Federal Housing Finance Agency

Enterprise Capital Requirements

Overview of Notice of Proposed Rulemaking

June 19, 2018

AGENDA

Overview	**3**
Purpose of the Proposed Rule	**4**
Proposed Rule Considerations	**6**
Summary of the Proposed Rule	**9**
Proposed Risk-Based Capital Requirements	**10**
Single-Family Credit Risk	13
Multifamily Credit Risk	15
Capital Relief for Credit Risk Transfers	18
Proposed Minimum Leverage Capital Alternatives	**22**
Statutory Definition of Capital	**23**
Impact	**25**

OVERVIEW

- The Federal Housing Finance Agency (FHFA) suspended regulatory capital requirements after placing Fannie Mae and Freddie Mac (the Enterprises) into conservatorships in September 2008.
- Despite the Enterprises' strict capital limits imposed by the Senior Preferred Stock Purchase Agreements, FHFA identified the need to develop an aligned risk measurement framework to better evaluate each Enterprise's business decisions during conservatorship.
- To address this need, FHFA developed the Conservatorship Capital Framework (CCF), which went into effect in 2017. The CCF provides the basis for FHFA's proposed capital regulation (Proposed Rule).

PURPOSE

- The Proposed Rule achieves several objectives:
  - Transparently communicates FHFA's views as a financial regulator about capital adequacy.
  - Prepares FHFA to modify the capital requirements for future housing finance entities, even if significantly different from the Enterprises, upon completion of housing finance reform by Congress.
  - Allows market participants to comment on the proposed capital requirements for Fannie Mae and Freddie Mac.
  - Provides valuable feedback to FHFA to refine the CCF, which will continue to apply to the Enterprises during conservatorship.
- Any final rule for Enterprise regulatory capital requirements would remain suspended during conservatorship.

PURPOSE CONTD.

For clarification:

- In proposing this rule, FHFA is not attempting to take a position on housing finance reform.
- The Proposed Rule is not a step towards recapitalizing the Enterprises and administratively releasing them from conservatorship.
- FHFA's position continues to be that it is the role of Congress and the Administration to determine the future of housing finance reform and what role, if any, the Enterprises should play in that system.

PROPOSED RULE CONSIDERATIONS

- The Enterprises should operate under a robust capital framework that is similar to regulatory capital frameworks applicable to banks and other financial institutions, but appropriately differentiates from other capital requirements based on the actual risks associated with the Enterprises' businesses.
- FHFA should use experience gained during the conservatorships of the Enterprises to ensure that the capital requirements secure the safety and soundness of the Enterprises while also supporting their statutory missions to foster and increase liquidity of mortgage investments and promote access to mortgage credit throughout the Nation.

PROPOSED RULE CONSIDERATIONS CONTD.

FHFA considers it prudent that the risk-based capital requirements:

- Include components of credit risk, market risk, operational risk, and a going-concern buffer;
- Require full life-of-loan capital for each loan, at acquisition;
- Cover losses for different loan categories in a severe stress event comparable to the recent financial crisis, but with house price recoveries somewhat more conservative than experienced following the recent crisis;
- Provide capital relief for credit risk transfer (CRT) transactions; and
- Do not count future Enterprise revenue as capital.

PROPOSED RULE CONSIDERATIONS CONTD.

- FHFA's ongoing Prompt Corrective Action authority to increase risk-based or minimum leverage capital requirements by order or regulation make additional capital buffers beyond those FHFA proposes, such as a countercyclical buffer, unnecessary at this time.

- It may be necessary in the future for FHFA to revise this rule, develop a separate capital planning rule to more fully address stress testing of the Enterprises and other factors, and develop a liquidity rule, the timing of which will depend on how the Enterprises evolve and on the details of housing finance reform.

SUMMARY OF THE PROPOSED RULE

The Proposed Rule establishes the following regulatory capital framework for the Enterprises:

- A new framework for risk-based capital requirements; and
- A revised minimum leverage capital requirement with two alternative proposals.
- In order to be considered adequately capitalized, an Enterprise would have to meet the higher of the risk-based capital requirement or the minimum capital requirement.

RISK-BASED CAPITAL REQUIREMENTS

The Proposed Rule's risk-based capital requirements for single-family and multifamily assets and guarantees include the following four components:

- Granular **credit risk** capital requirements to account for default risk;
- **Market risk** capital requirements to account for spread risk;
- **Operational risk** capital requirement to account for risk in ongoing business operations; and
- **Going-concern buffer** that provides the Enterprises with sufficient capital to continue operating for one-two years after a stress event without external capital support.

RISK-BASED CAPITAL REQUIREMENTS – CREDIT RISK

For credit risk capital requirements, in order to differentiate risk, the Proposed Rule categorizes single-family and multifamily loans by loan segment:

- Single-family loan segments:
  - New originations;
  - Performing seasoned loans;
  - Re-performing loans – non-modified;
  - Re-performing loans – modified; and
  - Non-performing loans.

- Multifamily loan segments:
  - Fixed-rate loans; and
  - Adjustable-rate loans.

RISK-BASED CAPITAL REQUIREMENTS – CREDIT RISK CONTD.

The Proposed Rule calculates credit risk capital requirements using the following:

- **Base grids** determine credit risk capital requirements for “baseline” loans by loan segment.
- **Risk multipliers** adjust the credit risk capital requirements to reflect individual risk characteristics of loans that differ from those of baseline loans.
- **Credit enhancement multipliers** decrease credit risk capital requirements on loans with loan-level credit enhancement.
  - Counterparty haircuts moderate the decrease in credit risk capital requirements from loan-level credit enhancement to reflect counterparty credit risk.
- Reduce credit risk capital requirements to reflect **capital relief** from CRT transactions.

SINGLE-FAMILY CREDIT RISK – NEW ORIGINATIONS

Base Grid for Single-Family New Originations

(in bps)		Original Loan-To-Value (OLTV) (%)								
Original Credit Score		(30,60]	(60,70]	(70,75]	(75,80)	80	(80,85]	(85,90]	(90,95]	
[680, 700)		53	154	230	300	339	405	528	656	
[700, 720)		46	134	199	259	293	344	452	566	
[720, 740)	…	39	115	171	222	251	300	400	507	…
[740, 760)		31	95	141	183	206	244	326	417	
[760, 780)		25	77	114	148	166	195	262	339	
>= 780		19	59	87	113	127	148	200	258	

Base Grid Loan Characteristics

- Purchase
- Owner occupied or second home
- 1-Unit
- Multiple borrowers
- DTI between 25% and 40%
- 30-year fixed-rate mortgage (FRM)
- Loan size greater than $100,000
- Retail channel sourced
- No second lien

Select Single-Family Risk Multipliers

Loan Purpose	**Purchase**	**1.0**
	Cashout Refinance	1.4
	Rate/Term Refinance	1.3
Occupancy Type	**Owner Occupied or Second Home**	**1.0**
	Investment	1.2
Property Type	**1-Unit**	**1.0**
	2-4 Unit	1.4
	Condominium	1.1
	Manufactured Home	1.3
Number of Borrowers	**Multiple Borrowers**	**1.0**
	One Borrower	1.5
Debt-To-Income (DTI)	DTI <= 25%	0.8
	25% < DTI <= 40%	**1.0**
	DTI > 40%	1.2
Product Type	**FRM 30 year**	**1.0**
	ARM 1/1	1.7
	FRM 15 year	0.3
	FRM 20 year	0.6
Loan Size at Origination	UPB <= $50,000	2.0
	$50,000 < UPB <= $100,000	1.4
	UPB > $100,000	**1.0**
Credit Enhancement Multipliers by Guide for 30 Yr Amortizing	OLTV: (80-85], CvrgPct* = 12%	0.867
	OLTV: (85-90], CvrgPct = 25%	0.551
	OLTV: (90-95], CvrgPct = 30%	0.412
	OLTV: (95-97], CvrgPct = 35%	0.322
	OLTV: >97, CvrgPct = 35%	0.272

* CvrgPct = Coverage Percentage

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SINGLE-FAMILY CREDIT RISK EXAMPLE

The product of (1) base grid capital, (2) risk multipliers, and (3) credit enhancement multipliers after adjusting for counterparty haircuts yields (4) credit risk capital.

Consider a newly originated loan with OLTV of 90 percent and an original credit score of 730 that has identical features to the baseline loan except for the following: property type of condominium, DTI of 42 percent, and mortgage insurance coverage of 25 percent.

(1) Base grid capital 400 bps

(2) Select risk multipliers

Risk multiplier	Value
Loan purpose	1.0
Occupancy type	1.0
Property type	1.1
Number of borrowers	1.0
DTI	1.2
Product type	1.0
Loan size	1.0

(3) Credit enhancement multiplier and counterparty haircut

Item	Value
Credit enhancement multiplier	0.551
Counterparty haircut	17.2%

(4) Credit risk capital = (400 bps) x (1.1 x 1.2) x (1 - (1 - 0.551) x (1 – 0.172)) = **332 bps**

MULTIFAMILY CREDIT RISK – FIXED-RATE LOANS

Base Grid for Multifamily Fixed-Rate Loans

(in bps)		Acquisition LTV or MTMLTV (%)				
Acquisition DSCR or MTMDSCR		(55, 65]	(65, 70]	(70, 75]	(75, 80]	
				⋮		
[1.25, 1.30)		520	593	645	690	
[1.30, 1.35)		470	528	568	608	
[1.35, 1.50)	…	428	475	510	548	…
[1.50, 1.65)		315	345	375	408	
[1.65, 1.80)		245	270	298	330	

* DSCR = Debt Service Coverage Ratio; MTM = Mark-To-Market.

Base Grid Loan Characteristics

- Loan never been delinquent or modified
- Not interest-only loan
- $10 million loan amount
- 30-year amortization period
- Not a special product
- 10-year balloon

Interest-Only Loans

For interest-only loans, use fully amortizing acquisition DSCR (or MTMDSCR) when determining base capital.

Select Risk Multipliers

Category	Condition	Multiplier
Payment Performance	**Performing**	**1.0**
	Delinquent	1.1
	Re-Performing (without Modification)	1.1
	Modified	1.2
Interest-Only	**Not Interest-Only**	**1.0**
	Interest-Only	1.1
Original/ Remaining Loan Term (years)	Loan Term <= 1	0.7
	1 < Loan Term <= 3	0.8
	3 < Loan Term <= 5	0.9
	5 < Loan Term <= 10	**1.0**
	Loan Term > 10	1.2
Original Loan Size ($millions)	Loan Size <= $3	1.5
	$3 < Loan Size <= $5	1.2
	$5 < Loan Size <= $10	**1.0**
	$10 < Loan Size <= $25	0.8
	Loan Size > $25	0.7

RISK-BASED CAPITAL REQUIREMENTS – MARKET RISK

The Proposed Rule calculates market risk capital requirements, which focus on spread risk, for the following retained portfolio assets:

- Single-family and multifamily whole loans and agency securities;
- Private-label securities;
- Commercial mortgage-backed securities; and
- Other assets with market risk exposure.

The following three approaches are used to measure market risk:

- Single-point estimate;
- Spread shock; and
- Internal models.

RISK-BASED CAPITAL REQUIREMENTS – OTHER

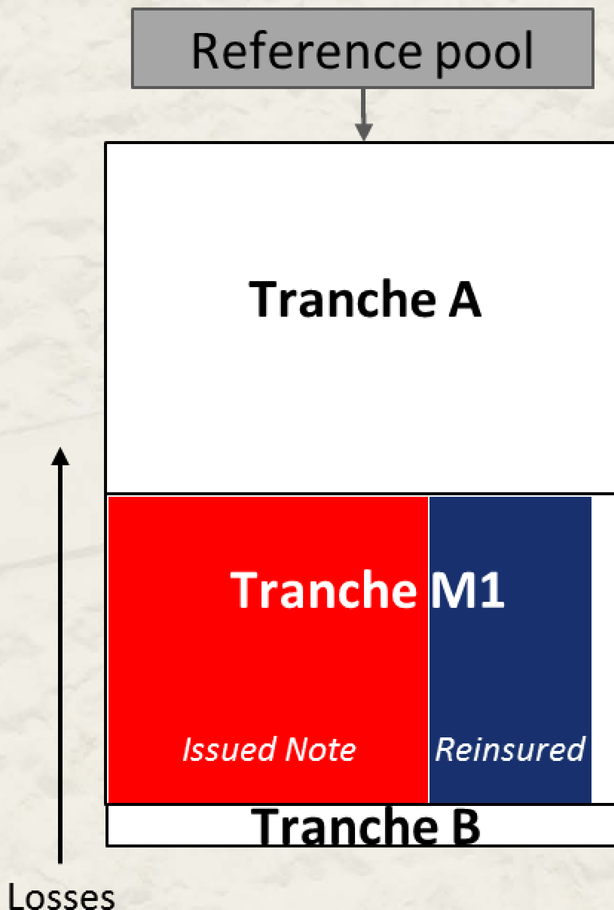
The Proposed Rule includes an operational risk capital requirement and a going-concern buffer.

- The operational risk capital requirement is 8 basis points (bps).
  - Reflects the inherent risk in ongoing business operations.
  - Based on the Basel operational risk methodology.
- The going-concern buffer is 75 bps.
  - Provides the Enterprises with sufficient capital to continue operating for one-two years after a stress event without external capital support.

CAPITAL RELIEF FOR CREDIT RISK TRANSFERS

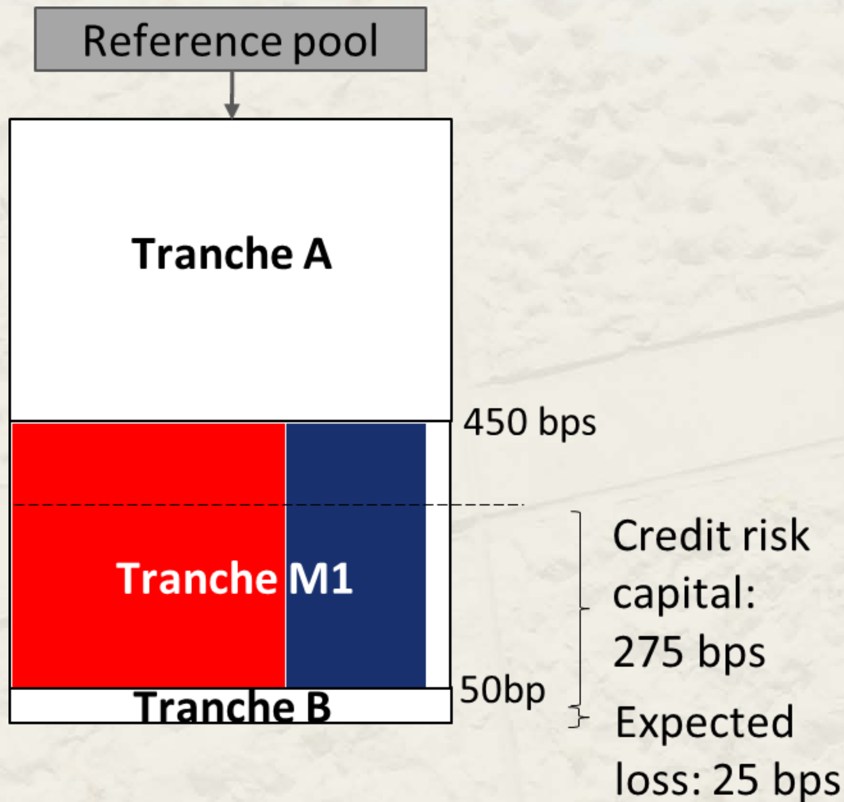
- Enterprise CRTs include capital markets, reinsurance, and loss sharing programs. Examples include:
  - Single-family: STACR/CAS, ACIS/CIRT, lender recourse.
  - Multifamily: DUS, K-Deals.
- The Proposed Rule's stepwise approach for capital relief:
  1. Distribute credit risk capital on the underlying loans to the tranches of the CRT independent of tranche ownership such that higher capital requirements are applied to more junior tranches;
  2. Calculate capital relief accounting for tranche ownership;
  3. Adjust capital relief for loss timing to address the mismatch between lifetime losses and the CRT's term of coverage;
  4. Adjust capital relief for counterparty credit risk on loss sharing transactions; and
  5. Aggregate capital relief across tranches.

SINGLE-FAMILY CRT CAPITAL RELIEF EXAMPLE



- Reference pool includes loans acquired by an Enterprise and deposited into MBS.
- Credit and prepayment performance of the reference pool determine the performance of the CRT's tranches.
- Tranche B absorbs losses first. Tranche M1 absorbs losses after tranche B and before tranche A.
- Enterprises typically retain tranches B and A, and 5 percent of tranche M1. The remainder of tranche M1 is typically divided between issued notes through capital markets and reinsurance.

SINGLE-FAMILY CRT CAPITAL RELIEF EXAMPLE CONTD.



Tranche Ownership

A and B	Retained by Enterprise.
M1	60% capital markets (red), 35% reinsured (blue), and 5% retained (white).

CRT Coverage

Coverage term	10 years

Reference Pool

Single-family loans	$1 billion, fixed-rate 30 year, 60%<OLTV<=80%
Credit risk capital	275 bps (excludes going-concern buffer and operational risk)
Expected loss	25 bps

Reinsurance

Reinsurer	Collateral: $2.8 million, Haircut: 5.2%.

SINGLE-FAMILY CRT CAPITAL RELIEF EXAMPLE CONTD.

1.	**Distribute credit risk capital**	
	M1 credit risk capital	**250 bps** = 300 bps – 50 bps
2.	**Capital relief accounting for ownership**	
	Capital markets	150 bps = 60% x 250 bps
	Reinsurance	87.5 bps = 35% x 250 bps
	Total	**237.5 bps**
3.	**Capital relief updated to account for loss timing**	
	Capital markets	132 bps = 88% x 150 bps
	Reinsurance	77 bps = 88% x 87.5 bps
	Total	**209 bps**
4.	**Capital relief updated to account for counterparty credit risk**	
	Counterparty credit risk capital	$= \frac{[(77 \text{ bps} \times \$1 \text{ billion} - \$2.8 \text{ million}) \times 5.2\%]}{\$1 \text{ billion}}$
		= 2.5 bps
5.	**Capital relief**	
	Capital relief	= 132 bps + 77 bps – 2.5 bps = 209 bps – 2.5 bps
		= 206.5 bps

MINIMUM LEVERAGE CAPITAL REQUIREMENT ALTERNATIVES

The Proposed Rule includes two alternative minimum leverage capital requirements:

- The **2.5 Percent Alternative**: 2.5 percent of total assets and off-balance sheet guarantees.
  - This approach requires the Enterprises to hold a minimum amount of capital for assets and guarantees that does not differentiate between the risk characteristics of assets and guarantees, consistent with the Basel leverage capital requirements for banks.

- The **Bifurcated Alternative**: 1.5 percent of trust assets and 4.0 percent of non-trust assets.
  - This approach, consistent with the approach for minimum leverage capital requirements in the Enterprises' Safety and Soundness Act, differentiates between the greater funding risks of the Enterprises' non-trust assets and the lower funding risks of the Enterprises' trust assets, but increases the capital requirements for both types of assets.

STATUTORY DEFINITION OF CAPITAL

- Core capital is used to meet the minimum leverage capital requirement and is defined as 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.

- Total capital is used to meet the risk-based capital requirements and is defined as the sum of the following:
  - Core capital;
  - A general allowance for foreclosure losses; 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.

DEFERRED TAX ASSETS

- The statutory definition of core capital does not limit the amount of Deferred Tax Assets (DTAs) that count as capital.
- The Proposed Rule would establish a risk-based capital requirement for DTAs that would offset the DTAs included in capital in a manner generally consistent with the Basel III treatment of DTAs.

IMPACT AS OF DECEMBER 31, 2007

- FHFA estimated the Enterprises' risk-based capital requirements as of December 31, 2007, under the Proposed Rule.
- The capital requirements, when combined with the Enterprises' revenues, would have exceeded the Enterprises' respective peak cumulative capital losses resulting from the financial crisis including losses from write-downs of DTAs.
- Peak cumulative capital losses are defined as losses sustained between 2008 and the dates at which the Enterprises no longer required draws from the Treasury Department to eliminate negative net worth – the fourth quarter of 2011 for Fannie Mae and the first quarter of 2012 for Freddie Mac.

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IMPACT – RISK-BASED CAPITAL REQUIREMENTS

Comparison of proposed risk-based capital requirements as of December 31, 2007 to peak cumulative capital losses.

	Fannie Mae $ in billions	**Fannie Mae** Percent of Total Assets and Off-Balance Sheet Guarantees	**Freddie Mac** $ in billions	**Freddie Mac** Percent of Total Assets and Off-Balance Sheet Guarantees
Proposed Risk-Based Capital Requirement as of Dec 31, 2007	$171	5.6%	$110	5.0%
Peak Cumulative Capital Losses	$167	5.5%	$98	4.5%
Relative to Peak Capital Losses	$3	0.1%	$12	0.5%

Peak cumulative capital losses are defined as losses sustained between 2008 and the dates at which the Enterprises no longer required draws from the Treasury Department to eliminate negative net worth – the fourth quarter of 2011 for Fannie Mae and the first quarter of 2012 for Freddie Mac.

IMPACT AS OF SEPTEMBER 30, 2017

- FHFA estimated the Enterprises' capital requirements as of September 30, 2017.
- The proposed risk-based capital requirement is $181 billion (combined for both Enterprises).
- Under the proposed 2.5 Percent Alternative, the minimum leverage capital requirement is $139 billion (combined for both Enterprises).
- Under the proposed Bifurcated Alternative, the minimum leverage capital requirement is $103 billion (combined for both Enterprises).

IMPACT – RISK-BASED CAPITAL REQUIREMENTS

Estimated risk-based capital requirements as of September 30, 2017 per the Proposed Rule – **by Risk Category**

Risk Category	Fannie Mae $billions	Freddie Mac $billions	Combined $billions	Percent of Total
Credit Risk	$59	$32	$91	50%
Market Risk	$10	$10	$19	11%
Going-Concern Buffer	$24	$16	$40	22%
Operational Risk	$3	$2	$4	2%
Other (DTAs)	$20	$7	$27	15%
Total Risk-Based Capital Requirement	$115	$66	$181	100%
Percent of Total Assets and Off-Balance Sheet Guarantees	3.43%	2.96%	3.24%	

IMPACT – RISK-BASED CAPITAL REQUIREMENTS CONTD.

Estimated risk-based capital requirements as of September 30, 2017 per the Proposed Rule – **by Asset Category**

Asset Category	Enterprises Combined $billions	Enterprises Combined bps	Percent of Total
Single-Family Whole Loans, Guarantees and Related Securities	$131	273	72%
Multifamily Whole Loans, Guarantees and Related Securities	$14	278	8%
Private-Label Securities	$3	2,336	2%
Commercial Mortgage-Backed Securities	$0.02	279	0%
Other (DTA)	$27	811	15%
Other Assets	$6	192	3%
Total Risk-Based Capital Requirement	$181		100%

IMPACT – MIMIMUM LEVERAGE CAPITAL REQUIREMENTS

Estimated minimum leverage capital requirements as of September 30, 2017 per the Proposed Rule.

	Fannie Mae $billions	**Freddie Mac $billions**	**Combined $billions**
2.5 Percent Alternative	$84	$56	$139
Percent of Total Assets and Off-Balance Sheet Guarantees	2.5%	2.5%	2.5%
Bifurcated Alternative	$60	$43	$103
Percent of Total Assets and Off-Balance Sheet Guarantees	1.8%	1.9%	1.9%

CONTACT US

Submit Written Comments to:

www.fhfa.gov/SupervisionRegulation/Rules/Pages/Enterprise-Capital-Requirements.aspx

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Questions?

Thank You for Joining Us!