GUY CARPENTER

COMMENT ON PROPOSED RULEMAKING REGARDING CAPITAL ADEQUACY OF ENTERPRISES

AUGUST 31, 2020

MARSH & McLENNAN COMPANIES

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Introduction

Guy Carpenter appreciates the opportunity to comment on the Federal Housing Finance Agency's (FHFA) Enterprise Regulatory Capital Framework, RIN 2590-AA95 (the Proposed Rule)[1]. FHFA's stated goal for the Proposed Rule is "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]

Guy Carpenter enthusiastically embraces this mission and has supported it by participating in the Enterprises' Agency Credit Insurance Structure (ACIS) and Credit Risk Insurance Transfer (CIRT) programs. The ACIS and CIRT programs will help the Enterprises weather the uncertainty surrounding the recent pandemic-related economic volatility.

Our analysis of the Proposed Rule relies on our mortgage credit experience working with the Enterprises and with global mortgage insurers, as well as on our century of experience with reinsurance across market and economic cycles. Based on that experience, we firmly believe that an appropriate capital framework for the Enterprises should include, and properly promote and calibrate, Credit Risk Transfer (CRT).

The Proposed Rule's capital framework improves on the 2018 proposal in significant respects and has many laudable features. For example, the countercyclical buffer for single-family exposures is a significant step forward. Likewise, we believe the single-family lookup grids and multipliers that assign an exposure-specific risk weight based on the risk characteristics of the mortgage exposure are well calibrated to actual risk.

We also appreciate that the Proposed Rule, throughout, poses thoughtful questions for public response and comment and thus recognizes that careful analysis from stakeholders can serve to improve the final rule. In that spirit, we outline several modifications to the Proposed Rule that, in our opinion, will more effectively enable each Enterprise "to fulfill its statutory mission across the economic cycle" through effective and carefully deployed use of CRT.

Specifically, there are several elements of the proposed CRT framework that, if adopted in a final rule, will likely eliminate the ability of CRT to support the Enterprises and the mortgage market across economic cycles.

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[1] Enterprise Regulatory Capital Framework, 85 FR 39274 (proposed June 30, 2020) (hereinafter "Proposed Rule").

[2] Proposed Rule, 85 FR at 39275.

The modifications we suggest will better align incentives and outcomes with the missions set forth by the FHFA, while staying true to the baseline framework. Guy Carpenter strongly supports a revised framework by which the Enterprises will emerge from conservatorship and ultimately facilitate a transition to an improved secondary mortgage market.

Sincerely,

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Managing Director and Global Practice Leader of Mortgage Credit

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CRT Overview

Following the 2007-08 financial crisis and subsequent conservatorship, the Enterprises operate today under a fundamentally altered business model calibrated to ensure the Enterprises can continue to meet their statutory missions even during a severe economic downturn. These fundamental changes included a substantial reduction in investment risk through retained mortgage portfolios, more conservative underwriting standards, and the establishment and proliferation of Credit Risk Transfer programs. Through its conservatorship, the FHFA has incentivized the Enterprises to implement these changes. This business model has stabilized and repositioned the Enterprises to continue fulfilling their housing mission, while substantially reducing the potential risk to the U.S. taxpayer and preparing for transition out of conservatorship. The success of the Credit Risk Transfer program has been widely acknowledged.[3]

Fannie Mae and Freddie Mac established CRT in line with the FHFA conservatorship scorecard objective for "the enterprises to reduce taxpayer risk through increasing the role of private capital in the mortgage market."[4] Beginning with small nascent transactions executed in the capital and (re)insurance markets, to date over 200 CRT transactions have been completed, transferring over $130 billion of risk on over $3.5 trillion of single and multi-family mortgages[5]. The private capital, bankers, brokers, and other service providers supporting the CRT programs have "bought-in" to CRT's role in the evolution of the Enterprises, resulting in a deep and broad market for the efficient transfer of mortgage credit risk across multiple transaction and execution types. It is also important to note that reinsurance CRT is frequently placed on a forward basis where future credit risk is protected further reducing pro cyclicality.

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[3] *See, e.g.*, Don Layton, Demystifying GSE Credit Risk Transfer Part I – What Problems Are We Trying to Solve?, Joint Center for Housing Studies at 6, 8-9, 14-16 (Jan. 2020), https://www.jchs.harvard.edu/sites/default/files/harvard_jchs_gse_crt_part1_layton_2020_0.pdf; Laurie Goodman, Credit Risk Transfer: A Fork in the Road, Urban Institute at 1 (June 2018), https://www.urban.org/sites/default/files/publication/98578/credit_risk_transfer_a_fork_in_the_road_0.pdf; United States Department of the Treasury, Press Release, Remarks by Counselor to the Secretary for Housing Finance Policy Dr. Michael Stegman Before the Goldman Sachs Third Annual Housing Finance Conference (Mar. 5, 2015), https://www.treasury.gov/press-center/press-releases/Pages/jl9987.aspx.

[4] Federal Housing Finance Agency, The 2014 Strategic Plan for the Conservatorships of Fannie Mae and Freddie Mac (May 13, 2014), https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2014StrategicPlan05132014Final.pdf.

[5] Federal Home Loan Mortgage Corporation, About CRT, https://crt.freddiemac.com/about-crt.aspx (last visited Aug. 29, 2020); Federal National Mortgage Association, Single-Family Credit Insurance Risk Transfer (Mar. 2020), https://www.fanniemae.com/resources/file/credit-risk/pdf/credit-insurance-risk-transfer-overview.pdf; Federal National Mortgage Association, Multifamily Credit Insurance Risk Transfer, https://www.fanniemae.com/portal/funding-the-market/credit-risk/multifamily/mf-credit-insurance-risk-transfer.html (last visited Aug. 29, 2020).

The CRT programs are designed to protect the Enterprises against un-expected credit losses on defined portfolios of guaranteed mortgage loans. This has been evidenced in the current environment, where the Enterprises have recognized over $1 billion[6] in expected credit enhancement recoveries through the first two quarters of 2020 resulting from pandemic-related increases in credit-loss provisions.

The loss-absorbing capital provided by CRT comes from a diverse group of private investors and reinsurers, most of whom will not be potential participants in an equity capital raise as the Enterprises seek to exit conservatorship. Reinsurers and fixed-income investors that participate in CRT typically target stable, predictable returns on credit investments, rather than the more volatile, higher-upside returns that equity investors seek. The credit market is estimated to be substantially larger in size than the equity market,[7] and CRT provides an avenue for credit investors to provide considerable amounts of capital to the Enterprises. In other words, the CRT program brings a more diverse range, and larger pools, of capital to support the Enterprises.

Specific to the areas in which Guy Carpenter participates most actively—the Freddie Mac ACIS and Fannie Mae CIRT—CRT executions provide the Enterprises with access to the significant balance sheets of the global reinsurance market participants. Through the estimated $435 billion[8] of dedicated reinsurance market capital, the Enterprises access long-term, stable markets with a proven track record of fulfilling commitments and trading forward through difficult times. In addition to providing financial support, reinsurers (as well as other CRT market participants) have also enhanced the Enterprises by providing another view of risk, adding both pricing transparency and an additional risk-management feedback loop.

The Proposed Rule notes that FHFA seeks to ensure both quality and quantity of capital in the Enterprises. CRT has provided both. Yet, despite the success of the Enterprises' CRT programs in meeting this goal, the Proposed Rule's treatment of CRT in the capital framework would, if adopted, encourage a shift away from CRT and back toward the pre-2008 business model of increased retained risk and reliance on equity as the only form of external capital. This reversion would conflict with the countercyclical mission of the Enterprises.

Diversity in sources and forms of capital has proven to be a critical component of capital management for successful companies throughout business cycles. Entering the 2007-08 financial crisis, the Enterprises (and private mortgage insurers) were largely dependent on equity capital only, with a "buy and hold" mentality with respect to guaranteed credit risk. Given all that has transpired in the interim, it is clear that this strategy was neither a successful nor a sustainable approach. Therefore, Guy Carpenter believes that any framework for the

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[6] Federal National Mortgage Association, Second Quarter 2020 Form 10-Q at 39; Federal Home Loan Mortgage Corporation, Second Quarter 2020 Form 10-Q at 41.

[7] Securities Industry and Financial Markets Association, 2019 SIFMA Capital Markets Fact Book, https://www.sifma.org/wp-content/uploads/2019/09/2019-Capital-Markets-Fact-Book-SIFMA.pdf.

[8] This figure is a Guy Carpenter and AM Best estimate of the amount of dedicated reinsurance sector capital as of December 31, 2019. It differs from AON's higher figure as that figure includes balance sheets where reinsurance may be written on an insurance balance sheet.

Enterprises' capital going forward must incentivize continued diversification of capital sources by providing prudent and appropriate credit for CRT transactions.

In its current iteration, the proposed Enterprise Regulatory Capital Framework does not include such incentives and, viewed as a whole, would render CRT economically untenable. The remainder of this Comment analyzes the specific elements of the Proposed Rule that support this statement and respectfully suggests alternatives for FHFA's consideration.

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Comments on the Proposed Rule

The Capital Framework Should Ensure Quantity and Quality of Capital by Embracing Diverse Sources of Capital, Including CRT

Guy Carpenter is fully supportive of the FHFA's objective to increase the quantity and quality of capital available to the Enterprises. As the Proposed Rule rightly points out: "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."[9] To ensure quality, quantity, and loss-absorbing capacity of capital across economic conditions and cycles, it is crucial that the Enterprises embrace diverse sources and forms of capital, including CRT. Ensuring diverse sources and forms of capital supports the FHFA's objectives and the Enterprises' mission in multiple ways.

First, and most importantly, maintaining CRT capital will strengthen the stability of the Enterprises. A more diverse capital base is more reliable and resilient to stress, furthering the Enterprises' goal of providing "stability and ongoing assistance to the secondary mortgage market across the economic cycle, in particular during periods of financial stress."[10] By reducing potential loss and responding in times of stress, CRT serves as an effective form of countercyclical capital. As Exhibit 1 illustrates, a reference mortgage pool's income is protected after the Enterprise retains a modest level of risk (25 bps of the pool's unpaid principal balance in this example) up to a specified level of stress losses (400 bps).

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[9] Proposed Rule, 85 FR at 39285.

[10] Proposed Rule, 85 FR at 39275.

Exhibit 1: Certainty of Income Increases With CRT – Illustrative
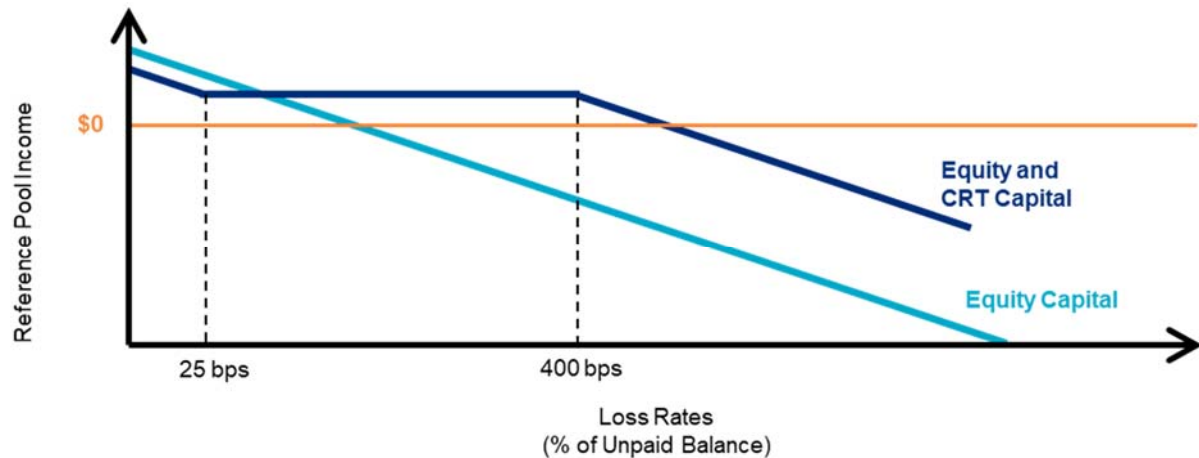
The effect of CRT-protected loss pools protects both the Enterprises and taxpayers. The 2007-08 crisis proved the danger of relying on a single form of capital generally and relying solely on equity capital in particular. It did not work then and it will not work now. A diverse capital framework ensures that if a particular economic cycle stresses one form of capital the Enterprises will have other loss-absorbing forms of capital to fall back on.

Second, maintaining CRT capital enhances the ability of the Enterprises to emerge from conservatorship—and reduces costs to U.S. homeowners—by reducing the Enterprises' overall cost of capital.
*   Equity capital is the most expensive form of capital, so the ability to rely on CRT capital reduces the amount of equity capital the Enterprises will have to raise, which is already many times the level of any prior IPO.
*   Moreover, CRT increases the demand and attractiveness of equity capital by lowering Enterprise capital costs and improving potential investor returns.
*   The lower capital costs created by utilizing CRT ultimately translates into lower costs for U.S. homeowners and greater affordability. The alternative—sole reliance on equity capital—will require the Enterprises to increase their guarantee fee to attract necessary equity capital.

Third, maintaining CRT capital creates incentives for the Enterprises to operate in a prudent manner. CRT participants have significant "skin in the game" and provide a valuable oversight and surveillance function and a market signal of increased risk. These participants provide an immensely valuable role when the short-term interests of equity holders may surface and put the long-term safety and soundness of the Enterprises at risk.

Despite these benefits of CRT, the Proposed Rule devalues CRT to the point where it will be economically unsustainable for the Enterprises from a cost and capital-benefit perspective. The Proposed Rule does not recognize any of the benefits of having diverse sources of private CRT capital as a complement to a strong equity capital base. Guy Carpenter believes that sensible haircuts to CRT are justified, but once so adjusted, CRT capital should be put on par with equity capital.

If FHFA ultimately adopts the Proposed Rule's disincentives against the use of CRT, it is simply unrealistic to expect the Enterprises to utilize CRT in the future. Prior to the 2008 financial crisis, CRT did not receive capital credit and, unsurprisingly, the Enterprises retained all the risk. In wake of the publication of the Proposed Rule, Fannie has already ceased all CRT in anticipation of even the possibility that FHFA will adopt the Proposed Rule in its current form, and Freddie has indicated that it will substantially curtail its use of CRT if the Proposed Rule is adopted in its current form.[11] In light of this context, the benefits of CRT that have not been valued in the Proposed Rule should be weighed against some of the arbitrary applications of adjustments and floors in the new proposal.

The Enterprises Are Different From Banks and Should Be Treated Accordingly

The Proposed Rule's treatment of CRT stems in large part from an inapt comparison of the Enterprises capital framework to bank capital frameworks. On the surface, the Enterprises and banks might resemble each other: they both make up part of the value chain in housing finance, provide competing funding models, and must be regulated for safety and soundness. But these are superficial similarities, not deep causal traits.   The Enterprises are financial guarantors and are not exposed to the same risks as banks, as illustrated in Exhibit 2 below.

Exhibit 2: A Comparison of Risk Retentions, Enterprises and Banks

	Enterprises	Banks
Mortgage Credit Risk	●	●
Other Consumer/Commercial Credit Risk		●
Take Deposits		●
Liquidity Risk		●
Interest Rate Risk		●

While banks and the Enterprises are both exposed to mortgage credit risk—one of the most understood and widely modeled risks in the financial system—their risk profiles otherwise diverge in important ways. Unlike the Enterprises, which have portfolios that are limited to mortgage credit, banks assume an array of more volatile classes of risk in order to earn positive yield spread. Banks take deposits, the Enterprises do not. As such, banks assume funding risk and are exposed to "run on the bank" liquidity risks. And, the interest-rate risk that sank many of the Savings and Loans in the 1980s is fully sold by the Enterprises through MBS transactions.

In sum, significant differences exist between banks and the Enterprises and these differences require a thoughtful departure from strict banking regulations in order to assure the Enterprises

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[11] Federal National Mortgage Association, Second Quarter 2020 Form 10-Q at 5; Federal Home Loan Mortgage Corporation, Second Quarter 2020 Form 10-Q at 65; Federal Home Loan Mortgage Corporation, Financial Results Press Release, Second Quarter 2020 Financial Results at 6-7 (July 30, 2020), http://www.freddiemac.com/investors/financials/pdf/2020er-2q20_release.pdf.

meet their unique mission. The Proposed Rule relies too heavily on comparisons to Basel III and bank regulatory capital. Guy Carpenter's recommendations work within the architecture of the Proposed Rule as presented but consider the Enterprises' unique structure and role.

This subsection responds to FHFA question 103.

The Leverage Ratio and Inconsistent Application of CRT Capital Credit

Under the Proposed Rule, the binding capital requirement for the Enterprises is the greater of either the risk-based requirements or the leverage ratio capital requirements. The binding requirement is calculated quarterly and may oscillate from risk-based capital to leverage ratio from one quarter to the next. Under the risk-based approach, the Enterprises receive a benefit from CRT; under the leverage-ratio approach, they do not.

This inconsistent approach is highly consequential for the Enterprises' ultimate use of CRT. Most CRT contractual obligations are in excess of ten-year terms. It is unlikely that an Enterprise will assume such a long-term economic commitment when its capital benefits will not be recognized under the leverage-ratio approach. The economics simply are not justified because of the difficulty of forecasting out 40 quarters and attempting to determine whether the leverage ratio will be the binding requirement in any given quarter. As noted above, we need not speculate as to whether the Proposed Rule will turn the Enterprises away from CRT: it already has.[12]

The leverage-ratio approach is most commonly deployed as a framework for regulating bank capital. As noted above, however, banking regulation frameworks are not an apt comparison for the Enterprises. A more apt parallel to consider is insurance capital frameworks, which provide a meaningful comparison because the Enterprises are mono-line insurers. Insurance capital frameworks do not typically incorporate leverage ratios but do recognize and provide credit to the presence of risk transfer.[13] Guy Carpenter respectfully requests that FHFA adopt a straightforward and sensible solution in the final rule: afford the same capital credit under the leverage ratio as under the risk-based capital framework (after reasonable haircuts for CRT).

The Leverage Ratio Should Be a Backstop

When non risk-based measures become the binding capital constraint on a regular basis, incentives to accumulate risk are at their highest. The leverage ratio is, therefore, an effective tool only when it rarely is the binding constraint. Under the Proposed Rule, however, the leverage ratio is set at 2.5% plus a 1.5% buffer, for a total of 4%. Under these parameters, the leverage-ratio requirement will frequently be binding unless the Enterprises substantially decrease their support of the American housing market. To manage such a substantial capital

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[12] *See* supra note 11.

[13] *See* National Association for Insurance Commissioners, Credit for Reinsurance Model Law, https://www.naic.org/store/free/MDL-785.pdf; National Association for Insurance Commissioners, Credit for Reinsurance Model Regulation, https://www.naic.org/store/free/MDL-786.pdf.; Private Mortgage Insurer Eligibility Requirements, https://singlefamily.fanniemae.com/media/6151/display.

requirement, the Enterprises would have to shrink their guarantee portfolio regardless of economic conditions. In today's uncertain economic climate, the Enterprises should continue to provide the support that has been critical to the housing stability through the pandemic.

Accordingly, to ensure that the leverage ratio is a backstop rather than the predominant framework, it should be reduced. The Proposed Rule's quantitative justification for the chosen level is a comparison to banking regulatory levels of 5%, but those frameworks are meant to manage far riskier portfolios. Banks invest across multiple asset classes and retain significant interest-rate, market, and other risk that justify higher capital requirements. The Enterprises do not have significant investment portfolios and net assets are dominated by loans in securitization trusts for which the Enterprises fully transfer interest-rate and market risk. The Proposed Rule fails to adequately acknowledge this critical difference.

The appropriate level of leverage ratio should be calibrated to the risk in the business model. Any credible measure of historical experience or risk-based modeling, including DFAST stress tests[14] and 2008 replay scenarios,[15] suggests that capital requirements below the 2.5% will be sufficient. Considering that FHFA has taken such a thorough and thoughtful approach to the risk-based side, and that a frequently binding leverage-ratio requirement introduces undesirable risk-taking incentives, Guy Carpenter respectfully recommends a bifurcated approach, consistent with the 2018 proposed rule, whereby the assets in the securitization trusts require a 1.5% leverage ratio and all other assets require a 4% leverage ratio.[16] The match-funded nature of the securitization trust assets and the related elimination of significant components of risk justifies a substantially lower leverage ratio.

In addition to this more reasonable calculation, we suggest a lower Prescribed Leverage Buffer Amount (PLBA) of 0.5% to better align with banking capital regulations. The 1.5% PLBA in the Proposed Rule seems outsized given that most regulated entities will already hold buffers in excess of required regulatory levels as part of prudent business practice[17].

Guy Carpenter's proposed modification provides a meaningful backstop to the robust risk-based measures, as intended.

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[14] Board of Governors of the Federal Reserve System, Dodd-Frank Act Stress Test 2020: Supervisory Stress Test Results (June 2020), https://www.federalreserve.gov/publications/files/2020-dfast-results-20200625.pdf.

[15] Milliman, Response to FHFA Proposal Capital Framework, Treatment of Credit Risk Transfer Securities and Reinsurance (Aug. 17, 2020).

[16] Enterprise Capital Requirements, 83 FR 33312, 33314 (proposed July 17, 2020).

[17] The range of buffers in excess of the PMIERs regulatory capital requirements for the six U.S. Mortgage Insurers was 31% to 77% with an average 50% buffer. Federal National Mortgage Association, Second Quarter 2020 Form 10-Q at 64; Federal Home Loan Mortgage Corporation, Second Quarter 2020 Form 10-Q at 129; and Guy Carpenter calculations.

This subsection responds to FHFA question 4.

Risk-Based Buffers Dominate

Under the risk-based capital requirement, the Proposed Rule prescribes a formulaic, data-driven approach to quantifying credit risk capital. This framework reflects a considerably stressful environment when applied to Enterprise guaranteed portfolios in 2007—excluding loans types the Enterprises no longer acquire, the capital requirement would exceed projected losses from the 2008 financial crisis[18].

On top of this conservative risk-based calculation, the Proposed Rule adds stress capital and stability capital buffers, increasing total required capital as of September 2019 by nearly 75%,[19] a massive amount. These buffer calculations do not account for buffers already implicitly included and are overly impactful to the total risk-based capital requirement, devaluing the very technically calculated credit-risk capital requirement. The loss-absorbing capability of the significant income from future guarantee fees, and the loan-level risk weight floor provide a substantial level of conservatism to the capital requirements before buffers are added. To avoid dominating the total risk-based capital and maintain risk sensitivity in the buffers they should be reduced and capped at 25% of the calculated credit risk capital required.

The stress capital buffer increases required capital to enhance the ability of the Enterprises to function as going concerns during severe stress periods. Though a prudent concept, the buffer is too large. To adjust for the riskiness of the Enterprises guaranteed assets, the stress capital buffer should be applied to risk weighted assets, rather than adjusted total assets, because total adjusted assets is a particularly misleading measure of risk for the Enterprises as described above. Further, because the credit-risk capital calculation reflects a stress roughly equal to the 2008 financial crisis, a 34% increase to this amount via the stress capital buffer (as of September 2019)[20] is excessive and would lead to the Enterprises raising costly, inefficient levels of capital.

The stability capital buffer intends to minimize the negative impact an Enterprise in financial distress could have on the housing finance market by increasing required capital as the Enterprises increase market share. However, this buffer has an important potential negative consequence. During stress periods, private mortgage funding sources decline and the Enterprises are increasingly relied upon to perform their countercyclical mission of providing liquidity, stability and affordability to the mortgage market. This is evidenced by the Enterprises' increased market share during the 2008 financial crisis, and more recently during the COVID-19 pandemic, as jumbo and non-QM mortgage availability has declined while Enterprise-eligible mortgages have been little impacted. Raising required capital levels during these times would

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[18] Proposed Rule, 85 FR at 39288.

[19] Federal Housing Finance Agency, Re-Proposed Rule on Enterprise Capital, Overview of Notice of Proposed Rulemaking at 19 (June 2020), https://www.fhfa.gov/Media/PublicAffairs/PublicAffairsDocuments/ Webinar_642020.pdf.

[20] Proposed Rule, 85 FR at 39277-78.

disincentivize the Enterprises from providing stability to the mortgage market because they would need more capital to do so, increasing pro-cyclicality and pressuring housing affordability.

This subsection responds to FHFA questions 9, 12, and 16.

The Proposed Rule's Expanded CRT Haircuts Are Excessive

While CRT is an effective risk-distribution mechanism that can absorb losses and protect taxpayers or equity holders, we recognize that it should not receive dollar-for-dollar credit as a reduction of required capital because it does not have all of the same benefits as pure equity. However, the CRT safety and soundness risks identified by FHFA are minor and can largely be addressed by the robust qualitative and disclosure requirements for effective CRT outlined in the Proposed Rule.[21] If there are structural features or provisions that may reduce loss-absorbing capacity or are otherwise objectionable, such as the Enterprises providing implicit support for a CRT, FHFA should identify and limit them through these requirements. In addition, concerns over pro cyclicality are not well founded, as existing CRT remains in place to absorb losses through a downturn. Indeed, CRT has proven resilient through stress like that which we see today in the wake of the COVID-19 pandemic. The temporary impacts of leverage-driven investors de-levering quickly subsided without the aid of the Federal Reserve and new issuance at reasonable pricing resumed within a couple of months.

The Proposed Rule states that one of the "limits relating to the effectiveness of CRT in transferring credit risk" is that there "might be unique legal risks posed by the contractual terms of CRT structures and by the practices associated with contractual enforcement."[22] The Proposed Rule does not offer any CRT-specific evidence or justification for this conclusion, merely noting that "[o]ne of the lessons of the 2008 financial crisis is that securitization structures, especially complex securitizations, might not perform as expected during a financial stress."[23] But the "complex securitizations" relevant in 2008 are nothing like the standard and time-tested reinsurance contracts the Enterprises have employed post-crisis, which are designed specifically to transfer risk and have a long market history of functioning well precisely when a reinsured entity is facing financial stress. Indeed, reinsurance's ability to protect entities from risk is precisely what makes reinsurance a well-capitalized, thriving market both domestically and globally. With respect to the Enterprises specifically, CRT has—as explained above—proven an effective protection against risk during the current pandemic-related financial stress. Far from the abstract hypothesis in the Proposed Rule, actual evidence of existing CRT's performance in the past few months shows that it can reduce risk for the Enterprises even under the most challenging of economic circumstances, and that there is no unknown performance risk from "contractual terms" or "practices associated with contractual enforcement."

The 2018 Proposed Rule appropriately introduced haircuts for counterparty credit risk and the mismatch of coverage period versus life-of-credit exposure. The 2020 Proposed Rule

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[21] Proposed Rule, 85 FR at 39330-31.

[22] Proposed Rule, 85 FR at 39330.

[23] *Id.*

introduces a risk weight floor (RWF) and an additional overall effectiveness haircut (OEA) that go beyond offsetting safety and soundness concerns and instead penalize for distribution of risk. These two adjustments, as well intentioned as they are, unnecessarily decrease the benefit of CRT to the point where the Enterprises will not utilize CRT when the risk-based capital requirements are binding. We believe that the construct of both new elements is problematic from an incentive and structural perspective and that FHFA should consider a more holistic approach to CRT credit that is based on CRT's particular risk-mitigating features.

The Tranche Risk Weight Floor Is Unnecessary and Flawed

The comparison to Tranche Risk Weight Floors (RWF) in banking regulatory capital regimes doesn't appropriately account for important differences in risk profiles and attempts to address risks best handled elsewhere. Therefore, we believe the Tranche Risk Weight Floor should be replaced.

The concept of an RWF in a bank regulatory environment is applied to retained interests in securitization transactions and functions exactly as it sounds — as an alternative to risk-based measures that do not effectively respond to risk retained in a structured transaction. In most cases, the risk-based requirement is sufficient. Applying this concept to CRT, the floor is imposed on *every* single transaction in *every* single period and eventually becomes the dominant measure of required capital, despite the presence of effective risk-based measures, substantial buffers, and the alternative leverage ratio.

Bank securitizations are typically funding transactions in which the senior tranches are sold and the core credit risk is retained (e.g., 0% attachment to 5% detachment retained). In credit risk transfer transactions (i.e., not funding transactions), the opposite occurs and the core credit risk is sold with only the remote risk retained (e.g., 5% attachment to 100% detachment retained).

Exhibit 3: Incongruent Applications of Risk Weight Floors
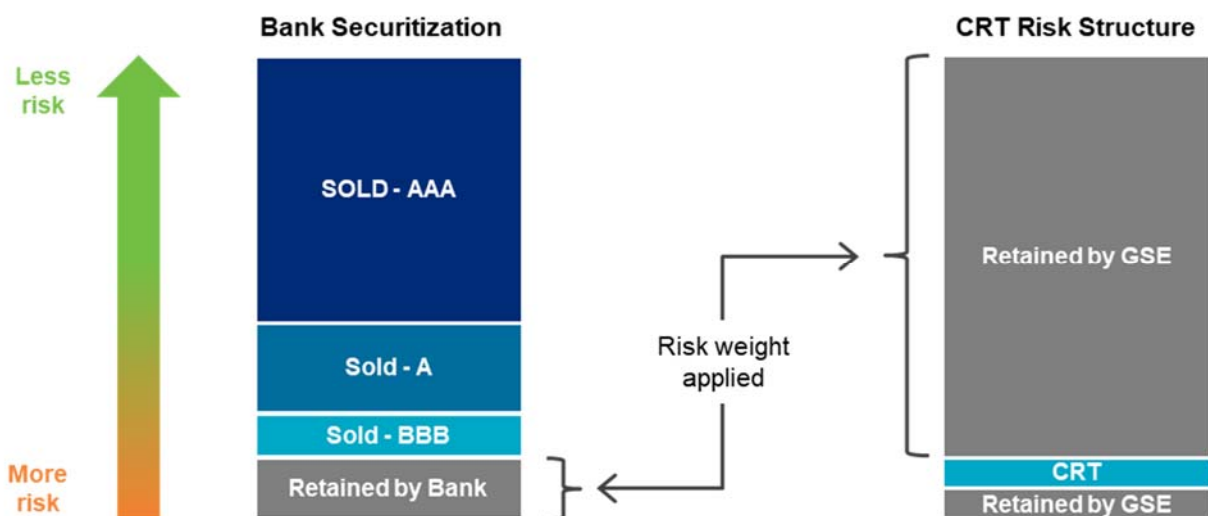
The proposed RWF adjustment has several other problematic attributes. Its intention—to ensure that no retained exposure carries a zero-capital requirement—has some merit as risk in retained tranches above the risk-based capital requirement is not zero. However, this risk more closely approximates zero than the arbitrarily proposed 10% floor. While a 10% floor is less than what is seen in banking capital regimes, banks do not retain the remote risk tranches. Accordingly, this superficial analogy compares a risk-dense tranche to one that is risk-remote and then arbitrarily cuts it in half.

The RWF is also intended to address model, legal, and structural risk associated with securitization transactions, and the possibility of regulatory arbitrage. The Proposed Rule does not adequately define these risks to lend legitimacy to the attempted quantification. We believe that these abstract concerns are more appropriately addressed through appropriately calibrated buffers and leverage-ratio requirement, as well through the robust qualitative standards that FHFA has set for CRT. Additionally, the FHFA retains the authority to disapprove a CRT structure on a case-by-case basis.

An important weakness of the RWF is that it requires more capital for a pool of loans that is covered by a CRT than it does for the same pool without the risk reduction (capital neutrality). Justifications for departures from capital neutrality in banking standards have very limited applicability to CRT. The underlying mortgage risk is well understood with more quantifiable risk attributes and historical performance data than any other class of credit business. CRT structures are mature, subject to robust qualifying effectiveness standards, and the incremental model risk associated with CRT is not significant. There is no layering of model risk or significant use of simplifying assumptions, two risks cited in Basel III as justifying departures from capital neutrality.[24] While the Proposed Rule allows the Enterprises the option to ignore CRT if it results in a higher capital requirement, the idea that risk reduction transactions can create higher capital requirement highlights a serious flaw in the Proposed Rule.

We strongly believe that an unprotected pool should always require more capital than a properly protected pool and that higher levels of protection should always result in lower levels of required capital (if only marginally). In the Proposed Rule, the additional risk charge added, simply for the presence of a risk-distribution program, effectively states that the Enterprises are taking more risk for entering into risk-reducing transactions. We recommend that any safety and soundness concerns related to CRT, not already addressed elsewhere, be addressed by reductions to the CRT credit rather than as an additional capital requirement.

Under the 2018 rule, the Enterprises were incented to purchase CRT up to the risk capital level. Any additional limit purchased provided no capital benefit, despite risk existing above that level. With the 2020 rule, the FHFA has correctly recognized that there is risk above the risk capital level and attempted to address this via the 10% tranche risk weight floor. However, the tranche risk weight floor, in conjunction with the Loss Timing Effectiveness Adjustment (LTEA), creates perverse incentives for the Enterprises when considering how much CRT to purchase.

The RWF as proposed artificially incents a specific level of protection. Consider Exhibit 4 which plots net capital required against CRT detachment points using CIRT 2020-1 at inception as an

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[24] Proposed Rule, 85 FR at 39331.

example. The deal includes 60-80 LTV and 21-30 year Fixed Rate Mortgages. The structure is an Aggregate Excess of Loss Credit Insurance with a Limit of Liability of 3.00% of the Total Initial Principal Balance in excess of a Retention of 0.35% of the Total Initial Principal Balance[25][OBJ]. Within Exhibit 4, we have varied the Limit of Liability, and therefore detachment point, in order to illustrate the inconsistent capital requirement. We would expect the required capital to decline as the detachment increases, however this is not the case as the Enterprises would be required to hold increasing levels of capital between point A and point B as the amount of CRT limit purchased increases.
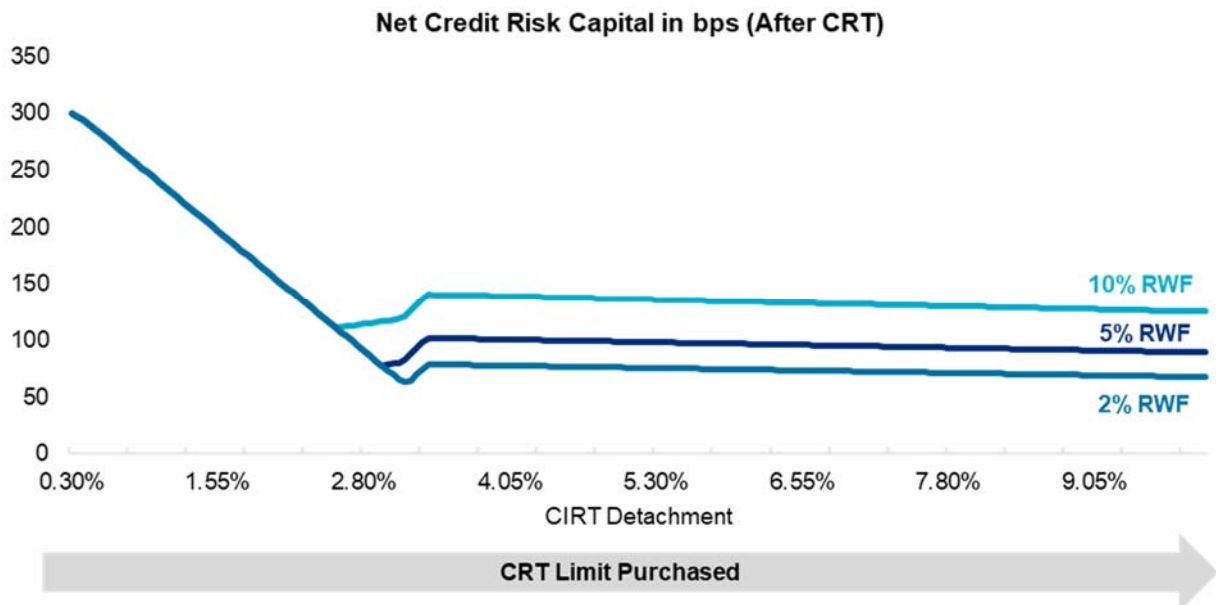
Exhibit 4: Capital Requirements by CRT Detachment Point
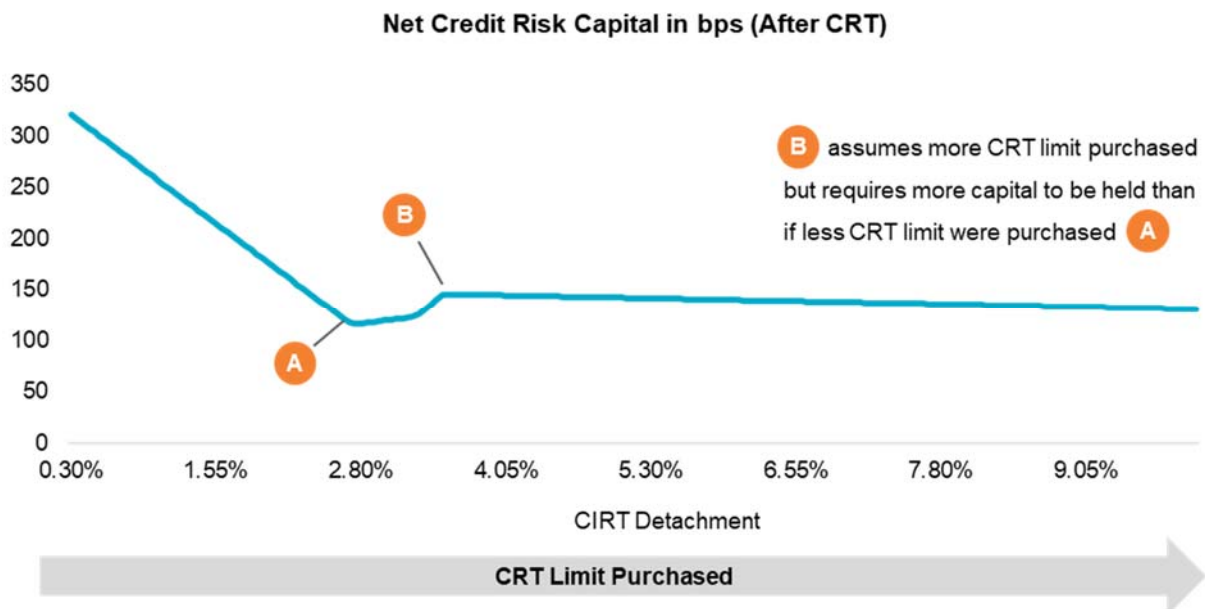
The upward kink in the line on Exhibit 4 indicates where purchasing more protection (i.e., lowering risk) actually requires more capital, creating an arbitrary incentive to purchase CRT only up to level "A". If level "A" were clearly the optimal protection, we might agree with this approach, but there is no magic to level "A" nor can it be characterized as optimal. We believe that the level to which the Enterprises purchase CRT should be at their discretion (with FHFA approval) rather than to an arbitrarily determined floor. Please refer to Appendix A for a detailed description on how this analysis was constructed.

Reducing the ten-percent risk weight floor will not remedy the issue—the same perverse consequences exist at different risk weight levels, as shown in Exhibit 5.

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[25] Federal National Mortgage Association, Summary of Terms: CIRT FE 2020-1, https://capmrkt.fanniemae.com/resources/file/credit-risk/pdf/cirt-fe-2020-01-summary-of-terms.pdf.

Exhibit 5: Lower Risk Weight Floors Do Not Resolve the Issue

Net Credit Risk Capital in bps (After CRT)

It is also worth noting that the Enterprises are not holding zero capital against their retentions as described in the proposal. Because of the first loss retentions, the vertical slice retentions and the appropriate CRT haircuts, the Enterprises are in fact holding meaningful capital against their aggregate retentions in any CRT structure. Viewing each element of their retentions independently is overly formulaic and ignores the economic substance of the transactions.

Finally, applying an RWF to the most remote tranche of the structure amplifies the arbitrary nature and impact of the RWF. Over time, the RWF creates undesirable incentives and becomes the dominant determinant of required capital. This occurs because the RWF ignores that mortgage credit risk diminishes at a faster rate than mortgage loan balances. Consider Exhibit 6 below which presents the composition of required capital of a representative CRT 2020 transaction forecasted over ten years.[26]

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[26] This chart is derived from a Guy Carpenter analysis of the impact of the proposed RWF.

Exhibit 6: Composition of Capital Requirement Over Time – Representative
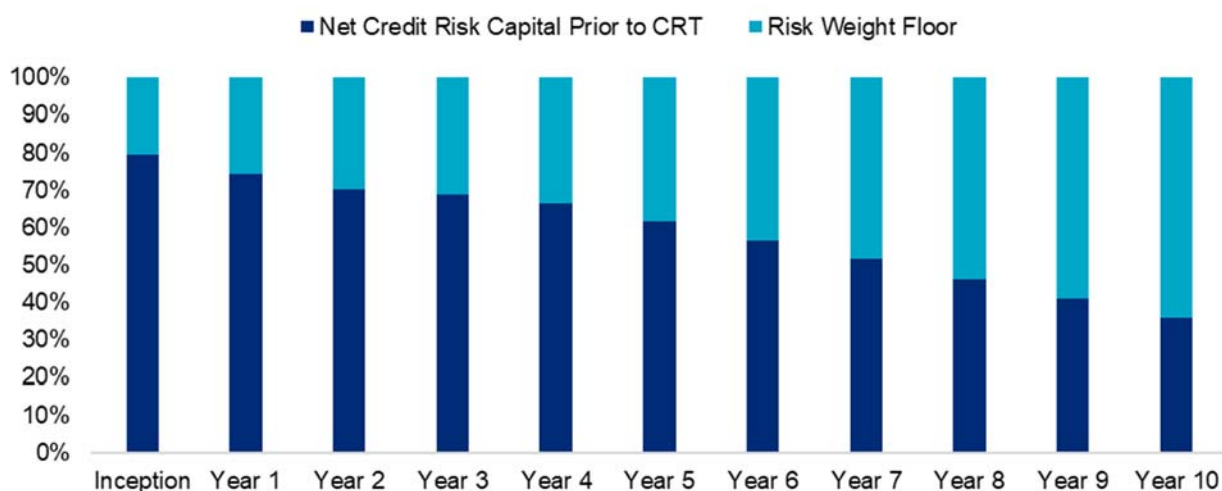
As the RWF becomes an increasingly large component of the capital requirement, required capital becomes increasingly disconnected from risk. Disconnecting capital requirements from risk creates an incentive for the Enterprises to take more risk to generate shareholder returns. Such an outcome appears antithetical to FHFA's stated goal of establishing "a post-conservatorship regulatory capital framework that ensures that each Enterprise operates in a safe and sound manner."[27]

*This subsection responds to FHFA questions 67, 68, and 70.*

The Overall Effectiveness Adjustment Is Unwarranted

The Proposed Rule describes the Overall Effectiveness Adjustment (OEA) as intended to compensate for the superior flexibility, fungibility and loss-absorbing capacity of equity capital. We agree with this characterization of equity capital but believe that the OEA is not warranted and should be removed.

The choice of capital sources facing the Enterprises is not binary. A prudent capital structure should not force an entity to choose between equity capital and CRT-based capital, but rather encourage the appropriate deployment of multiple forms of capital in an effort to most efficiently construct high quality, diverse capital bases that appropriately consider the risks facing the Enterprises. The vast majority of risk faced by the Enterprises is credit risk as shown in Exhibit 7.

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[27] Proposed Rule, 85 FR at 39275.

Exhibit 7: The Majority of Risks Faced by the Enterprises Is Credit Risk [28]
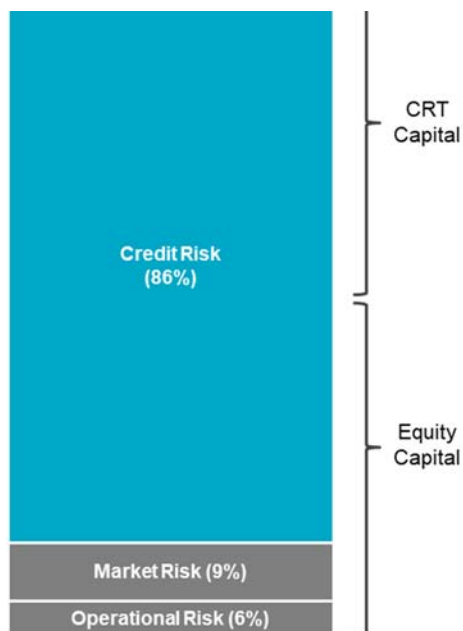
A capital structure that is primarily equity and enhanced with CRT capital, should effectively respond to catastrophic credit losses while balancing the most efficient cost structure. Only a small portion of the capital structure is needed to respond to operational market risk and other risks.[28]

In significant credit events, CRT has loss-absorbing capacity equivalent to equity capital. The frequently cited risk that CRT only covers specific pools and therefore may not fully respond to credit losses is only true in mild loss events. For example, in the most stressful scenarios in Guy Carpenter's models, losses eroded the vast majority of recently placed CRT protection. Because the capital levels proposed imply losses that are beyond what is reasonably modeled, we believe this risk of non-coverage to be very low. As a result, we conclude that there is little difference in the loss-absorbing capacity for purposes of the capital rule.

The Proposed Rule also contends that one other difference between equity capital and CRT capital is that dividends and other payments to shareholders may be stopped in times of stress while CRT payments are ongoing contractual obligations. CRT payments, however, are essentially a pass through of a portion of the guarantee fees collected by the Enterprises, which also persist through a stress period. Future guarantee fees payments receive no credit in the proposed capital rule, so it would be inappropriate to consider them as available as equity to absorb future losses.

In any reasonable capital construct for the Enterprises, equity capital would make up most of the capital base with CRT acting as complement. CRT capital provides lower cost, targeted capital from risk-sensitive sources that may not otherwise participate in U.S. housing finance. These attributes compliment the flexibility of equity capital and enhance the overall quality of balanced capital structure. To prevent CRT from becoming a dominant rather than complementary source of capital, CRT could be capped at a percentage of the capital base or risk-based capital amount, as is the case in other regulatory frameworks. For example, this is the approach applied to Australian mortgage insurers who use reinsurance as form of capital to cover up to 60% of their probable maximum loss in their regulatory capital calculation.[29]

If CRT is a complementary source of capital, then the ability of equity to respond to other risks (market risk, operational risk), should not be relevant in determining the credit given to CRT. CRT capital is not needed to respond to risks other than credit. Furthermore, if CRT has loss-

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[28] Proposed Rule, 85 FR at 39330

[29] https://www.legislation.gov.au/Details/F2019L00875

absorbing capacity equivalent to equity capital in catastrophic situations then the arbitrary 10% OEA is not necessary. We believe that any residual risk related to the limited flexibility of CRT as a capital source can be covered in other CRT haircuts.

It is important to note that the more the capital rules stigmatize CRT and prevent its functioning as a risk-transfer mechanism, the more prominent the differences between equity and CRT capital will become. A well-functioning, liquid CRT market results in an always-available source of capital that can be used to manage capital levels much more pragmatically than difficult-to-execute shareholder transactions. The availability of CRT as an alternative to equity capital also makes equity capital cheaper and more accessible. Equity capital is the most expensive form of capital and limiting the Enterprises' ability to distribute risk through alternative mechanisms like CRT will only serve to eliminate competition and thus raise this cost and decrease access to additional capital when needed.

This subsection responds to FHFA question 73.

FHFA Should Adopt a Holistic Approach to CRT Capital Credit

Guy Carpenter respectfully proposes a holistic approach to CRT haircuts summarized in Exhibit 8.

Exhibit 8: Guy Carpenter's Recommended Holistic Approach

	2018 Proposal	2020 Proposal	GC Proposal
Counterparty Credit	Included	Included	Included – Discrete
Loss Timing	Included	Included	Included – Holistic
Overall Effectiveness	Excluded	Included	
Tranche Risk Weight Floor	Excluded	Included	

As we have shown in the prior sections, the Tranche Risk Weight Floor and the Overall Effectiveness Adjustment have material weaknesses. In addition, requiring four separate haircuts to the CRT credit is overly prescriptive and operationally cumbersome. These types of arbitrary rules historically invite the potential for calculation errors and regulatory arbitrage. While we appreciate the thought that went into identifying and attempting to solve for each individual risk (perceived or real) we believe this is a fundamentally flawed approach when combined with blunt instruments such as the buffers or leverage ratio.

Considering these issues, and recognizing that requiring massive amounts of equity capital comes with significant costs for the taxpayer and consumer, we explored several options to derive methods that incent appropriate and prudent CRT but still recognize the risk inherent in CRTs. We sought solutions that meet the following objectives:

• preserve capital neutrality;
• acknowledge that the risk in senior retentions is nonzero;
• do not unintentionally create an arbitrary optimal coverage amount;
• address model, legal, and structural risk associated with securitization transactions and the possibility of regulatory arbitrage;
• are appropriate across all structures, not just those in place today.

Under the FHFA's approach, departure from capital neutrality is intended to manage the potential safety and soundness risks of CRT, mitigate the model risk associated with the calibration of the credit risk capital requirements of the underlying exposures and the adjustments for loss-timing and counterparty risks, respond to structural and other risks, and reduce the likelihood of regulatory capital arbitrage. All of these points do not increase the risk of a pool of loans, nor the capital required to support those loans. Instead, they reduce the effectiveness of CRT, and as such, are better handled by directly reducing the credit given to CRT. By adjusting the CRT credit, rather than violating capital neutrality, our proposal below prevents the undesirable and counterintuitive situation of the existence of a CRT structure potentially increasing an Enterprise's formulaic capital requirement.

Because we believe that the comparison to banking capital regimes is not directly applicable in the area of CRT, which is fundamentally a catastrophe insurance product, we sought parallels to the insurance regulatory capital frameworks. Catastrophe bonds and reinsurance have long established regulatory regimes with stringent risk transfer requirements and are proven loss absorbing sources of capital.

We believe that a simple approach of calculating the capital credit directly, rather than applying multiple haircuts could solve the issues we have identified and capture all FHFA's concerns in a single measure. Fundamentally, the capital credit for CRT should be a function of the risk-based capital and the protection purchased. Intuitively, and ignoring counterparty risk, the CRT credit should approximate the limit purchased at lower levels of coverage where risk reduction is greatest and should reduce at higher levels where the risk reduction is more uncertain. When the detachment exceeds risk-based capital estimates, little credit should be awarded. This approach effectively spreads the capital credit across the entire risk exposure and matches the credit to the risk reduction achieved.

We used a Tail Value-at-Risk (TVaR) approach to derive the curve shown in Exhibit 9. (See Appendix A for description of the methodology behind this approach). This Exhibit shows the net capital required under the current proposal for CIRT 2020-1 across an array of detachment points. It is compared to a curve derived from the TVaR approach that spreads the capital credit for the reinsurance over the entire exposure, not just the covered losses. Importantly, this curve requires capital above the risk-based capital amount and always provides at least a marginal benefit to risk reduction activities.

We believe that this proposal not only fixes the perverse incentives created by the risk weight floor, but also improves upon the 2018 proposed rule. Like the 2018 proposed rule, the optimal amount of CRT to purchase will approximate the credit risk capital. But an important difference is that because purchasing additional coverage always provides additional capital credit, the optimal amount of CRT will depend on the market pricing of the incremental risk.

Exhibit 9: TVaR Approach to Capital Requirements by CRT Detachment Point
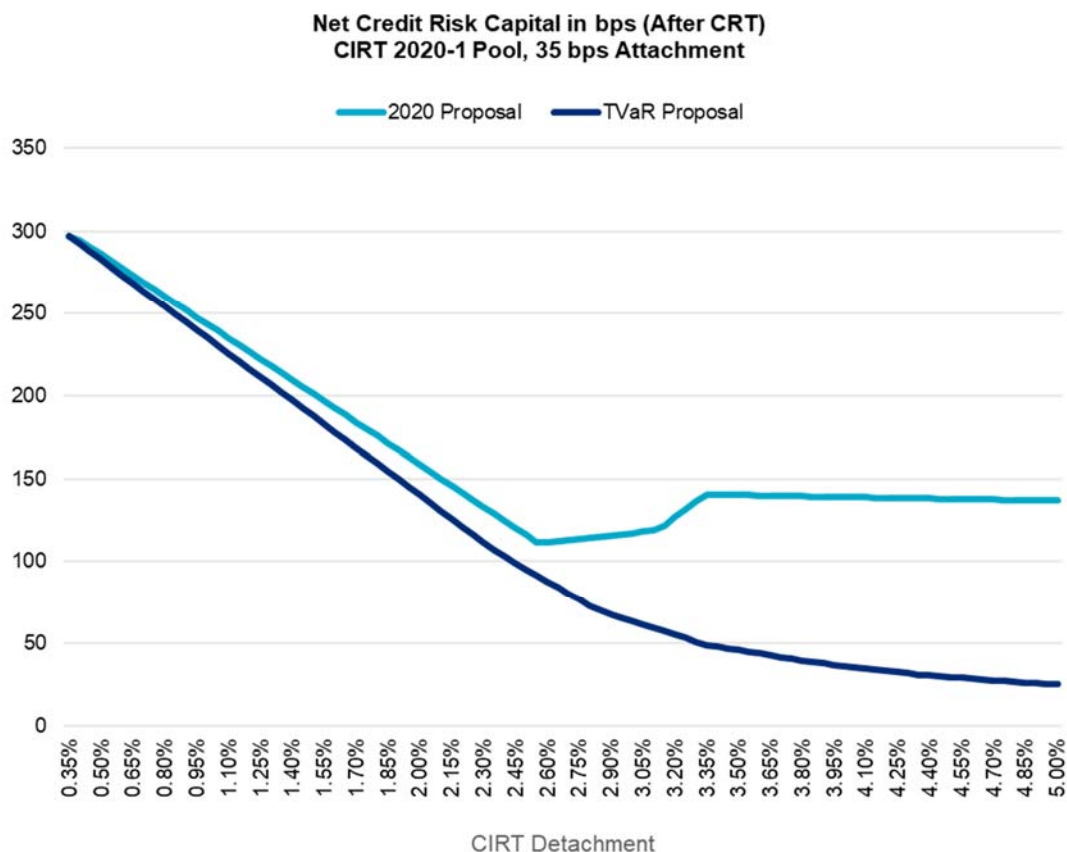
While it is not practical to run such analysis for each contract every period, we performed a similar analysis across a variety of collateral types (15/20 year, low LTV, and high LTV pools) and seasoning levels with similar results. In order to turn this analysis into a useable capital rule, we reduced the formula to a simple table Exhibit 10 that approximates this curve as detailed below. The table provides for reducing credit on a percentage basis as the portion of risk covered increases. It should be noted that this table does not consider counterparty risk, so we recommend that the existing counterparty haircut remain in place. The proposed table would replace the OEA, RWF, and LTEA.

This proposal recognizes that the Enterprises retain risk in the A tranche, but considers that the risk decreases as the A tranche attachment becomes more remote. As with the risk weight floor framework, the Enterprises are required to hold some capital to support the A tranche risk, but this capital will adjust over time in response to the economic environment (decreasing in benign scenarios, increasing in stress scenarios). Because our analysis considered the treaty term of 12.5 years in calculating CRT credit, our proposed framework would not require an additional loss timing haircut. Finally, we recognize that CRT introduces additional model risk, due to the structural risk and the calibration of the adjustment for counterparty risk. The counterparty risk can be best addressed in the parametrization of the LSEA. Because the capital levels are based on a severe stress event, which would generally produce a limit loss in all CRT

structures, we believe the structural risk is relatively minor. However, to the extent that some structural risk remains, this can be addressed within our proposed framework through a small haircut to the capital credit calculated from the table below.

Exhibit 10: Recommended Implementation

Detachment as a % of Risk Capital	% of Credit Capital
0-75	100
75-100	50
100-150	16
150-300	3
>300	0

Using this table, in the typical single-family CRT structure where the detachment point approximates the risk-based capital amount, 87% of capital credit is received (effectively a 13% haircut). For the first 75% of risk capital, the Enterprises would receive 100% credit for CRT as the risk of CRT not responding to catastrophic credit loss approaches zero. Above 75% of the risk-based amount, only 50% credit is allowed as this risk of non-response increases. That is, a significant credit loss event could result in the coverage on one pool being exhausted while the coverage on another pool is not fully utilized. However, the credit is still meaningful as the risk reduction is meaningful. Over time, the net required capital decreases in high correlation with the reduction in risk. This approach has the benefit of being durable across time and still providing haircuts to the credit where warranted.

This subsection responds to FHFA questions 67, 70, and 74.

Multifamily Specific Considerations

Many of the concepts applicable to the relationship between the Enterprises' single-family business and CRT are equally applicable to the Enterprises' multifamily business. The relationship between CRT and the multifamily business also implicates several unique concerns.

Risk Weight Floor Impact on Multifamily

A ten-percent Risk Weight Floor on retained tranches of CRT has significant impacts on both Enterprises' multifamily programs. The application of the RWF to Freddie Mac K deals is similar to the application of single-family CRT where the retained AH tranche sits above CRT.

Exhibit 11: Multifamily RWF Application
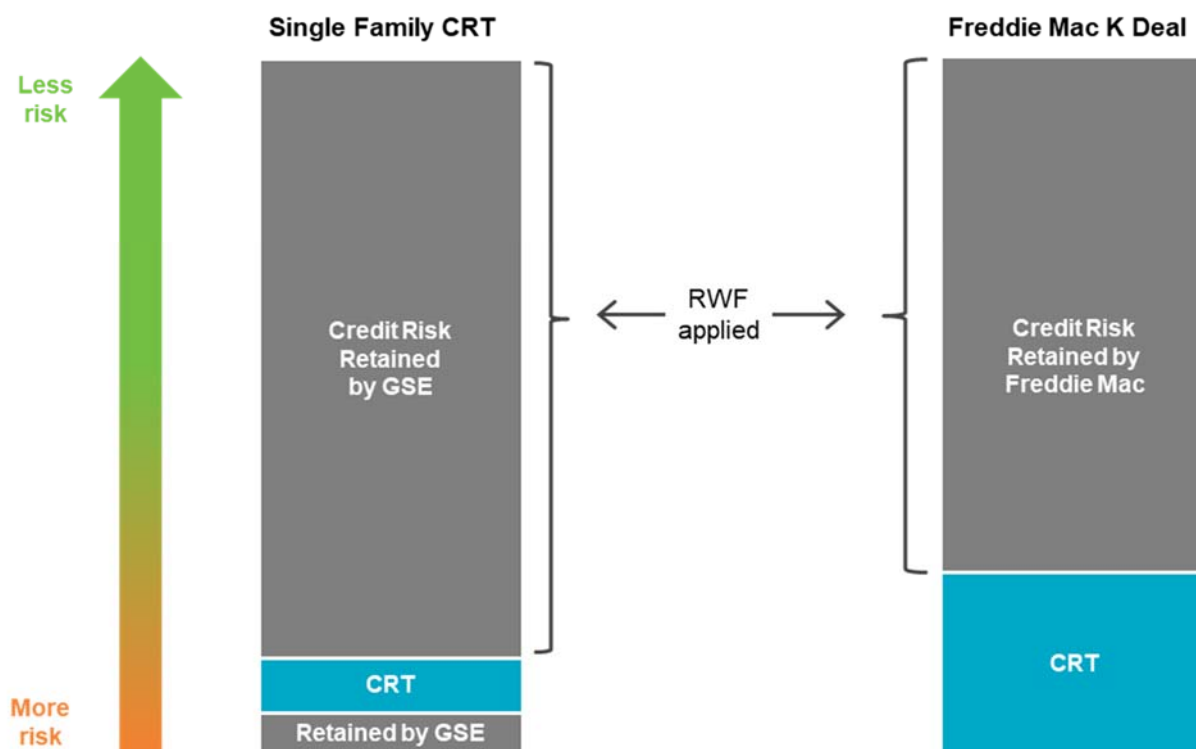
However, in the case of the Freddie Mac K deal, the retention is even more remote (i.e., AAA credit risk), which may attach at 2-3x higher than the required risk-based capital (vs 1x the required risk-based capital on single-family CRT). The RWF treats these two retentions the same.   As a result of the RWF (and the ten-percent OEA), we estimate that the capital requirements could double, potentially reducing Freddie Mac's motivation and ability to distribute credit risk through the K deals. We believe that the holistic approach that we outlined above in the *FHFA Should Adopt a Holistic Approach to CRT* section should also be applied to multifamily because incentives are similarly distorted and risk management is unnecessarily punished.

The impacts on Fannie Mae's DUS program are less pronounced, but still material, because the lender loss share covers a vertical slice of the risk. Fannie retains two-thirds of the risk pool in a typical DUS transaction. Further distribution of this risk is enabled by CRT transactions that, like single-family CRT, are materially disincentivized by the RWF.

This subsection responds to FHFA questions 67 and 70.

CRT Loss Timing Adjustment

The Loss Timing Adjustment should be adjusted to more closely match the risk in multifamily. The current formula has a weakness in that it looks to the longest maturity loan rather than the average for the pool. For single-family, these numbers are not meaningfully different, but, for multifamily—where the portfolios have fewer loans and more variety in maturity

dates—using the longest maturity could materially skew the LTEA. We recommend that the LTEA be adjusted to use the weighted average maturity of the pool rather than the longest maturity date.

This subsection responds to FHFA question 72.

Countercyclical Adjustment for Multifamily

Several commenters in 2018 pointed to the pro-cyclicality inherent in the proposal for single-family and multifamily exposures. The Proposed Rule does a commendable job in accounting for this in the Enterprises' single-family portfolios but does not address multifamily pro-cyclicality embedded in the capital grids and multipliers. Guy Carpenter suggests the FHFA explore using effective rent data to derive an approach similar to the home-price collar approach used in single-family. We believe this approach provides the best proxy for capturing cyclicality of the rental market.

This subsection responds to FHFA question 57.

15% Loan Level Risk Weight Floor for Multifamily Loans

The Proposed Rule establishes a floor on the adjusted risk weight for a multifamily mortgage exposure equal to 15 percent (the risk weight for single-family exposure). While a loan level risk weight floor is appropriate for multifamily mortgage exposure, it should be calibrated against actual agency multifamily loss experience and should not be anchored to generic bank capital standards. Enterprise multifamily collateral is significantly higher quality than the multifamily exposure that can be found on bank balance sheets. Accordingly, using this capital standard as a proxy is overly punitive to the Enterprises and would disincentivize the acquisition of higher quality collateral by the agencies.

It may be FHFA seeks to limit Enterprise influence on the market by pushing more high credit quality business to private lenders. If so, FHFA should acknowledge that private capital already funds this risk through CRT and that seeking to maximize private direct lending reduces the benefit of cross subsidization that works to support affordable and workforce housing today. Maximizing the use of private CRT would broaden risk distribution, support mission, and position the Enterprises to minimize cyclicality.

In addition, the risk weight floor for multifamily exposure should not be linked to the risk weight floor for single-family mortgage exposure. The more prudent method to differentiate the two asset classes would be to calibrate the respective RWFs against actual agency loss experience during times of stress. The proposal also notes that the 15% RWF does not appear to have material impact on the average risk weight for the Enterprises, with the average risk weight without the floor being 50% and an average risk weight of 51% with the floor. This appears to conflict with the information contained in Table 30 of the Proposed Rule, which suggests a much larger impact; the addition of the loan level capital floor would increase capital requirement for the collective Enterprise multifamily exposure by approximately $800 million from 2018 (Freddie Mac increases $600m while Fannie Mae increases $200m).

*This subsection responds to FHFA question 62.*

Multifamily Capital Grids and Multipliers

The Proposed Rule states: "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."[30] As is the case elsewhere, the Proposed Rule leans heavily on a parallel to the U.S. bank capital framework to support the risk weights. But the historical performance of Enterprise multifamily loans is far better than the performance of this asset class in depository institutions. Enterprise serious delinquencies have never been greater than 1% over the last twenty years, while depository institutions delinquencies peaked at greater than 4% post-crisis. In other words, the Enterprises' multifamily portfolios are a unique asset class as demonstrated by the historical performance in Exhibit 12.

The Proposed Rule states: "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."[31] As is the case elsewhere, the Proposed Rule leans heavily on a parallel to the U.S. bank capital framework to support the risk weights. But the historical performance of Enterprise multifamily loans is far better than the performance of this asset class in depository institutions. Enterprise serious delinquencies have never been greater than 1% over the last twenty years, while depository institutions delinquencies peaked at greater than 4% post-crisis. In other words, the Enterprises' multifamily portfolios are a unique asset class as demonstrated by the historical performance in Exhibit 12.

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[30] Proposed Rule, 85 FR at 39328.

[31] Proposed Rule, 85 FR at 39328.

Exhibit 12: Historical Multifamily Portfolio Delinquencies[32]
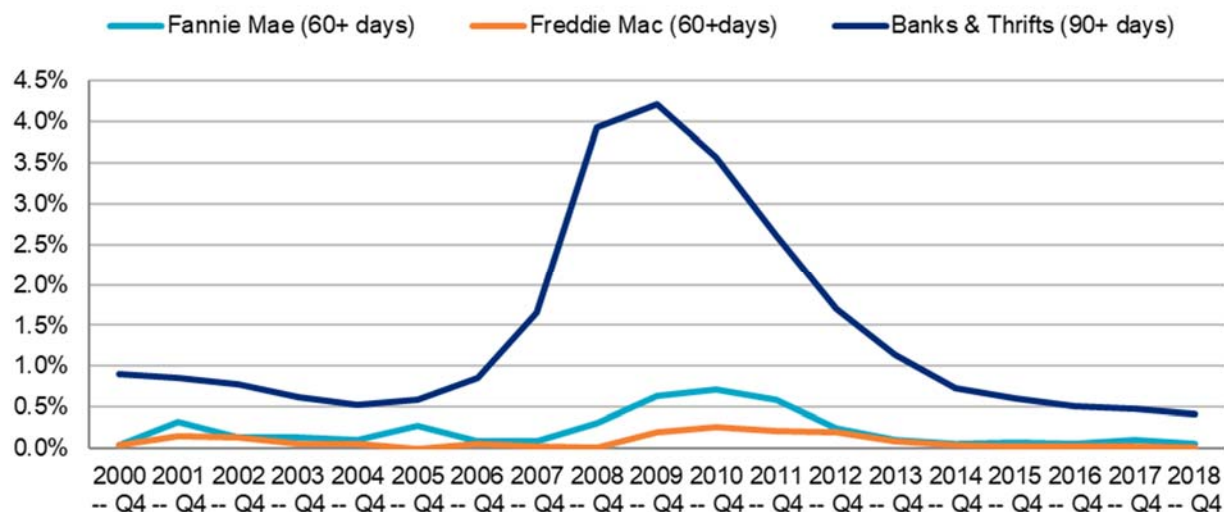
This difference in performance can be attributed to the risk-reducing business models followed by the Enterprises and the quality of the assets they attract. This wide disparity in performance makes the direct quantitative comparison to banking risk weights inappropriate. Calibration of the risk weights should be based on relative historical performance metrics and should not be benchmarked to asset classes with dissimilar historical performance.

In addition to the differentiation from bank multifamily, we observe an unusual relationship between the multifamily and single-family risk weights. Despite performance data that shows historical multifamily delinquency rates well below that of its single-family counterpart, the Proposed Rule's capital grids and multipliers result in risk weights that are nearly double that of the Enterprises' single-family loans. As of September 30, 2019, the standardized approach results in average risk weights for single-family and multifamily of 26% and 51%, respectively.   Given the performance history of multifamily collateral, FHFA should provide additional transparency into how these risk weights were derived and how they relate to actual historical experience.

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[32] MBA Commercial / Multifamily Quarterly Databook – Q1 2020. Please note that 60-day delinquent and 90-day delinquent number are not directly comparable as we would expect 90-day delinquencies to lower. This difference further emphasizes our point.

This subsection responds to FHFA questions 52 and 54.

Summary of Guy Carpenter Recommendations

The recommendations made in this comment are summarized as follows:

1. The capital framework for the Enterprises should reflect banking capital rules only where the comparison is apt and should reflect other regulatory capital regimes where appropriate.
2. The leverage ratio should be set at 1.5% of trust assets and 4.0% of other assets to reflect the unique nature of Enterprise assets.
3. The leverage buffer should be reduced to 0.5% as seen in banking capital rules.
4. The buffers in risk-based calculation should be capped at 25% of the risk-based amount to maintain risk sensitivity.
5. The calculation of the Stress Capital Buffer should be changed to incorporate risk-weighted assets rather than adjusted assets.
6. The Tranche Risk Weight Floor, Overall Effectiveness Adjustment, and Loss Timing Effectiveness Adjustment (LTEA) should be replaced with a single measure of CRT credit based on risk reduction.
7. If LTEA remains, distortions in multifamily LTEA should be addressed.
8. A countercyclical adjustment for multifamily using effective rents should be added.
9. Multifamily grids, multipliers, and loan-level risk weight floors should be calibrated to the Enterprises' multifamily experience.

Conclusion

Thank you for considering Guy Carpenter's perspective on the proposed Enterprise Regulatory Capital Framework. This Proposed Rule is foundational to the future of the mortgage market in the United States. Given the significance of this Proposed Rule, Guy Carpenter appreciates FHFA's willingness to consider not only our response, but those of other industry experts and stakeholders. The Proposed Rule should be analyzed and structured holistically to prevent serious unintended consequences for the Enterprises and the United States mortgage and housing markets. Guy Carpenter recognizes the substantial undertaking required to publish this framework and appreciates the opportunity to provide recommendations. We are committed to working with the FHFA, the Enterprises, and other industry experts and stakeholders to further refine a post-conservatorship framework that ensures each Enterprise operates safely and soundly and provides ongoing assistance to the secondary mortgage market across economic cycles.

APPENDIX A

TVaR Approach to CRT Capital Credit

To derive the curve shown in Exhibit 9, we analyzed three representative CRT transactions at inception (low LTV, high LTV, 15/20-year). In order to parametrize the curve, the Tail Value at Risk (TVaR) metric was used to measure the risk reduction of CRT structures with varying detachments.

Based on the factors in Tables 9-16 of the Proposed Rule and the minimum adjusted risk weight, the net credit risk capital for each pool was calculated. Separately, a stochastic model was used with each loan tape to provide 10,000 simulations of ultimate losses for each pool. For each transaction, a TVaR percentile was selected so that the TVaR at that level equaled the sum of modeled expected losses and the net credit risk capital (see example below).

Example – CIRT 2020-1 (Low LTV)
Net Credit Risk Capital + Expected Losses = 296.9 bps + 37.0 bps = 333.9 bps

TVaR (97.5%) = 321.1 bps
TVaR (97.8%) = 334.1 bps
TVaR (98.0%) = 343.6 bps

Since TVaR (97.8%) was approximately equal to the sum of net credit risk capital and expected losses, it was used as a proxy for the amount of capital required to support the pool of loans in the absence of CRT. Then, CRT structures ranging from 50 bps xs 35 bps to 900 bps xs 35 bps were analyzed, with the difference between TVaR (97.8%) gross of CRT and TVaR (97.8%) net of CRT representing the reduction in required capital due to the presence of the CRT structure.

CRT Limit	Limit (% of Risk Capital)	TVaR gross of CRT	TVaR net of CRT	Reduction in TVaR (bps)	Reduction in TVaR* (%)
50 bps	16.7%	334.1 bps	284.1 bps	50.0 bps	16.7%
100 bps	33.4%	334.1 bps	234.1 bps	100.0 bps	33.4%
150 bps	50.2%	334.1 bps	184.1 bps	150.0 bps	50.1%
200 bps	66.9%	334.1 bps	134.1 bps	200.0 bps	66.9%
250 bps	83.6%	334.1 bps	95.1 bps	239.0 bps	79.9%
300 bps	100.3%	334.1 bps	73.3 bps	260.8 bps	87.2%
350 bps	117.1%	334.1 bps	62.1 bps	272.1 bps	91.0%
400 bps	133.8%	334.1 bps	54.5 bps	279.7 bps	93.5%
450 bps	150.5%	334.1 bps	49.3 bps	284.8 bps	95.2%
500 bps	167.2%	334.1 bps	45.9 bps	288.3 bps	96.4%
550 bps	184.0%	334.1 bps	43.0 bps	291.1 bps	97.3%
600 bps	200.7%	334.1 bps	40.7 bps	293.4 bps	98.1%
650 bps	217.4%	334.1 bps	38.8 bps	295.3 bps	98.7%
700 bps	234.1%	334.1 bps	37.4 bps	296.7 bps	99.2%
750 bps	250.9%	334.1 bps	36.5 bps	297.6 bps	99.5%
800 bps	267.6%	334.1 bps	35.9 bps	298.2 bps	99.7%
850 bps	284.3%	334.1 bps	35.5 bps	298.6 bps	99.8%
900 bps	301.0%	334.1 bps	35.3 bps	298.9 bps	99.9%

*Percentage reduction in TVaR subtracts retained losses (35 bps) from both gross and net TVaR values

To normalize across different transactions and structures, the percentage reduction in TVaR (at the appropriate percentile for each transaction) was compared to the limit as a percentage of net credit risk capital. Based on this analysis, the best fit to the data was provided by the following:

Let x = Limit (as a % of net credit risk capital)

For x ≤ 75%, capital is reduced by x

For x > 75%, capital is reduced by $1-\left(\dfrac{.42}{x}\right)^{2.39}$

For CIRT 2020-1, that methodology produces the following results:

CRT Limit	Limit (% of Risk Capital)	Reduction in TVaR from Stochastic Output	Fitted Reduction in Capital
50 bps	16.7%	16.7%	16.7%
100 bps	33.4%	33.4%	33.4%
150 bps	50.2%	50.1%	50.2%
200 bps	66.9%	66.9%	66.9%
250 bps	83.6%	79.9%	80.7%
300 bps	100.3%	87.2%	87.5%
350 bps	117.1%	91.0%	91.4%
400 bps	133.8%	93.5%	93.7%
450 bps	150.5%	95.2%	95.3%
500 bps	167.2%	96.4%	96.3%
550 bps	184.0%	97.3%	97.1%
600 bps	200.7%	98.1%	97.6%
650 bps	217.4%	98.7%	98.0%
700 bps	234.1%	99.2%	98.4%
750 bps	250.9%	99.5%	98.6%
800 bps	267.6%	99.7%	98.8%
850 bps	284.3%	99.8%	99.0%
900 bps	301.0%	99.9%	99.1%

At 300 bps of limit, which was the actual CRT structure, the fitted reduction in capital (prior to counterparty haircut) is 87.5%, which represents a 12.5% haircut for the risk in the AH tranche as well as the risk related to losses beyond the treaty term of 12.5 years.

For simplicity, our recommended implementation did not directly use the curve above. Instead, the curve was approximated by assigning a credit capital % to several limit bands (0%-75%, 75%-100%, 150%-300%, and > 300% of credit risk capital). The results are shown in Exhibit 10.

It is important to note that while the parametrization of the curve is based on simulation output from one model, we believe that the parametrization will not vary materially if another model is used with the same methodology. Any similar curve will have the same desirable properties, most importantly that buying additional CRT protection will always reduce capital requirements, albeit at a declining rate.

APPENDIX B

Implications of Proposed Rule on Optimal CRT Detachment

Exhibit 9 uses CIRT 2020-1 as an example to show that the proposed rule creates a situation where an Enterprise can increase its net capital requirement by buying additional CRT.

For our analysis, we calculated the net credit risk capital for the CIRT 2020-1 pool as 296.9 bps and the expected losses as 37 bps. Additionally, we assumed that the LSEA haircut is based on a counterparty rating of 3 and Not High mortgage concentration risk. We then fixed the CRT attachment point at 35 bps (actual layer was 300 bps xs 35 bps) and looked at the net capital at varying detachment points.

To explain the shape of the line in the chart, the table below shows the marginal increase/decrease in required capital from a $1 increase in the layer detachment at different bands.

	M1			AH	Total Retained Capital – M-1 + A-H
Layer Detachment	**Total**	**Retained**	**Transferred**	**Total (Retained)**	
36-37 bps	Within Expected Loss				
37-256 bps	$1	$0.15	$0.85	-$1	-$0.85
256-313 bps	$1	$0.15	$0.85	-$0.01	$0.14
313-334 bps	$1	$1	$0	-$0.01	$0.99
334-10,000 bps	$0	$0	$0	-$0.01	-$0.01

Under the proposed framework, when a CRT structure is in place, an Enterprise needs to hold capital for the reinsured M1 tranche (because CRT is not 100% efficient) as well as the retained AH tranche.

At the left side of the chart, every dollar that the retention increases lowers the required capital on the AH tranche by $1 and increases the capital on the M1 tranche by ~15 cents (due to the overall efficiency and counterparty haircuts), for a net benefit of 85 cents.

As the detachment point reaches 256 bps, the required capital on the AH tranche hits the tranche risk weight floor. At this point, every additional dollar that the retention increases still increases the capital on the M1 tranche by ~15 cents, but because of the risk weight floor, the required capital on the A tranche only decreases by 0.8 cents, and the graph becomes upward sloping.

A loss timing adjustment of 93.5% is applied to the calculated risk capital to reflect the treaty term of 12.5 years. As long as 93.5% of the risk capital is above the layer detachment, this has no effect. However, for layer detachments between 93.5% and 100% of the risk capital, every dollar that the retention increases raises the capital on the M1 tranche by $1 (since the CRT is

not providing any additional credit due to the LTEA) with the same 0.8 cent offset from the reduced capital on the AH tranche, and the graph becomes much steeper.

For detachments beyond 100% of the risk capital, there is no additional capital required for the M1 tranche as the detachment point increases. Since the size of the AH tranche and consequently the required capital under the risk weight floor decrease as the detachment point increases, the right side of the chart has a slight negative slope.

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