, 4526, 4611–4612, 4631–36.

Subpart A—General Provisions

§ 1240.1 Purpose, applicability, reservations of authority, and reporting.

(a) *Purpose.* This part establishes capital requirements and overall capital adequacy standards for the Enterprises. This part includes methodologies for calculating capital requirements.

(b) *Authorities*—(1) *Limitations of authority.* Nothing in this part shall be read to limit the authority of FHFA to take action under other provisions of law, including action to address unsafe or unsound practices or conditions, deficient capital levels, or violations of law or regulation under the Safety and Soundness Act, and including action under sections 1313(a)(2), 1365–1367, 1371–1376 (12 U.S.C. 4513(a)(2), 4615–4617, and 4631–4636).

(2) *Permissible activities.* Nothing in this part may be construed to authorize, permit, or require an Enterprise to engage in any activity not authorized by its authorizing statute or that would otherwise be inconsistent with its authorizing statute or the Safety and Soundness Act.

(c) *Applicability*—(1) *Covered regulated entities.* This part applies on a consolidated basis to each Enterprise.

(2) *Capital requirements and overall capital adequacy standards.* Each Enterprise must calculate its capital requirements and meet the overall capital adequacy standards in subpart B of this part.

(3) *Regulatory capital.* Each Enterprise must calculate its regulatory capital in accordance with subpart C of this part.

(4) *Risk-weighted assets.* (i) Each Enterprise must use the methodologies in subparts D and F of this part to calculate standardized total risk-weighted assets.

(ii) Each Enterprise must use the methodologies in subpart E and subpart F of this part to calculate advanced approaches total risk-weighted assets.

(d) *Reservation of authority regarding capital.* Subject to applicable provisions of the Safety and Soundness Act—

(1) *Additional capital in the aggregate.* FHFA may require an Enterprise to hold an amount of regulatory capital greater than otherwise required under this part if FHFA determines that the Enterprise's capital requirements under this part are not commensurate with the Enterprise's credit, market, operational, or other risks.

(2) *Regulatory capital elements.* (i) If FHFA determines that a particular common equity tier 1 capital, additional tier 1 capital, or tier 2 capital element has characteristics or terms that diminish its ability to absorb losses, or otherwise present safety and soundness concerns, FHFA may require the Enterprise to exclude all or a portion of such element from common equity tier 1 capital, additional tier 1 capital, or tier 2 capital, as appropriate.

(ii) Notwithstanding the criteria for regulatory capital instruments set forth in subpart C of this part, FHFA may find that a capital element may be included in an Enterprise's common equity tier 1 capital, additional tier 1 capital, or tier 2 capital on a permanent or temporary basis consistent with the loss absorption capacity of the element and in accordance with § 1240.20(e).

(3) *Risk-weighted asset amounts.* If FHFA determines that the risk-weighted asset amount calculated under this part by the Enterprise for one or more exposures is not commensurate with the risks associated with those exposures, FHFA may require the Enterprise to assign a different risk-weighted asset amount to the exposure(s) or to deduct

the amount of the exposure(s) from its regulatory capital.

(4) *Total leverage.* If FHFA determines that the adjusted total asset amount calculated by an Enterprise under § 1240.10 is inappropriate for the exposure(s) or the circumstances of the Enterprise, FHFA may require the Enterprise to adjust this exposure amount in the numerator and the denominator for purposes of the leverage ratio calculations.

(5) *Consolidation of certain exposures.* FHFA may determine that the risk-based capital treatment for an exposure or the treatment provided to an entity that is not consolidated on the Enterprise's balance sheet is not commensurate with the risk of the exposure and the relationship of the Enterprise to the entity. Upon making this determination, FHFA may require the Enterprise to treat the exposure or entity as if it were consolidated on the balance sheet of the Enterprise for purposes of determining the Enterprise's risk-based capital requirements and calculating the Enterprise's risk-based capital ratios accordingly. FHFA will look to the substance of, and risk associated with, the transaction, as well as other relevant factors FHFA deems appropriate in determining whether to require such treatment.

(6) *Other reservation of authority.* With respect to any deduction or limitation required under this part, FHFA may require a different deduction or limitation, provided that such alternative deduction or limitation is commensurate with the Enterprise's risk and consistent with safety and soundness.

(e) *Corrective action and enforcement.* FHFA may enforce this part pursuant to sections 1371, 1372, and 1376 of the Safety and Soundness Act (12 U.S.C. 4631, 4632, 4636) and also may enforce the total capital requirement established under § 1240.10(a) and the core capital requirement established under § 1240.10(e) pursuant to section 1364 of the Safety and Soundness Act (12 U.S.C. 4614). This part is also a prudential standard adopted under section 1313b of the Safety and Soundness Act (12 U.S.C. 4513b), excluding § 1240.11, which is a prudential standard only for purposes of § 1240.4(d). That section authorizes the Director to require that an Enterprise submit a corrective plan under 12 CFR 1236.4 specifying the actions the Enterprise will take to correct the deficiency if the Director determines that an Enterprise is not in compliance with this part.

(f) *Reporting procedure and timing*—(1) *Capital Reports.* Each Enterprise shall file a capital report with FHFA every calendar quarter providing the information and data required by FHFA. The specifics of required information and data, and the report format, will be separately provided to the Enterprise by FHFA. The report shall include the ratio of capital requirement under § 1240.10 to the adjusted total assets of the Enterprise and the maximum payout ratio of the Enterprise.

(2) *Timing.* The capital report shall be submitted not later than 60 days after calendar quarter end or at such other time as the Director requires.

(3) *Approval.* The capital report must be approved by the Chief Risk Officer and the Chief Financial Officer of an Enterprise prior to submission to FHFA.

(4) *Adjustment.* In the event an Enterprise makes an adjustment to its financial statements for a quarter or a date for which information was provided pursuant to this paragraph (f), which would cause an adjustment to a capital report, an Enterprise must file with the Director an amended capital report not later than 15 days after the date of such adjustment.

§ 1240.2 Definitions.

As used in this part:

12 CFR 217 means the regulation published at 12 CFR part 217 as of April 23, 2020.

Acquired CRT exposure means, with respect to an Enterprise:

(1) Any exposure that arises from a credit risk transfer of the Enterprise and has been acquired by the Enterprise since the issuance or entry into the credit risk transfer by the Enterprise; or

(2) Any exposure that arises from a credit risk transfer of the other Enterprise.

Additional tier 1 capital is defined in § 1240.20(c).

Adjusted allowances for credit losses (AACL) means valuation allowances that have been established through a charge against earnings or retained earnings for expected credit losses on financial assets measured at amortized cost and a lessor's net investment in leases that have been established to reduce the amortized cost basis of the assets to amounts expected to be collected as determined in accordance with GAAP. For purposes of this part, adjusted allowances for credit losses include allowances for expected credit losses on off-balance sheet credit exposures not accounted for as insurance as determined in accordance with GAAP. Adjusted allowances for credit losses allowances created that reflect credit losses on purchased credit deteriorated assets and available-for-sale debt securities.

Adjusted total assets means the sum of the items described in paragraphs (1) though (9) of this definition, as adjusted pursuant to paragraph (9) for a clearing member Enterprise:

(1) The balance sheet carrying value of all of the Enterprise's on-balance sheet assets, plus the value of securities sold under a repurchase transaction or a securities lending transaction that qualifies for sales treatment under GAAP, less amounts deducted from tier 1 capital under § 1240.22(a), (c), and (d), and less the value of securities received in security-for-security repo-style transactions, where the Enterprise acts as a securities lender and includes the securities received in its on-balance sheet assets but has not sold or re-hypothecated the securities received, and less the fair value of any derivative contracts;

(2) The potential future credit exposure (PFE) for each derivative contract or each single-product netting set of derivative contracts (including a cleared transaction except as provided in paragraph (9) of this definition and, at the discretion of the Enterprise, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP), to which the Enterprise is a counterparty as determined under 12 CFR 217.34, but without regard to 12 CFR 217.34(b), provided that:

(i) An Enterprise may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under 12 CFR 217.34, but without regard to 12 CFR 217.34(b), provided that it does not adjust the net-to-gross ratio (NGR); and

(ii) An Enterprise that chooses to exclude the PFE of credit derivatives or other similar instruments through which it provides credit protection pursuant to paragraph (2)(i) of this definition must do so consistently over time for the calculation of the PFE for all such instruments;

(3) The amount of cash collateral that is received from a counterparty to a derivative contract and that has offset the mark-to-fair value of the derivative asset, or cash collateral that is posted to a counterparty to a derivative contract and that has reduced the Enterprise's on-balance sheet assets, unless such cash collateral is all or part of variation margin that satisfies the following requirements:

(i) The variation margin is used to reduce the current credit exposure of the derivative contract, calculated as

described in 12 CFR 217.34(b) and not the PFE; and

(ii) For derivative contracts that are not cleared through a QCCP, the cash collateral received by the recipient counterparty is not segregated (by law, regulation, or an agreement with the counterparty);

(iii) Variation margin is calculated and transferred on a daily basis based on the mark-to-fair value of the derivative contract;

(iv) The variation margin transferred under the derivative contract or the governing rules of the CCP or QCCP for a cleared transaction is the full amount that is necessary to fully extinguish the net current credit exposure to the counterparty of the derivative contracts, subject to the threshold and minimum transfer amounts applicable to the counterparty under the terms of the derivative contract or the governing rules for a cleared transaction;

(v) The variation margin is in the form of cash in the same currency as the currency of settlement set forth in the derivative contract, provided that for the purposes of this paragraph, currency of settlement means any currency for settlement specified in the governing qualifying master netting agreement and the credit support annex to the qualifying master netting agreement, or in the governing rules for a cleared transaction; and

(vi) The derivative contract and the variation margin are governed by a qualifying master netting agreement between the legal entities that are the counterparties to the derivative contract or by the governing rules for a cleared transaction, and the qualifying master netting agreement or the governing rules for a cleared transaction must explicitly stipulate that the counterparties agree to settle any payment obligations on a net basis, taking into account any variation margin received or provided under the contract if a credit event involving either counterparty occurs;

(4) The effective notional principal amount (that is, the apparent or stated notional principal amount multiplied by any multiplier in the derivative contract) of a credit derivative, or other similar instrument, through which the Enterprise provides credit protection, provided that:

(i) The Enterprise may reduce the effective notional principal amount of the credit derivative by the amount of any reduction in the mark-to-fair value of the credit derivative if the reduction is recognized in common equity tier 1 capital;

(ii) The Enterprise may reduce the effective notional principal amount of the credit derivative by the effective notional principal amount of a purchased credit derivative or other similar instrument, provided that the remaining maturity of the purchased credit derivative is equal to or greater than the remaining maturity of the credit derivative through which the Enterprise provides credit protection and that:

(A) With respect to a credit derivative that references a single exposure, the reference exposure of the purchased credit derivative is to the same legal entity and ranks *pari passu* with, or is junior to, the reference exposure of the credit derivative through which the Enterprise provides credit protection; or

(B) With respect to a credit derivative that references multiple exposures, the reference exposures of the purchased credit derivative are to the same legal entities and rank *pari passu* with the reference exposures of the credit derivative through which the Enterprise provides credit protection, and the level of seniority of the purchased credit derivative ranks *pari passu* to the level of seniority of the credit derivative through which the Enterprise provides credit protection;

(C) Where an Enterprise has reduced the effective notional amount of a credit derivative through which the Enterprise provides credit protection in accordance with paragraph (4)(i) of this definition, the Enterprise must also reduce the effective notional principal amount of a purchased credit derivative used to offset the credit derivative through which the Enterprise provides credit protection, by the amount of any increase in the mark-to-fair value of the purchased credit derivative that is recognized in common equity tier 1 capital; and

(D) Where the Enterprise purchases credit protection through a total return swap and records the net payments received on a credit derivative through which the Enterprise provides credit protection in net income, but does not record offsetting deterioration in the mark-to-fair value of the credit derivative through which the Enterprise provides credit protection in net income (either through reductions in fair value or by additions to reserves), the Enterprise may not use the purchased credit protection to offset the effective notional principal amount of the related credit derivative through which the Enterprise provides credit protection;

(5) Where an Enterprise acting as a principal has more than one repo-style transaction with the same counterparty and has offset the gross value of receivables due from a counterparty under reverse repurchase transactions by the gross value of payables under repurchase transactions due to the same counterparty, the gross value of receivables associated with the repo-style transactions less any on-balance sheet receivables amount associated with these repo-style transactions included under paragraph (1) of this definition, unless the following criteria are met:

(i) The offsetting transactions have the same explicit final settlement date under their governing agreements;

(ii) The right to offset the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable in the normal course of business and in the event of receivership, insolvency, liquidation, or similar proceeding; and

(iii) Under the governing agreements, the counterparties intend to settle net, settle simultaneously, or settle according to a process that is the functional equivalent of net settlement, (that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date), where both transactions are settled through the same settlement system, the settlement arrangements are supported by cash or intraday credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day, and the settlement of the underlying securities does not interfere with the net cash settlement;

(6) The counterparty credit risk of a repo-style transaction, including where the Enterprise acts as an agent for a repo-style transaction and indemnifies the customer with respect to the performance of the customer's counterparty in an amount limited to the difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, calculated as follows:

(i) If the transaction is not subject to a qualifying master netting agreement, the counterparty credit risk (E*) for transactions with a counterparty must be calculated on a transaction by transaction basis, such that each transaction i is treated as its own netting set, in accordance with the following formula, where Ei is the fair value of the instruments, gold, or cash that the Enterprise has lent, sold subject to repurchase, or provided as collateral to the counterparty, and Ci is the fair value of the instruments, gold, or cash that the Enterprise has borrowed, purchased subject to resale, or received as collateral from the counterparty:

$$Ei^* = \max\{0, [Ei - Ci]\}$$

(ii) If the transaction is subject to a qualifying master netting agreement, the counterparty credit risk (E*) must be calculated as the greater of zero and the total fair value of the instruments, gold, or cash that the Enterprise has lent, sold subject to repurchase or provided as collateral to a counterparty for all transactions included in the qualifying master netting agreement (ΣEi), less the total fair value of the instruments, gold, or cash that the Enterprise borrowed, purchased subject to resale or received as collateral from the counterparty for those transactions (ΣCi), in accordance with the following formula:

$$E^* = \max\{0, [\Sigma Ei - \Sigma Ci]\}$$

(7) If an Enterprise acting as an agent for a repo-style transaction provides a guarantee to a customer of the security or cash its customer has lent or borrowed with respect to the performance of the customer's counterparty and the guarantee is not limited to the difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, the amount of the guarantee that is greater than the difference between the fair value of the security or cash its customer has lent and the value of the collateral the borrower has provided;

(8) The credit equivalent amount of all off-balance sheet exposures of the Enterprise, excluding repo-style transactions, repurchase or reverse repurchase or securities borrowing or lending transactions that qualify for sales treatment under GAAP, and derivative transactions, determined using the applicable credit conversion factor under 12 CFR 217.33(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; and

(9) For an Enterprise that is a clearing member:

(i) A clearing member Enterprise that guarantees the performance of a clearing member client with respect to a cleared transaction must treat its exposure to the clearing member client as a derivative contract for purposes of determining its adjusted total assets;

(ii) A clearing member Enterprise that guarantees the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client must treat its exposure to the CCP as a derivative contract for purposes of determining its adjusted total assets;

(iii) A clearing member Enterprise that does not guarantee the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client may exclude its exposure to the CCP for purposes of determining its adjusted total assets;

(iv) An Enterprise that is a clearing member may exclude from its adjusted total assets the effective notional principal amount of credit protection sold through a credit derivative contract, or other similar instrument, that it clears on behalf of a clearing member client through a CCP as calculated in accordance with paragraph (4) of this definition; and

(v) Notwithstanding paragraphs (9)(i) through (iii) of this definition, an Enterprise may exclude from its adjusted total assets a clearing member's exposure to a clearing member client for a derivative contract, if the clearing member client and the clearing member are affiliates and consolidated for financial reporting purposes on the Enterprise's balance sheet.

Adjusted total capital means the sum of tier 1 capital and tier 2 capital.

Advanced approaches total risk-weighted assets means:

(1) The sum of:

(i) Credit-risk-weighted assets for general credit risk (including for mortgage exposures), cleared transactions, default fund contributions, unsettled transactions, securitization exposures (including retained CRT exposures), equity exposures, and the fair value adjustment to reflect counterparty credit risk in valuation of OTC derivative contracts, each as calculated under § 1240.123.

(ii) Risk-weighted assets for operational risk, as calculated under § 1240.162(c); and

(iii) Advanced market risk-weighted assets; minus

(2) Excess eligible credit reserves not included in the Enterprise's tier 2 capital.

Advanced market risk-weighted assets means the advanced measure for spread risk calculated under § 1240.204(a) multiplied by 12.5.

Affiliate has the meaning given in section 1303(1) of the Safety and Soundness Act (12 U.S.C. 4502(1)).

Allowances for loan and lease losses (ALLL) means valuation allowances that have been established through a charge against earnings to cover estimated credit losses on loans, lease financing receivables or other extensions of credit as determined in accordance with GAAP. For purposes of this part, *ALLL* includes allowances that have been established through a charge against earnings to cover estimated credit losses associated with off-balance sheet credit exposures as determined in accordance with GAAP.

Carrying value means, with respect to an asset, the value of the asset on the balance sheet of an Enterprise as determined in accordance with GAAP. For all assets other than available-for-sale debt securities or purchased credit deteriorated assets, the carrying value is not reduced by any associated credit loss allowance that is determined in accordance with GAAP.

Central counterparty (CCP) means a counterparty (for example, a clearing house) that facilitates trades between counterparties in one or more financial markets by either guaranteeing trades or novating contracts.

CFTC means the U.S. Commodity Futures Trading Commission.

Clean-up call means a contractual provision that permits an originating Enterprise or servicer to call securitization exposures before their stated maturity or call date.

Cleared transaction means an exposure associated with an outstanding derivative contract or repo-style transaction that an Enterprise or clearing member has entered into with a central counterparty (that is, a transaction that a central counterparty has accepted).

(1) The following transactions are cleared transactions:

(i) A transaction between a CCP and an Enterprise that is a clearing member of the CCP where the Enterprise enters into the transaction with the CCP for the Enterprise's own account;

(ii) A transaction between a CCP and an Enterprise that is a clearing member of the CCP where the Enterprise is acting as a financial intermediary on behalf of a clearing member client and the transaction offsets another transaction that satisfies the requirements set forth in § 1240.3(a);

(iii) A transaction between a clearing member client Enterprise and a clearing member where the clearing member acts as a financial intermediary on behalf of the clearing member client and enters into an offsetting transaction with a CCP, provided that the requirements set forth in § 1240.3(a) are met; or

(iv) A transaction between a clearing member client Enterprise and a CCP where a clearing member guarantees the performance of the clearing member client Enterprise to the CCP and the transaction meets the requirements of § 1240.3(a)(2) and (a)(3).

(2) The exposure of an Enterprise that is a clearing member to its clearing member client is not a cleared transaction where the Enterprise is either acting as a financial intermediary and enters into an offsetting transaction with a CCP or where the Enterprise

provides a guarantee to the CCP on the performance of the client.

Clearing member means a member of, or direct participant in, a CCP that is entitled to enter into transactions with the CCP.

Clearing member client means a party to a cleared transaction associated with a CCP in which a clearing member acts either as a financial intermediary with respect to the party or guarantees the performance of the party to the CCP.

Client-facing derivative transaction means a derivative contract that is not a cleared transaction where the Enterprise is either acting as a financial intermediary and enters into an offsetting transaction with a qualifying central counterparty (QCCP) or where the Enterprise provides a guarantee on the performance of a client on a transaction between the client and a QCCP.

Collateral agreement means a legal contract that specifies the time when, and circumstances under which, a counterparty is required to pledge collateral to an Enterprise for a single financial contract or for all financial contracts in a netting set and confers upon the Enterprise a perfected, first-priority security interest (notwithstanding the prior security interest of any custodial agent), or the legal equivalent thereof, in the collateral posted by the counterparty under the agreement. This security interest must provide the Enterprise with a right to close-out the financial positions and liquidate the collateral upon an event of default of, or failure to perform by, the counterparty under the collateral agreement. A contract would not satisfy this requirement if the Enterprise's exercise of rights under the agreement may be stayed or avoided:

(1) Under applicable law in the relevant jurisdictions, other than

(i) In receivership, conservatorship, or resolution under the Federal Deposit Insurance Act, Title II of the Dodd-Frank Act, or under any similar insolvency law applicable to GSEs, or laws of foreign jurisdictions that are substantially similar to the U.S. laws referenced in this paragraph (1)(i) in order to facilitate the orderly resolution of the defaulting counterparty;

(ii) Where the agreement is subject by its terms to, or incorporates, any of the laws referenced in paragraph (1)(i) of this definition; or

(2) Other than to the extent necessary for the counterparty to comply with the requirements of subpart I of Federal Reserve Board's Regulation YY (part 252 of this title), part 47 of this title, or part 382 of this title, as applicable.

Commitment means any legally binding arrangement that obligates an Enterprise to extend credit or to purchase assets.

Common equity tier 1 capital is defined in § 1240.20(b).

Company means a corporation, partnership, limited liability company, depository institution, business trust, special purpose entity, association, or similar organization.

Core capital has the meaning given at section 1303(7) of the Safety and Soundness Act (12 U.S.C. 4502(7)).

Corporate exposure means an exposure to a company that is not:

(1) An exposure to a sovereign, the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, the European Financial Stability Facility, a multi-lateral development bank (MDB), a depository institution, a foreign bank, a credit union, or a public sector entity (PSE);

(2) An exposure to a GSE;

(3) A mortgage exposure;

(4) A cleared transaction;

(5) A default fund contribution;

(6) A securitization exposure; or

(7) An equity exposure.

Credit derivative means a financial contract executed under standard industry credit derivative documentation that allows one party (the protection purchaser) to transfer the credit risk of one or more exposures (reference exposure(s)) to another party (the protection provider) for a certain period of time.

Credit-enhancing interest-only strip (CEIO) means an on-balance sheet asset that, in form or in substance:

(1) Represents a contractual right to receive some or all of the interest and no more than a minimal amount of principal due on the underlying exposures of a securitization; and

(2) Exposes the holder of the CEIO to credit risk directly or indirectly associated with the underlying exposures that exceeds a pro rata share of the holder's claim on the underlying exposures, whether through subordination provisions or other credit-enhancement techniques.

Credit risk mitigant means collateral, a credit derivative, or a guarantee.

Credit union means an insured credit union as defined under the Federal Credit Union Act (12 U.S.C. 1752 *et seq.*).

Credit risk transfer (CRT) means any traditional securitization, synthetic securitization, senior/subordinated structure, credit derivative, guarantee, or other structure or arrangement (other than primary mortgage insurance, a traditional securitization that satisfies the conditions under § 1240.41(a), or a synthetic securitization that satisfies the conditions under § 1240.41(b)) that allows an Enterprise to transfer the credit risk of one or more mortgage exposures (reference exposure(s)) to another party (the protection provider).

Current Expected Credit Losses (CECL) means the current expected credit losses methodology under GAAP.

Default fund contribution means the funds contributed or commitments made by a clearing member to a CCP's mutualized loss sharing arrangement.

Depository institution means a depository institution as defined in section 3 of the Federal Deposit Insurance Act.

Derivative contract means a financial contract whose value is derived from the values of one or more underlying assets, reference rates, or indices of asset values or reference rates. Derivative contracts include interest rate derivative contracts, exchange rate derivative contracts, equity derivative contracts, commodity derivative contracts, credit derivative contracts, and any other instrument that poses similar counterparty credit risks. Derivative contracts also include unsettled securities, commodities, and foreign exchange transactions with a contractual settlement or delivery lag that is longer than the lesser of the market standard for the particular instrument or five business days.

Discretionary bonus payment means a payment made to an executive officer of an Enterprise, where:

(1) The Enterprise retains discretion as to whether to make, and the amount of, the payment until the payment is awarded to the executive officer;

(2) The amount paid is determined by the Enterprise without prior promise to, or agreement with, the executive officer; and

(3) The executive officer has no contractual right, whether express or implied, to the bonus payment.

Distribution means:

(1) A reduction of tier 1 capital through the repurchase of a tier 1 capital instrument or by other means, except when an Enterprise, within the same quarter when the repurchase is announced, fully replaces a tier 1 capital instrument it has repurchased by issuing another capital instrument that meets the eligibility criteria for:

(i) A common equity tier 1 capital instrument if the instrument being repurchased was part of the Enterprise's common equity tier 1 capital, or

(ii) A common equity tier 1 or additional tier 1 capital instrument if

the instrument being repurchased was part of the Enterprise's tier 1 capital;

(2) A reduction of tier 2 capital through the repurchase, or redemption prior to maturity, of a tier 2 capital instrument or by other means, except when an Enterprise, within the same quarter when the repurchase or redemption is announced, fully replaces a tier 2 capital instrument it has repurchased by issuing another capital instrument that meets the eligibility criteria for a tier 1 or tier 2 capital instrument;

(3) A dividend declaration or payment on any tier 1 capital instrument;

(4) A dividend declaration or interest payment on any tier 2 capital instrument if the Enterprise has full discretion to permanently or temporarily suspend such payments without triggering an event of default; or

(5) Any similar transaction that FHFA determines to be in substance a distribution of capital.

Dodd-Frank Act means the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub. L. 111–203, 124 Stat. 1376).

Early amortization provision means a provision in the documentation governing a securitization that, when triggered, causes investors in the securitization exposures to be repaid before the original stated maturity of the securitization exposures, unless the provision:

(1) Is triggered solely by events not directly related to the performance of the underlying exposures or the originating Enterprise (such as material changes in tax laws or regulations); or

(2) Leaves investors fully exposed to future draws by borrowers on the underlying exposures even after the provision is triggered.

Effective notional amount means for an eligible guarantee or eligible credit derivative, the lesser of the contractual notional amount of the credit risk mitigant and the exposure amount of the hedged exposure, multiplied by the percentage coverage of the credit risk mitigant.

Eligible clean-up call means a clean-up call that:

(1) Is exercisable solely at the discretion of the originating Enterprise or servicer;

(2) Is not structured to avoid allocating losses to securitization exposures held by investors or otherwise structured to provide credit enhancement to the securitization; and

(3)(i) For a traditional securitization, is only exercisable when 10 percent or less of the principal amount of the underlying exposures or securitization exposures (determined as of the inception of the securitization) is outstanding; or

(ii) For a synthetic securitization or credit risk transfer, is only exercisable when 10 percent or less of the principal amount of the reference portfolio of underlying exposures (determined as of the inception of the securitization) is outstanding.

Eligible credit derivative means a credit derivative in the form of a credit default swap, nth-to-default swap, total return swap, or any other form of credit derivative approved by FHFA, provided that:

(1) The contract meets the requirements of an eligible guarantee and has been confirmed by the protection purchaser and the protection provider;

(2) Any assignment of the contract has been confirmed by all relevant parties;

(3) If the credit derivative is a credit default swap or nth-to-default swap, the contract includes the following credit events:

(i) Failure to pay any amount due under the terms of the reference exposure, subject to any applicable minimal payment threshold that is consistent with standard market practice and with a grace period that is closely in line with the grace period of the reference exposure; and

(ii) Receivership, insolvency, liquidation, conservatorship or inability of the reference exposure issuer to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and similar events;

(4) The terms and conditions dictating the manner in which the contract is to be settled are incorporated into the contract;

(5) If the contract allows for cash settlement, the contract incorporates a robust valuation process to estimate loss reliably and specifies a reasonable period for obtaining post-credit event valuations of the reference exposure;

(6) If the contract requires the protection purchaser to transfer an exposure to the protection provider at settlement, the terms of at least one of the exposures that is permitted to be transferred under the contract provide that any required consent to transfer may not be unreasonably withheld;

(7) If the credit derivative is a credit default swap or nth-to-default swap, the contract clearly identifies the parties responsible for determining whether a credit event has occurred, specifies that this determination is not the sole responsibility of the protection provider, and gives the protection purchaser the right to notify the protection provider of the occurrence of a credit event; and

(8) If the credit derivative is a total return swap and the Enterprise records net payments received on the swap as net income, the Enterprise records offsetting deterioration in the value of the hedged exposure (either through reductions in fair value or by an addition to reserves).

Eligible credit reserves means all general allowances that have been established through a charge against earnings or retained earnings to cover expected credit losses associated with on- or off-balance sheet wholesale and retail exposures, including AACL associated with such exposures. Eligible credit reserves exclude allowances that reflect credit losses on purchased credit deteriorated assets and available-for-sale debt securities and other specific reserves created against recognized losses.

Eligible CRT structure means any category of credit risk transfers that has been approved by FHFA as effective in transferring the credit risk of one or more mortgage exposures to another party, taking into account any counterparty, recourse, or other risk to the Enterprise and any capital, liquidity, or other requirements applicable to counterparties (including any arrangement under which an entity that is approved by an Enterprise to originate multifamily mortgage exposures retains credit risk of one or more multifamily mortgage exposures *pari passu* with the Enterprise on substantially the same terms and conditions as in effect on [the date the proposed rule is published] for Fannie Mae's credit risk transfers known as the ''Delegated Underwriting and Servicing program'').

Eligible guarantee means a guarantee that:

(1) Is written;

(2) Is either:

(i) Unconditional, or

(ii) A contingent obligation of the U.S. government or its agencies, the enforceability of which is dependent upon some affirmative action on the part of the beneficiary of the guarantee or a third party (for example, meeting servicing requirements);

(3) Covers all or a pro rata portion of all contractual payments of the obligated party on the reference exposure;

(4) Gives the beneficiary a direct claim against the protection provider;

(5) Is not unilaterally cancelable by the protection provider for reasons other than the breach of the contract by the beneficiary;

(6) Except for a guarantee by a sovereign, is legally enforceable against

the protection provider in a jurisdiction where the protection provider has sufficient assets against which a judgment may be attached and enforced;

(7) Requires the protection provider to make payment to the beneficiary on the occurrence of a default (as defined in the guarantee) of the obligated party on the reference exposure in a timely manner without the beneficiary first having to take legal actions to pursue the obligor for payment;

(8) Does not increase the beneficiary's cost of credit protection on the guarantee in response to deterioration in the credit quality of the reference exposure;

(9) Is not provided by an affiliate of the Enterprise; and

(10) Is provided by an eligible guarantor.

Eligible guarantor means:

(1) A sovereign, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Commission, a Federal Home Loan Bank, Federal Agricultural Mortgage Corporation (Farmer Mac), the European Stability Mechanism, the European Financial Stability Facility, a multilateral development bank (MDB), a depository institution, a bank holding company as defined in section 2 of the Bank Holding Company Act of 1956, as amended (12 U.S.C. 1841 *et seq.*), a savings and loan holding company, a credit union, a foreign bank, or a qualifying central counterparty; or

(2) An entity (other than a special purpose entity):

(i) That at the time the guarantee is issued or anytime thereafter, has issued and outstanding an unsecured debt security without credit enhancement that is investment grade;

(ii) Whose creditworthiness is not positively correlated with the credit risk of the exposures for which it has provided guarantees; and

(iii) That is not an insurance company engaged predominately in the business of providing credit protection (such as a monoline bond insurer or re-insurer).

Eligible margin loan means:

(1) An extension of credit where:

(i) The extension of credit is collateralized exclusively by liquid and readily marketable debt or equity securities, or gold;

(ii) The collateral is marked-to-fair value daily, and the transaction is subject to daily margin maintenance requirements; and

(iii) The extension of credit is conducted under an agreement that provides the Enterprise the right to accelerate and terminate the extension of credit and to liquidate or set-off collateral promptly upon an event of default, including upon an event of receivership, insolvency, liquidation, conservatorship, or similar proceeding, of the counterparty, provided that, in any such case:

(A) Any exercise of rights under the agreement will not be stayed or avoided under applicable law in the relevant jurisdictions, other than:

(1) In receivership, conservatorship, or resolution under the Federal Deposit Insurance Act, Title II of the Dodd-Frank Act, or under any similar insolvency law applicable to GSEs,[1] or laws of foreign jurisdictions that are substantially similar to the U.S. laws referenced in this paragraph (1)(iii)(A)*(1)* in order to facilitate the orderly resolution of the defaulting counterparty; or

(2) Where the agreement is subject by its terms to, or incorporates, any of the laws referenced in paragraph (1)(iii)(A)*(1)* of this definition; and

(B) The agreement may limit the right to accelerate, terminate, and close-out on a net basis all transactions under the agreement and to liquidate or set-off collateral promptly upon an event of default of the counterparty to the extent necessary for the counterparty to comply with the requirements of subpart I of the Federal Reserve Board's Regulation YY (part 252 of this title), part 47 of this title, or part 382 of this title, as applicable.

(2) In order to recognize an exposure as an eligible margin loan for purposes of this subpart, an Enterprise must comply with the requirements of § 1240.3(b) with respect to that exposure.

Equity exposure means:

(1) A security or instrument (whether voting or non-voting) that represents a direct or an indirect ownership interest in, and is a residual claim on, the assets and income of a company, unless:

(i) The issuing company is consolidated with the Enterprise under GAAP;

(ii) The Enterprise is required to deduct the ownership interest from tier 1 or tier 2 capital under this part;

(iii) The ownership interest incorporates a payment or other similar obligation on the part of the issuing company (such as an obligation to make periodic payments); or

(iv) The ownership interest is a securitization exposure;

(2) A security or instrument that is mandatorily convertible into a security or instrument described in paragraph (1) of this definition;

(3) An option or warrant that is exercisable for a security or instrument described in paragraph (1) of this definition; or

(4) Any other security or instrument (other than a securitization exposure) to the extent the return on the security or instrument is based on the performance of a security or instrument described in paragraph (1) of this definition.

ERISA means the Employee Retirement Income and Security Act of 1974 (29 U.S.C. 1001 *et seq.*).

Executive officer means a person who holds the title or, without regard to title, salary, or compensation, performs the function of one or more of the following positions: President, chief executive officer, executive chairman, chief operating officer, chief financial officer, chief investment officer, chief legal officer, chief lending officer, chief risk officer, or head of a major business line, and other staff that the board of directors of the Enterprise deems to have equivalent responsibility.

Exposure amount means:

(1) For the on-balance sheet component of an exposure (including a mortgage exposure); an OTC derivative contract; a repo-style transaction or an eligible margin loan for which the Enterprise determines the exposure amount under § 1240.39; a cleared transaction; a default fund contribution; or a securitization exposure), the Enterprise's carrying value of the exposure.

(2) For the off-balance sheet component of an exposure (other than an OTC derivative contract; a repo-style transaction or an eligible margin loan for which the Enterprise calculates the exposure amount under § 1240.39; a cleared transaction; a default fund contribution; or a securitization exposure), the notional amount of the off-balance sheet component multiplied by the appropriate credit conversion factor (CCF) in § 1240.35.

(3) For an exposure that is an OTC derivative contract, the exposure amount determined under § 1240.36.

(4) For an exposure that is a cleared transaction, the exposure amount determined under § 1240.37.

(5) For an exposure that is an eligible margin loan or repo-style transaction for which the Enterprise calculates the exposure amount as provided in § 1240.39, the exposure amount determined under § 1240.39.

[1] This requirement is met where all transactions under the agreement are (i) executed under U.S. law and (ii) constitute ''securities contracts'' under section 555 of the Bankruptcy Code (11 U.S.C. 555), qualified financial contracts under section 11(e)(8) of the Federal Deposit Insurance Act, or netting contracts between or among financial institutions under sections 401–407 of the Federal Deposit Insurance Corporation Improvement Act or the Federal Reserve's Regulation EE (12 CFR part 231).

(6) For an exposure that is a securitization exposure, the exposure amount determined under § 1240.42.

Federal Deposit Insurance Act means the Federal Deposit Insurance Act (12 U.S.C. 1813).

Federal Deposit Insurance Corporation Improvement Act means the Federal Deposit Insurance Corporation Improvement Act (12 U.S.C. 4401).

Federal Reserve Board means the Board of Governors of the Federal Reserve System.

Financial collateral means collateral:

(1) In the form of:

(i) Cash on deposit with the Enterprise (including cash held for the Enterprise by a third-party custodian or trustee);

(ii) Gold bullion;

(iii) Long-term debt securities that are not resecuritization exposures and that are investment grade;

(iv) Short-term debt instruments that are not resecuritization exposures and that are investment grade;

(v) Equity securities that are publicly traded;

(vi) Convertible bonds that are publicly traded; or

(vii) Money market fund shares and other mutual fund shares if a price for the shares is publicly quoted daily; and

(2) In which the Enterprise has a perfected, first-priority security interest or, outside of the United States, the legal equivalent thereof (with the exception of cash on deposit and notwithstanding the prior security interest of any custodial agent).

Foreign bank means a foreign bank as defined in § 211.2 of the Federal Reserve Board's Regulation K (12 CFR 211.2) (other than a depository institution).

Gain-on-sale means an increase in the equity capital of an Enterprise resulting from a traditional securitization other than an increase in equity capital resulting from:

(1) The Enterprise's receipt of cash in connection with the securitization; or

(2) The reporting of a mortgage servicing asset.

General obligation means a bond or similar obligation that is backed by the full faith and credit of a public sector entity (PSE).

Government-sponsored enterprise (GSE) means an entity established or chartered by the U.S. government to serve public purposes specified by the U.S. Congress but whose debt obligations are not explicitly guaranteed by the full faith and credit of the U.S. government, including an Enterprise.

Guarantee means a financial guarantee, letter of credit, insurance, or other similar financial instrument (other than a credit derivative) that allows one party (beneficiary) to transfer the credit risk of one or more specific exposures (reference exposure) to another party (protection provider).

Investment grade means that the entity to which the Enterprise is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments for the projected life of the asset or exposure. Such an entity or reference entity has adequate capacity to meet financial commitments if the risk of its default is low and the full and timely repayment of principal and interest is expected.

Mortgage-backed security (MBS) means a security collateralized by a pool or pools of mortgage exposures, including any pass-through or collateralized mortgage obligation.

Mortgage exposure means either a single-family mortgage exposure or a multifamily mortgage exposure.

Multifamily mortgage exposure means an exposure that is secured by a first or subsequent lien on a property with five or more residential units.

Mortgage servicing assets (MSAs) means the contractual rights owned by an Enterprise to service for a fee mortgage loans that are owned by others.

Multilateral development bank (MDB) means the International Bank for Reconstruction and Development, the Multilateral Investment Guarantee Agency, the International Finance Corporation, the Inter-American Development Bank, the Asian Development Bank, the African Development Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the European Investment Fund, the Nordic Investment Bank, the Caribbean Development Bank, the Islamic Development Bank, the Council of Europe Development Bank, and any other multilateral lending institution or regional development bank in which the U.S. government is a shareholder or contributing member or which FHFA determines poses comparable credit risk.

Netting set means a group of transactions with a single counterparty that are subject to a qualifying master netting agreement or a qualifying cross-product master netting agreement. For purposes of calculating risk-based capital requirements using the internal models methodology in subpart E of this part, this term does not cover a transaction:

(1) That is not subject to such a master netting agreement; or

(2) Where the Enterprise has identified specific wrong-way risk.

Nth-to-default credit derivative means a credit derivative that provides credit protection only for the nth-defaulting reference exposure in a group of reference exposures.

Originating Enterprise, with respect to a securitization, means an Enterprise that directly or indirectly originated or securitized the underlying exposures included in the securitization.

Over-the-counter (OTC) derivative contract means a derivative contract that is not a cleared transaction. An OTC derivative includes a transaction:

(1) Between an Enterprise that is a clearing member and a counterparty where the Enterprise is acting as a financial intermediary and enters into a cleared transaction with a CCP that offsets the transaction with the counterparty; or

(2) In which an Enterprise that is a clearing member provides a CCP a guarantee on the performance of the counterparty to the transaction.

Protection amount (P) means, with respect to an exposure hedged by an eligible guarantee or eligible credit derivative, the effective notional amount of the guarantee or credit derivative, reduced to reflect any currency mismatch, maturity mismatch, or lack of restructuring coverage (as provided in § 1240.38).

Publicly-traded means traded on:

(1) Any exchange registered with the SEC as a national securities exchange under section 6 of the Securities Exchange Act; or

(2) Any non-U.S.-based securities exchange that:

(i) Is registered with, or approved by, a national securities regulatory authority; and

(ii) Provides a liquid, two-way market for the instrument in question.

Public sector entity (PSE) means a state, local authority, or other governmental subdivision below the sovereign level.

Qualifying central counterparty (QCCP) means a central counterparty that:

(1)(i) Is a designated financial market utility (FMU) under Title VIII of the Dodd-Frank Act;

(ii) If not located in the United States, is regulated and supervised in a manner equivalent to a designated FMU; or

(iii) Meets the following standards:

(A) The central counterparty requires all parties to contracts cleared by the counterparty to be fully collateralized on a daily basis;

(B) The Enterprise demonstrates to the satisfaction of FHFA that the central counterparty:

(1) Is in sound financial condition;

(2) Is subject to supervision by the Federal Reserve Board, the CFTC, or the Securities Exchange Commission (SEC), or, if the central counterparty is not located in the United States, is subject to effective oversight by a national supervisory authority in its home country; and

(3) Meets or exceeds the risk-management standards for central counterparties set forth in regulations established by the Federal Reserve Board, the CFTC, or the SEC under Title VII or Title VIII of the Dodd-Frank Act; or if the central counterparty is not located in the United States, meets or exceeds similar risk-management standards established under the law of its home country that are consistent with international standards for central counterparty risk management as established by the relevant standard setting body of the Bank of International Settlements; and

(2)(i) Provides the Enterprise with the central counterparty's hypothetical capital requirement or the information necessary to calculate such hypothetical capital requirement, and other information the Enterprise is required to obtain under 12 CFR 217.35(d)(3);

(ii) Makes available to FHFA and the CCP's regulator the information described in paragraph (2)(i) of this definition; and

(iii) Has not otherwise been determined by FHFA to not be a QCCP due to its financial condition, risk profile, failure to meet supervisory risk management standards, or other weaknesses or supervisory concerns that are inconsistent with the risk weight assigned to qualifying central counterparties under § 1240.37.

(3) A QCCP that fails to meet the requirements of a QCCP in the future may still be treated as a QCCP under the conditions specified in § 1240.3(e).

Qualifying master netting agreement means a written, legally enforceable agreement provided that:

(1) The agreement creates a single legal obligation for all individual transactions covered by the agreement upon an event of default following any stay permitted by paragraph (2) of this definition, including upon an event of receivership, conservatorship, insolvency, liquidation, or similar proceeding, of the counterparty;

(2) The agreement provides the Enterprise the right to accelerate, terminate, and close-out on a net basis all transactions under the agreement and to liquidate or set-off collateral promptly upon an event of default, including upon an event of receivership, conservatorship, insolvency, liquidation, or similar proceeding, of the counterparty, provided that, in any such case:

(i) Any exercise of rights under the agreement will not be stayed or avoided under applicable law in the relevant jurisdictions, other than:

(A) In receivership, conservatorship, or resolution under the Federal Deposit Insurance Act, Title II of the Dodd-Frank Act, or under any similar insolvency law applicable to GSEs, or laws of foreign jurisdictions that are substantially similar to the U.S. laws referenced in this paragraph (2)(i)(A) in order to facilitate the orderly resolution of the defaulting counterparty; or

(B) Where the agreement is subject by its terms to, or incorporates, any of the laws referenced in paragraph (2)(i)(A) of this definition; and

(ii) The agreement may limit the right to accelerate, terminate, and close-out on a net basis all transactions under the agreement and to liquidate or set-off collateral promptly upon an event of default of the counterparty to the extent necessary for the counterparty to comply with the requirements of subpart I of the Federal Reserve Board's Regulation YY (part 252 of this title), part 47 of this title, or part 382 of this title, as applicable.

Repo-style transaction means a repurchase or reverse repurchase transaction, or a securities borrowing or securities lending transaction, including a transaction in which the Enterprise acts as agent for a customer and indemnifies the customer against loss, provided that:

(1) The transaction is based solely on liquid and readily marketable securities, cash, or gold;

(2) The transaction is marked-to-fair value daily and subject to daily margin maintenance requirements;

(3)(i) The transaction is a ''securities contract'' or ''repurchase agreement'' under section 555 or 559, respectively, of the Bankruptcy Code (11 U.S.C. 555 or 559), a qualified financial contract under section 11(e)(8) of the Federal Deposit Insurance Act, or a netting contract between or among financial institutions under sections 401–407 of the Federal Deposit Insurance Corporation Improvement Act or the Federal Reserve Board's Regulation EE (12 CFR part 231); or

(ii) If the transaction does not meet the criteria set forth in paragraph (3)(i) of this definition, then either:

(A) The transaction is executed under an agreement that provides the Enterprise the right to accelerate, terminate, and close-out the transaction on a net basis and to liquidate or set-off collateral promptly upon an event of default, including upon an event of receivership, insolvency, liquidation, or similar proceeding, of the counterparty, provided that, in any such case:

(1) Any exercise of rights under the agreement will not be stayed or avoided under applicable law in the relevant jurisdictions, other than:

(i) In receivership, conservatorship, or resolution under the Federal Deposit Insurance Act, Title II of the Dodd-Frank Act, or under any similar insolvency law applicable to GSEs, or laws of foreign jurisdictions that are substantially similar to the U.S. laws referenced in this paragraph (3)(ii)(A)*(1)(i)* in order to facilitate the orderly resolution of the defaulting counterparty;

(ii) Where the agreement is subject by its terms to, or incorporates, any of the laws referenced in paragraph (3)(ii)(A)*(1)(i)* of this definition; and

(2) The agreement may limit the right to accelerate, terminate, and close-out on a net basis all transactions under the agreement and to liquidate or set-off collateral promptly upon an event of default of the counterparty to the extent necessary for the counterparty to comply with the requirements of subpart I of the Federal Reserve Board's Regulation YY (part 252 of this title), part 47 of this title, or part 382 of this title, as applicable; or

(B) The transaction is:

(1) Either overnight or unconditionally cancelable at any time by the Enterprise; and

(2) Executed under an agreement that provides the Enterprise the right to accelerate, terminate, and close-out the transaction on a net basis and to liquidate or set-off collateral promptly upon an event of counterparty default; and

(3) In order to recognize an exposure as a repo-style transaction for purposes of this subpart, an Enterprise must comply with the requirements of § 1240.3(e) with respect to that exposure.

Resecuritization means a securitization which has more than one underlying exposure and in which one or more of the underlying exposures is a securitization exposure.

Resecuritization exposure means:

(1) An on- or off-balance sheet exposure to a resecuritization; or

(2) An exposure that directly or indirectly references a resecuritization exposure.

Retained CRT exposure means, with respect to an Enterprise, any exposure that arises from a credit risk transfer of the Enterprise and has been retained by the Enterprise since the issuance or

entry into the credit risk transfer by the Enterprise.

Revenue obligation means a bond or similar obligation that is an obligation of a PSE, but which the PSE is committed to repay with revenues from the specific project financed rather than general tax funds.

Securities and Exchange Commission (SEC) means the U.S. Securities and Exchange Commission.

Securities Exchange Act means the Securities Exchange Act of 1934 (15 U.S.C. 78).

Securitization exposure means:

(1) An on-balance sheet or off-balance sheet credit exposure (including credit-enhancing representations and warranties) that arises from a traditional securitization or synthetic securitization (including a resecuritization);

(2) An exposure that directly or indirectly references a securitization exposure described in paragraph (1) of this definition;

(3) A retained CRT exposure; or

(4) An acquired CRT exposure.

Securitization special purpose entity (securitization SPE) means a corporation, trust, or other entity organized for the specific purpose of holding underlying exposures of a securitization, the activities of which are limited to those appropriate to accomplish this purpose, and the structure of which is intended to isolate the underlying exposures held by the entity from the credit risk of the seller of the underlying exposures to the entity.

Servicer cash advance facility means a facility under which the servicer of the underlying exposures of a securitization may advance cash to ensure an uninterrupted flow of payments to investors in the securitization, including advances made to cover foreclosure costs or other expenses to facilitate the timely collection of the underlying exposures.

Single-family mortgage exposure means an exposure that is secured by a first or subsequent lien on a property with one to four residential units.

Sovereign means a central government (including the U.S. government) or an agency, department, ministry, or central bank of a central government.

Sovereign default means noncompliance by a sovereign with its external debt service obligations or the inability or unwillingness of a sovereign government to service an existing loan according to its original terms, as evidenced by failure to pay principal and interest timely and fully, arrearages, or restructuring.

Sovereign exposure means:

(1) A direct exposure to a sovereign; or

(2) An exposure directly and unconditionally backed by the full faith and credit of a sovereign.

Standardized market risk-weighted assets means the standardized measure for spread risk calculated under § 1240.204(a) multiplied by 12.5.

Standardized total risk-weighted assets means:

(1) The sum of:

(i) Total risk-weighted assets for general credit risk as calculated under § 1240.31;

(ii) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 1240.37;

(iii) Total risk-weighted assets for unsettled transactions as calculated under § 1240.40;

(iv) Total risk-weighted assets for CRT and other securitization exposures as calculated under § 1240.42;

(v) Total risk-weighted assets for equity exposures as calculated under § 1240.51;

(vi) Risk-weighted assets for operational risk, as calculated under § 1240.162(c); and

(vii) Standardized market risk-weighted assets; minus

(2) Excess eligible credit reserves not included in the Enterprise's tier 2 capital.

Subsidiary means, with respect to a company, a company controlled by that company.

Synthetic securitization means a transaction in which:

(1) All or a portion of the credit risk of one or more underlying exposures is retained or transferred to one or more third parties through the use of one or more credit derivatives or guarantees (other than a guarantee that transfers only the credit risk of an individual mortgage exposure or other retail exposure);

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends upon the performance of the underlying exposures; and

(4) All or substantially all of the underlying exposures are financial exposures (such as mortgage exposures, loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities).

Tier 1 capital means the sum of common equity tier 1 capital and additional tier 1 capital.

Tier 2 capital is defined in § 1240.20(d).

Total capital has the meaning given at section 1303(23) of the Safety and Soundness Act (12 U.S.C. 4502(23)).

Traditional securitization means a transaction in which:

(1) All or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties other than through the use of credit derivatives or guarantees;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends upon the performance of the underlying exposures;

(4) All or substantially all of the underlying exposures are financial exposures (such as mortgage exposures, loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities);

(5) The underlying exposures are not owned by an operating company;

(6) The underlying exposures are not owned by a small business investment company defined in section 302 of the Small Business Investment Act;

(7) The underlying exposures are not owned by a firm an investment in which qualifies as a community development investment under section 24 (Eleventh) of the National Bank Act;

(8) FHFA may determine that a transaction in which the underlying exposures are owned by an investment firm that exercises substantially unfettered control over the size and composition of its assets, liabilities, and off-balance sheet exposures is not a traditional securitization based on the transaction's leverage, risk profile, or economic substance;

(9) FHFA may deem a transaction that meets the definition of a traditional securitization, notwithstanding paragraph (5), (6), or (7) of this definition, to be a traditional securitization based on the transaction's leverage, risk profile, or economic substance; and

(10) The transaction is not:

(i) An investment fund;

(ii) A collective investment fund (as defined in 12 CFR 208.34);

(iii) An employee benefit plan (as defined in 29 U.S.C. 1002(3)), a governmental plan (as defined in 29 U.S.C. 1002(32)) that complies with the tax deferral qualification requirements provided in the Internal Revenue Code;

(iv) A synthetic exposure to the capital of a financial institution to the

extent deducted from capital under § 1240.22; or

(v) Registered with the SEC under the Investment Company Act of 1940 (15 U.S.C. 80a–1 *et seq.*) or foreign equivalents thereof.

Tranche means all securitization exposures associated with a securitization that have the same seniority level.

Underlying exposures means one or more exposures that have been securitized in a securitization transaction.

Wrong-way risk means the risk that arises when an exposure to a particular counterparty is positively correlated with the probability of default of such counterparty itself.

§ 1240.3 Operational requirements for counterparty credit risk.

For purposes of calculating risk-weighted assets under subpart D of this part:

(a) *Cleared transaction.* In order to recognize certain exposures as cleared transactions pursuant to paragraphs (1)(ii), (iii), or (iv) of the definition of ''cleared transaction'' in § 1240.2, the exposures must meet the applicable requirements set forth in this paragraph (a).

(1) The offsetting transaction must be identified by the CCP as a transaction for the clearing member client.

(2) The collateral supporting the transaction must be held in a manner that prevents the Enterprise from facing any loss due to an event of default, including from a liquidation, receivership, insolvency, or similar proceeding of either the clearing member or the clearing member's other clients. Omnibus accounts established under 17 CFR parts 190 and 300 satisfy the requirements of this paragraph (a).

(3) The Enterprise must conduct sufficient legal review to conclude with a well-founded basis (and maintain sufficient written documentation of that legal review) that in the event of a legal challenge (including one resulting from a default or receivership, insolvency, liquidation, or similar proceeding) the relevant court and administrative authorities would find the arrangements of paragraph (a)(2) of this section to be legal, valid, binding and enforceable under the law of the relevant jurisdictions.

(4) The offsetting transaction with a clearing member must be transferable under the transaction documents and applicable laws in the relevant jurisdiction(s) to another clearing member should the clearing member default, become insolvent, or enter receivership, insolvency, liquidation, or similar proceedings.

(b) *Eligible margin loan.* In order to recognize an exposure as an eligible margin loan as defined in § 1240.2, an Enterprise must conduct sufficient legal review to conclude with a well-founded basis (and maintain sufficient written documentation of that legal review) that the agreement underlying the exposure:

(1) Meets the requirements of paragraph (1)(iii) of the definition of eligible margin loan in § 1240.2, and

(2) Is legal, valid, binding, and enforceable under applicable law in the relevant jurisdictions.

(c) *Qualifying master netting agreement.* In order to recognize an agreement as a qualifying master netting agreement as defined in § 1240.2, an Enterprise must:

(1) Conduct sufficient legal review to conclude with a well-founded basis (and maintain sufficient written documentation of that legal review) that:

(i) The agreement meets the requirements of paragraph (2) of the definition of qualifying master netting agreement in § 1240.2; and

(ii) In the event of a legal challenge (including one resulting from default or from receivership, insolvency, liquidation, or similar proceeding) the relevant court and administrative authorities would find the agreement to be legal, valid, binding, and enforceable under the law of the relevant jurisdictions; and

(2) Establish and maintain written procedures to monitor possible changes in relevant law and to ensure that the agreement continues to satisfy the requirements of the definition of qualifying master netting agreement in § 1240.2.

(d) *Repo-style transaction.* In order to recognize an exposure as a repo-style transaction as defined in § 1240.2, an Enterprise must conduct sufficient legal review to conclude with a well-founded basis (and maintain sufficient written documentation of that legal review) that the agreement underlying the exposure:

(1) Meets the requirements of paragraph (3) of the definition of ''repo-style transaction'' in § 1240.2, and

(2) Is legal, valid, binding, and enforceable under applicable law in the relevant jurisdictions.

(e) *Failure of a QCCP to satisfy the rule's requirements.* If an Enterprise determines that a CCP ceases to be a QCCP due to the failure of the CCP to satisfy one or more of the requirements set forth in paragraphs (2)(i) through (2)(iii) of the definition of a QCCP in § 1240.2, the Enterprise may continue to treat the CCP as a QCCP for up to three months following the determination. If the CCP fails to remedy the relevant deficiency within three months after the initial determination, or the CCP fails to satisfy the requirements set forth in paragraphs (2)(i) through (2)(iii) of the definition of a ''QCCP'' continuously for a three-month period after remedying the relevant deficiency, an Enterprise may not treat the CCP as a QCCP for the purposes of this part until after the Enterprise has determined that the CCP has satisfied the requirements in paragraphs (2)(i) through (2)(iii) of the definition of a QCCP for three continuous months.

§ 1240.4 Compliance dates.

(a) *Delayed compliance dates.* Certain sections and subparts of this part are subject to delayed compliance dates under this section.

(b) *Reporting compliance.* Section 1240.1(f) has a compliance date of one year from [DATE OF PUBLICATION OF FINAL RULE].

(c) *Capital requirements and buffers.* Subject to paragraph (d) of this section, subpart B of this part has a compliance date with respect to an Enterprise of the later of:

(1) One year from [DATE OF PUBLICATION OF FINAL RULE]; and

(2) The date of the termination of the conservatorship of the Enterprise.

(d) *Capital restoration plan or other interim order.* (1) The Director may determine to direct a later compliance date for an Enterprise to achieve compliance with § 1240.10 based on his assessment of capital market conditions and the likely feasibility of the plan of the Enterprise to achieve capital levels sufficient to comply with § 1240.10 and avoid restrictions on capital distributions and discretionary bonuses under § 1240.11(b).

(2) If the Director makes a determination under paragraph (d)(1) of this section:

(i) For the period between the compliance date for § 1240.11 under paragraph (c) of this section and any later compliance date for § 1240.10 under this paragraph (d), the prescribed capital conservation buffer amount of the Enterprise will be the amount equal to:

(A) The CET1 capital that would otherwise be required under § 1240.10(d); plus

(B) The prescribed capital conservation buffer amount that would otherwise apply under § 1240.11(a)(5);

(ii) For the period between the compliance date for § 1240.11 under paragraph (c) of this section and the later compliance date for § 1240.10 under this paragraph (d), the prescribed leverage buffer amount of the Enterprise

will be equal to 4.0 percent of the adjusted total assets of the Enterprise; and

(iii) The compliance date for § 1240.10 will be tolled if the Enterprise is in compliance with:

(A) Any corrective plan pursuant to section 1313B of the Safety and Soundness Act (12 U.S.C. 4513b(b)(1)) and 12 CFR 1236.4(c), approved by FHFA, which may prescribe the feasible actions and milestones by which the Enterprise will achieve compliance with § 1240.10 by the date directed by FHFA; and

(B) Any agreement or order pursuant to section 1371 of the Safety and Soundness Act (12 U.S.C. 4631), including any requirement under any plan required under that agreement or order to achieve compliance with § 1240.10.

Subpart B—Capital Requirements and Buffers

§ 1240.10 Capital requirements.

(a) *Total capital.* An Enterprise must maintain total capital not less than the amount equal to 8.0 percent of the greater of:

(1) Standardized total risk-weighted assets; and

(2) Advanced approaches total risk-weighted assets.

(b) *Adjusted total capital.* An Enterprise must maintain adjusted total capital not less than the amount equal to 8.0 percent of the greater of:

(1) Standardized total risk-weighted assets; and

(2) Advanced approaches total risk-weighted assets.

(c) *Tier 1 capital.* An Enterprise must maintain tier 1 capital not less than the amount equal to 6.0 percent of the greater of:

(1) Standardized total risk-weighted assets; and

(2) Advanced approaches total risk-weighted assets.

(d) *Common equity tier 1 capital.* An Enterprise must maintain common equity tier 1 capital not less than the amount equal to 4.5 percent of the greater of:

(1) Standardized total risk-weighted assets; and

(2) Advanced approaches total risk-weighted assets.

(e) *Core capital.* An Enterprise must maintain core capital not less than the amount equal to 2.5 percent of adjusted total assets.

(f) *Leverage ratio.* An Enterprise must maintain tier 1 capital not less than the amount equal to 2.5 percent of adjusted total assets.

(g) *Capital adequacy.* (1) Notwithstanding the minimum requirements in this part, an Enterprise must maintain capital commensurate with the level and nature of all risks to which the Enterprise is exposed. The supervisory evaluation of an Enterprise's capital adequacy is based on an individual assessment of numerous factors, including the character and condition of the Enterprise's assets and its existing and prospective liabilities and other corporate responsibilities.

(2) An Enterprise must have a process for assessing its overall capital adequacy in relation to its risk profile and a comprehensive strategy for maintaining an appropriate level of capital.

§ 1240.11 Capital conservation buffer and leverage buffer.

(a) *Definitions.* For purposes of this section, the following definitions apply:

(1) *Capital conservation buffer.* An Enterprise's capital conservation buffer is the amount calculated under paragraph (c)(2) of this section.

(2) *Eligible retained income.* The eligible retained income of an Enterprise is the greater of:

(i) The Enterprise's net income, as defined under GAAP, for the four calendar quarters preceding the current calendar quarter, net of any distributions and associated tax effects not already reflected in net income; and

(ii) The average of the Enterprise's net income for the four calendar quarters preceding the current calendar quarter.

(3) *Leverage buffer.* An Enterprise's leverage buffer is the amount calculated under paragraph (d)(2) of this section.

(4) *Maximum payout ratio.* The maximum payout ratio is the percentage of eligible retained income that an Enterprise can pay out in the form of distributions and discretionary bonus payments during the current calendar quarter. The maximum payout ratio is determined under paragraph (b)(2) of this section.

(5) *Prescribed capital conservation buffer amount.* An Enterprise's prescribed capital conservation buffer amount is equal to its stress capital buffer in accordance with paragraph (a)(7) of this section plus its applicable countercyclical capital buffer amount in accordance with paragraph (e) of this section plus its applicable stability capital buffer in accordance with paragraph (f) of this section.

(6) *Prescribed leverage buffer amount.* An Enterprise's prescribed leverage buffer amount is 1.5 percent of the Enterprise's adjusted total assets, as of the last day of the previous calendar quarter.

(7) *Stress capital buffer.* An Enterprise's stress capital buffer is 0.75 percent of the Enterprise's adjusted total assets, as of the last day of the previous calendar quarter.

(b) *Maximum payout amount.* (1) *Limits on distributions and discretionary bonus payments.* An Enterprise shall not make distributions or discretionary bonus payments or create an obligation to make such distributions or payments during the current calendar quarter that, in the aggregate, exceed the amount equal to the Enterprise's eligible retained income for the calendar quarter, multiplied by its maximum payout ratio.

(2) *Maximum payout ratio.* The maximum payout ratio of an Enterprise is the lowest of the payout ratios determined by its capital conservation buffer and its leverage buffer, as set forth on Table 1 to paragraph (b)(5) of this section.

(3) *No maximum payout amount limitation.* An Enterprise is not subject to a restriction under paragraph (b)(1) of this section if it has:

(i) A capital conservation buffer that is greater than its prescribed capital conservation buffer amount; and

(ii) A leverage buffer that is greater than its prescribed leverage buffer amount.

(4) *Negative eligible retained income.* An Enterprise may not make distributions or discretionary bonus payments during the current calendar quarter if:

(i) The eligible retained income of the Enterprise is negative; and

(ii) Either:

(A) The capital conservation buffer of the Enterprise was less than its stress capital buffer; or

(B) The leverage buffer of the Enterprise was less than its prescribed leverage buffer amount.

(5) *Prior approval.* Notwithstanding the limitations in paragraphs (b)(1) through (b)(3) of this section, FHFA may permit an Enterprise to make a distribution or discretionary bonus payment upon a request of the Enterprise, if FHFA determines that the distribution or discretionary bonus payment would not be contrary to the purposes of this section or to the safety and soundness of the Enterprise. In making such a determination, FHFA will consider the nature and extent of the request and the particular circumstances giving rise to the request.

Table 1 to paragraph (b)(5): Calculation of Maximum Payout Ratio

Capital buffer[2]	Maximum payout ratio
Greater than or equal to the Enterprise's prescribed buffer amount.[3]	No payout ratio limitation applies
Less than the Enterprise's prescribed buffer amount, and greater than or equal to 75 percent of the Enterprise's prescribed buffer amount.	60 percent
Less than 75 percent of the Enterprise's prescribed buffer amount, and greater than or equal to 50 percent of the Enterprise's prescribed buffer amount.	40 percent
Less than 50 percent of the Enterprise's prescribed buffer amount, and greater than or equal to 25 percent of the Enterprise's prescribed buffer amount.	20 percent
Less than 25 percent of the Enterprise's prescribed buffer amount.	0 percent

(c) *Capital conservation buffer*—(1) *Composition of the capital conservation buffer.* The capital conservation buffer is composed solely of common equity tier 1 capital.

(2) *Calculation of capital conservation buffer.* (i) An Enterprise's capital conservation buffer is equal to the lowest of the following, calculated as of the last day of the previous calendar quarter:

(A) The Enterprise's adjusted total capital minus the minimum amount of adjusted total capital under § 1240.10(b);

(B) The Enterprise's tier 1 capital minus the minimum amount of tier 1 capital under § 1240.10(c); or

(C) The Enterprise's common equity tier 1 capital minus the minimum amount of common equity tier 1 capital under § 1240.10(d).

(ii) Notwithstanding paragraphs (c)(2)(i)(A) through (C) of this section, if the Enterprise's adjusted total capital, tier 1 capital, or common equity tier 1 capital is less than or equal to the Enterprise's minimum adjusted total capital, tier 1 capital, or common equity tier 1 capital, respectively, the Enterprise's capital conservation buffer is zero.

(d) *Leverage buffer*—(1) *Composition of the leverage buffer.* The leverage buffer is composed solely of tier 1 capital.

(2) *Calculation of the leverage buffer.* (i) An Enterprise's leverage buffer is equal to the Enterprise's tier 1 capital minus the minimum amount of tier 1 capital under § 1240.10(f), calculated as of the last day of the previous calendar quarter.

(ii) Notwithstanding paragraph (d)(2)(i) of this section, if the Enterprise's tier 1 capital is less than or equal to the minimum amount of tier 1 capital under § 1240.10(d), the Enterprise's leverage buffer is zero.

(e) *Countercyclical capital buffer amount*—(1) *Composition of the countercyclical capital buffer amount.* The countercyclical capital buffer amount is composed solely of common equity tier 1 capital.

(2) *Amount*—(i) *Initial countercyclical capital buffer.* The initial countercyclical capital buffer amount is zero.

(ii) *Adjustment of the countercyclical capital buffer amount.* FHFA will adjust the countercyclical capital buffer amount in accordance with applicable law.

(iii) *Range of countercyclical capital buffer amount.* FHFA will adjust the countercyclical capital buffer amount between zero percent and 0.75 percent of adjusted total assets.

(iv) *Adjustment determination.* FHFA will base its decision to adjust the countercyclical capital buffer amount under this section on a range of macroeconomic, financial, and supervisory information indicating an increase in systemic risk, including the ratio of credit to gross domestic product, a variety of asset prices, other factors indicative of relative credit and liquidity expansion or contraction, funding spreads, credit condition surveys, indices based on credit default swap spreads, options implied volatility, and measures of systemic risk.

(3) *Effective date of adjusted countercyclical capital buffer amount*—

(i) *Increase adjustment.* A determination by FHFA under paragraph (e)(2)(ii) of this section to increase the countercyclical capital buffer amount will be effective 12 months from the date of announcement, unless FHFA establishes an earlier effective date and includes a statement articulating the reasons for the earlier effective date.

(ii) *Decrease adjustment.* A determination by FHFA to decrease the established countercyclical capital buffer amount under paragraph (e)(2)(ii) of this section will be effective on the day following announcement of the final determination or the earliest date permissible under applicable law or regulation, whichever is later.

(iii) *Twelve month sunset.* The countercyclical capital buffer amount will return to zero percent 12 months after the effective date that the adjusted countercyclical capital buffer amount is announced, unless FHFA announces a decision to maintain the adjusted countercyclical capital buffer amount or adjust it again before the expiration of the 12-month period.

(f) *Stability capital buffer.* An Enterprise must use its stability capital buffer calculated in accordance with subpart G of this part for purposes of determining its maximum payout ratio under Table 1 to paragraph (b)(5) of this section.

Subpart C—Definition of Capital

§ 1240.20 Capital components and eligibility criteria for regulatory capital instruments.

(a) *Regulatory capital components.* An Enterprise's regulatory capital components are:

(1) Common equity tier 1 capital;

(2) Additional tier 1 capital;

(3) Tier 2 capital;

(4) Core capital; and

(5) Total capital.

[2] An Enterprise's ''capital buffer'' means, as applicable, its capital conservation buffer or its leverage buffer.

[3] An Enterprise's ''prescribed buffer amount'' means, as applicable, its prescribed capital conservation buffer amount or its leverage prescribed buffer amount.

(b) *Common equity tier 1 capital.* Common equity tier 1 capital is the sum of the common equity tier 1 capital elements in this paragraph (b), minus regulatory adjustments and deductions in § 1240.22. The common equity tier 1 capital elements are:

(1) Any common stock instruments (plus any related surplus) issued by the Enterprise, net of treasury stock, that meet all the following criteria:

(i) The instrument is paid-in, issued directly by the Enterprise, and represents the most subordinated claim in a receivership, insolvency, liquidation, or similar proceeding of the Enterprise;

(ii) The holder of the instrument is entitled to a claim on the residual assets of the Enterprise that is proportional with the holder's share of the Enterprise's issued capital after all senior claims have been satisfied in a receivership, insolvency, liquidation, or similar proceeding;

(iii) The instrument has no maturity date, can only be redeemed via discretionary repurchases with the prior approval of FHFA to the extent otherwise required by law or regulation, and does not contain any term or feature that creates an incentive to redeem;

(iv) The Enterprise did not create at issuance of the instrument through any action or communication an expectation that it will buy back, cancel, or redeem the instrument, and the instrument does not include any term or feature that might give rise to such an expectation;

(v) Any cash dividend payments on the instrument are paid out of the Enterprise's net income, retained earnings, or surplus related to common stock, and are not subject to a limit imposed by the contractual terms governing the instrument.

(vi) The Enterprise has full discretion at all times to refrain from paying any dividends and making any other distributions on the instrument without triggering an event of default, a requirement to make a payment-in-kind, or an imposition of any other restrictions on the Enterprise;

(vii) Dividend payments and any other distributions on the instrument may be paid only after all legal and contractual obligations of the Enterprise have been satisfied, including payments due on more senior claims;

(viii) The holders of the instrument bear losses as they occur equally, proportionately, and simultaneously with the holders of all other common stock instruments before any losses are borne by holders of claims on the Enterprise with greater priority in a receivership, insolvency, liquidation, or similar proceeding;

(ix) The paid-in amount is classified as equity under GAAP;

(x) The Enterprise, or an entity that the Enterprise controls, did not purchase or directly or indirectly fund the purchase of the instrument;

(xi) The instrument is not secured, not covered by a guarantee of the Enterprise or of an affiliate of the Enterprise, and is not subject to any other arrangement that legally or economically enhances the seniority of the instrument;

(xii) The instrument has been issued in accordance with applicable laws and regulations; and

(xiii) The instrument is reported on the Enterprise's regulatory financial statements separately from other capital instruments.

(2) Retained earnings.

(3) Accumulated other comprehensive income (AOCI) as reported under GAAP.[4]

(4) Notwithstanding the criteria for common stock instruments referenced above, an Enterprise's common stock issued and held in trust for the benefit of its employees as part of an employee stock ownership plan does not violate any of the criteria in paragraphs (b)(1)(iii), (b)(1)(iv) or (b)(1)(xi) of this section, provided that any repurchase of the stock is required solely by virtue of ERISA for an instrument of an Enterprise that is not publicly-traded. In addition, an instrument issued by an Enterprise to its employee stock ownership plan does not violate the criterion in paragraph (b)(1)(x) of this section.

(c) *Additional tier 1 capital.* Additional tier 1 capital is the sum of additional tier 1 capital elements and any related surplus, minus the regulatory adjustments and deductions in § 1240.22. Additional tier 1 capital elements are:

(1) Subject to paragraph (e)(2) of this section, instruments (plus any related surplus) that meet the following criteria:

(i) The instrument is issued and paid-in;

(ii) The instrument is subordinated to general creditors and subordinated debt holders of the Enterprise in a receivership, insolvency, liquidation, or similar proceeding;

(iii) The instrument is not secured, not covered by a guarantee of the Enterprise or of an affiliate of the Enterprise, and not subject to any other arrangement that legally or economically enhances the seniority of the instrument;

(iv) The instrument has no maturity date and does not contain a dividend step-up or any other term or feature that creates an incentive to redeem; and

(v) If callable by its terms, the instrument may be called by the Enterprise only after a minimum of five years following issuance, except that the terms of the instrument may allow it to be called earlier than five years upon the occurrence of a regulatory event that precludes the instrument from being included in additional tier 1 capital, a tax event, or if the issuing entity is required to register as an investment company pursuant to the Investment Company Act of 1940 (15 U.S.C. 80a–1 *et seq.*). In addition:

(A) The Enterprise must receive prior approval from FHFA to exercise a call option on the instrument.

(B) The Enterprise does not create at issuance of the instrument, through any action or communication, an expectation that the call option will be exercised.

(C) Prior to exercising the call option, or immediately thereafter, the Enterprise must either: Replace the instrument to be called with an equal amount of instruments that meet the criteria under paragraph (b) of this section or this paragraph (c);[5] or demonstrate to the satisfaction of FHFA that following redemption, the Enterprise will continue to hold capital commensurate with its risk.

(vi) Redemption or repurchase of the instrument requires prior approval from FHFA.

(vii) The Enterprise has full discretion at all times to cancel dividends or other distributions on the instrument without triggering an event of default, a requirement to make a payment-in-kind, or an imposition of other restrictions on the Enterprise except in relation to any distributions to holders of common stock or instruments that are *pari passu* with the instrument.

(viii) Any distributions on the instrument are paid out of the Enterprise's net income, retained earnings, or surplus related to other additional tier 1 capital instruments.

(ix) The instrument does not have a credit-sensitive feature, such as a dividend rate that is reset periodically based in whole or in part on the Enterprise's credit quality, but may have a dividend rate that is adjusted periodically independent of the Enterprise's credit quality, in relation to general market interest rates or similar adjustments.

(x) The paid-in amount is classified as equity under GAAP.

[4] *See* § 1240.22 for specific adjustments related to AOCI.

[5] Replacement can be concurrent with redemption of existing additional tier 1 capital instruments.

(xi) The Enterprise, or an entity that the Enterprise controls, did not purchase or directly or indirectly fund the purchase of the instrument.

(xii) The instrument does not have any features that would limit or discourage additional issuance of capital by the Enterprise, such as provisions that require the Enterprise to compensate holders of the instrument if a new instrument is issued at a lower price during a specified time frame.

(xiii) If the instrument is not issued directly by the Enterprise or by a subsidiary of the Enterprise that is an operating entity, the only asset of the issuing entity is its investment in the capital of the Enterprise, and proceeds must be immediately available without limitation to the Enterprise or to the Enterprise's top-tier holding company in a form which meets or exceeds all of the other criteria for additional tier 1 capital instruments.[6]

(xiv) The governing agreement, offering circular, or prospectus of an instrument issued after [the effective date of the final rule] must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the Enterprise enters into a receivership, insolvency, liquidation, or similar proceeding.

(2) Notwithstanding the criteria for additional tier 1 capital instruments referenced above, an instrument issued by an Enterprise and held in trust for the benefit of its employees as part of an employee stock ownership plan does not violate any of the criteria in paragraph (c)(1)(iii) of this section, provided that any repurchase is required solely by virtue of ERISA for an instrument of an Enterprise that is not publicly-traded. In addition, an instrument issued by an Enterprise to its employee stock ownership plan does not violate the criteria in paragraphs (c)(1)(v) or (c)(1)(xi) of this section.

(d) *Tier 2 Capital.* Tier 2 capital is the sum of tier 2 capital elements and any related surplus, minus the regulatory adjustments and deductions in § 1240.22. Tier 2 capital elements are:

(1) Subject to paragraph (e)(2) of this section, instruments (plus related surplus) that meet the following criteria:

(i) The instrument is issued and paid-in.

(ii) The instrument is subordinated to general creditors of the Enterprise.

(iii) The instrument is not secured, not covered by a guarantee of the Enterprise or of an affiliate of the Enterprise, and not subject to any other arrangement that legally or economically enhances the seniority of the instrument in relation to more senior claims.

(iv) The instrument has a minimum original maturity of at least five years. At the beginning of each of the last five years of the life of the instrument, the amount that is eligible to be included in tier 2 capital is reduced by 20 percent of the original amount of the instrument (net of redemptions) and is excluded from regulatory capital when the remaining maturity is less than one year. In addition, the instrument must not have any terms or features that require, or create significant incentives for, the Enterprise to redeem the instrument prior to maturity.[7]

(v) The instrument, by its terms, may be called by the Enterprise only after a minimum of five years following issuance, except that the terms of the instrument may allow it to be called sooner upon the occurrence of an event that would preclude the instrument from being included in tier 2 capital, a tax event. In addition:

(A) The Enterprise must receive the prior approval of FHFA to exercise a call option on the instrument.

(B) The Enterprise does not create at issuance, through action or communication, an expectation the call option will be exercised.

(C) Prior to exercising the call option, or immediately thereafter, the Enterprise must either: Replace any amount called with an equivalent amount of an instrument that meets the criteria for regulatory capital under this section;[8] or demonstrate to the satisfaction of FHFA that following redemption, the Enterprise would continue to hold an amount of capital that is commensurate with its risk.

(vi) The holder of the instrument must have no contractual right to accelerate payment of principal or interest on the instrument, except in the event of a receivership, insolvency, liquidation, or similar proceeding of the Enterprise.

(vii) The instrument has no credit-sensitive feature, such as a dividend or interest rate that is reset periodically based in whole or in part on the Enterprise's credit standing, but may have a dividend rate that is adjusted periodically independent of the Enterprise's credit standing, in relation to general market interest rates or similar adjustments.

(viii) The Enterprise, or an entity that the Enterprise controls, has not purchased and has not directly or indirectly funded the purchase of the instrument.

(ix) If the instrument is not issued directly by the Enterprise or by a subsidiary of the Enterprise that is an operating entity, the only asset of the issuing entity is its investment in the capital of the Enterprise, and proceeds must be immediately available without limitation to the Enterprise or the Enterprise's top-tier holding company in a form that meets or exceeds all the other criteria for tier 2 capital instruments under this section.[9]

(x) Redemption of the instrument prior to maturity or repurchase requires the prior approval of FHFA.

(xi) The governing agreement, offering circular, or prospectus of an instrument issued after [the effective date of the final rule] must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the Enterprise enters into a receivership, insolvency, liquidation, or similar proceeding.

(2) Any eligible credit reserves that exceed expected credit losses to the extent that the excess reserve amount does not exceed 0.6 percent of credit risk-weighted assets.

(e) *FHFA approval of a capital element.* (1) An Enterprise must receive FHFA prior approval to include a capital element (as listed in this section) in its common equity tier 1 capital, additional tier 1 capital, or tier 2 capital unless the element:

(i) Was included in an Enterprise's tier 1 capital or tier 2 capital prior to [the publication date of the proposed rule] and the underlying instrument may continue to be included under the criteria set forth in this section; or

(ii) Is equivalent, in terms of capital quality and ability to absorb losses with respect to all material terms, to a regulatory capital element FHFA determined may be included in regulatory capital pursuant to paragraph (e)(3) of this section.

(2) An Enterprise may not include an instrument in its additional tier 1 capital or a tier 2 capital unless FHFA has determined that the Enterprise has made appropriate provision, including in any resolution plan of the Enterprise, to ensure that the instrument would not pose a material impediment to the

[6] *De minimis* assets related to the operation of the issuing entity can be disregarded for purposes of this criterion.

[7] An instrument that by its terms automatically converts into a tier 1 capital instrument prior to five years after issuance complies with the five-year maturity requirement of this criterion.

[8] An Enterprise may replace tier 2 capital instruments concurrent with the redemption of existing tier 2 capital instruments.

[9] An Enterprise may disregard *de minimis* assets related to the operation of the issuing entity for purposes of this criterion.

ability of an Enterprise to issue common stock instruments following the appointment of FHFA as conservator or receiver under the Safety and Soundness Act.

(3) After determining that a regulatory capital element may be included in an Enterprise's common equity tier 1 capital, additional tier 1 capital, or tier 2 capital, FHFA will make its decision publicly available, including a brief description of the material terms of the regulatory capital element and the rationale for the determination.

(f) *FHFA prior approval.* An Enterprise may not repurchase or redeem any common equity tier 1 capital, additional tier 1, or tier 2 capital instrument without the prior approval of FHFA to the extent such prior approval is required by paragraphs (b), (c), or (d) of this section, as applicable.

§ 1240.21 [Reserved]

§ 1240.22 Regulatory capital adjustments and deductions.

(a) *Regulatory capital deductions from common equity tier 1 capital.* An Enterprise must deduct from the sum of its common equity tier 1 capital elements the items set forth in this paragraph (a):

(1) Goodwill, net of associated deferred tax liabilities (DTLs) in accordance with paragraph (e) of this section, including goodwill that is embedded in the valuation of a significant investment in the capital of an unconsolidated financial institution in the form of common stock (and that is reflected in the consolidated financial statements of the Enterprise), in accordance with paragraph (d) of this section;

(2) Intangible assets, other than MSAs, net of associated DTLs in accordance with paragraph (e) of this section;

(3) Deferred tax assets (DTAs) that arise from net operating loss and tax credit carryforwards net of any related valuation allowances and net of DTLs in accordance with paragraph (e) of this section;

(4) Any gain-on-sale in connection with a securitization exposure;

(5) Any defined benefit pension fund net asset, net of any associated DTL in accordance with paragraph (e) of this section, held by the Enterprise. With the prior approval of FHFA, this deduction is not required for any defined benefit pension fund net asset to the extent the Enterprise has unrestricted and unfettered access to the assets in that fund. An Enterprise must risk weight any portion of the defined benefit pension fund asset that is not deducted under this paragraph (a) as if the Enterprise directly holds a proportional ownership share of each exposure in the defined benefit pension fund.

(6) The amount of expected credit loss that exceeds its eligible credit reserves.

(b) *Regulatory adjustments to common equity tier 1 capital.* (1) An Enterprise must adjust the sum of common equity tier 1 capital elements pursuant to the requirements set forth in this paragraph (b). Such adjustments to common equity tier 1 capital must be made net of the associated deferred tax effects.

(i) An Enterprise must deduct any accumulated net gains and add any accumulated net losses on cash flow hedges included in AOCI that relate to the hedging of items that are not recognized at fair value on the balance sheet.

(ii) An Enterprise must deduct any net gain and add any net loss related to changes in the fair value of liabilities that are due to changes in the Enterprise's own credit risk. An Enterprise must deduct the difference between its credit spread premium and the risk-free rate for derivatives that are liabilities as part of this adjustment.

(c) *Deductions from regulatory capital related to investments in capital instruments.*[10] An Enterprise must deduct an investment in the Enterprise's own capital instruments as follows:

(1) An Enterprise must deduct an investment in the Enterprise's own common stock instruments from its common equity tier 1 capital elements to the extent such instruments are not excluded from regulatory capital under § 1240.20(b)(1);

(2) An Enterprise must deduct an investment in the Enterprise's own additional tier 1 capital instruments from its additional tier 1 capital elements; and

(3) An Enterprise must deduct an investment in the Enterprise's own tier 2 capital instruments from its tier 2 capital elements.

(d) *Items subject to the 10 and 15 percent common equity tier 1 capital deduction thresholds.* (1) An Enterprise must deduct from common equity tier 1 capital elements the amount of each of the items set forth in this paragraph (d) that, individually, exceeds 10 percent of the sum of the Enterprise's common equity tier 1 capital elements, less adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section (the 10 percent common equity tier 1 capital deduction threshold).

(i) DTAs arising from temporary differences that the Enterprise could not realize through net operating loss carrybacks, net of any related valuation allowances and net of DTLs, in accordance with paragraph (e) of this section. An Enterprise is not required to deduct from the sum of its common equity tier 1 capital elements DTAs (net of any related valuation allowances and net of DTLs, in accordance with paragraph (e) of this section) arising from timing differences that the Enterprise could realize through net operating loss carrybacks. The Enterprise must risk weight these assets at 100 percent.

(ii) MSAs net of associated DTLs, in accordance with paragraph (e) of this section.

(2) An Enterprise must deduct from common equity tier 1 capital elements the items listed in paragraph (d)(1) of this section that are not deducted as a result of the application of the 10 percent common equity tier 1 capital deduction threshold, and that, in aggregate, exceed 17.65 percent of the sum of the Enterprise's common equity tier 1 capital elements, minus adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section, minus the items listed in paragraph (d)(1) of this section (the 15 percent common equity tier 1 capital deduction threshold).[11]

(3) For purposes of calculating the amount of DTAs subject to the 10 and 15 percent common equity tier 1 capital deduction thresholds, an Enterprise may exclude DTAs and DTLs relating to adjustments made to common equity tier 1 capital under paragraph (b) of this section. An Enterprise that elects to exclude DTAs relating to adjustments under paragraph (b) of this section also must exclude DTLs and must do so consistently in all future calculations. An Enterprise may change its exclusion preference only after obtaining the prior approval of FHFA.

(e) *Netting of DTLs against assets subject to deduction.* (1) Except as described in paragraph (e)(3) of this section, netting of DTLs against assets that are subject to deduction under this section is permitted, but not required, if the following conditions are met:

(i) The DTL is associated with the asset; and

[10] The Enterprise must calculate amounts deducted under paragraphs (c) through (f) of this section after it calculates the amount of ALLL or AACL, as applicable, includable in tier 2 capital under § 1240.20(d).

[11] The amount of the items in paragraph (d) of this section that is not deducted from common equity tier 1 capital pursuant to this section must be included in the risk-weighted assets of the Enterprise and assigned a 250 percent risk weight.

(ii) The DTL would be extinguished if the associated asset becomes impaired or is derecognized under GAAP.

(2) A DTL may only be netted against a single asset.

(3) For purposes of calculating the amount of DTAs subject to the threshold deduction in paragraph (d) of this section, the amount of DTAs that arise from net operating loss and tax credit carryforwards, net of any related valuation allowances, and of DTAs arising from temporary differences that the Enterprise could not realize through net operating loss carrybacks, net of any related valuation allowances, may be offset by DTLs (that have not been netted against assets subject to deduction pursuant to paragraph (e)(1) of this section) subject to the conditions set forth in this paragraph (e).

(i) Only the DTAs and DTLs that relate to taxes levied by the same taxation authority and that are eligible for offsetting by that authority may be offset for purposes of this deduction.

(ii) The amount of DTLs that the Enterprise nets against DTAs that arise from net operating loss and tax credit carryforwards, net of any related valuation allowances, and against DTAs arising from temporary differences that the Enterprise could not realize through net operating loss carrybacks, net of any related valuation allowances, must be allocated in proportion to the amount of DTAs that arise from net operating loss and tax credit carryforwards (net of any related valuation allowances, but before any offsetting of DTLs) and of DTAs arising from temporary differences that the Enterprise could not realize through net operating loss carrybacks (net of any related valuation allowances, but before any offsetting of DTLs), respectively.

(4) An Enterprise must net DTLs against assets subject to deduction under this section in a consistent manner from reporting period to reporting period. An Enterprise may change its preference regarding the manner in which it nets DTLs against specific assets subject to deduction under this section only after obtaining the prior approval of FHFA.

(f) *Insufficient amounts of a specific regulatory capital component to effect deductions.* Under the corresponding deduction approach, if an Enterprise does not have a sufficient amount of a specific component of capital to effect the required deduction after completing the deductions required under paragraph (d) of this section, the Enterprise must deduct the shortfall from the next higher (that is, more subordinated) component of regulatory capital.

(g) *Treatment of assets that are deducted.* An Enterprise must exclude from standardized total risk-weighted assets and advanced approaches total risk-weighted assets any item deducted from regulatory capital under paragraphs (a), (c), and (d) of this section.

Subpart D—Risk-Weighted Assets—Standardized Approach

§ 1240.30 Applicability.

(a) This subpart sets forth methodologies for determining risk-weighted assets for purposes of the generally applicable risk-based capital requirements for the Enterprises.

(b) This subpart is also applicable to covered positions, as defined in subpart F of this part.

Risk-Weighted Assets For General Credit Risk

§ 1240.31 Mechanics for calculating risk-weighted assets for general credit risk.

(a) *General risk-weighting requirements.* An Enterprise must apply risk weights to its exposures as follows:

(1) An Enterprise must determine the exposure amount of each mortgage exposure, each other on-balance sheet exposure, each OTC derivative contract, and each off-balance sheet commitment, trade and transaction-related contingency, guarantee, repo-style transaction, forward agreement, or other similar transaction that is not:

(i) An unsettled transaction subject to § 1240.40;

(ii) A cleared transaction subject to § 1240.37;

(iii) A default fund contribution subject to § 1240.37;

(iv) A retained CRT exposure, acquired CRT exposure, or other securitization exposure subject to §§ 1240.41 through 1240.46; or

(v) An equity exposure (other than an equity OTC derivative contract) subject to § 1240.51.

(2) An Enterprise must multiply each exposure amount by the risk weight appropriate to the exposure based on the exposure type or counterparty, eligible guarantor, or financial collateral to determine the risk-weighted asset amount for each exposure.

(b) *Total risk-weighted assets for general credit risk.* Total risk-weighted assets for general credit risk equals the sum of the risk-weighted asset amounts calculated under this section.

§ 1240.32 General risk weights.

(a) *Exposures to the U.S. government.* (1) Notwithstanding any other requirement in this subpart, an Enterprise must assign a zero percent risk weight to:

(i) An exposure to the U.S. government, its central bank, or a U.S. government agency; and

(ii) The portion of an exposure that is directly and unconditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency. This includes a deposit or other exposure, or the portion of a deposit or other exposure, that is insured or otherwise unconditionally guaranteed by the FDIC or NCUA.

(2) An Enterprise must assign a 20 percent risk weight to the portion of an exposure that is conditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency. This includes an exposure, or the portion of an exposure, that is conditionally guaranteed by the FDIC or NCUA.

(b) *Certain supranational entities and multilateral development banks (MDBs).* An Enterprise must assign a zero percent risk weight to an exposure to the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, the European Financial Stability Facility, or an MDB.

(c) *Exposures to GSEs.* (1) An Enterprise must assign a zero percent risk weight to any MBS guaranteed by the Enterprise (other than any retained CRT exposure).

(2) An Enterprise must assign a 20 percent risk weight to an exposure to another GSE, including an MBS guaranteed by the other Enterprise, other than an equity exposure or preferred stock.

(d) *Exposures to depository institutions and credit unions.* (1) An Enterprise must assign a 20 percent risk weight to an exposure to a depository institution or credit union that is organized under the laws of the United States or any state thereof, except as otherwise provided under paragraph (d)(2) of this section.

(2) An Enterprise must assign a 100 percent risk weight to an exposure to a financial institution if the exposure may be included in that financial institution's capital unless the exposure is:

(i) An equity exposure; or

(ii) Deducted from regulatory capital under § 1240.22.

(e) *Exposures to U.S. public sector entities (PSEs).* (1) An Enterprise must assign a 20 percent risk weight to a general obligation exposure to a PSE that is organized under the laws of the United States or any state or political subdivision thereof.

(2) An Enterprise must assign a 50 percent risk weight to a revenue

obligation exposure to a PSE that is organized under the laws of the United States or any state or political subdivision thereof.

(f) *Corporate exposures.* An Enterprise must assign a 100 percent risk weight to all its corporate exposures.

(g) *Residential mortgage exposures*—(1) *Single-family mortgage exposures.* An Enterprise must assign a risk weight to a single-family mortgage exposure in accordance with § 1240.33.

(2) *Multifamily mortgage exposures.* An Enterprise must assign a risk weight to a multifamily mortgage exposure in accordance with § 1240.34.

(h) *Past due exposures.* Except for an exposure to a sovereign entity or a mortgage exposure, if an exposure is 90 days or more past due or on nonaccrual:

(1) An Enterprise must assign a 150 percent risk weight to the portion of the exposure that is not guaranteed or that is unsecured;

(2) An Enterprise may assign a risk weight to the guaranteed portion of a past due exposure based on the risk weight that applies under § 1240.38 if the guarantee or credit derivative meets the requirements of that section; and

(3) An Enterprise may assign a risk weight to the collateralized portion of a past due exposure based on the risk weight that applies under § 1240.39 if the collateral meets the requirements of that section.

(i) *Other assets.* (1) An Enterprise must assign a zero percent risk weight to cash owned and held in the offices of an insured depository institution or in transit.

(2) An Enterprise must assign a 20 percent risk weight to cash items in the process of collection.

(3) An Enterprise must assign a 100 percent risk weight to DTAs arising from temporary differences that the Enterprise could realize through net operating loss carrybacks.

(4) An Enterprise must assign a 250 percent risk weight to the portion of each of the following items to the extent it is not deducted from common equity tier 1 capital pursuant to § 1240.22(d):

(i) MSAs; and

(ii) DTAs arising from temporary differences that the Enterprise could not realize through net operating loss carrybacks.

(5) An Enterprise must assign a 100 percent risk weight to all assets not specifically assigned a different risk weight under this subpart and that are not deducted from tier 1 or tier 2 capital pursuant to § 1240.22.

(j) *Insurance assets.* (1) An Enterprise must risk-weight the individual assets held in a separate account that does not qualify as a non-guaranteed separate account as if the individual assets were held directly by the Enterprise.

(2) An Enterprise must assign a zero percent risk weight to an asset that is held in a non-guaranteed separate account.

§ 1240.33 Single-family mortgage exposures.

(a) *Definitions.* Subject to any additional instructions set forth on Table 1 to this paragraph (a), for purposes of this section:

Adjusted MTMLTV means, with respect to a single-family mortgage exposure, the amount equal to:

(i) The MTMLTV of the single-family mortgage exposure (or, if the loan age of the single-family mortgage exposure is less than 6, the OLTV of the single-family mortgage exposure); divided by

(ii) The amount equal to 1 plus the single-family countercyclical adjustment of the single-family mortgage exposure.

Approved insurer means an insurance company that is currently approved by an Enterprise to guarantee or insure single-family mortgage exposures acquired by the Enterprise.

Cancellable mortgage insurance means a mortgage insurance policy that, pursuant to its terms, may or will be terminated before the maturity date of the insured single-family mortgage exposure, including as required or permitted by the Homeowners Protection Act of 1998 (12 U.S.C. 4901).

Charter-level coverage means mortgage insurance that satisfies the minimum requirements of the authorizing statute of an Enterprise.

Cohort burnout means the number of refinance opportunities since the loan age of the single-family mortgage exposure was 6, categorized into ranges pursuant to the instructions set forth on Table 1 to this paragraph (a).

Coverage percent means, with respect to mortgage insurance or a recourse agreement, the percent of the sum of the unpaid principal balance, any lost interest, and any foreclosure costs that is used to determine the benefit or other coverage under a mortgage insurance policy or recourse agreement.

Days past due means the number of days a single-family mortgage exposure is past due.

Debt-to-income ratio (DTI) means the ratio of a borrower's total monthly obligations (including housing expense) divided by the borrower's monthly income, as calculated under the Guide of the Enterprise.

Deflated single-family house price index (DeflatedSFHPI) means the amount equal to:

(i) The most recently available FHFA quarterly, not-seasonally-adjusted U.S. all transactions house price index; divided by

(ii) The average quarterly observation from the Consumer Price Index for All Urban Consumers, All Items Less Shelter in U.S. City Average, that corresponds to the same quarter.

Full recourse agreement means a recourse agreement that provides for a coverage percent of 100 percent and has a term of the coverage that is equal to the life of the single-family mortgage exposure.

Guide means, as applicable, the Fannie Mae Single Family Selling Guide, the Fannie Mae Single Family Servicing Guide and the Freddie Mac Single-family Seller/Servicers Guide.

Guide-level coverage means mortgage insurance that satisfies the requirements of the Guide of the Enterprise with respect to mortgage insurance that has a coverage percent that exceeds charter-level coverage.

Interest-only (IO) means a single-family mortgage exposure that requires only payment of interest without any principal amortization during all or part of the loan term.

Loan age means the number of scheduled payment dates since the origination of a single-family mortgage exposure.

Loan-level credit enhancement means:

(i) Mortgage insurance;

(ii) A recourse agreement; or

(iii) A participation agreement.

Loan documentation means the completeness of the documentation used to underwrite a single-family mortgage exposure, as determined under the Guide of the Enterprise.

Loan purpose means the purpose of a single-family mortgage exposure at origination.

Long-run single-family house price index trend (LRSFHPITrend) means,

$$LRSFHPITrend = 1.0873681e^{0.00294746 * (\text{Number of Quarters})}$$

where equal to the number of quarters from 1975Q1 to the given reporting quarter and where 1975Q1 is counted as one.

MI cancellation feature means an indicator for whether mortgage insurance is cancellable mortgage insurance or non-cancellable mortgage insurance, assigned pursuant to the instructions set forth on Table 1 to this paragraph (a).

Modification means:

(i) Any permanent amendment or other change to the interest rate, maturity date, unpaid principal balance, or other contractual term of a single-family mortgage exposure; or

(ii) Entry into any repayment plan with respect to any amounts that are

past due under the terms of a single-family mortgage exposure.

Modified re-performing loan (modified RPL) means a single-family mortgage exposure (other than an NPL) that has been subject to a modification.

Months since last modification means the number of scheduled payment dates since the effective date of the last modification of a single-family mortgage exposure.

Mortgage concentration risk means the extent to which a mortgage insurer or other counterparty is exposed to mortgage credit risk relative to other risks.

MTMLTV means, with respect to a single-family mortgage exposure, the amount equal to:

(i) The unpaid principal balance of the single-family mortgage exposure; divided by

(ii) The amount equal to:

(A) The unpaid principal balance of the single-family mortgage exposure at origination; divided by

(B) The OLTV of the single-family mortgage exposure; multiplied by

(C) The most recently available FHFA Purchase-only State-level House Price Index of the State in which the property securing the singe-family mortgage exposure is located; divided by

(D) The FHFA Purchase-only State-level House Price Index, as of date of the origination of the single-family mortgage exposure, in which the property securing the singe-family mortgage exposure is located.

Non-cancellable mortgage insurance means a mortgage insurance policy that, pursuant to its terms, may not be terminated before the maturity date of the insured single-family mortgage exposure.

Non-modified re-performing loan (non-modified RPL) means a single-family mortgage exposure (other than a modified RPL or an NPL) that was previously an NPL at any time in the prior 48 calendar months.

Non-performing loan (NPL) means a single-family mortgage exposure that is 60 days or more past due.

Occupancy type means the borrowers' intended use of the property securing a single-family mortgage exposure.

Original credit score means the borrower's credit score as of the origination date of a single-family mortgage exposure.

OLTV means, with respect to a single-family mortgage exposure, the amount equal to:

(i) The unpaid principal balance of the single-family mortgage exposure at origination; divided by

(ii) The lesser of:

(A) The appraised value of the property securing the single-family mortgage exposure; and

(B) The sale price of the property securing the single-family mortgage exposure.

Origination channel means the type of institution that originated a single-family mortgage exposure, assigned pursuant to the instructions set forth on Table 1 to this paragraph (a).

Partial recourse agreement means a recourse agreement that is not a full recourse agreement.

Participation agreement means, with respect to a single-family mortgage exposure, any agreement between an Enterprise and the seller of the single-family mortgage exposure pursuant to which the seller retains a participation of not less than 10 percent in the single-family mortgage exposure.

Past due means, with respect to a single-family mortgage exposure, that any amount required to be paid by the borrower under the terms of the single-family mortgage exposure has not been paid.

Payment change from modification means the amount, expressed as a percent, equal to:

(i) The amount equal to:

(A) The monthly payment of a single-family mortgage exposure after a modification; divided by

(B) The monthly payment of the single-family mortgage exposure before the modification; minus

(ii) 1.0.

Percentage difference between DeflatedSFHPI and LRSFHPITrend (DiffLRSFHPITrend%) means

$$DiffLRSFHPITrend_{\%} = 100 * \left(\frac{DeflatedSFHPI}{LRSFHPITrend} - 1\right).$$

Performing loan means any single-family mortgage exposure that is not an NPL, a modified RPL, or a non-modified RPL.

Previous maximum days past due means the maximum number of days a modified RPL or non-modified RPL was past due in the prior 36 calendar months.

Product type means an indicator reflecting the contractual terms of a single-family mortgage exposure as of the origination date, assigned pursuant to the instructions set forth on Table 1 to this paragraph (a).

Property type means the physical structure of the property securing a single-family mortgage exposure.

Recourse agreement means, with respect to a single-family mortgage exposure, any agreement (other than a participation agreement) between an Enterprise and the seller of the single-family mortgage exposure pursuant to which the seller agrees either to reimburse the Enterprise for any loss arising out of the default of single-family mortgage exposure or to repurchase or replace the single-family mortgage exposure in the event of the default of the single-family mortgage exposure.

Refinance opportunity means, with respect to a single-family mortgage exposure, any calendar month in which the Primary Mortgage Market Survey (PMMS) rate for the month and year of the origination of the single-family mortgage exposure exceeds the PMMS rate for that calendar month by more than 50 basis points.

Refreshed credit score means the borrower's most recently available credit score.

Single-family countercyclical adjustment (SFCCyCAdj%) means

if *DiffLRSFHPITrend%* is greater than 5% then

$$SFCCyCAdj_{\%} = 100 * \left(\frac{105\% * LRSFHPITrend}{DeflatedSFHPI} - 1\right).$$

if *DiffLRSFHPITrend%* is less than −5% then

$$SFCCyCAdj_{\%} = 100 * \left(\frac{95\% * LRSFHPITrend}{DeflatedSFHPI} - 1\right).$$

Otherwise *SFCCyCAdj%* = 0%.

Streamlined refi means a single-family mortgage exposure that was refinanced through a streamlined refinance program of an Enterprise, including the Home Affordable Refinance Program, Relief Refi, and Refi-Plus.

Subordination means, with respect to a single-family mortgage exposure, the amount equal to the original unpaid principal balance of any second lien single-family mortgage exposure divided by the lesser of the appraised value or sale price of the property that secures the single-family mortgage exposure.

TABLE 1 TO PARAGRAPH (a): PERMISSIBLE VALUES AND ADDITIONAL INSTRUCTIONS

Defined term	Permissible values	Additional instructions
Cohort burnout	"No burnout," if the single-family mortgage exposure has not had a refinance opportunity since the loan age of the single-family mortgage exposure was 6. "Low," if the single-family mortgage exposure has had 12 or fewer refinance opportunities since the loan age of the single-family mortgage exposure was 6. "Medium," if the single-family mortgage exposure has had between 13 and 24 refinance opportunities since the loan age of the single-family mortgage exposure was 6. "High," if the single-family mortgage exposure has had more than 24 refinance opportunities since the loan age of the single-family mortgage exposure was 6.	High if unable to determine.
Coverage percent	0 percent <= coverage percent <= 100 percent	0 percent if outside of permissible range or unable to determine.
Days past due	Non-negative integer	210 if negative or unable to determine.
Debt-to-income (DTI) ratio	0 percent < DTI < 100 percent	42 percent if outside of permissible range or unable to determine.
Interest-only (IO)	Yes, no	Yes if unable to determine.
Loan age	0 <= loan age <= 500	500 if outside of permissible range or unable to determine.
Loan documentation	None, low, full	None if unable to determine.
Loan purpose	Purchase, cashout refinance, rate/term refinance	Cashout refinance if unable to determine.
MTMLTV	0 percent < MTMLTV <= 300 percent	If the property securing the single-family mortgage exposure is located in Puerto Rico or the U.S. Virgin Islands, use the FHFA House Price Index of the United States. If the property securing the single-family mortgage exposure is located in Hawaii, use the FHFA Purchase-only State-level House Price Index of Guam. If the single-family mortgage exposure was originated before 1991, use the Enterprise's proprietary housing price index. Use geometric interpolation to convert quarterly housing price index data to monthly data. 300 percent if outside of permissible range or unable to determine.
Mortgage concentration risk	High, not high	High if unable to determine.
MI cancellation feature	Cancellable mortgage insurance, non-cancellable mortgage insurance.	Cancellable mortgage insurance, if unable to determine.
Occupancy type	Investment, owner-occupied, second home	Investment if unable to determine.
OLTV	0 percent < OLTV <= 300 percent	300 percent if outside of permissible range or unable to determine.

TABLE 1 TO PARAGRAPH (a): PERMISSIBLE VALUES AND ADDITIONAL INSTRUCTIONS—Continued

Defined term	Permissible values	Additional instructions
Original credit score	300 <= original credit score <= 850	If there are credit scores from multiple credit repositories for a borrower, use the following logic to determine a single original credit score: • If there are credit scores from two repositories, take the lower credit score. • If there are credit scores from three repositories, use the middle credit score. • If there are credit scores from three repositories and two of the credit scores are identical, use the identical credit score. If there are multiple borrowers, use the following logic to determine a single original credit score: • Using the logic above, determine a single credit score for each borrower. • Select the lowest single credit score across all borrowers. 600 if outside of permissible range or unable to determine.
Origination channel	Retail, third-party origination (TPO)	TPO includes broker and correspondent channels. TPO if unable to determine.
Payment change from modification.	−80 percent < payment change from modification < 50 percent.	If the single-family mortgage exposure initially had an adjustable or step-rate feature, the monthly payment after a permanent modification is calculated using the initial modified rate. 0 percent if unable to determine. −79 percent if less than or equal to −80 percent. 49 percent if greater than or equal to 50 percent.
Previous maximum days past due.	Non-negative integer	181 months if negative or unable to determine.
Product type	''FRM30'' means a fixed-rate single-family mortgage exposure with an original amortization term greater than 309 months and less than or equal to 429 months. ''FRM20'' means a fixed-rate single-family mortgage exposure with an original amortization term greater than 189 months and less than or equal to 309 months. ''FRM15'' means a fixed-rate single-family mortgage exposure with an original amortization term less than or equal to 189 months. ''ARM1/1'' is an adjustable-rate single-family mortgage exposure that has a mortgage rate and required payment that adjust annually.	Product types other than FRM30, FRM20, FRM15 or ARM1/1 should be assigned to FRM30. Use the post-modification product type for modified mortgage exposures. ARM1/1 if unable to determine.
Property type	1-unit, 2–4 units, condominium, manufactured home	Use condominium for cooperatives. 2–4 units if unable to determine.
Refreshed credit score	300 <= refreshed credit score <= 850	If there are credit scores from multiple credit repositories for a borrower, use the following logic to determine a single refreshed credit score: • If there are credit scores from two repositories, take the lower credit score. • If there are credit scores from three repositories, use the middle credit score. • If there are credit scores from three repositories and two of the credit scores are identical, use the identical credit score. If there are multiple borrowers, use the following logic to determine a single Original Credit Score: • Using the logic above, determine a single credit score for each borrower. • Select the lowest single credit score across all borrowers. 600 if outside of permissible range or unable to determine.
Streamlined refi	Yes, no	No if unable to determine.
Subordination	0 percent <= Subordination <= 80 percent	80 percent if outside permissible range.

(b) *Risk weight*—(1) *In general.* Subject to paragraph (b)(2) of this section, an Enterprise must assign a risk weight to a single-family mortgage exposure equal to:

(i) The base risk weight for the single-family mortgage exposure as determined under paragraph (c) of this section; multiplied by

(ii) The combined risk multiplier for the single-family mortgage exposure as

determined under paragraph (d) of this section; multiplied by

(iii) The adjusted credit enhancement multiplier for the single-family mortgage exposure as determined under paragraph (e) of this section.

(2) *Minimum risk weight.* Notwithstanding the risk weight determined under paragraph (b)(1) of this section, the risk weight assigned to a single-family mortgage exposure may not be less than 15 percent.

(c) *Base risk weight*—(1) *Performing loan.* The base risk weight for a performing loan is set forth on Table 2 to this paragraph (c)(1). For purposes of this paragraph (c)(1), credit score means, with respect to a single-family mortgage exposure, (i) the original credit score of the single-family mortgage exposure, if the loan age of the single-family mortgage exposure is less than 6, or (ii) the refreshed credit score of the single-family mortgage exposure.

Table 2 to paragraph (c)(1): Performing Loans

	Adjusted MTMLTV											
Credit Score	<= 30%	> 30%, <= 60%	> 60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%, <= 95%	> 95%, <= 100%	> 100%, <= 110%	> 110%, <= 120%	> 120%
< 620	2%	18%	49%	72%	105%	129%	159%	188%	218%	247%	275%	317%
>=620, < 640	2%	14%	39%	58%	84%	102%	127%	151%	178%	208%	237%	282%
>=640, < 660	2%	12%	34%	51%	73%	89%	111%	133%	159%	186%	214%	258%
>=660, < 680	2%	10%	29%	44%	63%	78%	98%	119%	141%	168%	194%	236%
>=680, < 700	2%	9%	26%	38%	55%	67%	88%	109%	125%	150%	176%	215%
>=700, < 720	2%	8%	22%	33%	47%	57%	75%	94%	110%	134%	158%	194%
>=720, < 740	2%	6%	19%	28%	41%	50%	66%	84%	96%	118%	140%	172%
>=740, < 760	2%	5%	16%	23%	33%	40%	54%	69%	80%	99%	119%	147%
>=760, < 780	2%	4%	13%	19%	27%	32%	43%	56%	65%	82%	99%	122%
>= 780	2%	3%	10%	14%	21%	25%	33%	43%	50%	63%	77%	96%

(2) *Non-modified RPL.* The base risk weight for a non-modified RPL is set forth on Table 3 to this paragraph (c)(2). For purposes of this paragraph (c)(2), re-performing duration means, with respect to a non-modified RPL, the number of scheduled payment dates since the non-modified RPL was last an NPL.

Table 3 to paragraph (c)(2): Non-Modified RPLs

	Adjusted MTMLTV											
Non-modified re-performing duration	<= 30%	> 30%, <= 60%	>60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%, <= 95%	> 95%, <= 100%	> 100%, <= 110%	> 110%, <= 120%	> 120%
<= 3	2%	20%	50%	69%	84%	105%	122%	135%	149%	160%	174%	180%
>3, <= 12	2%	14%	39%	54%	67%	84%	100%	113%	127%	141%	160%	177%
> 12, <= 36	2%	11%	32%	46%	57%	69%	84%	97%	111%	127%	150%	175%
> 36, <= 48	2%	7%	21%	32%	46%	56%	72%	88%	103%	123%	143%	174%

(3) *Modified RPL.* The base risk weight for a modified RPL is set forth on Table 4 to this paragraph (c)(3). For purposes of this paragraph (c)(3), re-performing duration means, with respect to a modified RPL, the lesser of: (i) The months since last modification of the modified RPL; and (ii) the number of scheduled payment dates since the modified RPL was last an NPL.

Table 4 to paragraph (c)(3): Modified RPLs

Modified re-performing duration	Adjusted MTMLTV											
	<= 30%	> 30%, <= 60%	>60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%, <= 95%	> 95%, <= 100%	> 100%, <= 110%	> 110%, <= 120%	> 120%
<= 3	2%	31%	76%	98%	115%	129%	145%	159%	170%	179%	189%	196%
>3, <= 12	2%	25%	62%	81%	95%	109%	124%	139%	152%	164%	178%	195%
> 12, <= 36	2%	19%	50%	66%	79%	92%	107%	123%	136%	152%	169%	194%
> 36	2%	13%	35%	50%	68%	80%	98%	117%	133%	150%	168%	193%

(4) *NPL.* The base risk weight for an NPL is set forth on Table 5 to this paragraph (c)(4).

Table 5 to paragraph (c)(4): NPLs

Days past due	Adjusted MTMLTV							
	<= 30%	> 30%, <= 60%	>60%, <= 70%	> 70%, <= 75%	> 75%, <= 80%	> 80%, <= 85%	> 85%, <= 90%	> 90%
60 to 89 days	8%	71%	173%	193%	205%	215%	226%	238%
90 to 209 days	11%	85%	184%	201%	211%	218%	224%	230%
>= 210 days	28%	124%	219%	227%	231%	233%	234%	221%

(d) *Combined risk multiplier.* The combined risk multiplier for a single-family mortgage exposure is equal to the product of each of the applicable risk multipliers set forth under the applicable single-family segment on Table 6 to this paragraph (d).

TABLE 6 TO PARAGRAPH (d): RISK MULTIPLIERS

Risk factor	Value or range	Single-family segment			
		Performing loan	Non-modified RPL	Modified RPL	NPL
Loan Purpose	Purchase	1.0	1.0	1.0	
	Cashout refinance	1.4	1.4	1.4	
	Rate/term refinance	1.3	1.2	1.3	
Occupancy Type	Owner-occupied or second home	1.0	1.0	1.0	1.0
	Investment	1.2	1.5	1.3	1.2
Property Type	1-unit	1.0	1.0	1.0	1.0
	2–4 unit	1.4	1.4	1.3	1.1
	Condominium	1.1	1.0	1.0	1.0
	Manufactured home	1.3	1.8	1.6	1.2
Origination Channel	Retail	1.0	1.0	1.0	1.0
	TPO	1.1	1.1	1.1	1.0
DTI	DTI <= 25%	0.8	0.9	0.9	
	25% < DTI <= 40%	1.0	1.0	1.0	
	DTI > 40%	1.2	1.2	1.1	
Product Type	FRM30	1.0	1.0	1.0	1.0
	ARM1/1	1.7	1.1	1.0	1.1
	FRM15	0.3	0.3	0.5	0.5
	FRM20	0.6	0.6	0.5	0.8
Subordination	No subordination	1.0	1.0	1.0	
	30% < OLTV <= 60% and 0% < subordination <= 5%	1.1	0.8	1.0	
	30% < OLTV <= 60% and subordination > 5%.	1.5	1.1	1.2	
	OLTV > 60% and 0% < subordination <= 5%	1.1	1.2	1.1	

TABLE 6 TO PARAGRAPH (d): RISK MULTIPLIERS—Continued

Risk factor	Value or range	Single-family segment			
		Performing loan	Non-modified RPL	Modified RPL	NPL
	OLTV > 60% and subordination > 5%	1.4	1.5	1.3	
Loan Age	Loan age <= 24 months	1.0			
	24 months < loan age <= 36 months	0.95			
	36 months < loan Age <= 60 months.	0.80			
	Loan age > 60 months	0.75			
Cohort Burnout	No burnout	1.0			
	Low	1.2			
	Medium	1.3			
	High	1.4			
Interest-only	No IO	1.0	1.0	1.0	
	Yes IO	1.6	1.4	1.1	
Loan Documentation	Full	1.0	1.0	1.0	
	None or low	1.3	1.3	1.2	
Streamlined Refi	No	1.0	1.0	1.0	
	Yes	1.0	1.2	1.1	
Refreshed Credit Score for Modified RPLs and Non-modified RPLs.	Refreshed credit score < 620		1.6	1.4	
	620 <= refreshed credit score < 640		1.3	1.2	
	640 <= refreshed credit score < 660		1.2	1.1	
	660 <= refreshed credit score < 700		1.0	1.0	
	700 <= refreshed credit score < 720		0.7	0.8	
	720 <= refreshed credit score < 740		0.6	0.7	
	740 <= refreshed credit score < 760		0.5	0.6	
	760 <= refreshed credit score < 780		0.4	0.5	
	Refreshed credit score >= 780		0.3	0.4	
Payment Change from Modification	Payment change >= 0%			1.1	
	−20% <= payment change < 0%			1.0	
	−30% <= payment change < −20%.			0.9	
	Payment change < −30%			0.8	
Previous Maximum Days Past Due	0–59 days		1.0	1.0	
	60–90 days		1.2	1.1	
	91–150 days		1.3	1.1	
	151+ days		1.5	1.1	
Refreshed Credit Score for NPLs	Refreshed credit score < 580				1.2
	580 <= refreshed credit score < 640				1.1
	640 <= refreshed credit score < 700				1.0
	700 <= refreshed credit score < 720				0.9
	720 <= refreshed credit score < 760				0.8
	760 <= refreshed credit score < 780				0.7
	Refreshed credit score >= 780				0.5

(e) *Credit enhancement multiplier*—(1) *Amount*—(i) *In general.* The adjusted credit enhancement multiplier for a single-family mortgage exposure that is subject to loan-level credit enhancement is equal to 1.0 minus the product of:

(A) 1.0 minus the credit enhancement multiplier for the single-family mortgage exposure as determined under paragraph (e)(2) of this section; multiplied by

(B) 1.0 minus the counterparty haircut for the loan-level credit enhancement as determined under paragraph (e)(3) of this section.

(ii) *No loan-level credit enhancement.* The adjusted credit enhancement multiplier for a single-family mortgage exposure that is not subject to loan-level credit enhancement is equal to 1.0.

(2) *Credit enhancement multiplier.* (i) The credit enhancement multiplier for a single-family mortgage exposure that is subject to a participation agreement is 1.0.

(ii) The credit enhancement multiplier for a single-family mortgage exposure that is subject to a full recourse agreement is 0.

(iii) The credit enhancement multiplier for a single-family mortgage exposure that is subject to a partial recourse agreement is:

(A) 1.0; minus

(B) The amount equal to:

(1) The coverage percent of the partial recourse agreement; multiplied by

(2) A loss timing adjustment determined under § 1240.44(g) as if the partial recourse agreement were a CRT.

(iv) Subject to paragraph (e)(2)(v) of this section, the credit enhancement multiplier for—

(A) A performing loan, non-modified RPL, or modified RPL that is subject to non-cancellable mortgage insurance is set forth on Table 7 to paragraph (e)(2)(v)(E) of this section;

(B) A performing loan or non-modified RPL that is subject to cancellable mortgage insurance is set forth on Table 8 to paragraph (e)(2)(v)(E) of this section;

(C) A modified RPL with a 30-year post-modification amortization that is subject to cancellable mortgage insurance is set forth on Table 9 to paragraph (e)(2)(v)(E) of this section;

(D) A modified RPL with a 40-year post-modification amortization that is subject to cancellable mortgage insurance is set forth on Table 10 to paragraph (e)(2)(v)(E) of this section; and

(E) NPL, whether subject to non-cancellable mortgage insurance or cancellable mortgage insurance, is set forth on Table 11 to paragraph (e)(2)(v)(E) of this section.

(v) Notwithstanding anything to the contrary in this paragraph (e), for purposes of paragraph (e)(2)(iv) of this section:

(A) The OLTV of a single-family mortgage exposure will be deemed to be 80 percent if the single-family mortgage exposure has an OLTV less than or equal to 80 percent.

(B) If the single-family mortgage exposure has an interest-only feature, any cancellable mortgage insurance will be deemed to be non-cancellable mortgage insurance.

(C) If the coverage percent of the mortgage insurance is greater than charter-level coverage and less than guide-level coverage, the credit enhancement multiplier is the amount equal to a linear interpolation between the credit enhancement multiplier of the single-family mortgage exposure for charter-level coverage and the credit enhancement multiplier of the single-family mortgage exposure for guide-level coverage.

(D) If the coverage percent of the mortgage insurance is less than charter-level coverage, the credit enhancement multiplier is the amount equal to the midpoint of a linear interpolation between a credit enhancement multiplier of 1.0 and the credit enhancement multiplier of the single-family mortgage exposure for charter-level coverage.

(E) If the coverage percent of the mortgage insurance is greater than guide-level coverage, the credit enhancement multiplier is determined as if the coverage percent were guide-level coverage.

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Table 7 to paragraph (e)(2)(v)(E): Credit Enhancement Multipliers for Single-family Mortgage Exposures Subject to Non-Cancellable Mortgage Insurance (Except NPLs)

Amortization Term / Coverage Type	Coverage Category	Credit Enhancement Multiplier
15/20-year with Guide-level Coverage	80% < OLTV <= 85% and coverage percent = 6%	0.846
	85% < OLTV <= 90% and coverage percent = 12%	0.701
	90% < OLTV <= 95% and coverage percent = 25%	0.408
	95% < OLTV <= 97% and coverage percent = 35%	0.226
	OLTV > 97% and coverage percent = 35%	0.184
30-year with Guide-level Coverage	80% < OLTV <= 85% and coverage percent = 12%	0.706
	85% < OLTV <= 90% and coverage percent = 25%	0.407
	90% < OLTV <= 95% and coverage percent = 30%	0.312
	95% < OLTV <= 97% and coverage percent = 35%	0.230
	OLTV > 97% and coverage percent = 35%	0.188
15/20-year with Charter-level Coverage	80% < OLTV <= 85% and coverage percent = 6%	0.846
	85% < OLTV <= 90% and coverage percent = 12%	0.701
	90% < OLTV <= 95% and coverage percent = 16%	0.612
	95% < OLTV <= 97% and coverage percent = 18%	0.570
	OLTV > 97% and coverage percent = 20%	0.535
30-year with Charter-level Coverage	80% < OLTV <= 85% and coverage percent = 6%	0.850
	85% < OLTV <= 90% and coverage percent = 12%	0.713
	90% < OLTV <= 95% and coverage percent = 16%	0.627
	95% < OLTV <= 97% and coverage percent = 18%	0.590
	OLTV > 97% and coverage percent = 20%	0.558

Table 8 to paragraph (e)(2)(v)(E): Credit Enhancement Multipliers for Performing Loans and Non-Modified RPLs Subject to Cancellable Mortgage Insurance

			Loan Age											
	OLTV	Coverage Percent	<= 5	>5, <= 12	>12, <= 24	>24, <= 36	>36, <= 48	>48, <= 60	> 60, <= 72	> 72, <= 84	> 84, <= 96	>96, <=108	>108, <=120	>120
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	25%	0.826	0.853	0.912	0.973	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.732	0.765	0.848	0.936	0.986	0.998	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	35%	0.630	0.673	0.762	0.865	0.945	0.980	0.996	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	12%	0.867	0.884	0.928	0.962	0.994	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	25%	0.551	0.584	0.627	0.679	0.785	0.893	0.950	0.986	0.998	1.000	1.000	1.000
Loan with	>90%, <=95%	30%	0.412	0.440	0.456	0.484	0.547	0.654	0.743	0.845	0.932	0.969	0.992	1.000
Guide-level	>95%, <=97%	35%	0.322	0.351	0.369	0.391	0.449	0.535	0.631	0.746	0.873	0.925	0.965	1.000
Coverage	>97%	35%	0.272	0.295	0.314	0.353	0.410	0.462	0.515	0.607	0.756	0.826	0.887	1.000
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.887	0.904	0.943	0.983	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.854	0.874	0.918	0.966	0.992	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	20%	0.788	0.810	0.859	0.922	0.969	0.989	0.998	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	6%	0.934	0.943	0.964	0.981	0.997	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.780	0.795	0.819	0.845	0.896	0.948	0.976	0.993	0.999	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.679	0.690	0.703	0.719	0.755	0.813	0.861	0.916	0.963	0.983	0.995	1.000
Charter-level	>95%, <=97%	18%	0.642	0.652	0.662	0.676	0.708	0.756	0.806	0.866	0.933	0.960	0.981	1.000
Coverage	>97%	20%	0.597	0.607	0.617	0.629	0.658	0.686	0.715	0.765	0.845	0.882	0.914	1.000

Table 9 to paragraph (e)(2)(v)(E): Credit Enhancement Multipliers for Modified RPLs with 30-year Post-Modification Amortization That Is Subject to Cancellable Mortgage Insurance

			Months Since Last Modification											
	OLTV	Coverage Percent	<= 5	>5, <= 12	>12, <= 24	>24, <= 36	>36, <= 48	>48, <= 60	> 60, <= 72	> 72, <= 84	> 84, <= 96	>96, <=108	>108, <=120	>120
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	25%	0.826	0.853	0.912	0.973	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.732	0.765	0.848	0.936	0.986	0.998	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	35%	0.630	0.673	0.762	0.865	0.945	0.980	0.996	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	12%	0.867	0.906	0.978	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	25%	0.551	0.568	0.653	0.839	0.968	0.992	0.998	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	30%	0.412	0.426	0.470	0.601	0.794	0.889	0.951	0.981	0.992	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.322	0.337	0.380	0.492	0.689	0.810	0.899	0.945	0.965	1.000	1.000	1.000
Coverage	>97%	35%	0.272	0.284	0.334	0.436	0.561	0.682	0.791	0.857	0.887	1.000	1.000	1.000
15/20 Year	>80%, <=85%	6%	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.988	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.887	0.904	0.943	0.983	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.854	0.874	0.918	0.966	0.992	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Coverage	>97%	20%	0.788	0.810	0.859	0.922	0.969	0.989	0.998	1.000	1.000	1.000	1.000	1.000
30 Year	>80%, <=85%	6%	0.934	0.954	0.989	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.780	0.788	0.832	0.922	0.985	0.996	0.999	1.000	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.679	0.685	0.711	0.784	0.889	0.940	0.973	0.989	0.995	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.642	0.647	0.669	0.732	0.836	0.900	0.947	0.971	0.981	1.000	1.000	1.000
Coverage	>97%	20%	0.597	0.602	0.623	0.672	0.740	0.805	0.864	0.898	0.914	1.000	1.000	1.000

Table 10 to paragraph (e)(2)(v)(E): Credit Enhancement Multipliers for Modified RPLs with 40-year Post-Modification Amortization That Is Subject to Cancellable Mortgage Insurance

			Months Since Last Modification											
	OLTV	Coverage Percent	<= 5	>5, <= 12	>12, <= 24	>24, <= 36	>36, <= 48	>48, <= 60	> 60, <= 72	> 72, <= 84	> 84, <= 96	>96, <=108	>108, <=120	>120
15/20 Year	>80%, <=85%	6%	0.997	0.998	0.999	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.971	0.971	0.980	0.988	0.994	0.999	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	25%	0.826	0.853	0.853	0.853	0.883	0.912	0.943	0.973	0.996	1.000	1.000	1.000
Guide-level	>95%, <=97%	35%	0.732	0.765	0.765	0.765	0.807	0.848	0.892	0.936	0.986	0.998	1.000	1.000
Coverage	>97%	35%	0.630	0.673	0.673	0.673	0.718	0.762	0.814	0.865	0.945	0.980	0.996	1.000
30 Year	>80%, <=85%	12%	0.867	0.884	0.928	0.962	0.994	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	25%	0.551	0.584	0.627	0.679	0.785	0.893	0.950	0.986	0.998	1.000	1.000	1.000
Loan with	>90%, <=95%	30%	0.412	0.440	0.456	0.484	0.547	0.654	0.743	0.845	0.932	0.969	0.992	1.000
Guide-level	>95%, <=97%	35%	0.322	0.351	0.369	0.391	0.449	0.535	0.631	0.746	0.873	0.925	0.965	1.000
Coverage	>97%	35%	0.272	0.295	0.314	0.353	0.410	0.462	0.515	0.607	0.756	0.826	0.887	1.000
15/20 Year	>80%, <=85%	6%	0.997	0.998	0.998	0.999	0.998	0.998	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.963	0.971	0.971	0.971	0.980	0.988	0.994	0.999	1.000	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.887	0.904	0.904	0.904	0.924	0.943	0.963	0.983	0.997	1.000	1.000	1.000
Charter-level	>95%, <=97%	18%	0.854	0.874	0.874	0.874	0.896	0.918	0.942	0.966	0.992	0.999	1.000	1.000
Coverage	>97%	20%	0.788	0.810	0.810	0.810	0.835	0.859	0.891	0.922	0.969	0.989	0.998	1.000
30 Year	>80%, <=85%	6%	0.934	0.943	0.964	0.981	0.997	0.999	1.000	1.000	1.000	1.000	1.000	1.000
Amortizing	>85%, <=90%	12%	0.780	0.795	0.819	0.845	0.896	0.948	0.976	0.993	0.999	1.000	1.000	1.000
Loan with	>90%, <=95%	16%	0.679	0.690	0.703	0.719	0.755	0.813	0.861	0.916	0.963	0.983	0.995	1.000
Charter-level	>95%, <=97%	18%	0.642	0.652	0.662	0.676	0.708	0.756	0.806	0.866	0.933	0.960	0.981	1.000
Coverage	>97%	20%	0.597	0.607	0.617	0.629	0.658	0.686	0.715	0.765	0.845	0.882	0.914	1.000

Table 11 to paragraph (e)(2)(v)(E): Credit Enhancement Multipliers for NPLs Subject to Cancellable Mortgage Insurance or Non-Cancellable Mortgage Insurance

Amortization Term / Coverage Type	Coverage Category	Credit Enhancement Multiplier
15/20-year with Guide-level Coverage	80% < OLTV <= 85% and coverage percent = 6%	0.893
	85% < OLTV <= 90% and coverage percent = 12%	0.803
	90% < OLTV <= 95% and coverage percent = 25%	0.597
	95% < OLTV <= 97% and coverage percent = 35%	0.478
	OLTV > 97% and coverage percent = 35%	0.461
30-year with Guide-level Coverage	80% < OLTV <= 85% and coverage percent = 12%	0.813
	85% < OLTV <= 90% and coverage percent = 25%	0.618
	90% < OLTV <= 95% and coverage percent = 30%	0.530
	95% < OLTV <= 97% and coverage percent = 35%	0.490
	OLTV > 97% and coverage percent = 35%	0.505
15/20-year with Charter-level Coverage	80% < OLTV <= 85% and coverage percent = 6%	0.893
	85% < OLTV <= 90% and coverage percent = 12%	0.803
	90% < OLTV <= 95% and coverage percent = 16%	0.775
	95% < OLTV <= 97% and coverage percent = 18%	0.678
	OLTV > 97% and coverage percent = 20%	0.663
30-year with Charter-level Coverage	80% < OLTV <= 85% and coverage percent = 6%	0.902
	85% < OLTV <= 90% and coverage percent = 12%	0.835
	90% < OLTV <= 95% and coverage percent = 16%	0.787
	95% < OLTV <= 97% and coverage percent = 18%	0.765
	OLTV > 97% and coverage percent = 20%	0.760

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(3) *Credit enhancement counterparty haircut*—(i) *Definitions.* For purposes of this paragraph (e)(3), the counterparty rating for a counterparty is:

(A) 1, if the Enterprise has determined that the counterparty is expected to perform all of its contractual obligations under foreseeable adverse events.

(B) 2, if the Enterprise has determined that there is negligible risk the counterparty may not be able to perform all of its contractual obligations under foreseeable adverse events.

(C) 3, if the Enterprise has determined that there is a slight risk the counterparty might not be able to perform all of its contractual obligations under foreseeable adverse events.

(D) 4, if the Enterprise has determined that foreseeable adverse events will have a greater impact on ''4'' rated counterparties than higher rated counterparties.

(E) 5, if the Enterprise has determined that the counterparty might not perform all of its contractual obligations under foreseeable adverse events.

(F) 6, if the Enterprise has determined that the counterparty is not expected to meet its contractual obligations under foreseeable adverse events.

(G) 7, if the Enterprise has determined that the counterparty's ability to perform its contractual obligations is questionable.

(H) 8, if the Enterprise has determined that the counterparty is in default on a material contractual obligation or is under a resolution proceeding or similar regulatory proceeding.

(ii) *Counterparty haircut.* The counterparty haircut is set forth on Table 12 to this paragraph (e)(3)(ii). For purposes of this paragraph (e)(3)(ii), RPL means either a modified RPL or a non-modified RPL.

Table 12 to paragraph (e)(3)(ii): Counterparty Haircuts

	Mortgage Concentration Risk: Not High			High Mortgage Concentration Risk and Approved Insurer			High Mortgage Concentration Risk and Not an Approved Insurer		
Counterparty Rating	Performing Loans and RPLs		NPLs	Performing Loans and RPLs		NPLs	Performing Loans and RPLs		NPLs
	30 Year Product	20/15 Year Product		30 Year Product	20/15 Year Product		30 Year Product	20/15 Year Product	
1	1.8%	1.3%	0.6%	2.3%	1.6%	0.7%	2.8%	2.0%	0.9%
2	4.5%	3.5%	2.0%	5.9%	4.5%	2.6%	7.3%	5.6%	3.2%
3	5.2%	4.0%	2.4%	6.7%	5.1%	3.1%	8.3%	6.4%	3.9%
4	11.4%	9.5%	6.9%	14.2%	11.8%	8.5%	17.2%	14.3%	10.4%
5	14.8%	12.7%	9.9%	17.8%	15.2%	11.9%	20.9%	18.0%	14.0%
6	21.2%	19.1%	16.4%	24.0%	21.7%	18.6%	26.8%	24.2%	20.8%
7	40.0%	38.2%	35.7%	42.0%	40.1%	37.5%	43.7%	41.7%	39.0%
8	47.6%	46.6%	45.3%	47.6%	46.6%	45.3%	47.6%	46.6%	45.3%

§ 1240.34 Multifamily mortgage exposures.

(a) *Definitions.* Subject to any additional instructions set forth on Table 1 to this paragraph (a), for purposes of this section:

Acquisition debt-service-coverage ratio (acquisition DSCR) means, with respect to a multifamily mortgage exposure, the amount equal to:

(i) The net operating income (NOI) (or, if not available, the net cash flow) of the multifamily property that secures the multifamily mortgage exposure, at the time of the acquisition by the Enterprise (or, if not available, at the time of the underwriting or origination) of the multifamily mortgage exposure; divided by

(ii) The scheduled periodic payment on the multifamily mortgage exposure (or, if interest-only, fully amortizing payment), at the time of the acquisition by the Enterprise (or, if not available, at the time of the origination) of the multifamily mortgage exposure.

Acquisition loan-to-value (acquisition LTV) means, with respect to a multifamily mortgage exposure, the amount, determined as of the time of the acquisition by the Enterprise (or, if not available, at the time of the underwriting or origination) of the multifamily mortgage exposure, equal to:

(i) The unpaid principal balance of the multifamily mortgage exposure; divided by

(ii) The value of the multifamily property securing the multifamily mortgage exposure.

Debt-service-coverage ratio (*DSCR)* means, with respect to a multifamily mortgage exposure:

(i) The acquisition DSCR of the multifamily mortgage exposure if the loan age of the multifamily mortgage exposure is less than 6; or

(ii) The MTMDSCR of the multifamily mortgage exposure.

Interest-only (IO) means a multifamily mortgage exposure that requires only payment of interest without any principal amortization during all or part of the loan term.

Loan age means the number of scheduled payment dates since the origination of the multifamily mortgage exposure.

Loan term means the number of years until final loan payment (which may be a balloon payment) under the terms of a multifamily mortgage exposure.

LTV means, with respect to a multifamily mortgage exposure;

(i) The acquisition LTV of the multifamily mortgage exposure if the loan age of the multifamily mortgage exposure is less than 6, or

(ii) The MTMLTV of the multifamily mortgage exposure.

Mark-to-market debt-service coverage ratio (MTMDSCR) means, with respect to a multifamily mortgage exposure, the amount equal to—

(i) The net operating income (or, if not available, the net cash flow) of the multifamily property that secures the multifamily mortgage exposure, as reported on the most recently available property operating statement; divided by

(ii) The scheduled periodic payment on the multifamily mortgage exposure (or, for interest-only, fully amortizing payment), as reported on the most recently available property operating statement.

Mark-to-market loan-to-value (MTMLTV) means, with respect to a multifamily mortgage exposure, the amount calculated by adjusting the acquisition LTV using a multifamily property value index or property value estimated based on net operating income and capitalization rate indices.

Multifamily adjustable-rate exposure means a multifamily mortgage exposure that is not, at that time, a multifamily fixed-rate exposure.

Multifamily fixed-rate exposure means a multifamily mortgage exposure that, at that time, has an interest rate that may not then increase or decrease based on a change in a reference index or other methodology, including:

(i) A multifamily mortgage exposure that has an interest rate that is fixed over the life of the loan; and

(ii) A multifamily mortgage exposure that has an interest rate that may increase or decrease in the future, but is fixed at that time.

Net cash flow means, with respect to a multifamily mortgage exposure, the amount equal to:

(i) The net operating income of the multifamily mortgage exposure; minus

(ii) Reserves for capital improvements; minus

(iii) Other expenses not included in net operating income required for the proper operation of the multifamily

property securing the multifamily mortgage exposure, including any commissions paid to leasing agents in securing renters and special improvements to the property to accommodate the needs of certain renters.

Net operating income means, with respect to a multifamily mortgage exposure, the amount equal to:

(i) The rental income generated by the multifamily property securing the multifamily mortgage exposure; minus

(ii) The vacancy and property operating expenses of the multifamily property securing the multifamily mortgage exposure.

Original amortization term means the number of years, determined as of the time of the origination of a multifamily mortgage exposure, that it would take a borrower to pay a multifamily mortgage exposure completely if the borrower only makes the scheduled payments, and without making any balloon payment.

Original loan size means the dollar amount of the unpaid principal balance of a multifamily mortgage exposure at origination.

Payment performance means the payment status of history of a multifamily mortgage exposure, assigned pursuant to the instructions set forth on Table 1 to this paragraph (a).

Supplemental mortgage exposure means any multifamily fixed-rate exposure or multifamily adjustable-rate exposure that is originated after the origination of a multifamily mortgage exposure that is secured by all or part of the same multifamily property.

Unpaid principal balance (UPB) means the outstanding loan amount of a multifamily mortgage exposure.

Table 1 to paragraph (a): Permissible Values and Additional Instructions

Defined Term	Permissible Values	Additional Instructions
Acquisition DSCR	Greater than or equal to 0.	Origination DSCR if negative or unable to determine. If origination DSCR is unavailable, use underwriting DSCR. If underwriting DSCR is unavailable, use 1.00.
Acquisition LTV	Greater than or equal to 0.	Origination LTV if negative or unable to determine. If origination LTV is unavailable, use underwriting LTV. If underwriting LTV is unavailable, use 100 percent.
Interest-only	Yes, no.	Yes if unable to determine.
Loan Term	Non-negative integer in years.	11 years if negative or unable to determine.
MTMDSCR	Greater than or equal to 0.	If the MTMDSCR is unavailable, the last observed DSCR can be marked to market using a property NOI index or an NOI estimate based on rent and expense indices. If the index is not sufficiently granular, either because of its frequency or geography, or with respect to a certain multifamily property type, use a more geographically broad index or a recently estimated mark-to-market value.
MTMLTV	Greater than or equal to 0.	If the MTMLTV is unavailable, mark to market using an index. If the index is not sufficiently granular, either because of its frequency or geography or with respect to a certain multifamily property type, use a more geographically broad index or a recently estimated mark-to-market value.
Net Operating Income (NOI) / Net Cash Flow (NCF)	Greater than or equal to 0.	Infer using origination LTV or origination DSCR if NOI/NCF is unavailable. Alternatively, infer using actual MTMLTV or actual MTMDSCR.
Original Amortization Term	Non-negative integer in years.	31 years if negative or unable to determine.
Original Loan Size	Non-negative dollar value.	$3,000,000 if negative or unable to determine
Payment Performance	Performing, delinquent 60 days or more, re-performing (without modification), modified.	Modified if unable to determine.
Special Product	Not a special product, student housing, rehab/value-add/lease-up, supplemental mortgage exposure.	Rehab/value-add/lease-up if unable to determine.
UPB	UPB > $0	$100,000,000 if negative or unable to determine.

(b) *Risk weight*—(1) *In general.* Subject to paragraphs (b)(2) and (b)(3) of this section, an Enterprise must assign a risk weight to a multifamily mortgage exposure equal to:

(i) The base risk weight for the multifamily mortgage exposure as determined under paragraph (c) of this section; multiplied by

(ii) The combined risk multiplier for the multifamily mortgage exposure as determined under paragraph (d) of this section.

(2) *Minimum risk weight.* Notwithstanding the risk weight determined under paragraph (b)(1) of this section, the risk weight assigned to a multifamily mortgage exposure may not be less than 15 percent.

(3) *Loan groups.* If a multifamily property that secures a multifamily mortgage exposure also secures one or more supplemental mortgage exposures:

(i) A multifamily mortgage exposure-specific base risk weight must be determined under paragraph (c) of this section using for each of these multifamily mortgage exposures a single DSCR and single LTV, both calculated as if all of the multifamily mortgage exposures secured by the multifamily

property were consolidated into a single multifamily mortgage exposure; and

(ii) A multifamily mortgage exposure-specific combined risk multiplier must be determined under paragraph (d) of this section based on the risk characteristics of the multifamily mortgage exposure (except with respect to the loan size multiplier, which would be determined using the aggregate unpaid principal balance of these multifamily mortgage exposures).

(c) *Base risk weight*—(1) *Multifamily fixed-rate exposure.* The base risk weight for a multifamily fixed-rate exposure is set forth on Table 2 to this paragraph (c)(1).

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Table 2 to paragraph (c)(1): Multifamily Fixed-rate Exposure

		LTV									
		<=35%	> 35%, <=45%	> 45%, <=55%	> 55%, <=65%	> 65%, <=70%	> 70%, <=75%	> 75%, <=80%	> 80%, <=90%	> 90%, <=100%	>100%
DSCR	<1.00	52%	60%	76%	109%	125%	140%	153%	166%	172%	182%
	>= 1.00, <1.15	45%	52%	65%	92%	105%	118%	129%	140%	145%	153%
	>=1.15, < 1.20	40%	46%	58%	81%	93%	103%	112%	122%	127%	134%
	>=1.20, < 1.25	37%	42%	52%	72%	83%	92%	97%	107%	112%	119%
	>=1.25, < 1.30	33%	38%	47%	65%	74%	81%	86%	94%	99%	105%
	>=1.30, < 1.35	31%	35%	43%	59%	66%	71%	76%	84%	88%	93%
	>=1.35, < 1.50	29%	32%	39%	54%	59%	64%	69%	76%	80%	86%
	>=1.50, < 1.65	25%	27%	31%	39%	43%	47%	51%	57%	62%	70%
	>=1.65, < 1.80	22%	23%	26%	31%	34%	37%	41%	47%	53%	61%
	>=1.80, < 1.95	16%	17%	19%	24%	26%	29%	32%	41%	47%	56%
	>=1.95, < 2.10	15%	15%	16%	20%	23%	26%	28%	37%	44%	54%
	>=2.10, < 2.25	13%	14%	15%	19%	21%	24%	25%	36%	42%	53%
	>=2.25	13%	13%	14%	18%	20%	23%	24%	35%	42%	52%

(2) *Multifamily adjustable-rate exposure.* The base risk weight for a multifamily adjustable-rate exposure is set forth on Table 3 to this paragraph (c)(2).

Table 3 to paragraph (c)(2): Multifamily Adjustable-rate Exposure

		LTV									
		<=35%	> 35%, <=45%	> 45%, <=55%	> 55%, <=65%	> 65%, <=70%	> 70%, <=75%	> 75%, <=80%	> 80%, <=90%	> 90%, <=100%	>100%
DSCR	<1.00	81%	86%	93%	133%	153%	172%	189%	211%	229%	255%
	>=1.00, <1.25	71%	75%	80%	113%	129%	145%	158%	178%	193%	215%
	>=1.25, < 1.30	63%	67%	71%	100%	114%	127%	138%	156%	169%	188%
	>=1.30, < 1.36	57%	60%	63%	88%	101%	113%	120%	136%	149%	168%
	>=1.36, < 1.42	51%	54%	57%	79%	90%	99%	106%	120%	131%	148%
	>=1.42, < 1.47	45%	49%	51%	71%	80%	86%	93%	107%	116%	131%
	>=1.47, < 1.53	37%	42%	47%	64%	71%	77%	84%	97%	106%	120%
	>=1.53, < 1.70	30%	33%	37%	47%	51%	56%	63%	72%	83%	98%
	>=1.70, < 1.87	23%	26%	30%	36%	40%	45%	51%	60%	70%	86%
	>=1.87, < 2.03	19%	21%	22%	28%	31%	35%	40%	52%	62%	79%
	>=2.03, < 2.21	17%	18%	19%	24%	26%	31%	34%	47%	58%	75%
	>=2.21, < 2.38	16%	17%	17%	22%	24%	28%	31%	45%	56%	73%
	>=2.38	16%	16%	16%	21%	23%	27%	30%	44%	55%	72%

(d) *Combined risk multiplier.* The combined risk multiplier for a multifamily mortgage exposure is equal to the product of each of the applicable risk multipliers set forth on Table 4 to this paragraph (d).

Table 4 to paragraph (d): Multifamily Risk Multipliers

Risk Factor	Value or Range	Risk Multiplier
Payment Performance	Performing	1.00
	Delinquent more than 60 days	1.10
	Re-performing (without modification)	1.10
	Modified	1.20
Interest-only	No	1.00
	Yes (during the interest-only period)	1.10
Loan Term	Loan term <= 1Yr	0.70
	1Yr < loan term <= 2Yr	0.75
	2Yr < loan term <= 3Yr	0.80
	3Yr < loan term <= 4Yr	0.85
	4Yr < loan term <= 5Yr	0.90
	5Yr < loan term <= 7Yr	0.95
	7Yr < loan term <= 10Yr	1.00
	Loan term > 10Yr	1.15
Original Amortization Term	Original amortization term <= 20Yr	0.70
	20Yr < original amortization term <= 25Yr	0.80
	25Yr < original amortization term <= 30Yr	1.00
	Original amortization term > 30Yr	1.10
Original Loan Size (in millions)	Loan size <= $2m	1.45
	$2m < loan size <= $3m	1.35
	$3m < loan size <= $4m	1.25
	$4m < loan size <= $5m	1.15
	$5m < loan size <= $6m	1.08
	$6m < loan size <= $7m	1.02
	$7m < loan size <= $8m	0.96
	$8m < loan size <= $9m	0.92
	$9m < loan size <= $10m	0.88
	$10m < loan size <= $11m	0.86
	$11m < loan size <= $12m	0.84
	$12m < loan size <= $13m	0.82
	$13m < loan size <= $14m	0.81
	$14m < loan size <= $15m	0.81
	$15m < loan size <= $16m	0.80
	$16m < loan size <= $17m	0.80
	$17m < loan size <= $18m	0.80
	$18m < loan size <= $19m	0.80
	$19m < loan size <= $20m	0.80
	$20m < loan size <= $21m	0.80
	$21m < loan size <= $22m	0.80
	$22m < loan size <= $23m	0.79
	$23m < loan size <= $24m	0.78
	$24m < loan size <= $25m	0.76
	Loan size >$25m	0.70
Special Products	Not a special product	1.00
	Student housing	1.15
	Rehab/value-add/lease-up	1.25

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§ 1240.35 Off-balance sheet exposures.

(a) *General.* (1) An Enterprise must calculate the exposure amount of an off-balance sheet exposure using the credit conversion factors (CCFs) in paragraph (b) of this section.

(2) Where an Enterprise commits to provide a commitment, the Enterprise may apply the lower of the two applicable CCFs.

(3) Where an Enterprise provides a commitment structured as a syndication or participation, the Enterprise is only required to calculate the exposure amount for its pro rata share of the commitment.

(4) Where an Enterprise provides a commitment or enters into a repurchase agreement and such commitment or repurchase agreement, the exposure amount shall be no greater than the maximum contractual amount of the commitment, repurchase agreement, or credit-enhancing representation and warranty, as applicable.

(b) *Credit conversion factors*—(1) *Zero percent CCF.* An Enterprise must apply a zero percent CCF to the unused portion of a commitment that is unconditionally cancelable by the Enterprise.

(2) *20 percent CCF.* An Enterprise must apply a 20 percent CCF to the amount of commitments with an original maturity of one year or less that are not unconditionally cancelable by the Enterprise.

(3) *50 percent CCF.* An Enterprise must apply a 50 percent CCF to the amount of commitments with an original maturity of more than one year that are not unconditionally cancelable by the Enterprise.

(4) *100 percent CCF.* An Enterprise must apply a 100 percent CCF to the amount of the following off-balance sheet items and other similar transactions:

(i) Guarantees;

(ii) Repurchase agreements (the off-balance sheet component of which equals the sum of the current fair values of all positions the Enterprise has sold subject to repurchase);

(iii) Off-balance sheet securities lending transactions (the off-balance sheet component of which equals the sum of the current fair values of all positions the Enterprise has lent under the transaction);

(iv) Off-balance sheet securities borrowing transactions (the off-balance sheet component of which equals the sum of the current fair values of all non-cash positions the Enterprise has posted as collateral under the transaction); and

(v) Forward agreements.

§ 1240.36 Derivative contracts.

An Enterprise must determine its risk-weighted assets for OTC derivative contracts as provided under 12 CFR 217.34, substituting ''Enterprise'' for ''Board-regulated institution''.

§ 1240.37 Cleared transactions.

An Enterprise must determine its risk-weighted assets for cleared transactions as provided under 12 CFR 217.35, substituting ''Enterprise'' for ''Board-regulated institution.''

§ 1240.38 Guarantees and credit derivatives: Substitution treatment.

An Enterprise may recognize the credit risk mitigation benefits of an eligible guarantee or eligible credit derivative by substituting the risk weight associated with the protection provider for the risk weight assigned to an exposure, as provided under 12 CFR 217.36, substituting ''Enterprise'' for ''Board-regulated institution.''

§ 1240.39 Collateralized transactions.

An Enterprise may recognize the risk-mitigating effects of financial collateral as provided under 12 CFR 217.37, substituting ''Enterprise'' for ''Board-regulated institution.''

Risk-Weighted Assets for Unsettled Transactions

§ 1240.40 Unsettled transactions.

An Enterprise must determine its risk-weighted assets for unsettled transactions under 12 CFR 217.38, substituting ''Enterprise'' for ''Board-regulated institution.''

Risk-Weighted Assets for CRT and Other Securitization Exposures

§ 1240.41 Operational requirements for CRT and other securitization exposures.

(a) *Operational criteria for traditional securitizations.* An Enterprise that transfers exposures it has purchased or otherwise acquired to a securitization SPE or other third party in connection with a traditional securitization may exclude the exposures from the calculation of its risk-weighted assets only if each condition in this section is satisfied. An Enterprise that meets these conditions must hold risk-based capital against any credit risk it retains in connection with the securitization. An Enterprise that fails to meet these conditions must hold risk-based capital against the transferred exposures as if they had not been securitized and must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the transaction. The conditions are:

(1) The exposures are not reported on the Enterprise's consolidated balance sheet under GAAP;

(2) The Enterprise has transferred to one or more third parties credit risk associated with the underlying exposures;

(3) Any clean-up calls relating to the securitization are eligible clean-up calls; and

(4) The securitization does not:

(i) Include one or more underlying exposures in which the borrower is permitted to vary the drawn amount within an agreed limit under a line of credit; and

(ii) Contain an early amortization provision.

(b) *Operational criteria for synthetic securitizations.* For synthetic securitizations, an Enterprise may recognize for risk-based capital purposes the use of a credit risk mitigant to hedge underlying exposures only if each condition in this paragraph (b) is satisfied. An Enterprise that meets these conditions must hold risk-based capital against any credit risk of the exposures it retains in connection with the synthetic securitization. An Enterprise that fails to meet these conditions or chooses not to recognize the credit risk mitigant for purposes of this section must instead hold risk-based capital against the underlying exposures as if they had not been synthetically securitized. The conditions are:

(1) The credit risk mitigant is:

(i) Financial collateral;

(ii) A guarantee that meets all criteria as set forth in the definition of ''eligible guarantee'' in § 1240.2, except for the criteria in paragraph (3) of that definition; or

(iii) A credit derivative that meets all criteria as set forth in the definition of ''eligible credit derivative'' in § 1240.2, except for the criteria in paragraph (3) of the definition of ''eligible guarantee'' in § 1240.2.

(2) The Enterprise transfers credit risk associated with the underlying exposures to one or more third parties, and the terms and conditions in the credit risk mitigants employed do not include provisions that:

(i) Allow for the termination of the credit protection due to deterioration in the credit quality of the underlying exposures;

(ii) Require the Enterprise to alter or replace the underlying exposures to improve the credit quality of the underlying exposures;

(iii) Increase the Enterprise's cost of credit protection in response to deterioration in the credit quality of the underlying exposures;

(iv) Increase the yield payable to parties other than the Enterprise in response to a deterioration in the credit quality of the underlying exposures; or

(v) Provide for increases in a retained first loss position or credit enhancement

provided by the Enterprise after the inception of the securitization;

(3) The Enterprise obtains a well-reasoned opinion from legal counsel that confirms the enforceability of the credit risk mitigant in all relevant jurisdictions; and

(4) Any clean-up calls relating to the securitization are eligible clean-up calls.

(c) *Operational criteria for credit risk transfers.* For credit risk transfers, an Enterprise may recognize for risk-based capital purposes, the use of a credit risk transfer only if each condition in this paragraph (c) is satisfied. An Enterprise that meets these conditions must hold risk-based capital against any credit risk of the exposures it retains in connection with the credit risk transfer. An Enterprise that fails to meet these conditions or chooses not to recognize the credit risk transfer for purposes of this section must instead hold risk-based capital against the underlying exposures as if they had not been subject to the credit risk transfer. The conditions are:

(1) The credit risk transfer is an eligible CRT structure.

(2) The Enterprise transfers credit risk associated with the underlying exposures to one or more third parties, and the terms and conditions in the credit risk transfer employed do not include provisions that:

(i) Allow for the termination of the credit risk transfer due to deterioration in the credit quality of the underlying exposures;

(ii) Require the Enterprise to alter or replace the underlying exposures to improve the credit quality of the underlying exposures;

(iii) Increase the Enterprise's cost of credit protection in response to deterioration in the credit quality of the underlying exposures;

(iv) Increase the yield payable to parties other than the Enterprise in response to a deterioration in the credit quality of the underlying exposures; or

(v) Provide for increases in a retained first loss position or credit enhancement provided by the Enterprise after the inception of the credit risk transfer;

(3) The Enterprise obtains a well-reasoned opinion from legal counsel that confirms the enforceability of the credit risk transfer in all relevant jurisdictions; and

(4) Any clean-up calls relating to the credit risk transfer are eligible clean-up calls.

(5) The Enterprise includes in its periodic disclosures under the Federal securities laws, or in other appropriate public disclosures, a reasonably detailed description of—

(i) The material recourse or other risks that might reduce the effectiveness of the credit risk transfer in transferring the credit risk on the underlying exposures to third parties; and

(ii) Each condition under paragraph (a) of this section (governing traditional securitizations) or paragraph (b) of this section (governing synthetic securitizations) that is not satisfied by the credit risk transfer and the reasons that each such condition is not satisfied.

(d) *Due diligence requirements for securitization exposures.* (1) Except for exposures that are deducted from common equity tier 1 capital and exposures subject to § 1240.42(h), if an Enterprise is unable to demonstrate to the satisfaction of FHFA a comprehensive understanding of the features of a securitization exposure that would materially affect the performance of the exposure, the Enterprise must assign the securitization exposure a risk weight of 1,250 percent. The Enterprise's analysis must be commensurate with the complexity of the securitization exposure and the materiality of the exposure in relation to its capital.

(2) An Enterprise must demonstrate its comprehensive understanding of a securitization exposure under paragraph (c)(1) of this section, for each securitization exposure by:

(i) Conducting an analysis of the risk characteristics of a securitization exposure prior to acquiring the exposure, and documenting such analysis within three business days after acquiring the exposure, considering:

(A) Structural features of the securitization that would materially impact the performance of the exposure, for example, the contractual cash flow waterfall, waterfall-related triggers, credit enhancements, liquidity enhancements, fair value triggers, the performance of organizations that service the exposure, and deal-specific definitions of default;

(B) Relevant information regarding the performance of the underlying credit exposure(s), for example, the percentage of loans 30, 60, and 90 days past due; default rates; prepayment rates; loans in foreclosure; property types; occupancy; average credit score or other measures of creditworthiness; average LTV ratio; and industry and geographic diversification data on the underlying exposure(s);

(C) Relevant market data of the securitization, for example, bid-ask spread, most recent sales price and historic price volatility, trading volume, implied market rating, and size, depth and concentration level of the market for the securitization; and

(D) For resecuritization exposures, performance information on the underlying securitization exposures, for example, the issuer name and credit quality, and the characteristics and performance of the exposures underlying the securitization exposures; and

(ii) On an on-going basis (no less frequently than quarterly), evaluating, reviewing, and updating as appropriate the analysis required under paragraph (c)(1) of this section for each securitization exposure.

§ 1240.42 Risk-weighted assets for CRT and other securitization exposures.

(a) *Securitization risk weight approaches.* Except as provided elsewhere in this section or in § 1240.41:

(1) An Enterprise must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from a securitization and apply a 1,250 percent risk weight to the portion of a CEIO that does not constitute after-tax gain-on-sale.

(2) If a securitization exposure does not require deduction under paragraph (a)(1) of this section, an Enterprise may assign a risk weight to the securitization exposure either using the simplified supervisory formula approach (SSFA) in accordance with §§ 1240.43(a) through 1240.43(d) for a securitization exposure that is not a retained CRT exposure or an acquired CRT exposure or using the credit risk transfer approach (CRTA) in accordance with § 1240.44 for a retained CRT exposure, and in either case, subject to the limitation under paragraph (e) of this section.

(3) If a securitization exposure does not require deduction under paragraph (a)(1) of this section and the Enterprise cannot, or chooses not to apply the SSFA or the CRTA to the exposure, the Enterprise must assign a risk weight to the exposure as described in § 1240.45.

(4) If a securitization exposure is a derivative contract (other than protection provided by an Enterprise in the form of a credit derivative) that has a first priority claim on the cash flows from the underlying exposures (notwithstanding amounts due under interest rate or currency derivative contracts, fees due, or other similar payments), an Enterprise may choose to set the risk-weighted asset amount of the exposure equal to the amount of the exposure as determined in paragraph (c) of this section.

(b) *Total risk-weighted assets for securitization exposures.* An Enterprise's total risk-weighted assets for securitization exposures equals the sum of the risk-weighted asset amount

for securitization exposures that the Enterprise risk weights under §§ 1240.41(d), 1240.42(a)(1), 1240.43, 1240.44, or 1240.45, and paragraphs (e) through (h) of this section, as applicable.

(c) *Exposure amount of a CRT or other securitization exposure*—(1) *On-balance sheet securitization exposures.* Except as provided for retained CRT exposures in § 1240.44(f), the exposure amount of an on-balance sheet securitization exposure (excluding a repo-style transaction, eligible margin loan, OTC derivative contract, or cleared transaction) is equal to the carrying value of the exposure.

(2) *Off-balance sheet securitization exposures.* Except as provided in paragraph (h) of this section or as provided for retained CRT exposures in § 1240.44(f), the exposure amount of an off-balance sheet securitization exposure that is not a repo-style transaction, eligible margin loan, cleared transaction (other than a credit derivative), or an OTC derivative contract (other than a credit derivative) is the notional amount of the exposure.

(3) *Repo-style transactions, eligible margin loans, and derivative contracts.* The exposure amount of a securitization exposure that is a repo-style transaction, eligible margin loan, or derivative contract (other than a credit derivative) is the exposure amount of the transaction as calculated under § 1240.36 or § 1240.39, as applicable.

(d) *Overlapping exposures.* If an Enterprise has multiple securitization exposures that provide duplicative coverage to the underlying exposures of a securitization, the Enterprise is not required to hold duplicative risk-based capital against the overlapping position. Instead, the Enterprise may apply to the overlapping position the applicable risk-based capital treatment that results in the highest risk-based capital requirement.

(e) *Implicit support.* If an Enterprise provides support to a securitization (including a CRT) in excess of the Enterprise's contractual obligation to provide credit support to the securitization (implicit support):

(1) The Enterprise must include in risk-weighted assets all of the underlying exposures associated with the securitization as if the exposures had not been securitized and must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the securitization; and

(2) The Enterprise must disclose publicly:

(i) That it has provided implicit support to the securitization; and

(ii) The risk-based capital impact to the Enterprise of providing such implicit support.

(f) *Interest-only mortgage-backed securities.* Regardless of any other provisions in this subpart, the risk weight for a non-credit-enhancing interest-only mortgage-backed security may not be less than 100 percent.

(g) *Nth-to-default credit derivatives*—(1) *Protection provider.* An Enterprise may assign a risk weight using the SSFA in § 1240.43 to an nth-to-default credit derivative in accordance with this paragraph (g). An Enterprise must determine its exposure in the nth-to-default credit derivative as the largest notional amount of all the underlying exposures.

(2) *Attachment and detachment points.* For purposes of determining the risk weight for an nth-to-default credit derivative using the SSFA, the Enterprise must calculate the attachment point and detachment point of its exposure as follows:

(i) The attachment point (parameter *A*) is the ratio of the sum of the notional amounts of all underlying exposures that are subordinated to the Enterprise's exposure to the total notional amount of all underlying exposures. The ratio is expressed as a decimal value between zero and one. In the case of a first-to-default credit derivative, there are no underlying exposures that are subordinated to the Enterprise's exposure. In the case of a second-or-subsequent-to-default credit derivative, the smallest $(n-1)$ notional amounts of the underlying exposure(s) are subordinated to the Enterprise's exposure.

(ii) The detachment point (parameter *D*) equals the sum of parameter *A* plus the ratio of the notional amount of the Enterprise's exposure in the nth-to-default credit derivative to the total notional amount of all underlying exposures. The ratio is expressed as a decimal value between zero and one.

(3) *Risk weights.* An Enterprise that does not use the SSFA to determine a risk weight for its nth-to-default credit derivative must assign a risk weight of 1,250 percent to the exposure.

(4) *Protection purchaser*—(i) *First-to-default credit derivatives.* An Enterprise that obtains credit protection on a group of underlying exposures through a first-to-default credit derivative that meets the rules of recognition of 12 CFR 217.36(b) must determine its risk-based capital requirement for the underlying exposures as if the Enterprise synthetically securitized the underlying exposure with the smallest risk-weighted asset amount and had obtained no credit risk mitigant on the other underlying exposures. An Enterprise must calculate a risk-based capital requirement for counterparty credit risk according to 12 CFR 217.34 for a first-to-default credit derivative that does not meet the rules of recognition of 12 CFR 217.36(b).

(ii) *Second-or-subsequent-to-default credit derivatives.* (A) An Enterprise that obtains credit protection on a group of underlying exposures through a nth-to-default credit derivative that meets the rules of recognition of 12 CFR 217.36(b) (other than a first-to-default credit derivative) may recognize the credit risk mitigation benefits of the derivative only if:

(1) The Enterprise also has obtained credit protection on the same underlying exposures in the form of first-through-$(n-1)$-to-default credit derivatives; or

(2) If $n-1$ of the underlying exposures have already defaulted.

(B) If an Enterprise satisfies the requirements of paragraph (i)(4)(ii)(A) of this section, the Enterprise must determine its risk-based capital requirement for the underlying exposures as if the Enterprise had only synthetically securitized the underlying exposure with the nth smallest risk-weighted asset amount and had obtained no credit risk mitigant on the other underlying exposures.

(C) An Enterprise must calculate a risk-based capital requirement for counterparty credit risk according to 12 CFR 217.34 for a nth-to-default credit derivative that does not meet the rules of recognition of 12 CFR 217.36(b).

(h) *Guarantees and credit derivatives other than nth-to-default credit derivatives*—(1) *Protection provider.* For a guarantee or credit derivative (other than an nth-to-default credit derivative) provided by an Enterprise that covers the full amount or a pro rata share of a securitization exposure's principal and interest, the Enterprise must risk weight the guarantee or credit derivative as if it holds the portion of the reference exposure covered by the guarantee or credit derivative.

(2) *Protection purchaser.* (i) An Enterprise that purchases a guarantee or OTC credit derivative (other than an nth-to-default credit derivative) that is recognized under § 1240.46 as a credit risk mitigant (including via collateral recognized under § 1240.39) is not required to compute a separate counterparty credit risk capital requirement under § 1240.31, in accordance with 12 CFR 217.34(c).

(ii) If an Enterprise cannot, or chooses not to, recognize a purchased credit derivative as a credit risk mitigant under § 1240.46, the Enterprise must

determine the exposure amount of the credit derivative under § 1240.36.

(A) If the Enterprise purchases credit protection from a counterparty that is not a securitization SPE, the Enterprise must determine the risk weight for the exposure according to this subpart D.

(B) If the Enterprise purchases the credit protection from a counterparty that is a securitization SPE, the Enterprise must determine the risk weight for the exposure according to section § 1240.42, including § 1240.42(a)(4) for a credit derivative that has a first priority claim on the cash flows from the underlying exposures of the securitization SPE (notwithstanding amounts due under interest rate or currency derivative contracts, fees due, or other similar payments).

§ 1240.43 Simplified supervisory formula approach (SSFA).

(a) *General requirements for the SSFA.* To use the SSFA to determine the risk weight for a securitization exposure, an Enterprise must have data that enables it to assign accurately the parameters described in paragraph (b) of this section. Data used to assign the parameters described in paragraph (b) of this section must be the most currently available data; if the contracts governing the underlying exposures of the securitization require payments on a monthly or quarterly basis, the data used to assign the parameters described in paragraph (b) of this section must be no more than 91 calendar days old. An Enterprise that does not have the appropriate data to assign the parameters described in paragraph (b) of this section must assign a risk weight of 1,250 percent to the exposure.

(b) *SSFA parameters.* To calculate the risk weight for a securitization exposure using the SSFA, an Enterprise must have accurate information on the following five inputs to the SSFA calculation:

(1) K_G is the weighted-average (with unpaid principal used as the weight for each exposure) adjusted total capital requirement of the underlying exposures calculated using this subpart. K_G is expressed as a decimal value between zero and one (that is, an average risk weight of 100 percent represents a value of KG equal to 0.08).

(2) Parameter W is expressed as a decimal value between zero and one. Parameter W is the ratio of the sum of the dollar amounts of any underlying exposures of the securitization that meet any of the criteria as set forth in paragraphs (b)(2)(i) through (vi) of this section to the balance, measured in dollars, of underlying exposures:

(i) Ninety days or more past due;

(ii) Subject to a bankruptcy or insolvency proceeding;

(iii) In the process of foreclosure;

(iv) Held as real estate owned;

(v) Has contractually deferred payments for 90 days or more, other than principal or interest payments deferred on:

(A) Federally-guaranteed student loans, in accordance with the terms of those guarantee programs; or

(B) Consumer loans, including non-federally-guaranteed student loans, provided that such payments are deferred pursuant to provisions included in the contract at the time funds are disbursed that provide for period(s) of deferral that are not initiated based on changes in the creditworthiness of the borrower; or

(vi) Is in default.

(3) Parameter A is the attachment point for the exposure, which represents the threshold at which credit losses will first be allocated to the exposure. Except as provided in § 1240.42(g) for nth-to-default credit derivatives, parameter A equals the ratio of the current dollar amount of underlying exposures that are subordinated to the exposure of the Enterprise to the current dollar amount of underlying exposures. Any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the Enterprise's securitization exposure may be included in the calculation of parameter A to the extent that cash is present in the account. Parameter A is expressed as a decimal value between zero and one.

(4) Parameter D is the detachment point for the exposure, which represents the threshold at which credit losses of principal allocated to the exposure would result in a total loss of principal. Except as provided in § 1240.42(g) for nth-to-default credit derivatives, parameter D equals parameter A plus the ratio of the current dollar amount of the securitization exposures that are *pari passu* with the exposure (that is, have equal seniority with respect to credit risk) to the current dollar amount of the underlying exposures. Parameter D is expressed as a decimal value between zero and one.

(5) A supervisory calibration parameter, p, is equal to 0.5 for securitization exposures that are not resecuritization exposures and equal to 1.5 for resecuritization exposures (except p is equal to 0.5 for resecuritization exposures secured by MBS guaranteed by an Enterprise).

(c) *Mechanics of the SSFA.* K_G and W are used to calculate K_A, the augmented value of K_G, which reflects the observed credit quality of the underlying exposures. K_A is defined in paragraph (d) of this section. The values of parameters A and D, relative to K_A determine the risk weight assigned to a securitization exposure as described in paragraph (d) of this section. The risk weight assigned to a securitization exposure, or portion of a securitization exposure, as appropriate, is the larger of the risk weight determined in accordance with this paragraph (c) or paragraph (d) of this section and a risk weight of 20 percent.

(1) When the detachment point, parameter D, for a securitization exposure is less than or equal to K_A, the exposure must be assigned a risk weight of 1,250 percent.

(2) When the attachment point, parameter A, for a securitization exposure is greater than or equal to K_A, the Enterprise must calculate the risk weight in accordance with paragraph (d) of this section.

(3) When A is less than K_A and D is greater than K_A, the risk weight is a weighted-average of 1,250 percent and 1,250 percent times K_{SSFA} calculated in accordance with paragraph (d) of this section. For the purpose of this weighted-average calculation:

(i) The weight assigned to 1,250 percent equals

$$\frac{K_A - A}{D - A}.$$

(ii) The weight assigned to 1,250 percent times K_{SSFA} equals

$$\frac{D - K_A}{D - A}.$$

(iii) The risk weight will be set equal to:

$$RW = \left[\left(\frac{K_A - A}{D - A}\right) * 1{,}250\ percent\right] + \left[\left(\frac{D - K_A}{D - A}\right) * 1{,}250\ percent * K_{SSFA}\right]$$

(d) *SFA equation.* (1) The Enterprise must define the following parameters:

$$K_A = (1 - W) * K_G + (0.5 * W)$$

$$a = -\frac{1}{\rho * K_A}$$

$$u = D - K_A$$

$$l = \max(A - K_A, 0)$$

e = 2.71828, the base of the natural logarithms.

(2) Then the Enterprise must calculate according to the following equation:

$$K_{SSFA} = \frac{e^{a*u} - e^{a*l}}{a * (u - l)}$$

(3) The risk weight for the exposure (expressed as a percent) is equal to K_{SSFA} * 1,250.

(e) *Limitations.* Notwithstanding any other provision of this section, an Enterprise must assign a risk weight of not less than 20 percent to a securitization exposure.

§ 1240.44 Credit risk transfer approach (CRTA).

(a) *General requirements for the CRTA.* To use the CRTA to determine the risk weighted assets for a retained CRT exposure, an Enterprise must have data that enables it to assign accurately the parameters described in paragraph (b) of this section. Data used to assign the parameters described in paragraph (b) of this section must be the most currently available data; if the contracts governing the underlying exposures of the credit risk transfer require payments on a monthly or quarterly basis, the data used to assign the parameters described in paragraph (b) of this section must be no more than 91 calendar days old. An Enterprise that does not have the appropriate data to assign the parameters described in paragraph (b) of this section must assign a risk weight of 1,250 percent to the retained CRT exposure.

(b) *CRTA parameters.* To calculate the risk weighted assets for a retained CRT exposure, an Enterprise must have accurate information on the following ten inputs to the CRTA calculation.

(1) Parameter *A* is the attachment point for the exposure, which represents the threshold at which credit losses will first be allocated to the exposure. Parameter *A* equals the ratio of the current dollar amount of underlying exposures that are subordinated to the exposure of the Enterprise to the current dollar amount of underlying exposures. Any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the Enterprise's exposure may be included in the calculation of parameter *A* to the extent that cash is present in the account. Parameter *A* is expressed as a value between 0 and 100 percent.

(2) Parameter $AggUPB_{\$}$ is the aggregate unpaid principal balance of the underlying mortgage exposures.

(3) Parameter *CM*% is the percentage of a tranche sold in the capital markets. *CM*% is expressed as a value between 0 and 100 percent.

(4) Parameter $Collat\%_{RIF}$ is the amount of financial collateral posted by a counterparty under a loss sharing contract expressed as a percentage of the risk in force. For multifamily lender loss sharing transactions where an Enterprise has the contractual right to receive future lender guarantee-fee revenue, the Enterprise may include up to 12 months of expected guarantee-fee revenue in collateral. $Collat\%_{RIF}$ is expressed as a value between 0 and 100 percent.

(5) Parameter *D* is the detachment point for the exposure, which represents the threshold at which credit losses of principal allocated to the exposure would result in a total loss of principal. Parameter *D* equals parameter *A* plus the ratio of the current dollar amount of the exposures that are *pari passu* with the exposure (that is, have equal seniority with respect to credit risk) to the current dollar amount of the underlying exposures. Parameter *D* is expressed as a value between 0 and 100 percent.

(6) Parameter $EL_{\$}$ is the remaining lifetime net expected credit risk losses of the underlying mortgage exposures. $EL_{\$}$ must be calculated internally by an Enterprise. If the contractual terms of the CRT do not provide for the transfer of the counterparty credit risk associated with any loan-level credit enhancement or other loss sharing on the underlying mortgage exposures, then the Enterprise must calculate $EL_{\$}$ assuming no counterparty haircuts. Parameter $EL_{\$}$ is expressed in dollars.

(7) Parameter *HC* is the haircut for the counterparty in contractual loss sharing transactions.

(i) For a CRT with respect to single-family mortgage exposures, the counterparty haircut is set forth on Table 12 to paragraph (e)(3)(ii) of § 1240.33, determined as if the counterparty to the CRT were a counterparty to loan-level credit enhancement (as defined in § 1240.33(a)) and considering the counterparty rating and mortgage concentration risk of the counterparty to the CRT and the single-family segment and product of the underlying single-family mortgage exposures.

(ii) For a CRT with respect to multifamily mortgage exposures, the counterparty haircut is set forth on Table 1 to this paragraph (b)(7)(ii), with counterparty rating and mortgage concentration risk having the meaning given in § 1240.33(a).

Table 1 to paragraph (b)(7)(ii): Haircuts for Multifamily Loss Sharing CRTs

Counterparty Rating	Mortgage Concentration Risk: Not High	Mortgage Concentration Risk: High
1	2.1%	3.4%
2	5.3%	8.5%
3	6.0%	9.6%
4	12.7%	19.2%
5	16.2%	22.9%
6	22.5%	28.5%
7	41.2%	45.1%
8	48.2%	48.2%

(8) Parameter $LS_{\%}$ is the percentage of a tranche that is either insured, reinsured, or afforded coverage through lender reimbursement of credit losses of principal. $LS_{\%}$ is expressed as a value between 0 and 100 percent.

(9) Parameter $LTF_{\%}$ is the loss timing factor which accounts for maturity differences between the CRT and the underlying mortgage exposures. Maturity differences arise when the maturity date of the CRT is before the maturity dates of the underlying mortgage exposures. $LTF_{\%}$ is expressed as a value between 0 and 100 percent.

(i) An Enterprise must have the following information to calculate $LTF_{\%}$ for a CRT with respect to multifamily mortgage exposures:

(A) The remaining months to the contractual maturity of the CRT (CRT_{RMM}).

(B) The remaining months to maturity of the underlying multifamily mortgage exposures (MME_{RMM}). If the underlying multifamily mortgage exposures have different maturity dates, MME_{RMM} should reflect the multifamily mortgage exposure with the longest maturity.

(C) An Enterprise must use the following method to calculate $LTF_{\%}$ for multifamily CRTs:

$$LTF_{\%} = \frac{CRT_{RMM}}{MME_{RMM}}$$

(ii) An Enterprise must have the following information to calculate $LTF_{\%}$ for a newly issued CRT with respect to single-family mortgage exposures:

(A) The original closing date (or effective date) of the CRT and the maturity date on the CRT.

(B) UPB share of single-family mortgage exposures that have original amortization terms of less than or equal to 189 months ($CRTF15_{\%}$).

(C) UPB share of single-family mortgage exposures that have original amortization terms greater than 189 months and OLTVs of less than or equal to 80 percent ($CRT80NotF15_{\%}$).

(D) The duration of seasoning.

(E) An Enterprise must use the following method to calculate $LTF_{\%}$ for single-family CRTs: Calculate CRT months to maturity (*CRTMthstoMaturity*) using one of the following methods:

(1) For single-family CRTs with reimbursement based upon occurrence or resolution of delinquency, *CRTMthstoMaturity* is the difference between the CRT's maturity date and original closing date, except for the following:

(i) If the coverage based upon delinquency is between one and three months, add 24 months to the difference between the CRT's maturity date and original closing date; and

(ii) If the coverage based upon delinquency is between four and six months, add 18 months to the difference between the CRT's maturity date and original closing date.

(2) For all other single-family CRTs, *CRTMthstoMaturity* is the difference between the CRT's maturity date and original closing date.

(i) If *CRTMthstoMaturity* is a multiple of 12, then an Enterprise must use the first column of Table 2 to paragraph (b)(9)(ii)(E)(*2*)(*iii*) of this section to identify the row matching *CRTMthstoMaturity* and take a weighted average of the three loss timing factors in columns 2, 3, and 4 as follows:

$$LTF\% = (CRTLT15 * CRTF15_{\%}) + (CRTLT80Not15 * CRT80NotF15_{\%}) + (CRTLTGT80Not15 * CRT80NotF15_{\%}) + (CRTLTGT80Not15 * (1 - CRT80NotF15_{\%} - CRTF15_{\%}))$$

(ii) If *CRTMthstoMaturity* is not a multiple of 12, an Enterprise must use the first column of Table 2 to paragraph (b)(9)(ii)(E)(*2*)(*iii*) of this section to identify the two rows that are closest to *CRTMthstoMaturity* and take a weighted average between the two rows of loss timing factors using linear interpolation, where the weights reflect *CRTMthstoMaturity*.

(*iii*) For seasoned single-family CRTs, the $LTF_{\%}$ is calculated:

$$LTF_{\%} = \left(\frac{CRTLT_M - CRTLT_S}{100\% - CRTLT_S}\right)$$

where

$CRTLT_M$ is the loss timing factor calculated under (ii) of this subsection.

$CRTLT_S$ is the loss timing factor calculated under (ii) of this subsection replacing *CRTMthstoMaturity* with the duration of seasoning.

Table 2 to paragraph (b)(9)(ii)(E)(*2*)(*iii*): Single-family CRT Loss Timing Factors

CRTMthstoMaturity: (#1) Number of months from the single-family CRT's original closing date (or effective date) to the maturity date on the CRT	*CRT Loss Timing Factors*		
	***CRTLT*15**: (#2) CRTLT for pool groups backed by single-family mortgage exposures with original amortization terms <= 189 months	***CRTLT*80*Not*15**: (#3) CRTLT for pool groups backed by single-family mortgage exposures with original amortization terms > 189 months and OLTVs <= 80 percent	***CRTLTGT*80*Not*15**: (#4) CRTLT for pool groups backed by single-family mortgage exposures with original amortization terms > 189 months and OLTVs > 80 percent
0	0%	0%	0%
12	1%	0%	0%
24	6%	3%	2%
36	21%	13%	11%
48	44%	31%	26%
60	66%	49%	43%
72	82%	65%	58%
84	90%	74%	68%
96	94%	80%	76%
108	96%	85%	81%
120	98%	88%	86%
132	99%	91%	89%
144	99%	93%	92%
156	100%	94%	94%
168	100%	96%	95%
180	100%	96%	96%
192	100%	97%	97%
204	100%	98%	98%
216	100%	98%	98%
228	100%	98%	98%
240	100%	99%	99%
252	100%	99%	99%
264	100%	99%	99%
276	100%	99%	99%
288	100%	99%	99%
300	100%	100%	100%
312	100%	100%	100%
324	100%	100%	100%
336	100%	100%	100%
348	100%	100%	100%
360	100%	100%	100%

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(10) Parameter $RWA_{\$}$ is the aggregate credit risk-weighted assets associated with the underlying mortgage exposures.

(11) Parameter $CntptyRWA_{\$}$ is the aggregate credit risk-weighted assets due to counterparty haircuts from loan-level credit enhancements. $CntptyRWA_{\$}$ is the difference between:

(i) Parameter $RWA_{\$}$; and

(ii) Aggregate credit risk-weighted assets associated with the underlying mortgage exposures where the counterparty haircuts for loan-level credit enhancements are set to zero.

(c) *Mechanics of the CRTA.* The risk weight assigned to a retained CRT exposure, or portion of a retained CRT

exposure, as appropriate, is the larger of $RW_{\%}$ determined in accordance with paragraph (d) of this section and a risk weight of 10 percent.

(1) When the detachment point, parameter *D,* for a retained CRT exposure is less than or equal to the sum of K_A and $AggEL_{\%}$, the exposure must be assigned a risk weight of 1,250 percent.

(2) When the attachment point, parameter *A,* for a retained CRT exposure is greater than or equal to or equal to the sum of K_A and $AggEL_{\%}$, determined in accordance with paragraph (d) of this section, the exposure must be assigned a risk weight of 10 percent.

(3) When parameter *A* is less than or equal to the sum of K_A and $AggEL_{\%}$, and parameter *D* is greater than the sum of K_A and $AggEL_{\%}$, the Enterprise must calculate the risk weight as 1,250% multiplied by the ratio of (i) the sum of K_A and $AggEL_{\%}$ less parameter *A* to (ii) the difference between parameter *D* and parameter *A.*

(d) *CRTA equations.*

$$RW_{\%,Tranche} = \begin{cases} 1{,}250\% \; if \; K_A + AggEL_{\%} \geq D \\ 10\% \; if \; K_A + AggEL_{\%} \leq A \\ 1250\% * \left(\dfrac{K_A + AggEL_{\%} - A}{D - A}\right) \; if \; A < K_A + AggEL_{\%} < D \end{cases}$$

$$AggEL_{\%} = 100\% * \frac{EL\$}{AggUPB_{\$}}$$

If the contractual terms of the CRT do not provide for the transfer of the counterparty credit risk associated with any loan-level credit enhancement or other loss sharing on the underlying mortgage exposures, then the Enterprise shall calculate K_A as follows:

$$K_A = 100\% * \frac{(RWA_{\$} - CntptyRWA_{\$}) * 8\%}{AggUPB_{\$}}$$

Otherwise the Enterprise shall calculate K_A as follows:

$$K_A = 100\% * \frac{RWA_{\$} * 8\%}{AggUPB_{\$}}$$

(e) *Limitations.* Notwithstanding any other provision of this section, an Enterprise must assign an overall risk weight of not less than 10 percent to a retained CRT exposure.

(f) *Adjusted exposure amount (AEA)*—(1) *In general.* The adjusted exposure amount (AEA) of a retained CRT exposure is equal to:

$$AEA_{\$,Tranche} = EAE_{\%,Tranche} * AggUPB_{\$} * (D - A) * \left(1 - \frac{ELS_{\%,Tranche}}{RW_{\%,Tranche} * 8\%}\right)$$

(2) *Inputs*—(i) *Enterprise Adjusted Exposure.* The adjusted exposure (EAE) of an Enterprise with respect to a retained CRT exposure is as follows:

$EAE_{\%,Tranche} = 100\% - (CM_{\%,Tranche} * LTEA_{\%,Tranche,CM} * OEA\%) - (LS_{\%,Tranche} * LSEA_{\%,Tranche,LS} * LTEA_{\%,Tranche,LS} * OEA\%)$,

Where the loss timing effectiveness adjustments (LTEA) for a retained CRT exposure are determined under paragraph (g) of this section, the loss sharing effectiveness adjustment (LSEA) for a retained CRT exposure is determine under paragraph (h) of this section, and the overall effectiveness adjustment (OEA) is determined under paragraph (i) of this section.

(ii) *Expected Loss Share.* The expected loss share is the share of a tranche that is covered by expected loss (ELS):

$$ELS_{\%,Tranche} = \begin{cases} 100\% \; if \; AggEL_{\%} \geq D \\ 0\% \; if \; AggEL_{\%} \leq A \\ 100\% * \left(\dfrac{AggEL_{\%} - A}{D - A}\right) \; if \; A < AggEL_{\%} < D. \end{cases}$$

(iii) *Risk weight.* The risk weight of a retained CRT exposure is determined under paragraph (d) of this section.

(g) *Loss timing effectiveness adjustments.* The loss timing effectiveness adjustments (LTEA) for a retained CRT exposure is calculated according to the following calculation:

if $(SLS_{\%,Tranche} - ELS_{\%,Tranche}) > 0$ *then*

$$LTEA_{\%,Tranche,CM} = \frac{100\% * \max\left(0, \min\left(1, \frac{LTK_{A,CM} + AggEL_{\%} - A}{D - A}\right)\right) - ELS_{\%,Tranche}}{\left(SLS_{\%,Tranche} - ELS_{\%,Tranche}\right)}$$

$$LTEA_{\%,Tranche,LS} = \frac{100\% * \max\left(0, \min\left(1, \frac{LTK_{A,LS} + AggEL_{\%} - A}{D - A}\right)\right) - ELS_{\%,Tranche}}{\left(SLS_{\%,Tranche} - ELS_{\%,Tranche}\right)}$$

Otherwise $LTEA_{\%,Tranche,CM} = 100\%$ *and* $LTEA_{\%,Tranche,LS} = 100\%$ where K_A adjusted for loss timing (LTK_A) is as follows:

$LTK_{A,CM} = \max((K_A + AggEL_{\%}) * LTF_{\%,CM}$

$LTK_{A,LS} = \max((K_A + AggEL_{\%}) * LTF_{\%,LS}$; and

$LTF_{\%,CM}$ is $LTF_{\%}$ calculated for the capital markets component of the tranche,

$LTF_{\%,LS}$ is $LTF_{\%}$ calculated for the loss sharing component of the tranche, and the share of the tranche that is covered by expected loss (ELS) and the share of the tranche that is covered by stress loss (SLS) are

$$ELS_{\%,Tranche} = \begin{cases} 100\% \; if \; AggEL_{\%} \geq D \\ 0\% \; if \; AggEL_{\%} \leq A \\ 100\% * \left(\frac{AggEL_{\%} - A}{D - A}\right) \; if \; A < AggEL_{\%} < D \end{cases}$$

$$SLS_{\%,Tranche} = \begin{cases} 100\% \; if \; K_A + AggEL_{\%} \geq D \\ 0\% \; if \; K_A + AggEL_{\%} \leq A \\ 100\% * \left(\frac{K_A + AggEL_{\%} - A}{D - A}\right) \; if \; A < K_A + AggEL_{\%} < D. \end{cases}$$

(h) *Loss sharing effectiveness adjustment.* The loss sharing effectiveness adjustment (LSEA) for a retained CRT exposure is calculated according to the following calculation:

if $(RW_{\%,Tranche} - ELS_{\%,Tranche} * 1250\%) > 0$ *then*

$$LSEA_{\%,Tranche} = max\left(\left(1 - HC * \frac{\left(UnCollatUL_{\%,Tranche} * 1250\% + SRIF_{\%,Tranche} * 10\%\right)}{\left(RW_{\%,Tranche} - ELS_{\%,Tranche} * 1250\%\right)}\right), 0\%\right)$$

Otherwise

$LESA_{\%,Tranche} = 100\%$

where

$UnCollatUL_{\%,Tranche} = max\,(0\%, SLS_{\%,Tranche} - max\,(Collat_{\%RIF,Tranche}, ELS_{\%,Tranche}))$

$SRIF_{\%,Tranche} = 100\% - max\,(SLS_{\%,Tranche}, Collat_{\%RIF,Tranche})$

and the share of the tranche that is covered by expected loss (ELS) and the share of the tranche that is covered by stress loss (SLS) are

$$ELS_{\%,Tranche} = \begin{cases} 100\% \; if \; AggEL_{\%} \geq D \\ 0\% \; if \; AggEL_{\%} \leq A \\ 100\% * \left(\frac{AggEL_{\%} - A}{D - A}\right) \; if \; A < AggEL_{\%} < D \end{cases}$$

$$SLS_{\%,Tranche} = \begin{cases} 100\% \; if \; K_A + AggEL_{\%} \geq D \\ 0\% \; if \; K_A + AggEL_{\%} \leq A \\ 100\% * \left(\frac{K_A + AggEL_{\%} - A}{D - A}\right) \; if \; A < K_A + AggEL_{\%} < D. \end{cases}$$

(i) *Overall effectiveness adjustment.* The overall effectiveness adjustment (OEA) for a retained CRT exposure is calculated according to the following calculation:

$OEA_{\%} = 90\%$

(j) *RWA supplement for retained loan-level counterparty credit risk.* If the Enterprise elects to use the CRTA for a retained CRT exposure and if the contractual terms of the CRT do not provide for the transfer of the counterparty credit risk associated with any loan-level credit enhancement or other loss sharing on the underlying mortgage exposures, then the Enterprise must add the following risk-weighted assets supplement ($RWASup_{\$}$) to risk weighted assets for the retained CRT exposure.

$RWASup_{\$,Tranche} = CntptyRWA_{\$} * (D - A)$

Otherwise the Enterprise shall add an $RWASup_{\$}$ of $0.

(k) Credit risk-weighted assets for the retained CRT exposure are as follows:

$RWA_{\$,Tranche} = AEA_{\$,Tranche} * RW_{\%,Tranche} + RWASup_{\$,Tranche}$

[Alternative: Modified SSFA]

(a) *General requirements.* To use the CRT approach to determine the risk weight for a CRT exposure, an Enterprise must have data that enables it to assign accurately the parameters described in paragraph (b) of this section. Data used to assign the parameters described in paragraph (b) of this section must be the most currently available data; if the contracts governing the underlying exposures of the CRT require payments on a monthly or quarterly basis, the data used to assign the parameters described in paragraph (b) of this section must be no more than 91 calendar days old. An Enterprise that does not have the appropriate data to assign the parameters described in paragraph (b) of this section must assign a risk weight of 1,250 percent to the exposure.

(b) *CRTA parameters.* To calculate the risk weight for a CRT exposure using the CRTA, an Enterprise must have accurate information on the following five inputs to the CRTA calculation, each as defined and calculated under § 1240.43(b): K_G; W; A; D; and p.

(c) *Mechanics of the CRTA.* The risk weight assigned to a CRT exposure, or portion of a CRT exposure, as appropriate, is the larger of the risk weight determined in accordance with this paragraph (c) or paragraph (d) of § 1240.43 and a risk weight of 10 percent.

(d) *Limitations.* Notwithstanding any other provision of this section, an Enterprise must assign a risk weight of not less than 10 percent to a CRT exposure.

(e) *Adjusted exposure amount.* The exposure amount for a CRT exposure is not subject to an adjustment under this section.

(f) *RWA adjustment for retained loan-level counterparty credit risk.* If the Enterprise elects to use the CRTA for a retained CRT exposure and if the contractual terms of the CRT do not provide for the transfer of the counterparty credit risk associated with any loan-level credit enhancement or other loss sharing on the underlying mortgage exposures, then the Enterprise must increase the risk-weighted assets of the retained CRT exposure by the amount equal to the portion of aggregate RWAs on the underlying mortgage exposures associated with counterparty credit risk.

§ 1240.45 Securitization exposures to which the SSFA and the CRTA do not apply.

An Enterprise must assign a 1,250 percent risk weight to any acquired CRT exposure and all securitization exposures to which the Enterprise does not apply the SSFA under § 1240.43 or the CRTA under § 1240.44.

§ 1240.46 Recognition of credit risk mitigants for securitization exposures.

(a) *General.* (1) An originating Enterprise that has obtained a credit risk mitigant to hedge its exposure to a synthetic or traditional securitization that satisfies the operational criteria provided in § 1240.41 may recognize the credit risk mitigant under §§ 1240.38 or 1240.39, but only as provided in this section.

(2) An investing Enterprise that has obtained a credit risk mitigant to hedge a securitization exposure may recognize the credit risk mitigant under §§ 1240.38 or 1240.39, but only as provided in this section.

(b) *Mismatches.* An Enterprise must make any applicable adjustment to the protection amount of an eligible guarantee or credit derivative as required in 12 CFR 217.36(d) through (f) for any hedged securitization exposure. In the context of a synthetic securitization, when an eligible guarantee or eligible credit derivative covers multiple hedged exposures that have different residual maturities, the Enterprise must use the longest residual maturity of any of the hedged exposures as the residual maturity of all hedged exposures.

Risk-Weighted Assets for Equity Exposures

§ 1240.51 Exposure measurement.

An Enterprise must calculate its risk-weighted assets for any equity exposures that are permissible under the Enterprise's authorizing statute under 12 CFR 217.51 through 217.53 of this title, substituting ''Enterprise for ''Board-regulated institution.''

Subpart E—Risk-Weighted Assets—Internal Ratings-Based and Advanced Measurement Approaches

§ 1240.100 Purpose, applicability, and principle of conservatism.

(a) *Purpose.* This subpart E establishes:

(1) Minimum requirements for using Enterprise-specific internal risk measurement and management processes for calculating risk-based capital requirements; and

(2) Methodologies for the Enterprises to calculate their advanced approaches total risk-weighted assets.

(b) *Applicability.* (1) This subpart applies to each Enterprise.

(2) An Enterprise must also include in its calculation of advanced credit risk-weighted assets under this subpart all covered positions, as defined in subpart F of this part.

(c) *Principle of conservatism.* Notwithstanding the requirements of this subpart, an Enterprise may choose not to apply a provision of this subpart to one or more exposures provided that:

(1) The Enterprise can demonstrate on an ongoing basis to the satisfaction of FHFA that not applying the provision would, in all circumstances, unambiguously generate a risk-based capital requirement for each such exposure greater than that which would otherwise be required under this subpart;

(2) The Enterprise appropriately manages the risk of each such exposure;

(3) The Enterprise notifies FHFA in writing prior to applying this principle to each such exposure; and

(4) The exposures to which the Enterprise applies this principle are not, in the aggregate, material to the Enterprise.

§ 1240.101 Definitions.

(a) Terms that are set forth in § 1240.2 and used in this subpart have the definitions assigned thereto in § 1240.2.

(b) For the purposes of this subpart, the following terms are defined as follows:

Advanced internal ratings-based (IRB) systems means an Enterprise's internal risk rating and segmentation system; risk parameter quantification system; data management and maintenance system; and control, oversight, and validation system for credit risk of exposures.

Advanced systems means an Enterprise's advanced IRB systems, operational risk management processes, operational risk data and assessment systems, operational risk quantification systems, and, to the extent used by the Enterprise, the internal models methodology, advanced CVA approach, double default excessive correlation detection process, and internal models approach (IMA) for equity exposures.

Backtesting means the comparison of an Enterprise's internal estimates with actual outcomes during a sample period not used in model development. In this context, backtesting is one form of out-of-sample testing.

Benchmarking means the comparison of an Enterprise's internal estimates with relevant internal and external data or with estimates based on other estimation techniques.

Business environment and internal control factors means the indicators of an Enterprise's operational risk profile that reflect a current and forward-looking assessment of the Enterprise's underlying business risk factors and internal control environment.

Dependence means a measure of the association among operational losses across and within units of measure.

Economic downturn conditions means, with respect to an exposure held by the Enterprise, those conditions in which the aggregate default rates for that exposure's exposure subcategory (or subdivision of such subcategory selected by the Enterprise) in the exposure's jurisdiction (or subdivision of such jurisdiction selected by the Enterprise) are significantly higher than average.

Eligible operational risk offsets means amounts, not to exceed expected operational loss, that:

(i) Are generated by internal business practices to absorb highly predictable and reasonably stable operational losses, including reserves calculated consistent with GAAP; and

(ii) Are available to cover expected operational losses with a high degree of certainty over a one-year horizon.

Expected operational loss (EOL) means the expected value of the distribution of potential aggregate operational losses, as generated by the Enterprise's operational risk quantification system using a one-year horizon.

External operational loss event data means, with respect to an Enterprise, gross operational loss amounts, dates, recoveries, and relevant causal information for operational loss events occurring at organizations other than the Enterprise.

Internal operational loss event data means, with respect to an Enterprise, gross operational loss amounts, dates, recoveries, and relevant causal information for operational loss events occurring at the Enterprise.

Operational loss means a loss (excluding insurance or tax effects) resulting from an operational loss event. Operational loss includes all expenses associated with an operational loss event except for opportunity costs, forgone revenue, and costs related to risk management and control enhancements implemented to prevent future operational losses.

Operational loss event means an event that results in loss and is associated with any of the following seven operational loss event type categories:

(i) Internal fraud, which means the operational loss event type category that comprises operational losses resulting from an act involving at least one internal party of a type intended to defraud, misappropriate property, or circumvent regulations, the law, or company policy excluding diversity- and discrimination-type events.

(ii) External fraud, which means the operational loss event type category that comprises operational losses resulting from an act by a third party of a type intended to defraud, misappropriate property, or circumvent the law. All third-party-initiated credit losses are to be treated as credit risk losses.

(iii) Employment practices and workplace safety, which means the operational loss event type category that comprises operational losses resulting from an act inconsistent with employment, health, or safety laws or agreements, payment of personal injury claims, or payment arising from diversity- and discrimination-type events.

(iv) Clients, products, and business practices, which means the operational loss event type category that comprises operational losses resulting from the nature or design of a product or from an unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements).

(v) Damage to physical assets, which means the operational loss event type category that comprises operational losses resulting from the loss of or damage to physical assets from natural disaster or other events.

(vi) Business disruption and system failures, which means the operational loss event type category that comprises operational losses resulting from disruption of business or system failures.

(vii) Execution, delivery, and process management, which means the operational loss event type category that comprises operational losses resulting from failed transaction processing or process management or losses arising from relations with trade counterparties and vendors.

Operational risk means the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (including legal risk but excluding strategic and reputational risk).

Operational risk exposure means the 99.9th percentile of the distribution of potential aggregate operational losses, as generated by the Enterprise's operational risk quantification system over a one-year horizon (and not incorporating eligible operational risk offsets or qualifying operational risk mitigants).

Risk parameter means a variable used in determining risk-based capital requirements for exposures, such as

probability of default, loss given default, exposure at default, or effective maturity.

Scenario analysis means a systematic process of obtaining expert opinions from business managers and risk management experts to derive reasoned assessments of the likelihood and loss impact of plausible high-severity operational losses. Scenario analysis may include the well-reasoned evaluation and use of external operational loss event data, adjusted as appropriate to ensure relevance to an Enterprise's operational risk profile and control structure.

Unexpected operational loss (UOL) means the difference between the Enterprise's operational risk exposure and the Enterprise's expected operational loss.

Unit of measure means the level (for example, organizational unit or operational loss event type) at which the Enterprise's operational risk quantification system generates a separate distribution of potential operational losses.

§ 1240.121 Minimum requirements.

(a) *Process and systems requirements.* (1) An Enterprise must have a rigorous process for assessing its overall capital adequacy in relation to its risk profile and a comprehensive strategy for maintaining an appropriate level of capital.

(2) The systems and processes used by an Enterprise for risk-based capital purposes under this subpart must be consistent with the Enterprise's internal risk management processes and management information reporting systems.

(3) Each Enterprise must have an appropriate infrastructure with risk measurement and management processes that meet the requirements of this section and are appropriate given the Enterprise's size and level of complexity. The Enterprise must ensure that the risk parameters and reference data used to determine its risk-based capital requirements are representative of long run experience with respect to its credit risk and operational risk exposures.

(b) *Risk rating and segmentation systems for exposures.* (1) An Enterprise must have an internal risk rating and segmentation system that accurately, reliably, and meaningfully differentiates among degrees of credit risk for the Enterprise's exposures. When assigning an internal risk rating, an Enterprise may consider a third-party assessment of credit risk, provided that the Enterprise's internal risk rating assignment does not rely solely on the external assessment.

(2) If an Enterprise uses multiple rating or segmentation systems, the Enterprise's rationale for assigning an exposure to a particular system must be documented and applied in a manner that best reflects the obligor or exposure's level of risk. An Enterprise must not inappropriately allocate exposures across systems to minimize regulatory capital requirements.

(3) In assigning ratings to exposures, an Enterprise must use all relevant and material information and ensure that the information is current.

(c) *Quantification of risk parameters for exposures.* (1) The Enterprise must have a comprehensive risk parameter quantification process that produces accurate, timely, and reliable estimates of the risk parameters on a consistent basis for the Enterprise's exposures.

(2) An Enterprise's estimates of risk parameters must incorporate all relevant, material, and available data that is reflective of the Enterprise's actual exposures and of sufficient quality to support the determination of risk-based capital requirements for the exposures. In particular, the population of exposures in the data used for estimation purposes, the underwriting standards in use when the data were generated, and other relevant characteristics, should closely match or be comparable to the Enterprise's exposures and standards. In addition, an Enterprise must:

(i) Demonstrate that its estimates are representative of long run experience, including periods of economic downturn conditions, whether internal or external data are used;

(ii) Take into account any changes in underwriting practice or the process for pursuing recoveries over the observation period;

(iii) Promptly reflect technical advances, new data, and other information as they become available;

(iv) Demonstrate that the data used to estimate risk parameters support the accuracy and robustness of those estimates; and

(v) Demonstrate that its estimation technique performs well in out-of-sample tests whenever possible.

(3) The Enterprise's risk parameter quantification process must produce appropriately conservative risk parameter estimates where the Enterprise has limited relevant data, and any adjustments that are part of the quantification process must not result in a pattern of bias toward lower risk parameter estimates.

(4) The Enterprise's risk parameter estimation process should not rely on the possibility of U.S. government financial assistance.

(5) Default, loss severity, and exposure amount data must include periods of economic downturn conditions, or the Enterprise must adjust its estimates of risk parameters to compensate for the lack of data from periods of economic downturn conditions.

(6) If an Enterprise uses internal data obtained prior to becoming subject to this subpart E or external data to arrive at risk parameter estimates, the Enterprise must demonstrate to FHFA that the Enterprise has made appropriate adjustments if necessary to be consistent with the Enterprise's definition of default. Internal data obtained after the Enterprise becomes subject to this subpart E must be consistent with the Enterprise's definition of default.

(7) The Enterprise must review and update (as appropriate) its risk parameters and its risk parameter quantification process at least annually.

(8) The Enterprise must, at least annually, conduct a comprehensive review and analysis of reference data to determine relevance of the reference data to the Enterprise's exposures, quality of reference data to support risk parameter estimates, and consistency of reference data to the Enterprise's definition of default.

(d) *Operational risk*—(1) *Operational risk management processes.* An Enterprise must:

(i) Have an operational risk management function that:

(A) Is independent of business line management; and

(B) Is responsible for designing, implementing, and overseeing the Enterprise's operational risk data and assessment systems, operational risk quantification systems, and related processes;

(ii) Have and document a process (which must capture business environment and internal control factors affecting the Enterprise's operational risk profile) to identify, measure, monitor, and control operational risk in the Enterprise's products, activities, processes, and systems; and

(iii) Report operational risk exposures, operational loss events, and other relevant operational risk information to business unit management, senior management, and the board of directors (or a designated committee of the board).

(2) *Operational risk data and assessment systems.* An Enterprise must have operational risk data and assessment systems that capture operational risks to which the

Enterprise is exposed. The Enterprise's operational risk data and assessment systems must:

(i) Be structured in a manner consistent with the Enterprise's current business activities, risk profile, technological processes, and risk management processes; and

(ii) Include credible, transparent, systematic, and verifiable processes that incorporate the following elements on an ongoing basis:

(A) *Internal operational loss event data.* The Enterprise must have a systematic process for capturing and using internal operational loss event data in its operational risk data and assessment systems.

(1) The Enterprise's operational risk data and assessment systems must include a historical observation period of at least five years for internal operational loss event data (or such shorter period approved by FHFA to address transitional situations, such as integrating a new business line).

(2) The Enterprise must be able to map its internal operational loss event data into the seven operational loss event type categories.

(3) The Enterprise may refrain from collecting internal operational loss event data for individual operational losses below established dollar threshold amounts if the Enterprise can demonstrate to the satisfaction of FHFA that the thresholds are reasonable, do not exclude important internal operational loss event data, and permit the Enterprise to capture substantially all the dollar value of the Enterprise's operational losses.

(B) *External operational loss event data.* The Enterprise must have a systematic process for determining its methodologies for incorporating external operational loss event data into its operational risk data and assessment systems.

(C) *Scenario analysis.* The Enterprise must have a systematic process for determining its methodologies for incorporating scenario analysis into its operational risk data and assessment systems.

(D) *Business environment and internal control factors.* The Enterprise must incorporate business environment and internal control factors into its operational risk data and assessment systems. The Enterprise must also periodically compare the results of its prior business environment and internal control factor assessments against its actual operational losses incurred in the intervening period.

(3) *Operational risk quantification systems.* The Enterprise's operational risk quantification systems:

(i) Must generate estimates of the Enterprise's operational risk exposure using its operational risk data and assessment systems;

(ii) Must employ a unit of measure that is appropriate for the Enterprise's range of business activities and the variety of operational loss events to which it is exposed, and that does not combine business activities or operational loss events with demonstrably different risk profiles within the same loss distribution;

(iii) Must include a credible, transparent, systematic, and verifiable approach for weighting each of the four elements, described in paragraph (d)(2)(ii) of this section, that an Enterprise is required to incorporate into its operational risk data and assessment systems;

(iv) May use internal estimates of dependence among operational losses across and within units of measure if the Enterprise can demonstrate to the satisfaction of FHFA that its process for estimating dependence is sound, robust to a variety of scenarios, and implemented with integrity, and allows for uncertainty surrounding the estimates. If the Enterprise has not made such a demonstration, it must sum operational risk exposure estimates across units of measure to calculate its total operational risk exposure; and

(v) Must be reviewed and updated (as appropriate) whenever the Enterprise becomes aware of information that may have a material effect on the Enterprise's estimate of operational risk exposure, but the review and update must occur no less frequently than annually.

(e) *Data management and maintenance.* (1) An Enterprise must have data management and maintenance systems that adequately support all aspects of its advanced systems and the timely and accurate reporting of risk-based capital requirements.

(2) An Enterprise must retain data using an electronic format that allows timely retrieval of data for analysis, validation, reporting, and disclosure purposes.

(3) An Enterprise must retain sufficient data elements related to key risk drivers to permit adequate monitoring, validation, and refinement of its advanced systems.

(f) *Control, oversight, and validation mechanisms.* (1) The Enterprise's senior management must ensure that all components of the Enterprise's advanced systems function effectively and comply with the minimum requirements in this section.

(2) The Enterprise's board of directors (or a designated committee of the board) must at least annually review the effectiveness of, and approve, the Enterprise's advanced systems.

(3) An Enterprise must have an effective system of controls and oversight that:

(i) Ensures ongoing compliance with the minimum requirements in this section;

(ii) Maintains the integrity, reliability, and accuracy of the Enterprise's advanced systems; and

(iii) Includes adequate governance and project management processes.

(4) The Enterprise must validate, on an ongoing basis, its advanced systems. The Enterprise's validation process must be independent of the advanced systems' development, implementation, and operation, or the validation process must be subjected to an independent review of its adequacy and effectiveness. Validation must include:

(i) An evaluation of the conceptual soundness of (including developmental evidence supporting) the advanced systems;

(ii) An ongoing monitoring process that includes verification of processes and benchmarking; and

(iii) An outcomes analysis process that includes backtesting.

(5) The Enterprise must have an internal audit function or equivalent function that is independent of business-line management that at least annually:

(i) Reviews the Enterprise's advanced systems and associated operations, including the operations of its credit function and estimations of risk parameters;

(ii) Assesses the effectiveness of the controls supporting the Enterprise's advanced systems; and

(iii) Documents and reports its findings to the Enterprise's board of directors (or a committee thereof).

(6) The Enterprise must periodically stress test its advanced systems. The stress testing must include a consideration of how economic cycles, especially downturns, affect risk-based capital requirements (including migration across rating grades and segments and the credit risk mitigation benefits of double default treatment).

(g) *Documentation.* The Enterprise must adequately document all material aspects of its advanced systems.

§ 1240.122 Ongoing qualification.

(a) *Changes to advanced systems.* An Enterprise must meet all the minimum requirements in § 1240.121 on an ongoing basis. An Enterprise must notify FHFA when the Enterprise makes any change to an advanced system that would result in a material change in the Enterprise's advanced approaches total

risk-weighted asset amount for an exposure type or when the Enterprise makes any significant change to its modeling assumptions.

(b) *Failure to comply with qualification requirements.* (1) If FHFA determines that an Enterprise fails to comply with the requirements in § 1240.121, FHFA will notify the Enterprise in writing of the Enterprise's failure to comply.

(2) The Enterprise must establish and submit a plan satisfactory to FHFA to return to compliance with the qualification requirements.

(3) In addition, if FHFA determines that the Enterprise's advanced approaches total risk-weighted assets are not commensurate with the Enterprise's credit, market, operational, or other risks, FHFA may require such an Enterprise to calculate its advanced approaches total risk-weighted assets with any modifications provided by FHFA.

§ 1240.123 Advanced approaches credit risk-weighted asset calculations.

(a) An Enterprise must use its advanced systems to determine its credit risk capital requirements for each of the following exposures:

(1) General credit risk (including for mortgage exposures);

(2) Cleared transactions;

(3) Default fund contributions;

(4) Unsettled transactions;

(5) Securitization exposures;

(6) Equity exposures; and

(7) The fair value adjustment to reflect counterparty credit risk in valuation of OTC derivative contracts.

(b) The credit-risk-weighted assets calculated under this subpart E equals the aggregate credit risk capital requirement under paragraph (a) of this section multiplied by 12.5.

§ 1240.161 Qualification requirements for incorporation of operational risk mitigants.

(a) *Qualification to use operational risk mitigants.* An Enterprise may adjust its estimate of operational risk exposure to reflect qualifying operational risk mitigants if:

(1) The Enterprise's operational risk quantification system is able to generate an estimate of the Enterprise's operational risk exposure (which does not incorporate qualifying operational risk mitigants) and an estimate of the Enterprise's operational risk exposure adjusted to incorporate qualifying operational risk mitigants; and

(2) The Enterprise's methodology for incorporating the effects of insurance, if the Enterprise uses insurance as an operational risk mitigant, captures through appropriate discounts to the amount of risk mitigation:

(i) The residual term of the policy, where less than one year;

(ii) The cancellation terms of the policy, where less than one year;

(iii) The policy's timeliness of payment;

(iv) The uncertainty of payment by the provider of the policy; and

(v) Mismatches in coverage between the policy and the hedged operational loss event.

(b) *Qualifying operational risk mitigants.* Qualifying operational risk mitigants are:

(1) Insurance that:

(i) Is provided by an unaffiliated company that the Enterprise deems to have strong capacity to meet its claims payment obligations and the Enterprise assigns the company a probability of default equal to or less than 10 basis points;

(ii) Has an initial term of at least one year and a residual term of more than 90 days;

(iii) Has a minimum notice period for cancellation by the provider of 90 days;

(iv) Has no exclusions or limitations based upon regulatory action or for the receiver or liquidator of a failed depository institution; and

(v) Is explicitly mapped to a potential operational loss event;

(2) In evaluating an operational risk mitigant other than insurance, FHFA will consider whether the operational risk mitigant covers potential operational losses in a manner equivalent to holding total capital.

§ 1240.162 Mechanics of operational risk risk-weighted asset calculation.

(a) If an Enterprise does not qualify to use or does not have qualifying operational risk mitigants, the Enterprise's dollar risk-based capital requirement for operational risk is its operational risk exposure minus eligible operational risk offsets (if any).

(b) If an Enterprise qualifies to use operational risk mitigants and has qualifying operational risk mitigants, the Enterprise's dollar risk-based capital requirement for operational risk is the greater of:

(1) The Enterprise's operational risk exposure adjusted for qualifying operational risk mitigants minus eligible operational risk offsets (if any); or

(2) 0.8 multiplied by the difference between:

(i) The Enterprise's operational risk exposure; and

(ii) Eligible operational risk offsets (if any).

(c) The Enterprise's risk-weighted asset amount for operational risk equals the greater of:

(1) The Enterprise's dollar risk-based capital requirement for operational risk determined under paragraphs (a) or (b) multiplied by 12.5; and

(2) The Enterprise's adjusted total assets multiplied by 0.0015 multiplied by 12.5.

Subpart F—Risk-Weighted Assets—Market Risk

§ 1240.201 Purpose, applicability, and reservation of authority.

(a) *Purpose.* This subpart F establishes risk-based capital requirements for spread risk and provides methods for the Enterprises to calculate their measure for spread risk.

(b) *Applicability.* This subpart applies to each Enterprise.

(c) *Reservation of authority.* Subject to applicable provisions of the Safety and Soundness Act:

(1) FHFA may require an Enterprise to hold an amount of capital greater than otherwise required under this subpart if FHFA determines that the Enterprise's capital requirement for spread risk as calculated under this subpart is not commensurate with the spread risk of the Enterprise's covered positions.

(2) If FHFA determines that the risk-based capital requirement calculated under this subpart by the Enterprise for one or more covered positions or portfolios of covered positions is not commensurate with the risks associated with those positions or portfolios, FHFA may require the Enterprise to assign a different risk-based capital requirement to the positions or portfolios that more accurately reflects the risk of the positions or portfolios.

(3) In addition to calculating risk-based capital requirements for specific positions or portfolios under this subpart, the Enterprise must also calculate risk-based capital requirements for covered positions under subpart D or subpart E of this part, as appropriate.

(4) Nothing in this subpart limits the authority of FHFA under any other provision of law or regulation to take supervisory or enforcement action, including action to address unsafe or unsound practices or conditions, deficient capital levels, or violations of law.

§ 1240.202 Definitions.

(a) Terms set forth in § 1240.2 and used in this subpart have the definitions assigned in § 1240.2.

(b) For the purposes of this subpart, the following terms are defined as follows:

Backtesting means the comparison of an Enterprise's internal estimates with actual outcomes during a sample period not used in model development. For

purposes of this subpart, backtesting is one form of out-of-sample testing.

Covered position means, any asset that has more than *de minimis* spread risk (other than any intangible asset, such as any servicing asset), including:

(i) Any NPL, RPL, reverse mortgage loan, or other mortgage exposure that, in any case, does not secure an MBS guaranteed by the Enterprise;

(ii) Any MBS guaranteed by an Enterprise, MBS guaranteed by Ginnie Mae, reverse mortgage security, PLS, commercial MBS, CRT exposure, or other securitization exposure, regardless of whether the position is held by the Enterprise for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements, or to lock in arbitrage profits; and

(iii) Any other trading asset or trading liability (whether on- or off-balance sheet).[12]

Market risk means the risk of loss on a position that could result from movements in market prices, including spread risk.

Private label security (PLS) means any MBS that is collateralized by a pool or pools of single-family mortgage exposures and that is not guaranteed by an Enterprise or by Ginnie Mae.

Reverse mortgage means a mortgage loan secured by a residential property in which a homeowner relinquishes equity in their home in exchange for regular payments.

Reverse mortgage security means a security collateralized by reverse mortgages.

Spread risk means the risk of loss on a position that could result from a change in the bid or offer price of such position relative to a risk free or funding benchmark, including when due to a change in perceptions of performance or liquidity of the position.

§ 1240.203 Requirements for managing market risk.

(a) *Management of covered positions*—(1) *Active management.* An Enterprise must have clearly defined policies and procedures for actively managing all covered positions. At a minimum, these policies and procedures must require:

(i) Marking covered positions to market or to model on a daily basis;

(ii) Daily assessment of the Enterprise's ability to hedge position and portfolio risks, and of the extent of market liquidity;

(iii) Establishment and daily monitoring of limits on covered positions by a risk control unit independent of the business unit;

(iv) Routine monitoring by senior management of information described in paragraphs (a)(1)(i) through (a)(1)(iii) of this section;

(v) At least annual reassessment of established limits on positions by senior management; and

(vi) At least annual assessments by qualified personnel of the quality of market inputs to the valuation process, the soundness of key assumptions, the reliability of parameter estimation in pricing models, and the stability and accuracy of model calibration under alternative market scenarios.

(2) *Valuation of covered positions.* The Enterprise must have a process for prudent valuation of its covered positions that includes policies and procedures on the valuation of positions, marking positions to market or to model, independent price verification, and valuation adjustments or reserves. The valuation process must consider, as appropriate, unearned credit spreads, close-out costs, early termination costs, investing and funding costs, liquidity, and model risk.

(b) *Requirements for internal models.* (1) A risk control unit independent of the business unit must approve any internal model to calculate its risk-based capital requirement under this subpart.

(2) An Enterprise must meet all of the requirements of this section on an ongoing basis. The Enterprise must promptly notify FHFA when:

(i) The Enterprise plans to extend the use of a model to an additional business line or product type;

(ii) The Enterprise makes any change to an internal model that would result in a material change in the Enterprise's risk-weighted asset amount for a portfolio of covered positions; or

(iii) The Enterprise makes any material change to its modeling assumptions.

(3) FHFA may determine an appropriate capital requirement for the covered positions to which a model would apply, if FHFA determines that the model no longer complies with this subpart or fails to reflect accurately the risks of the Enterprise's covered positions.

(4) The Enterprise must periodically, but no less frequently than annually, review its internal models in light of developments in financial markets and modeling technologies, and enhance those models as appropriate to ensure that they continue to meet the Enterprise's standards for model approval and employ risk measurement methodologies that are most appropriate for the Enterprise's covered positions.

(5) The Enterprise must incorporate its internal models into its risk management process and integrate the internal models used for calculating its market risk measure into its daily risk management process.

(6) The level of sophistication of an Enterprise's internal models must be commensurate with the complexity and amount of its covered positions. An Enterprise's internal models may use any of the generally accepted approaches, including variance-covariance models, historical simulations, or Monte Carlo simulations, to measure market risk.

(7) The Enterprise's internal models must properly measure all the material risks in the covered positions to which they are applied.

(8) The Enterprise's internal models must conservatively assess the risks arising from less liquid positions and positions with limited price transparency under realistic market scenarios.

(9) The Enterprise must have a rigorous and well-defined process for re-estimating, re-evaluating, and updating its internal models to ensure continued applicability and relevance.

(c) *Control, oversight, and validation mechanisms.* (1) The Enterprise must have a risk control unit that reports directly to senior management and is independent from the business units.

(2) The Enterprise must validate its internal models initially and on an ongoing basis. The Enterprise's validation process must be independent of the internal models' development, implementation, and operation, or the validation process must be subjected to an independent review of its adequacy and effectiveness. Validation must include:

(i) An evaluation of the conceptual soundness of (including developmental evidence supporting) the internal models;

(ii) An ongoing monitoring process that includes verification of processes and the comparison of the Enterprise's model outputs with relevant internal and external data sources or estimation techniques; and

(iii) An outcomes analysis process that includes backtesting.

(3) The Enterprise must stress test the market risk of its covered positions at a frequency appropriate to each portfolio, and in no case less frequently than quarterly. The stress tests must take into account concentration risk (including concentrations in single issuers, industries, sectors, or markets), illiquidity under stressed market conditions, and risks arising from the Enterprise's trading activities that may

[12] Securities subject to repurchase and lending agreements are included as if they are still owned by the Enterprise.

not be adequately captured in its internal models.

(4) The Enterprise must have an internal audit function independent of business-line management that at least annually assesses the effectiveness of the controls supporting the Enterprise's market risk measurement systems, including the activities of the business units and independent risk control unit, compliance with policies and procedures, and calculation of the Enterprise's measures for spread risk under this subpart. At least annually, the internal audit function must report its findings to the Enterprise's board of directors (or a committee thereof).

(d) *Internal assessment of capital adequacy.* The Enterprise must have a rigorous process for assessing its overall capital adequacy in relation to its market risk.

(e) *Documentation.* The Enterprise must adequately document all material aspects of its internal models, management and valuation of covered positions, control, oversight, validation and review processes and results, and internal assessment of capital adequacy.

§ 1240.204 Measure for spread risk.

(a) *General requirement*—(1) *In general.* An Enterprise must calculate its standardized measure for spread risk by following the steps described in paragraph (a)(2) of this section. An Enterprise also must calculate an advanced measure for spread risk by following the steps in paragraph (a)(2) of this section.

(2) *Measure for spread risk.* An Enterprise must calculate the standardized measure for spread risk, which equals the sum of the spread risk capital requirements of all covered positions using one or more of its internal models except as contemplated by paragraphs (b) or (c) of this section. An Enterprise also must calculate the advanced measure for spread risk, which equals the sum of the spread risk capital requirements of all covered positions calculated using one or more of its internal models.

(b) *Single point approach*—(1) *General.* For purposes of the standardized measure for spread risk, the spread risk capital requirement for a covered position that is an RPL, an NPL, a reverse mortgage loan, or a reverse mortgage security is the amount equal to:

(i) The market value of the covered position; multiplied by

(ii) The applicable single point shock assumption for the covered position under paragraph (b)(2) of this section.

(2) *Applicable single point shock assumption.* The applicable single point shock assumption is:

(i) 0.0475 for an RPL or an NPL;

(ii) 0.0160 for a reverse mortgage loan; and

(iii) 0.0410 for a reverse mortgage security.

(c) *Spread duration approach*—(1) *General.* For purposes of the standardized measure for spread risk, the spread risk capital requirement for a covered position that is a multifamily mortgage exposure, a PLS, or an MBS guaranteed by an Enterprise or Ginnie Mae and secured by multifamily mortgage exposures is the amount equal to:

(i) The market value of the covered position; multiplied by

(ii) The spread duration of the covered position determined by the Enterprise using one or more of its internal models; multiplied by

(iii) The applicable spread shock assumption under paragraph (c)(2) of this section.

(2) *Applicable spread shock assumption.* The applicable spread shock is:

(i) 0.0015 for a multifamily mortgage exposure;

(ii) 0.0265 for a PLS; and

(iii) 0.0100 for an MBS guaranteed by an Enterprise or by Ginnie Mae and secured by multifamily mortgage exposures (other than IO securities guaranteed by an Enterprise or Ginnie Mae).

Subpart G—Stability Capital Buffer

§ 1240.400 Stability capital buffer.

(a) *Definitions.* For purposes of this subpart:

(1) *Mortgage assets* means, with respect to an Enterprise, the dollar amount equal to the sum of:

(i) The unpaid principal balance of its single-family mortgage exposures, including any single-family loans that secure MBS guaranteed by the Enterprise;

(ii) The unpaid principal balance of its multifamily mortgage exposures, including any multifamily mortgage exposures that secure MBS guaranteed by the Enterprise;

(iii) The carrying value of its MBS guaranteed by an Enterprise or Ginnie Mae, PLS, and other securitization exposures (other than its retained CRT exposures); and

(iv) The exposure amount of any other mortgage assets.

(2) *Residential mortgage debt outstanding* means the dollar amount of mortgage debt outstanding secured by one- to four-family residences or multifamily residences that are located in the United States (and excluding any mortgage debt outstanding secured by non-farm, non-residential or farm properties).

(b) *Amount.* An Enterprise must calculate its stability capital buffer under this section on an annual basis by December 31 of each year. The stability capital buffer of an Enterprise is equal to:

(1) The ratio of:

(i) The mortgage assets of the Enterprise as of December 31 of the previous calendar year; to

(ii) The residential mortgage debt outstanding as of December 31 of the previous calendar year, as published by FHFA;

(2) Minus 0.05;

(3) Multiplied by 5;

(4) Divided by 100; and

(5) Multiplied by the adjusted total assets of the Enterprise.

(c) *Effective date of an adjusted stability capital buffer*—(1) *Increase in stability capital buffer.* An increase in the stability capital buffer of an Enterprise under this section will take effect (*i.e.,* be incorporated into the maximum payout ratio under Table 1 to paragraph (b)(5) of § 1240.11) on January 1 of the year that is one full calendar year after the increased stability capital buffer was calculated.

(2) *Decrease in stability capital buffer.* A decrease in the stability capital buffer of an Enterprise will take effect (*i.e.,* be incorporated into the maximum payout ratio under Table 1 to paragraph (b)(5) of § 1240.11) on January 1 of the year immediately following the calendar year in which the decreased stability capital buffer was calculated.

[Alternative Approach]

§ 1240.400 Stability capital buffer.

(a) *Amount.* An Enterprise must calculate its stability capital buffer under this section on an annual basis by December 31 of each year. The stability capital buffer of an Enterprise is equal to:

(1) Subject to paragraph (b) of this section, the GSIB surcharge as calculated under subpart H of 12 CFR 217 (expressed as a percent), as if the Enterprise were a globally systemic important BHC under 12 CFR 217.402; multiplied by

(2) The weighted average of the risk weights of the mortgage exposures of the Enterprise (weighted by exposure amount) as of the effective date of the final rule; multiplied by

(3) The adjusted total assets of the Enterprise.

(b) *Adjustment to systemic indicator score.* In calculating the GSIB surcharge

under paragraph (a)(1) of this section, the Enterprise must:

(1) Exclude from the sum of its systemic indicator scores the systemic indicators for substitutability (payments activity, assets under custody, and underwritten transactions in debt and equity markets) and cross-jurisdictional activity (cross-jurisdictional claims and cross-jurisdictional liabilities); and

(2) Divide the sum of its systemic indicator scores, as adjusted under paragraph (b)(1) of this section, by the amount equal to 0.60.

(c) *Effective date of an adjusted stability buffer*—(1) *Increase in stability capital buffer.* An increase in the stability buffer of an Enterprise under this section will take effect (*i.e.,* be incorporated into the maximum payout ratio under Table 1 to paragraph (b)(5) of § 1240.11) on January 1 of the year that is one full calendar year after the increased stability capital buffer was calculated.

(2) *Decrease in stability capital buffer.* A decrease in the stability buffer of an Enterprise will take effect (*i.e.,* be incorporated into the maximum payout ratio under Table 1 to paragraph (b)(5) of § 1240.11) on January 1 of the year immediately following the calendar year in which the decreased stability capital buffer was calculated.

CHAPTER XII—FEDERAL HOUSING FINANCE AGENCY

SUBCHAPTER C—SAFETY AND SOUNDNESS

PART 1750—[REMOVED]

■ 6. Remove part 1750.

Mark A. Calabria,

Director, Federal Housing Finance Agency.

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