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The Final Stretch: Securitization in the US Under the Proposed Basel III Endgame Rules

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## The Final Stretch: Securitization in the US Under the Proposed Basel III Endgame Rules

On July 27, 2023, the US banking regulators<sup>1</sup> issued a notice of proposed rulemaking (the "NPR")<sup>2</sup> to revise significantly the risk-based capital requirements applicable to large banks<sup>3</sup> and to banks with significant trading activity. The NPR would generally implement the Basel Committee's revisions to its regulatory capital standards colloquially referred to as "Basel III Endgame" or "Basel IV," with some key differences.

Comments on the NPR are due on November 30, 2023.

If adopted, the proposal would generally take effect on July 1, 2025. Banks would be given three years to phase-in compliance with the changes to the credit risk and operational requirements, including those discussed in this article.

This article focuses on the securitization-related changes proposed by the NPR. To put our detailed discussion of some of those changes into context, we refer you to our comprehensive article on the NPR<sup>4</sup> and note that:

- Under the NPR, the existing "standardized approach" for credit risks would continue to apply to all banks. The standardized approach utilizes the Simplified Supervisory Formula Approach (SSFA) and the gross-up approach to assign risk weights to securitization exposures.<sup>5</sup> The NPR does not propose to change the existing SSFA or gross-up approach to assigning risk weights for securitization exposures under the standardized approach.
- Under the NPR, the existing internal ratings-based and advanced measurement approaches for credit risks are being replaced by an expanded risk-based approach, which we refer to as the proposed "expanded standardized approach." The expanded standardized approach would apply only to banks with \$100 billion or more in assets. That approach includes a new "securitization standardized approach" (SEC-SA) to calculate risk weights for securitization exposures. The SEC-SA method is based on SSFA, with some important differences. The expanded standardized approach is, in the aggregate, a more stringent version of the Basel III Endgame standard.<sup>6</sup>
- Banks subject to the expanded standardized approach (i.e., banks with \$100 billion or more in assets) would be required to calculate risk weighted assets (all assets, not just securitization exposures) under both the existing standardized approach and the new expanded standardized approach and use the higher of the two.<sup>7</sup> This is referred to as a "dual stack" requirement.<sup>8</sup>
- For credit exposures in the aggregate, we expect risk weights under the expanded standardized approach would be higher than those under the standardized approach. Because of the dual stack requirement, we expect that most banks subject to the expanded standardized approach would be required to use the risk weights assigned by the expanded standardized approach, including risk weights assigned to securitization exposures under SEC-SA, to calculate total capital ratios.

- We expect that SEC-SA would lead to generally higher risk weights for securitization exposures compared to SSFA.
- Banks not subject to the expanded standardized approach (banks with less than \$100 billion in assets) would continue using the standardized approach, including the existing SSFA and gross up methods to assign risk weights to securitization exposures, as well as underlying exposures.
- Finally, we note that for any market risk bank,<sup>9</sup> the risk weights assigned to securitization
  exposures residing on its trading book would be determined under separate market risk capital
  requirements, which are beyond the scope of this article.<sup>10</sup> For a market risk bank, SSFA<sup>11</sup> and
  SEC-SA would be used to calculate credit risk weights for securitization exposures that reside on
  its banking book, not its trading book.

A "securitization exposure" is (1) an on-balance sheet or off-balance sheet credit exposure arising from a traditional securitization or synthetic securitization (including a resecuritization), or (2) an exposure that directly or indirectly references a securitization exposure described in clause (1).<sup>12</sup> As the NPR notes, securitization exposures "could include, among other things, asset-backed securities and mortgage-backed securities, loans, lines of credit, liquidity facilities, financial standby letters of credit, credit derivatives and guarantees, loan servicing assets, [and] servicer cash advance facilities."<sup>13</sup>

## Summary

The following is a brief summary of the key points in this article, which focuses on comparing SEC-SA with SSFA. We expect each of these points will receive significant attention in the comment letters that market participants submit to the US banking regulators.

*Increase in p, the Supervisory Calibration Parameter*. Both the existing SSFA and the proposed SEC-SA utilize a supervisory parameter, *p*, that governs the rate at which risk weights decline as tranche seniority increases. For securitizations, SEC-SA applies a *p* value of 1.0 while SSFA applies a value of 0.5. For resecuritizations, both approaches apply a *p* value of 1.5.

- Although the NPR does not characterize it as such, the value of the supervisory parameter p governs the amount of a securitization capital surcharge imposed by the SSFA and SEC-SA models. By "securitization capital surcharge," we mean the percentage amount by which a bank's capital requirement would increase if the bank held every tranche of a securitization, rather than holding the underlying exposures directly in its unsecuritized portfolio.<sup>14</sup>
  - Where p = 0.5, the securitization capital surcharge is 50%.
  - Where p = 1.0, the securitization capital surcharge is 100%.
  - $\circ$  Where p = 1.5, the securitization capital surcharge is 150%.
- The amount of this surcharge is higher if a risk weight floor applies to any tranche.
- The amount of this surcharge increases sharply as underlying exposures default.

**Different Supervisory Risk Weight Floors**. Despite the increase in *p* as noted above, C-SA etains supervisory risk weight floors. For securitizations, the risk weight floor under SEC-SA is 15% as compared to 20% under SSFA. SEC-SA has a 100% risk weight floor for resecuritizations (as well as NPL securitizations), as compared to 20% under SSFA. (Page 15)

**Different Risk Weights on Underlying Exposures**. The risk weights assigned to many commonly securitized assets are significantly different under the proposed expanded standardized approach compared to those assigned under the existing standardized approach. Risk weights on underlying exposures are inputs into the SEC-SA and SSFA models and thus have a significant impact on the risk weights assigned to securitization exposures. (Page 16)

**Different Attachment Point and Detachment Point Calculations**. The NPR defines attachment and detachment points for SEC-SA differently than under SSFA. Notably, the NPR would include any nonrefundable purchase price discount in the calculation of attachment and detachment points. As there is an exponential relationship between risk weights and tranche seniority under SEC-SA and SSFA, even small changes to attachment and detachment points can have a significant effect. (Page 18)

**New Look-Through Approach**. For a "senior securitization exposure" that is not a resecuritization exposure, the expanded standardized approach would allow banks to assign a risk weight equal to the greater of (1) 15% and (2) the weighted average risk weight of all the underlying exposures. As we explain, the proposed look-through approach would be useful in only limited circumstances. (Page 21)

**Additional Operational Criteria for Synthetic Securitizations**. The NPR proposes to add three new operational requirements for synthetic securitizations under the expanded standardized approach. The most important of these is a requirement that would prohibit an originating bank from recognizing the risk-mitigating benefits of a synthetic securitization that includes synthetic excess spread. (Page 24)

**Different Credit Conversion Factors (CCFs) for Commitments**. Unconditionally cancelable commitments would have a CCF equal to 10% under the expanded standardized approach (as opposed to 0% under the standardized approach). Commitments that are not unconditionally cancellable will have a CCF equal to 40% (as opposed to the standardized approach, which specifies 20% for such commitments that are less than or equal to one year, and 50% for such commitments that are greater than one year). (Page 26)

*New Capital Charge on Fees and Income*. The NPR proposes a capital requirement for operational risk with respect to a bank's fee and commission income. This capital charge would apply to the fees and commissions that banks earn in connection with securitizations, such as underwriting fees, third-party servicing fees and servicing fees under off-balance sheet securitizations. (Page 27)

## **Considerations and Impacts**

The impact of the proposals described in this article will depend on a bank's role in the securitization transaction (originator, investor or lender), as well as the securitization transaction type (bank sponsored on-balance sheet, bank sponsored off-balance sheet, or third party-sponsored). The table below provides a summary of the treatment, impact and considerations.<sup>15</sup>

Securitization Description	Impact and Considerations		
Originating bank sponsors an <i>on-balance sheet</i> traditional securitization of its own assets	The securitized assets remain on the bank's consolidated balance sheet under GAAP. The securitized assets remain in the bank's total risk- weighted assets and are assigned risk weights as though they had not been securitized. Any asset-backed security or other exposure retained by the originating bank would <i>not</i> be a securitization exposure subject to the risk-weighting rules described in this article.		
Originating bank sells assets to a third party; third party sponsors a securitization of those assets; originating bank acquires an asset-backed loan or asset-backed security issued in that securitization	The securitized assets are no longer on the bank's consolidated balance sheet under GAAP. The originating bank may remove the securitized assets from its total risk-weighted assets, and thus the bank would not have to hold risk- based capital against the securitized assets. The originating bank would be required to hold risk-based capital against any asset-backed loan, asset-backed security or other securitization exposure obtained by that originating bank. Any such securitization exposure would be subject to the risk- weighting rules described in this article.		
Originating bank sponsors an <i>off-balance sheet</i> traditional securitization of its own assets	The securitized assets are no longer on the bank's consolidated balance sheet under GAAP. We expect that the originating bank would be able to remove the securitized assets from its total risk-weighted assets, and thus the bank would not have to hold risk-based capital against the securitized assets. The originating bank would be required to hold risk-based capital against any asset-backed security or other securitization exposure retained by that originating bank. Any such securitization exposure would be subject to the risk-weighting rules described in this article.		
Originating bank sponsors a synthetic securitization of its own assets	If the operational criteria for synthetic securitizations are met, then: • the securitized assets are no longer included in the bank's total risk-weighted assets, and		

	<ul> <li>any securitization exposure retained by the originating bank would be subject to the risk-weighting rules described in this article.</li> </ul>
	The NPR proposes three additional operational requirements for synthetic securitizations under the expanded standardized approach relating to (i) early amortization provisions, (ii) synthetic excess spread and (iii) minimum payment threshold.
	As we note in this article, the NPR proposes to make the risk weight floor somewhat less punitive by reducing it from 20% to 15%. This reduction is important with respect to a bank's risk weight calculation for the senior tranche it typically retains.
	If the operational criteria for synthetic securitizations are not satisfied, then the securitized assets remain in the bank's total risk-weighted assets and are assigned risk weights as though they had not been securitized.
Investing bank acquires and holds an asset-backed security	Asset-backed securities held by an investing bank are securitization exposures.
	The investing bank would be required to calculate the risk weight for that asset-backed security under SEC-SA (unless as noted above, it is a market risk bank holding such security in its trading book, in which case the market risk rule applies).
Bank as lender in a warehouse facility or similar facility involving a bankruptcy-remote special purpose entity	A typical warehouse lending facility would be considered a "traditional securitization" under both the existing standardized approach and the proposed expanded standardized approach because the credit risk associated with the assets is separated into at least two tranches (debt and equity).
	The bank's outstanding loan amount would be considered a securitization exposure whose risk weight would be calculated under SEC-SA.
	The bank's undrawn commitment would be an off-balance sheet exposure that would be converted to its credit exposure equivalent using the applicable CCF. As noted above, the proposed expanded standardized approach uses CCFs that are different from those under the standardized approach.

## Overview of the New Securitization Standardized Approach: SEC-SA

Under the capital rules, banks must maintain a minimum total capital ratio of 8%.<sup>16</sup> That requirement can be expressed as:

$$\frac{total\ capital}{risk-weighted\ assets} \ge 8\%$$

Thus, the total capital requirement for any given asset held on a bank's balance sheet is equal to 8% *times* the risk-weight assigned to that asset.

The proposed expanded standardized approach includes a new method for calculating risk weights for securitization exposures, referred to as the securitization standardized approach (SEC-SA).

SEC-SA is based on the SSFA method under the existing standardized approach, but with some important differences, each of which this article will address.

Like SSFA, the SEC-SA method for calculating risk weights for securitization exposures uses the following inputs:<sup>17</sup>

- *K<sub>G</sub>* The weighted average capital requirement associated with the underlying exposures (i.e., the securitized assets).
- **W** The proportion of underlying exposures that are defaulted, seriously delinquent, etc.
- $K_A$  The weighted average capital requirement associated with the underlying exposures, as adjusted to reflect adverse performance.  $K_A = (1 W)K_G + 0.5W$
- A The attachment point of the exposure (tranche) the point in the capital structure of the securitization at which the tranche begins to absorb losses (i.e., the threshold at which credit losses will first be allocated to the exposure).
- **D** The detachment point of the securitization exposure (tranche) the point in the capital structure of the securitization at which the tranche ceases to absorb losses (i.e., the threshold at which credit losses allocated to the exposure would result in a total loss of principal).
- **p** A supervisory calibration parameter equal to:
  - 1.0, if the securitization exposure is not a resecuritization exposure (as compared to 0.5 under SSFA); or
  - 1.5, if the securitization exposure is a resecuritization exposure (which is the same as SSFA).

Like SSFA, risk weights are calculated under SEC-SA in piecewise fashion:

- Portions of the securitization exposure that are junior to  $K_A$  in the capital structure are assigned a risk weight equal to 1250% (which corresponds to a "dollar for dollar" capital requirement<sup>18</sup>).
- Portions of the securitization exposure that are senior to  $K_A$  in the capital structure are assigned a risk weight equal to  $1250\% * K_{SEC-SA}$ .
  - $K_{SEC-SA}$  is a mathematical model for calculating the area under an exponential decay function. Its functional form is the same as the  $K_{SSFA}$  model under the existing standardized approach.
  - Appendix A provides a detailed discussion of the  $K_{SEC-SA}$  model.
- Risk weights under SEC-SA are subject to the following supervisory risk weight floors ( $RW_{FLOOR}$ ):
  - o 15%, for securitizations (a decrease from 20% under the current SSFA approach).
  - 100%, for resecuritizations and NPL securitizations (an increase from 20% under the current SSFA approach).

Figure 1 provides an illustration of the calculation of the risk weight under SEC-SA ( $RW_{SEC-SA}$ ) for a hypothetical securitization exposure (tranche). The risk weight for the hypothetical tranche is equal to the shaded area under the curve divided by the tranche's thickness, D - A (0.3-0.1).<sup>19</sup>



#### Figure 1: Illustration of RW<sub>SEC-SA</sub>

## Increase in p, the Supervisory Calibration Parameter

For SEC-SA, the NPR proposes to set the supervisory calibration parameter, p, to 1.0 for securitizations and 1.5 for resecuritizations. Under SSFA, p remains 0.5 for securitizations, and 1.5 for resecuritizations.

The supervisory calibration parameter, p, is a term used in the decay rate of the exponential decay function that underlies the  $K_{SEC-SA}$  model (as well as the  $K_{SSFA}$  model under the standardized approach).<sup>20</sup> Under the model, the decay rate is equal to:

$$-\frac{1}{pK_A}$$

Figure 2 illustrates the effect of increasing the supervisory parameter from 0.5 to 1.0, assuming  $K_A$  remains fixed at 0.08.



Figure 2. Illustration of the Effects of the Increase in *p* 

Because p and  $K_A$  are in the denominator of the decay rate term, the rate of exponential decay (i.e., the rate at which risk weights under  $K_{SEC-SA}$  will decrease as the seniority of securitization exposures increases) will be inversely proportional to the product of p and  $K_A$ .<sup>21</sup> By increasing p, the NPR would lead to a lower decay rate, and to higher overall risk weights, under the proposed SEC-SA standard relative to the existing SSFA standard.

Although the NPR does not characterize it as such, the value of the supervisory parameter *p* is effectively the amount of a securitization capital surcharge imposed by the SSFA and SEC-SA models. By **"securitization capital surcharge,"** we mean the percentage amount by which a bank's capital requirement would increase if the bank held every tranche of a securitization, rather than holding the underlying exposures directly in its unsecuritized portfolio.

- Where p = 0.5, the securitization capital surcharge is 50%.
- Where p = 1.0, the securitization capital surcharge is 100%.
- Where p = 1.5, the securitization capital surcharge is 150%.

Thus, because p is 0.5 under SSFA and 1.0 under SEC-SA, the securitization capital surcharge imposed by SEC-SA is double that of the surcharge imposed by SSFA.

Note that the securitization capital surcharge amounts shown above do not include the effect of risk weight floors. If any tranche is subject to a risk weight floor, the securitization capital surcharge would be even higher.

In addition, as we explain below in our discussion of the  $K_A$  calculation, the SEC-SA effectively assigns a 625% risk weight to defaulted underlying exposures, whereas the risk weight for (unsecuritized) defaulted exposures under the NPR is 150%. Thus, the securitization capital surcharge increases sharply as underlying exposures default.

#### Comparison to Basel Standard

Under the Basel standard, the supervisory parameter, p, is set at 0.5 for STC (simple, transparent and comparable) securitizations,<sup>22</sup> 1.0 for non-STC securitizations, and 1.5 for resecuritizations. The US capital rules, however, do not recognize the distinction between STC and non-STC securitizations. Thus, market participants may wish to stress in their comment letters that the NPR's proposed increase of p from 0.5 to 1.0 is *not* the equivalent of aligning the US standard with the Basel standard. Indeed, the NPR's proposed increase would effectively treat all US securitizations under the expanded standardized approach the same way that Basel treats esoteric (non-STC) securitizations.

Moreover, we understand that the European Parliament has proposed lowering p from 0.5 to 0.25 for STC securitizations, and from 1.0 to 0.5 for non-STC securitizations. If the EU adopts that proposal, a p value of 1.0 in the US would be even further misaligned.

#### **NPR Explanation**

As explained below in the discussion about  $K_G$ , the NPR proposes to assign risk weights to securitization exposures under the expanded standardized approach that are different (and in some cases lower) than the risk weights assigned under the existing standardized approach. The US banking regulators cite those different risk weights in their decision to increase the supervisory parameter for securitizations, stating that:

"The proposed increase to the supervisory parameter p for securitizations that are not resecuritization exposures from 0.5 to 1.0 would help to ensure that the framework produces appropriately conservative risk-based capital requirements when combined with the reduced risk weights applicable to certain assets under the proposal that would be reflected in lower values of  $K_g$  and the proposed reduction in the risk weight floor under SEC-SA for securitization exposures that are not resecuritization exposures."<sup>23</sup>

The US banking regulators do not explain why the proposed changes in the risk weights of underlying exposures would render the supervisory parameter insufficiently conservative. According to the US banking regulators, the changes in risk weights "incorporate more granular risk factors to allow for a broader range of risk weights."<sup>24</sup> If such changes are a better and more accurate method of risk weighting underlying exposures, it is unclear why those changes lead to a worse and less accurate method of risk weighting securitization exposures such that an increase in the supervisory parameter is needed. The NPR's proposed lowering of the risk weights assigned to certain underlying exposures and its raising of them for others would seem to imply no more than a corresponding lowering of the risk weights assigned to related securitization exposures, in the former case, and a corresponding raising of them, in the latter case, through the normal operation of  $K_G$  under the model.

To be sure, where the NPR reduces the risk weight applicable to the underlying exposures, the effect of the increase in p in the decay rate term,  $-\frac{1}{pK_A}$ , will be offset to some extent by a decrease in  $K_A$ .

Figure 3 illustrates how a lower  $K_A$  under  $K_{SEC-A}$  than under  $K_{SSFA}$  interacts with the increase in p from 0.5 to 1.0 under  $K_{SEC-SA}$ . In this example,  $K_A = 0.068$  under  $K_{SEC-SA}$  and  $K_A = 0.08$  under  $K_{SSFA}$ . As Figure 3 depicts, the risk weight under the proposed  $K_{SEC-SA}$  model is actually less than the risk weight under the existing  $K_{SSFA}$  model.<sup>25</sup>



Figure 3. Illustration of Interacting Effects of Differences in p and  $K_A$ .

Notwithstanding the "sliver" effect noted above, it is our understanding from market participants that, in the aggregate, the increase in *p* yields a significant increase in the risk weights under  $K_{SEC-SA}$  relative to  $K_{SSFA}$  even after considering the NPR's lowering of the risk weights assigned to some types of underlying exposures. Even if principles of conservatism dictate that the  $K_{SEC-SA}$  model should neutralize the flow-through effects of lower risk weights for certain underlying exposures (a proposition which is itself questionable), it is unclear why such principles require effectively penalizing banks with securitization exposures simply because the risk weights on underlying exposures have been changed (presumably for the better) by the US banking regulators.<sup>26</sup>

## **Different Supervisory Risk Weight Floors**

The standardized approach's SSFA method assigns a risk weight floor of 20% for all securitizations. For the SEC-SA method under the expanded standardized approach, the NPR proposes to:

- Lower the risk weight floor to 15% for securitizations that are not resecuritizations or NPL securitizations, and
- Raise the risk weight floor to 100% for resecuritizations and NPL securitizations.

#### **Comparison to Basel**

The risk weight floor under the Basel standard is 15% for securitizations and 100% for resecuritizations. For senior tranches of STC securitizations (defined generally as the tranche with the highest credit rating), however, the risk weight floor is only 10% (whereas junior tranches of STC securitizations have a floor of 15%). The Basel standard does not specify a separate risk weight floor for NPL securitizations.

As with the supervisory calibration parameter, *p*, market participants may wish to stress in their comment letters that a 15% floor for securitizations is *not* the equivalent of aligning the US standard with the Basel standard. A 15% floor under the NPR effectively treats all tranches in US securitizations under the expanded standardized approach the same way that Basel treats junior tranches of STC securitizations, and all tranches of esoteric (i.e., non-STC) securitizations.

#### **NPR Explanation**

#### The NPR states that:

The SEC-SA is based on assumptions and the risk weight floor ensures a minimum level of capital is held to account for modelling risks and [default] correlation risks.... While junior tranches can absorb a significant amount of credit risk, senior tranches are still exposed to some amount of credit risk on the underlying exposures.<sup>27</sup>

Even without a risk weight floor, the  $K_{SEC-SA}$  model would still assign risk weights to even the most senior securitization exposures. The NPR does not explain why risk weights assigned under the  $K_{SEC-SA}$  model for senior tranches do not adequately reflect the credit risk to which those senior tranches are exposed, particularly in light of the NPR's proposed 100% increase in the supervisory calibration parameter, p. Indeed, one would expect that if the modelling risks and correlation risks cited by the NPR diminish the accuracy of  $K_{SEC-SA}$ , that diminished accuracy would manifest itself at the junior (more risk-sensitive) portions of the capital structure, not at the senior (less risk-sensitive) ones.

Moreover, as we discuss above in *Increase in p, the Supervisory Calibration Parameter*, the SEC-SA approach imposes a substantial capital surcharge on securitizations. The increase in *p* from 0.5 to 1.0 doubles the amount of that surcharge *before* giving effect to the application of any floor amount to a particular tranche. While the proposed 15% floor under SEC-SA is less than the 20% floor under SSFA, it is unclear why any floor is necessary in light of the substantial securitization capital surcharge imposed by both SEC-SA and SSFA.

Finally, the  $K_{SEC-SA}$  model is dynamic with respect to credit risk. As underlying exposures default, the  $K_A$  parameter increases. As  $K_A$  increases, the size of the "dollar for dollar" region of the capital structure expands, thus increasing risk weights across the junior region of the capital structure. The increase in  $K_A$  also decreases the decay rate of the underlying exponential risk-weighting function, thus elevating marginal risk weights at every point in the capital structure after the "dollar for dollar" region. The NPR does not explain why a risk weight floor remains necessary in light of the dynamic adjustments made by the  $K_{SEC-SA}$  model in response to the adverse performance of the underlying exposures.

# Changes to *K<sub>G</sub>*, Weighted Average Total Capital Requirement of the Underlying Exposures

 $K_G$  represents the weighted average total capital requirement of the underlying exposures. For example, if the average risk weight of the underlying exposures is 100%, then  $K_G$  would equal 0.08.

Weighting by Outstanding Balance. SEC-SA uses the outstanding balance of the exposure as the weight, whereas SSFA uses the unpaid principal. The NPR explains that this change was made "[f]or the sake of consistency," <sup>28</sup> as the outstanding balance is the proposed standard for use in calculating the attachment point (A) and detachment point (D) as described below.<sup>29</sup>

*Changes to Risk Weights for Underlying Exposures.* More significantly, values of  $K_G$  calculated under SEC-SA are, in many cases, different than under SFFA because the risk weights assigned to underlying exposures under the new expanded standardized approach are different than those under the existing standardized approach.<sup>30</sup> The risk weights under the proposed expanded standardized approach are derived from the Basel Endgame standard. Notably:

- Under the existing standardized approach, most retail exposures are assigned a risk weight of 100%. Under the proposed expanded standardized approach, retail exposures are placed into distinct categories:
  - "Regulatory retail exposures" are defined as "a revolving credit or line of credit [such as a credit card], or a term loan or lease [such as an installment loan, auto loan or lease, or student loan]."<sup>31</sup>
  - If a regulatory retail exposure is a "transactor exposure," its risk weight is 55%. If it is *not* a transactor exposure, its risk weight is 85%.
    - A "transactor exposure" means "a regulatory retail exposure that is a credit facility where the balance has been repaid in full at each scheduled repayment date for the previous 12 months or an overdraft facility where there has been no drawdown over the previous 12 months."<sup>32</sup>
    - Retail exposures in this category (e.g., a credit card where the balance is paid off consistently each month) have a risk weight of 55%.
    - Retail exposures that are not in this category (e.g., auto loans and leases) have a risk weight of 85%.
  - Other retail exposures (those that are not "regulatory retail exposures") would have a risk weight of 110%.
- Under the existing standardized approach, residential real estate exposures are subject to only a
  few categories of risk weights whose application is determined on the basis of guarantees or
  statutory exceptions. For the proposed expanded standardized approach, the NPR introduces a
  large number of risk weights applicable to residential real estate whose application is determined
  on the basis of loan-to-value (LTV) ratios and reliance on cash flow from the property.

*Elimination of Internal Ratings-Based Approach.* The existing advanced approaches capital framework requires that several of the largest banks use an internal ratings-based approach (and certain other methods) to calculate their risk-based capital requirements. The proposed expanded standardized approach, which would replace advanced approaches, does not permit banks to use internal models to calculate credit risk weights.

## Changes to W and $K_A$ , the Performance-Adjusted Weighted Average Capital Requirement of the Underlying Exposures

Like SSFA, SEC-SA uses parameter W to adjust  $K_G$  (the weighted average capital requirement of the underlying exposures) to reflect the observed adverse performance of those exposures. The model defines this adjusted value as:

$$K_A = (1 - W)K_G + 0.5W$$

*W* is the ratio of (i) the sum of the outstanding balances that are not securitization exposures<sup>33</sup> and that meet any of the specified adverse performance criteria to (ii) the outstanding balance of all underlying exposures. The adverse performance criteria are:

- ninety days or more past due,
- subject to bankruptcy or insolvency proceeding,
- in the process of foreclosure,
- held as real estate owned,
- has contractually deferred interest payments for 90 days or more or
- is in default.

The above is consistent with the existing SSFA approach. Nevertheless, market participants should consider two features of the  $K_A$  calculation when preparing their comments on the NPR.<sup>34</sup> The first is that, as with SSFA, the formula for  $K_A$  under SEC-SA treats underlying exposures that belong to the W category as though they have a capital requirement of 0.5, which corresponds to a risk weight of 625%. This is significantly higher than the NPR's proposed 150% risk weight for "defaulted exposures." <sup>35</sup> It is unclear why defaulted exposures should be effectively assigned such a high-risk weight when adjusting  $K_G$  for adverse performance.

Moreover, when an underlying exposure defaults and is moved to the W "bucket," the formula for  $K_A$  does not specify that such exposure should be disregarded in calculating  $K_G$  for the (1 - W) bucket. This effectively "double counts" the defaulted exposure. Not only does it receive a punitive 625% risk weight when it is moved to the W bucket, its associated 150% risk weight is still included in calculating the capital requirement for the assets that are performing (the (1 - W) bucket).

Finally, as we discuss above in *Increase in p, the Supervisory Calibration Parameter*, the SEC-SA approach imposes a very substantial securitization capital surcharge *before* giving effect to any defaults of underlying exposures. This securitization capital surcharge increases sharply as underlying exposures default because defaulted exposures are assigned a 150% risk weight under the NPR when held directly

by a bank, but are assigned a 625% risk weight for purposes of the SEC-SA calculation. If *all* of the securitized assets were to default (such that the risk weight for all of the underlying exposures is 150%), then our calculation of the securitization capital surcharges is as follows: <sup>36</sup>

- Where p = 0.5, the securitization capital surcharge would be 497%.
- Where p = 1.0, the securitization capital surcharge would be 580%.
- Where p = 1.5, the securitization capital surcharge would be 621%.

These securitization capital surcharge figures represent the amount by which the capital requirement for all the securitization exposures would exceed the capital requirement for all of the underlying exposures *after* taking into account the increase in the underlying exposures' risk weight to 150%.

## Changes to the Attachment Point (A) and Detachment Point (D)

Under the SEC-SA, the attachment point and detachment point for a securitization exposure are defined somewhat differently than under SSFA.

Both (A) and (D) have the same denominator. For convenience, we will define the denominator as O.

*O* means the outstanding principal balance of all underlying assets in the securitization, including (i) the funded portion of any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the bank's securitization exposure and (ii) the nonrefundable purchase price discount, if any.

For the attachment point, (*A*), the numerator is *O* minus "the outstanding balance of all tranches that rank senior or *pari passu* to the tranche that contains the securitization exposure of the [bank] (including the exposure itself)." <sup>37</sup> Suppose *O* is \$100 and that (i) the outstanding balance of all tranches that rank senior to the bank's tranche is \$60, (ii) the outstanding balance of all tranches that rank *pari passu* to the bank's tranche is \$15, and (iii) the outstanding balance of the bank's tranche is \$15. In that case the numerator would be \$100 - \$60 - \$15 - \$15 = \$10. Thus,  $A = \frac{$10}{$100} = 0.1$ .

For the detachment point, (*D*), the numerator is *O* minus the outstanding balance of all tranches that rank senior to the tranche that contains the securitization exposure of the bank. In our example, the numerator would be 100 - 60 = 40. Thus,  $D = \frac{40}{100} = 0.4$ .

#### Inclusion of the Funded Portion of Reserve Account

Under SEC-SA, any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the bank's securitization exposure "must" be included in the calculation of *A* and *D*. In contrast, under SSFA, such amounts "may" <sup>38</sup> be included in *A*, but there is no explicit reference to their inclusion in *D*.<sup>39</sup>

The NPR states that the expanded standardized approach would permit a bank to recognize all assets, cash or noncash, that are included in a reserve account "in the calculation of parameter

A."<sup>40</sup> However, in the proposed rule text, the definitions of both *A* and *D* refer to a provision stating that "a [bank] must include in the calculation of *A* and *D* the funded portion of any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the bank's securitization exposure."<sup>41</sup> Market participants may wish to seek clarification of these provisions during the comment letter process.

#### Inclusion of Nonrefundable Purchase Price Discount

Under the SEC-SA, any "nonrefundable purchase price discount" is included in the numerator and denominator of *A* and *D*. Although this term is not found in the existing standardized approach, the NPR characterizes it as a clarification.<sup>42</sup> Under the NPR:

Nonrefundable purchase price discount (NRPPD) means the difference between the initial outstanding balance of the exposures in the underlying pool and the price at which these exposures are sold by the originator to the securitization SPE, when neither originator nor the original lender are reimbursed for this difference. In cases where the originator underwrites tranches of an NPL securitization for subsequent sale, the NRPPD may include the differences between the notional amount of the tranches and the price at which these tranches are first sold to unrelated third parties. For any given piece of a securitization tranche, only its initial sale from the originator to investors is taken into account in the determination of NRPPD. The purchase prices of subsequent re-sales are not considered.<sup>43</sup>

The US banking regulators explain that a nonrefundable purchase price discount is a form of credit enhancement and thus effectively shifts the attachment points of securitization exposures up:

Since the calculation of parameters A and D both depend on the outstanding balance of the assets in the underlying pool, any nonrefundable purchase price discount associated with a securitization would be included in both the numerator and denominator of parameters A and D. For example, assume an originating banking organization transfers a pool of mortgage loans with an outstanding balance of \$100 million to a securitization SPE at a price of \$60 million. The nonrefundable purchase price discount would be the difference between the unpaid principal balances on the underlying mortgages at the time of sale to the securitization SPE and the price at which the originating banking organization sold these mortgages to the securitization SPE (that is, \$40 million).

The NRPPD provision merits further attention from market participants. Even in transactions with a modest NRPPD amount, any incremental shifting up of *A* and *D* leads to an exponential decrease in the risk weight, as discussed below.

#### **Exclusion of Excess Spread**

The SEC-SA does not include the value of excess spread in the calculation of the attachment point (*A*) and detachment point (*D*). Excess spread provides first loss protection to a securitization. The most junior tranche in a securitization's capital structure absorbs credit losses if, and only to the extent that, excess spread is not sufficient to cover those losses. While the loss absorbing capacity of excess spread is not recognized at all in the calculation of attachment and detachment points, its loss absorbing capacity is the very reason why the NPR proposes to disallow risk mitigation via synthetic securitizations that contain synthetic excess spread.<sup>44</sup>

Market participants may wish to emphasize in their comment letters that excess spread (like the funded portion of a reserve account and any nonrefundable purchase price) should be included in the calculation of the balance of the underlying assets. The exclusion of excess spread from that calculation creates a potentially significant misalignment between a tranche's regulatory position in the capital structure for risk weighting purposes and its true economic position in the capital structure for purposes of absorbing actual credit losses.

#### Impact of Changes in Tranche Seniority under SEC-SA

The precise calculation of A and D is important due to the rather dramatic effect even a small shift in a tranche's position has on its risk weight. For example, consider the tranche in Figure 1, for which A = 0.1 and D = 0.3. As noted, for that tranche,  $RW_{SEC-SA} \approx 251\%$ .<sup>45</sup>

- If we shift that tranche up by two points (so that A = 0.12 and D = 0.32), its risk weight drops to approximately 187%, a decrease of about 25%.
- If, instead, we shift that tranche down by two points to = 0.08 and D = 0.28, its risk weight increases to 337%, an increase of about 34%.

As constant percentage decay and growth are characteristics of exponential functions generally, any subsequent shifting up of the tranche by 2 points will result in a further 25% decrease in the risk weight, and any subsequent shifting down of the tranche by 2 points will result in a further 34% increase in the risk weight. Under both the proposed  $K_{SEC-SA}$  model and the existing  $K_{SSFA}$  model, the effect of changing the seniority of a tranche by some amount that we can call  $\Delta T^{46}$  is given by the following equation, assuming the tranche thickness (D - A) remains the same:

Percent change in risk weight = 
$$\left(e^{-\frac{1}{p*K_A}}\right)^{\Delta T} - 1$$

It is interesting to note that an effect in the increase in p is to make  $K_{SEC-SA}$  much less sensitive than  $K_{SSFA}$  to changes in a tranche's location in the capital structure. Keeping  $K_A = 0.068$  as in our example above, but using p = 0.5, we see the changes in risk weights resulting from shifting that tranche up by 2 points and down by two points, respectively:

$$\left(e^{-\frac{1}{0.5*0.068}}\right)^{0.02} - 1 \approx -44\% \text{ (as compared to } -25\% \text{ under } K_{SEC-SA}\text{)}$$
$$\left(e^{-\frac{1}{0.5*0.068}}\right)^{-0.02} - 1 \approx +80\% \text{ (as compared to } +34\% \text{ under } K_{SEC-SA}\text{)}$$

## **Exceptions to the SEC-SA Approach**

As noted above, like SSFA, the proposed SEC-SA approach assigns a 1250% (i.e., "dollar for dollar") risk weight to any portion of a securitization exposure that is junior to  $K_A$ . For any portion of a securitization exposure senior to  $K_A$ , SEC-SA assigns a risk weight equal to 1250% times  $K_{SEC-SA}$ , subject to a 15% supervisory floor (for securitizations) and a 100% supervisory floor (for resecuritizations and NPL securitizations).

The NPR specifies certain exceptions to the SEC-SA approach, each of which is discussed below.

#### Look-Through Approach

Under the expanded standardized approach, for a "senior securitization exposure" that is not a resecuritization exposure, banks may assign a risk weight equal to the greater of (a) the weighted-average risk weight of all the underlying exposures and (b) 15%.<sup>47</sup> The NPR defines "senior securitization exposure" as:

[A] securitization exposure that has a first-priority claim on the cash flows from the underlying exposures. When determining whether a securitization exposure has a first-priority claim on the cash flows from the underlying exposures, a [BANKING ORGANIZATION] is not required to consider amounts due under interest rate derivative, currency derivative, and servicer cash advance facility contracts; fees due; and other similar payments. Both the most senior commercial paper issued by an ABCP program and a liquidity facility that supports the ABCP program may be senior securitization exposures if the liquidity facility provider's right to reimbursement of the drawn amounts is senior to all claims on the cash flows from the underlying exposures except amounts due under interest rate derivative, currency derivative, and servicer cash advance facility contracts; fees due; and other similar payments.

Given that the risk weights assigned to underlying exposures under the expanded standardized approach generally exceed 15%, the presence of a 15% supervisory floor may not be relevant to the application of the look-through approach in most cases.

Note that for purposes of the "senior securitization exposure" definition, fees and other amounts typically due at the very top of the payment waterfall may be excluded. Thus, the most senior security issued by the securitization trust (or the most senior commercial paper issued by an ABCP conduit) may be a senior securitization exposure that is eligible for the look-through approach. In addition, the NPR makes clear that a liquidity facility that supports the ABCP program may be a senior securitization exposure if the liquidity provider's right to reimbursement of liquidity draws is senior to all claims on the cash flows from the underlying exposures.<sup>49</sup>

The look-through approach could be very helpful to a bank that is unable or unwilling to use the SEC-SA approach. The NPR provides that "Except as provided elsewhere in this section,... [i]f the [bank] cannot apply, or chooses not to apply, [SEC-SA], [it] must apply a 1,250% risk weight to the exposure."<sup>50</sup> The look-through approach is provided for in that same section and thus presumably is an available option for avoiding the 1250% risk weight.<sup>51</sup>

The look through approach, however, has two significant limitations: the tranched credit protection limitation and the thick tranche limitation.

<u>Tranched Credit Protection Limitation</u>. Under the expanded standardized approach, a bank that obtains tranched credit protection that references the higher-priority part of a securitization exposure and that recognizes the credit risk mitigation benefits of that credit protection would not be allowed to treat the lower-priority part of the securitization exposure as a senior securitization exposure that is eligible for the look-through approach.<sup>52</sup>

<u>Thick Tranche Limitation</u>. Since a senior securitization exposure is defined as the exposure having a firstpriority claim, its detachment point (*D*) is 1 (or near to it).<sup>53</sup> Thus, the attachment point (*A*) of the senior securitization exposure will determine whether the look-through approach will assign a lower risk weight to the securitization exposure than the regular SEC-SA approach.

In general, the look-through approach will not result in a lower risk weight unless the senior securitization exposure is very thick (i.e., the attachment point (*A*) is very low).<sup>54</sup> For example, where  $K_G = 0.068$  and where W = 0 (such that  $K_A$  is also 0.068), the look-through approach would not yield a lower risk weight relative to  $K_{SEC-SA}$  unless the exposure's attachment point (*A*) is less than approximately 0.07317.

In explaining the rationale for the look-through approach exception, the NPR states that it is:

intended to recognize that the credit risk associated with each dollar of a senior securitization exposure generally will not be greater than the credit risk associated with each dollar of the underlying assets, because the non-senior tranches of a securitization provide credit enhancement to the senior tranche.<sup>55</sup>

While the reasoning above is most clearly true of the *most* senior tranche, it is also true of any tranche that has the benefit of credit enhancement in the form of tranches subordinated to it. Market participants may wish to consider advocating for an expansion of the look-through approach, perhaps by expanding its availability to any tranche whose attachment point (A) exceeds some threshold (such as a reasonable multiple of  $K_A$ ).

#### **NPL Securitizations**

The proposed expanded standardized approach contains separate provisions for non-performing loan (NPL) securitizations because "SEC-SA may be inappropriate for the unique risks of such exposures."<sup>56</sup> The NPR defines an NPL securitization as:

a traditional securitization, or a synthetic securitization, that is not a resecuritization, where parameter W ... for the underlying pool is greater than or equal to 90 percent at the origination cut-off date and at any subsequent date on which assets are added to or removed from the pool due to replenishment or restructuring.<sup>57</sup>

If the exposure to the NPL securitization is a senior securitization exposure, a risk weight of 100% would apply if:

- the securitization is a traditional securitization; and
- the securitization has credit enhancement in the form of a nonrefundable purchase price discount greater than or equal to 50% of the outstanding balance of the pool of exposures.<sup>58</sup>

The NPR explains that "[t]he SEC-SA is calibrated on the basis that the loans in the pool at origination are generally performing and is therefore inappropriate for senior exposures to securitizations of NPLs that meet these criteria."<sup>59</sup>

If the exposure to the NPL securitization is not a senior securitization exposure or if the purchase price discount is less than 50%, the bank would be required to use SEC-SA, with parameter *W* reflecting all delinquent exposures. In addition, a supervisory risk weight floor of 100% would apply.<sup>60</sup>

#### **Other Exceptions**

<u>Overlapping exposures</u>. The NPR would allow banks to treat certain overlapping securitization exposures as if they were a single exposure for purposes of the risk weight calculation. The NPR would also allow recognition of overlap between securitization exposures and market risk covered positions if the bank can calculate and compare the capital requirements.<sup>61</sup>

<u>Nth-to-default credit derivatives</u>. The NPR would prohibit banks from recognizing any risk-mitigating benefits from any nth-to-default credit derivatives under which the bank is the protection purchaser. For nth-to-default credit derivatives under which the bank is the protection provider, the NPR would require the bank to calculate risk weights by multiplying the aggregate risk weights of the assets in the basket (excluding the n-1 assets with the lowest risk weights) by the notional amount of the protection provided.<sup>62</sup>

<u>Derivative contracts that do not provide credit enhancement</u>. The NPR would require banks acting as counterparties to certain interest rate or foreign exchange derivatives that qualify as securitization exposures but that do not provide credit enhancement to assign a risk weight equal to the risk weight of a *pari passu* securitization tranche or the next subordinated tranche. This approach seeks to reflect how the credit risk associated with these derivatives is commensurate with or less than the credit risk of a tranche of the securitization.<sup>63</sup>

#### After-tax gain-on-sale resulting from a securitization.

Under the NPR, regardless of whether a traditional securitization sponsored by an originating bank meets the operational criteria for traditional securitizations, the bank must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the securitization and any portion of a credit enhancing interest only strip (CEIO). This differs from the existing standardized approach in two ways:

• The existing standardized approach assigns a 1250% risk weight to these items. The NPR explains that "[w]hile a deduction is generally equivalent to a 1250 percent risk weight when the bank maintains an 8 percent capital ratio, given the various capital ratios, buffers, and add-ons

applicable to [certain banks], applying a deduction provides a more consistent treatment across ratios and banking organizations."<sup>64</sup>

 The existing standardized approach assigns the 1250% risk weight for CEIOs only if a traditional securitization fails to meet the operational criteria for traditional securitizations. The NPR explains that the treatment of CEIOs is intended to address the high degree of subjectivity associated with CEIO valuations.<sup>65</sup>

The proposed expanded standardized approach does not reflect substantial changes to the existing exceptions under the standardized approach for implicit support,<sup>66</sup> the undrawn portion of a servicer cash advance facility,<sup>67</sup> interest-only mortgage-backed securities,<sup>68</sup> small-business loans and leases on personal property transferred with retained contractual exposure,<sup>69</sup> and guarantees and credit derivatives other than nth-to-default credit derivatives.<sup>70</sup>

## Recognition of Credit Risk Mitigants for Securitization Exposures

Under specified circumstances, a bank may recognize the credit recognition benefits of a "credit risk mitigant" (defined as collateral, a credit derivative or a guarantee<sup>71</sup>) used to hedge its credit risks. The recognition of credit risk mitigants for securitization exposures under the proposed expanded standardized approach differs from the existing standardized approach in a number of ways, including that the proposed expanded standardized approach:

- does not permit the use of internal models for collateral recognition; and
- does not include the existing formula for collateral recognition that uses standard supervisory haircuts and allows banks to use their own internal estimates of haircuts with prior supervisory approval.<sup>72</sup>

## Additional Operational Criteria for Synthetic Securitizations

The NPR proposes three new operational criteria for synthetic securitizations under the expanded standardized approach.<sup>73</sup>

#### **Early Amortization Provisions**

Under the NPR, if a synthetic securitization includes an early amortization provision and if that synthetic securitization references one or more underlying exposures in which the borrower is permitted to vary the drawn amount with an agreed limit under a line of credit (e.g., a credit card account), then the bank is required to hold risk-based capital against the underlying exposures as if they had not been synthetically securitized.<sup>74</sup>

The term "early amortization provision" means:

a provision in the documentation governing a securitization trust that, when triggered, causes investors in the securitization exposures to be repaid before the original stated maturity of the securitization exposures, unless the provision:

- (1) Is triggered solely by events not directly related to the performance of the underlying exposures or the originating [bank]; or
- (2) Leaves investors fully exposed to future draw by borrowers on the underlying exposures even after the provision is triggered.<sup>75</sup>

The US banking regulators are concerned that a bank faces increased credit and liquidity risk arising from borrowers making future draws of their lines of credit after the early amortization provision has been triggered, such that the bank will need to find a new source of funding or reduce the borrower's credit line.<sup>76</sup>

#### Synthetic Excess Spread

The NPR would prohibit an originating bank from recognizing the risk-mitigating benefits of a synthetic securitization that includes synthetic excess spread.<sup>77</sup> The term "synthetic excess spread" is defined in the NPR as "any contractual provisions in a synthetic securitization that are designed to absorb losses prior to any of the tranches of the securitization structure."<sup>78</sup>

Synthetic excess spread acts as first-loss credit enhancement in synthetic securitizations. The NPR characterizes synthetic excess spread as credit enhancement provided by the originating bank, i.e., the originating bank effectively agrees to absorb losses on the underlying exposures up to the amount of the synthetic excess spread before investors incur losses.

Notably, the US banking regulators chose not to assign a separate risk weighting requirement to the amount of the synthetic excess spread but otherwise allow the originating bank to recognize the risk mitigating benefits of the synthetic securitization. They reason that:

A risk-based capital requirement for synthetic excess spread may not be determinable with sufficient precision to promote comparability across banking organizations because [the amount of such spread] would depend upon...whether any of the underlying exposures have defaulted or prepaid. In particular, the total amount of synthetic excess spread made available at inception to investors over the life of the transaction may not be known ex ante, as the outstanding balance of the securitization in future years is unknown.<sup>79</sup>

While the precise amount of excess spread may not be known *ex ante*, it is not clear why the presence of excess spread should eliminate the risk mitigating benefits of the synthetic securitization altogether. Moreover, the NPR's treatment of excess spread is internally inconsistent. On the one hand, the NPR does not give any credit to the first loss absorbing capacity of excess spread in its calculation of the attachment and detachment points for securitization exposures. On the other hand, the NPR disallows the risk mitigating benefits of synthetic securitizations that contain synthetic excess spread precisely because of such spread's first loss absorbing capacity.

#### **Minimum Payment Threshold**

The NPR requires that the minimum payment threshold for the credit risk mitigant is consistent with standard market practice.<sup>80</sup> A "minimum payment threshold" is "a contractual minimum amount that must be delinquent before a credit event is deemed to have occurred."<sup>81</sup> According to the NPR:

The proposed minimum payment threshold criterion is intended to prohibit an originating banking organization from recognizing the capital reducing benefits of a synthetic securitization whose minimum payment threshold is so large that it allows for material losses to occur without triggering the credit protection acquired by the protection purchaser, as such provisions would interfere with an effective transfer of credit risk.<sup>82</sup>

The NPR does not explain how the standard market practice is to be determined. The uncertain and subjective nature of this determination may subject banks to increased uncertainty about the risk mitigating benefits of their synthetic securitizations. We expect that this new requirement will receive considerable attention in comment letters from market participants.

## **Different Credit Conversion Factors**

Under the capital rules, a bank must calculate the amount of its off-balance sheet exposures using credit conversion factors (CCFs). Specifically, a bank's off-balance sheet exposures (measured by their notional, i.e., contractual, amount) are multiplied by their applicable CCFs in order to convert them to their credit exposure (risk-weighted asset) equivalents.

CCFs under the proposed expanded standardized approach are generally the same as those under the existing standardized approach, except with respect to commitments. The chart below summarizes the differences in CCFs applicable to commitments.

Commitment Type	<b>CCF</b> (Standardized Approach)	<b>CCF</b> (Proposed Expanded Standardized Approach)
Unconditionally cancelable	0% 83	10% 84
Not unconditionally cancelable; original maturity ≤ 1 year	20% <sup>85</sup>	400/ 86
Not unconditionally cancelable; original maturity > year	50% <sup>87</sup>	40%**

The NPR does not propose to change the definition of "unconditionally cancelable commitment," which is defined as a "commitment that a banking organization may, at any time, with or without cause, refuse to extend credit (to the extent permitted under applicable law)."<sup>88</sup>

Thus, under the proposed expanded standardized approach, (i) for uncommitted lending facilities and other unconditionally cancelable commitments, banks would need to apply a 10% CCF, rather than a 0%, and (ii) for committed lending facilities and other commitments that are not unconditionally cancelable, a 40% CCF would apply regardless of the original maturity of those commitments.

## New Capital Charge on Fees and Commissions

In addition to the capital requirements for credit risk (including the credit risk associated with securitization exposures), the NPR introduces a capital requirement for operational risk based on a standardized approach. Under the NPR, a bank's operational risk capital requirement would be equal to its business indicator component multiplied by its internal loss multiplier.<sup>89</sup>

A detailed discussion of operational risk capital requirements under the NPR is beyond the scope of this article. We note, however, that the "services component" of the business indicator captures, among other things, a bank's "fee and commission income," which is defined as "income received from providing advisory and financial services, including insurance income."<sup>90</sup> According to the NPR:

the components of the business indicator "aim to capture comprehensively the volume of a [bank's] financial activities and thus serve as a proxy for a banking organization's business volume...Banking organizations with higher overall business volume are larger and more complex, which likely results in exposure to higher operational risk."<sup>91</sup>

This capital requirement could apply to the fees and commissions that banks earn in connection with securitizations, such as underwriting fees, third-party servicing fees, and servicing fees under off-balance sheet securitizations for which the bank is the servicer. Thus, this new capital requirement would increase the costs to a bank for providing such services. In some cases, this may lead to banks charging higher fees for such services. However, if market conditions or other forces prevent banks from charging higher fees, then they will have to absorb the cost of holding additional capital against those fees (i.e., allocate more of their scarce capital to support their fee-generating activities).<sup>92</sup>

## **Concluding Thoughts**

The SEC-SA and the proposed expanded standardized approach are among the many significant proposals that market participants must evaluate and comment on. While banks are still in the early stages of assessing the overall potential impact of the NPR's securitization-related proposals, preliminary estimates are that, if adopted, the SEC-SA and the expanded standardized approach will lead to a material overall increase in the risk weights assigned to securitization exposures.

Of course, the aggregate impact of the proposals on securitization is the sum of the interacting effects of many provisions as applied to many different types of transactions. The most significant changes, such as the increase in the supervisory calibration parameter, *p*, for securitizations and the changes in risk weights applicable to many underlying exposures, have rightfully garnered much attention. As market participants continue to study the NPR and prepare their comment letters, we expect that they will pay increasing attention to other aspects of the securitization proposals that may have significant impacts on the risk weights assigned to securitization exposures.

As we discuss in this article, the NPR's impact across banks would not be consistent because the NPR sorts banks into those that are subject to the expanded standardized approach (which is new) and those that remain subject to the existing standardized approach (which would not change). Similarly, the NPR's impact across asset classes would not be consistent because (1) the expanded standardized approach and the existing standardized approach assign different risk weights to underlying exposures and (2) those two approaches have different models (SEC-SA and SSFA, respectively) for converting the risk weights of underlying exposures into the risk weights applicable to securitizations of those underlying exposures. While the NPR's impacts are variable across banks and asset-classes, we expect that the NPR would result in an overall increase in the amount of capital that banks are required to hold against securitization exposures.

# Appendix A

## Description of the $K_{SEC-SA}$ Model

 $K_{SEC-SA}$  is the mathematical model underlying SEC-SA. Like the existing  $K_{SSFA}$  model, it is a formula for calculating the area by integration under an exponential function<sup>93</sup> over the interval [*l*, *u*]:

$$K_{SEC-SA} = \frac{e^{au} - e^{al}}{a(u-l)} = \int_{l}^{u} \frac{1}{(u-l)} e^{ax} dx$$

As noted in the table below, the value of *a* is negative. Therefore, the function  $\frac{1}{(u-l)}e^{ax}$  follows the general form for exponential decay, which is given by  $g(x) = Ae^{-kx}$ , where *A* is the value of the function at x = 0 and where *k* is the decay rate of the function.

Parameter	Description	Value
а	Decay rate of the exponential decay function	$-\frac{1}{pK_A}$
р	Supervisory calibration parameter	{1.0, for securitization exposures {1.5, for resecuritization exposures
K <sub>G</sub>	Weighted average total capital requirement of the underlying exposures.	Decimal value between 0 and 1
W	Proportion of underlying assets that are defaulted, etc.	Decimal value between 0 and 1
K <sub>A</sub>	Performance-adjusted weighted average total capital requirement of the underlying exposures.	$(1-W)K_G + 0.5W$
u	Distance of the detachment point of the tranche $(D)$ from $K_A$	$D - K_A$
l	Distance of the attachment point of the tranche $(A)$ from $K_A$	$max(A - K_A, 0)$
е	Base of the natural logarithms	2.71828

The table below provides a summary description of the parameters used in the proposed  $K_{SEC-SA}$  model.

The integral expression of  $K_{SEC-SA}$  shown above can be adjusted to put it in a more convenient form:

$$K_{SEC-SA} = \int_{l}^{u} \frac{1}{(u-l)} e^{ax} dx = \frac{1}{(D-A)} \int_{A}^{D} e^{\left(-\frac{1}{pK_{A}}\right)(x-K_{A})} dx$$
$$k(x) = 1250\% * e^{\left(-\frac{1}{pK_{A}}\right)(x-K_{A})}$$
$$1250\% * K_{SEC-SA} = \frac{\int_{A}^{D} (k(x)) dx}{(D-A)}$$

The risk weight under SEC-SA ( $RW_{SEC-SA}$ ) for the securitization exposure depicted in Figure 1 in this article (and depicted again below for ease of reference) is equal to the shaded area under the curve divided by the tranche thickness, D - A.



The downward-sloping curved line is the function, k(x), described above, using as inputs the hypothetical parameter values:  $k(x) = 1250\% * e^{\left(-\frac{1}{1*0.068}\right)(x-0.068)}$ . The area under the curved line (referred to as "Shaded Area") is  $\int_{0.1}^{0.3} (k(x)) dx \approx 50.29\%$ . Dividing that percentage figure by the tranche thickness (0.3 – 0.1) gives the risk weight for the hypothetical tranche, which is approximately 251%.

## Endnotes

- <sup>1</sup> The US banking regulators consist of the Board of Governors of the Federal Reserve System ("Federal Reserve"), Office of the Comptroller of the Currency, and Federal Deposit Insurance Corporation ("FDIC").
- <sup>2</sup> Regulatory capital rule: Amendments applicable to large banking organizations and to banking organizations with significant trading activity (July 27, 2023), available at: <u>https://www.federalreserve.gov/aboutthefed/boardmeetings/frn-basel-iii-20230727.pdf</u>. The rules establishing minimum capital requirements and overall capital adequacy standards for US banks, commonly referred to as the "capital rule," are set forth in 12 CFR §3.1 et seq. (for banks regulated by the OCC), 12 CFR §217.1 et seq. (for banks regulated by the Board), and 12 CFR §324.1 et seq. (for banks regulated by the FDIC).
- <sup>3</sup> As used in this article, the term "bank" generally refers to a banking organization regulated by a US Banking Regulator. The OCC regulates national banks and Federal savings associations. The Board regulates state member banks, bank holding companies and savings and loan holding companies. The FDIC regulates insured depository institutions.
- <sup>4</sup> See <u>Overhaul of Regulatory Capital Reguirements Proposed by US Banking Regulators</u> (the "MB Comprehensive Update"). In a subsequent article, we highlight some key differences between the NPR and Basel. See <u>A Road Not Taken: Where the US Capital Proposal Differs from Basel</u>. As noted in the MB Comprehensive Update, despite early statements from the US banking regulators, the approach reflected in the NPR is not capital-neutral and would increase capital requirements significantly. The NPR would also affect banks with significant fee income. The G-SIB Proposal, which is discussed in the MB Comprehensive Update, would impact banks with substantial cross-border activity. When taken together, all of this may have the effect of causing banks to (i) review their loan exposures, (ii) consider loan originations and (iii) rotate into securities. The NPR may also lead to a shift of certain origination activities from banks to nonbanks, and result in nonbanks becoming more significant participants in the short-term wholesale funding markets that support securitization.
- <sup>5</sup> Under the standardized approach, banks that are not market risk banks may use the gross up approach instead of SSFA. Under the gross up approach, a bank calculates the "credit equivalent amount" of its securitization exposures and applies a risk weight to those exposures. Most banks apply SSFA rather than the gross up approach, and we expect that to continue to be the case. Thus, this article will generally refer to SSFA when discussing the standardized approach.
- <sup>6</sup> See MB Comprehensive Update, at 2.
- <sup>7</sup> Note that banks are not required to use the higher of the standardized approach risk weight and the expanded standardized approach risk weight on an exposure-by-exposure basis. Rather, banks are required to compare total risk-weighted assets as calculated under each approach.
- <sup>8</sup> The dual-stack approach is controversial due to its complexity and its inconsistent impact across banks. FDIC board member Jonathan McKernan voted against issuing the NPR and noted in his <u>dissent</u> that "This dual-requirement structure forgoes an opportunity to simplify an already complicated capital framework. The dual-requirement structure also introduces internal inconsistencies that compound into incoherence. Some large banks would have one capital requirement for a securitization exposure, while other large banks would have a different capital requirement for the same exposure."
- <sup>9</sup> As we note in our MB Comprehensive Update, a bank currently is subject to the market risk capital requirement if its aggregate trading assets and trading liabilities equal 10% or more of total assets or \$1 billion or more. About 40 banking organizations currently are subject to the market risk capital requirement. The NPR would

change the threshold for applying the market risk capital requirements by increasing the absolute threshold trigger from \$1 billion to \$5 billion in aggregate trading assets and trading liabilities.

- <sup>10</sup> See MB Comprehensive Update, pp. 10-12 for a description of the NPR's proposed changes to the market risk capital requirements. See also our discussion below concerning the "overlapping exposures" exception to SEC-SA.
- <sup>11</sup> Note that market risk banks may not use the gross-up approach under the standardized approach.
- <sup>12</sup> See 12 CFR §217.2.
- <sup>13</sup> See NPR, p. 429.
- <sup>14</sup> For example, if the capital requirement associated with holding the assets directly is 8% and the capital requirement for holding every tranche of a securitization of those assets is 16%, the securitization capital surcharge would be 100%.
- <sup>15</sup> The proposed expanded standardized approach contains provisions that relate to derivatives transactions, repo transactions and other types of transactions that may be relevant to some securitization participants. See the *MB Comprehensive Update* for a general discussion of those provisions.
- <sup>16</sup> See 12 CFR §217.10(a)(i)(iii). Under the capital rules, "total capital" is the sum of Tier 1 capital (which consists of common equity Tier 1 capital and Additional Tier 1 capital) and Tier 2 capital (which consists of subordinated capital interests, subject to certain limitations and adjustments). The NPR would eliminate the "AOCI opt-out" and require all banks with \$100 billion or more in total assets to include accumulated other comprehensive income (AOCI) (with some adjustments) when calculating common equity Tier 1 capital. This change would have a significant impact for those banks that carry significant negative AOCI on their balance sheets.
- <sup>17</sup> Each of these inputs is described in further detail later in this article.
- <sup>18</sup> 1250% \* 8% (the minimum total capital ratio) = 100%.
- <sup>19</sup> As explained in Appendix A, the risk weight for this hypothetical tranche would be approximately 251%.
- <sup>20</sup> See Appendix A for a discussion of the underlying exponential decay function,  $e^{ax}$ , where  $a = -\frac{1}{nK_{+}}$ .
- <sup>21</sup> See, also, our discussion below regarding the attachment and detachment point calculations. There, we (i) describe the exponential changes to a tranche's risk weight when that tranche's level of seniority is changed in the capital structure and (ii) note that the increase in *p* from 0.5 to 1.0 makes the model less sensitive to changes in a tranche's position.
- See Basel Committee on Banking Supervision, CRE40 (Securitisation: general provisions) (version effective as of 01 Jan. 2023) (CRE40), pp. 23-60. To qualify for STC treatment under Basel, a securitization must satisfy a number of criteria, including that the underlying assets are homogenous, reliance on refinancing or re-sale of underlying assets to pay investors is not substantial, standardized interest rates are used and no complex derivatives are used.
- <sup>23</sup> See NPR, p. 145.
- <sup>24</sup> See NPR, p. 42.
- <sup>25</sup> For securitization exposures that are not resecuritization exposures, the curves depicted on Figure 3 intersect whenever  $K_A$  under  $K_{SEC-A}$  is less than  $K_A$  under  $K_{SSFA}$ . The point x on the capital structure at which the lines intersect is given by:  $x = \frac{0.5 * K_A(SEC-SA) * K_A(SSFA)}{K_A(SEC-SA) - 0.5K_A(SSFA)}$ . In Figure 3, the lines intersect at  $x = \frac{0.5 * 0.068 * 0.08}{0.068 - 0.5(0.08)} \approx 0.097$ .

- <sup>26</sup> It is even more unclear why principles of conservatism require the use of a higher value of p where the underlying exposures are assigned a higher risk weight under the proposed expanded standardized approach than under the existing standardized approach.
- <sup>27</sup> See NPR, p. 145.
- <sup>28</sup> See NPR, p. 142 (fn. 136).
- <sup>29</sup> The change to outstanding balance for purposes of the  $K_G$  calculation does not appear to be significant. However, as explained below, the change to outstanding balance is potentially significant with respect to the calculation of the attachment and detachment points.
- <sup>30</sup> For a comprehensive overview of the NPR's proposed changes to risk weights, *see <u>Overhaul of Regulatory Capital Reguirements</u> <u>Proposed by US Banking Regulators</u>, at pp. 5-9.*
- <sup>31</sup> See, NPR, pp. 82 and 569.
- <sup>32</sup> See NPR, p. 570.
- <sup>33</sup> The US banking regulators seek to "clarify that for resecuritization exposures, any underlying exposure that is a securitization exposure would only be included in the denominator of the ratio and would be excluded from the numerator of the ratio. That is, for resecuritization exposures, parameter W would be the ratio of the sum of the outstanding balance of any underlying exposures of the securitization that meet any of the [adverse performance criteria] that are not securitization exposures to the outstanding balance of all underlying exposures. Underlying securitization exposures need not be included in the numerator of parameter W because the risk weight of the underlying securitization exposure as calculated by the SEC-SA already reflects the impact of any delinguent or otherwise nonperforming loans within the underlying securitization exposure." See NPR, at 142-143.
- <sup>34</sup> As noted in this article,  $K_A$  is an important component of the  $K_{SEC-SA}$  model, particularly because (1) it defines the boundary between 1250% risk weighting and risk weighting based on the  $K_{SEC-SA}$  model and (2) it is used in the exponential decay term,  $-\frac{1}{nKA'}$  which governs the rate at which marginal risk weights decline as a function of the securitization exposure's seniority.
- <sup>35</sup> See NPR, p. 584. A "defaulted exposure" includes, among other things, an exposure under which the obligor is 90 or more days past due or in nonaccrual status. *Id.*, pp. 557-558.
- <sup>36</sup> If all of the underlying exposures were to default, then W = 1 and therefore  $K_A = 0.5$  (which corresponds to a 625% risk weight under the model).
- <sup>37</sup> See NPR, p. 656.
- <sup>38</sup> See NPR, p. 657. We note that the preamble of the NPR, the US banking regulators state that such amounts "may" be included. Thus, it is not entirely clear whether their intention is to make this a "must."
- <sup>39</sup> See 12 CFR §144(b)(3).
- <sup>40</sup> See NPR, p. 141.
- <sup>41</sup> See NPR, p. 657.
- <sup>42</sup> See NPR, p. 141.
- <sup>43</sup> See NPR, p. 563.

- <sup>44</sup> The NPR characterizes synthetic excess spread as the effective equivalent of the bank's agreeing to absorb losses on the underlying exposures up to the amount of the excess spread. *See* NPR, p. 138.
- <sup>45</sup> Recall that the assumption for Figure 1 was  $K_A = 0.068$ .
- <sup>46</sup> For example, where the tranche is being shifted up by 2 points as in our example,  $\Delta T = 0.02$ , and if it is being shifted down by 2 points,  $\Delta T = -0.02$
- <sup>47</sup> Under the NPR, a bank may use the look-through approach only if it "has knowledge of the composition of all of the underlying exposures." See NPR, at p. 655.
- <sup>48</sup> See NPR, pp. 569-570.
- <sup>49</sup> See NPR, p. 151. For purposes of determining whether reimbursement amounts are senior to all other claims, claims with respect to amounts due under interest rate derivative, currency derivative, and servicer cash advance facility contracts, fees due and other similar payments may be ignored. *Id*.
- <sup>50</sup> See NPR, p. 648-649.
- <sup>51</sup> Note, however, that a condition to the look-through approach is that the bank "has knowledge of the composition of all of the underlying exposures." See NPR, at 655. That condition may be difficult for a bank to meet if the reason it is ineligible to use SEC-SA is because it does not satisfy the condition to SEC-SA's use that the bank has accurate and current information on *A*, *D*, *W*, and *K<sub>G</sub>*. See NPR, p. 648.
- <sup>52</sup> The NPR states that "if a banking organization holds a securitization exposure with an attachment point of 20 percent and a detachment point of 100 percent and the banking organization purchases an eligible guarantee with an attachment point of 50 percent and a detachment point of 100 percent, the banking organization's residual exposure, which attaches at 20% and detaches at 50 percent, would be considered a non-senior securitization exposure, and the banking organization would not be permitted to apply the look-through approach to this exposure. ... Alternatively, the banking organization may choose not to recognize the tranched credit protection, in which case, the banking organization may treat the securitization exposure (which attaches at 20 percent and detaches at 100 percent) as a senior securitization exposure." *See* NPR, p. 157.
- <sup>53</sup> If the relevant securitization exposure is the most senior asset-backed security, then its detachment point would be 1 unless there are securitization exposures senior to it, such as fees and other amounts typically paid at the top of the waterfall. The presence of these senior securitization exposures will cause the detachment point for the senior asset backed security to be somewhat less than 1. However, as noted above, such top-of-the-waterfall fees and other similar senior securitization exposures can be disregarded for purposes of determining whether the most senior asset-backed security is a senior securitization exposure.
- <sup>54</sup> Specifically, the attachment point, *A*, would generally have to be low enough to satisfy this inequality:

$$\frac{e^{a(1-K_A)}-e^{a(A-K_A)}}{a(1-A)} > K_{G'} \text{ where } a = -\frac{1}{pK_A}.$$

- <sup>55</sup> See NPR, p. 151.
- <sup>56</sup> See NPR, p. 153.
- <sup>57</sup> See NPR, p. 563. The NPR explains that the "[c]ut off date is the date on which the composition of the asset pool collateralizing a securitization transaction is established. This means that all assets to be included in a securitization must already be in existence and meet the NPL criteria as of that date." See NPR, p. 153 (fn. 143).

- <sup>58</sup> See NPR, p. 153.
- <sup>59</sup> See NPR, p. 154.
- <sup>60</sup> See NPR, p. 154. The NPR states that if the exposure does not meet the requirements of the SEC-SA, then a 1250% risk weight applies. *Id.*
- <sup>61</sup> See NPR, pp. 149-150, for a discussion of the exception for overlapping exposures exception.
- <sup>62</sup> See NPR, p. 147, for a discussion of the exception for nth-to-default credit derivatives.
- <sup>63</sup> See NPR, p. 147-148, for a discussion of the exception for derivative contracts that do not provide credit enhancement.
- 64 See, NPR, p. 152.
- <sup>65</sup> See NPR p. 152, for a discussion of the exception for CEIO strips.
- <sup>66</sup> If a bank provides support to a securitization in excess of the bank's contractual obligation to provide credit support, then the bank must calculate a risk-weighted asset amount for underlying exposures as if they had not been securitized, deduct certain amounts from its common equity tier 1 capital and make certain disclosures.
- <sup>67</sup> A servicer under an eligible servicer cash advance facility is not required to hold risk-based capital against potential future cash advanced payments that it may be required to provide. If the facility is not an eligible servicer cash advance facility, the exposure amount is equal to the amount of all potential future cash payments that the bank may be contractually required to make during the subsequent 12-month period.
- <sup>68</sup> The minimum risk weight for a non-credit-enhancing interest-only mortgage-backed security may not be less than 100%.
- <sup>69</sup> This exception permits a bank to include only its retained contractual exposure in its risk-weighted assets, subject to certain conditions.
- <sup>70</sup> A bank acting as the credit protection provider must risk-weight the guarantee or credit derivative as if it held the portion of the covered reference exposure. A bank that purchases that a credit derivative that is recognized as a credit risk mitigant is not required to compute a separate counterparty credit risk capital requirement.
- <sup>71</sup> See 12 CFR §217.2.
- <sup>72</sup> See NPR, p. 156.
- <sup>73</sup> As explained earlier in this article, the bank may exclude the referenced underlying exposures from its risk-weighted assets only if the operational criteria for synthetic securitizations are satisfied. We note that with respect to credit link notes (CLNs), the Basel Committee recognizes that cash-funded CLNs issued by the bank against exposures that fulfill the criteria for credit derivatives are treated as cash-collateralized transactions. *See* 22.34(1) (footnotes 3 and 4) of <u>CRE22</u> (Standardised approach: credit risk mitigation). The NPR does not reflect that provision.
- <sup>74</sup> See NPR, p. 137.
- <sup>75</sup> See 12 CFR §217.2.
- <sup>76</sup> See NPR, p. 136-137.
- <sup>77</sup> See NPR, p. 645.

- <sup>78</sup> See NPR, p. 570.
- <sup>79</sup> See NPR, p. 138.
- <sup>80</sup> See NPR, p. 645.
- <sup>81</sup> See NPR, p. 139.
- <sup>82</sup> Id.
- 83 See 12 CFR §217.33(b)(1).
- <sup>84</sup> See NPR, p. 588.
- 85 See 12 CFR §217.33(b)(2).
- <sup>86</sup> See NPR, p. 588.
- <sup>87</sup> See 12 CFR §217.33(b)(3).
- 88 See 12 CFR §217.2.
- <sup>89</sup> See NPR, p. 187.
- <sup>90</sup> See NPR, p. 560.
- <sup>91</sup> See NPR, p. 187-188.
- <sup>92</sup> In an off-balance sheet securitization in which the bank is the sponsor and the servicer, the capital charge on fee income could lead to *lower* servicing fees. In an off-balance sheet securitization, the residual interest is sold to third-party investors. A higher servicing fee at the top of the waterfall will reduce the amount of excess spread and thus lower the value (and thus lower the purchase price) of the residual interest. Where a bank acts as the sponsor and servicer of an off-balance sheet securitization, the capital charge applicable to servicing fees may incentivize the bank to lower its servicing fee in order to increase the value of the residual interest and thus the purchase price it receives from investors. This is because the bank would be required to hold capital against its servicing fee income but would not be required to hold capital against the proceeds of the sale of the residual interest.
- <sup>93</sup> Among other financial calculations, exponential functions are commonly used in calculating hedge ratios (note that the ratio of a bank's capital to its credit exposures is a type of hedge ratio). The current  $K_{SSFA}$  model, which follows the same  $\frac{1}{(\mu-b)}e^{ax}$  form, was

adopted by the US banking regulators in July 2013 as part of the Basel III final rules. That model replaced the ratings-based approach for assigning risk weights to securitization exposures under Basel I and Basel II.

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