

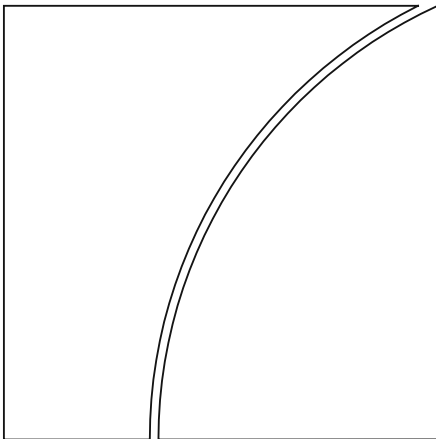
# Basel Committee on Banking Supervision

## Consultative Document

### Revisions to the securitisation framework

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# Revisions to the Basel Securitisation Framework

## Executive summary

The Basel Committee is publishing a second consultative document on revisions to the securitisation framework, including draft standards text.

The revisions to the capital framework set out in this paper aim to address a number of shortcomings in the existing securitisation framework and to strengthen the capital standards for securitisation exposures held in the banking book.<sup>1</sup> They form part of the Committee's broader agenda to reform regulatory standards for banks in response to the global financial crisis and thus contribute to a more resilient banking sector.

This consultative document follows the first consultative document published in December 2012.<sup>2</sup> The Committee wishes to thank all respondents to the initial proposals. Comments on the original consultation were mainly related to the proposed calibration, the lack of risk sensitivity and the usability of the proposed approaches.

In developing the proposals set out in this document, the Committee has carefully taken into account the comments received on the first consultative document, as well as the results of the quantitative impact study (QIS) undertaken during the first consultation. Furthermore, revisions have also been guided by the Committee's determination to strike an appropriate balance between risk sensitivity, simplicity and comparability. The proposed revisions in this document are presented in the form of standards text with the aim of further clarifying certain aspects of the revised framework for which respondents sought clarity on the original proposals.

The major changes in this consultative document relative to the first consultation include the following:

### (i) Changes to the hierarchy of approaches

Motivated by the Committee's objective to balance risk sensitivity and simplicity, the Committee has decided to replace the Modified Supervisory Formula Approach (MSFA)<sup>3</sup> with the "Internal Ratings-Based Approach",<sup>4</sup> which is based on the internal ratings-based approach (IRB) capital charge for the underlying pool of exposures, including expected losses (ie  $K_{IRB}$ ) alongside other risk drivers. The Committee has calibrated the Internal Ratings-Based Approach based on the model developed for the MSFA.<sup>5</sup> Thus, the Internal Ratings-Based Approach is designed to have risk sensitivity similar to that of

<sup>1</sup> Securitisation exposures held in the trading book will be subject to the revised framework for the trading book, currently under consultation. The consultative document was published in October 2013 and is available at: [www.bis.org/publ/bcbs265.pdf](http://www.bis.org/publ/bcbs265.pdf).

<sup>2</sup> The first consultative document, *Revisions to the Basel Securitisation Framework*, December 2012, is available at [www.bis.org/publ/bcbs236.pdf](http://www.bis.org/publ/bcbs236.pdf). The associated technical working papers, *Foundations of the Proposed Modified Supervisory Formula Approach* and *The Proposed Revised Ratings-Based Approach*, January 2013, are available at [www.bis.org/publ/bcbs\\_wp22.htm](http://www.bis.org/publ/bcbs_wp22.htm) and [www.bis.org/publ/bcbs\\_wp23.htm](http://www.bis.org/publ/bcbs_wp23.htm), respectively.

<sup>3</sup> While the MSFA has been eliminated from the hierarchy of approaches because of its complexity in use, it was revised in the light of comments received to original proposals as well as QIS results, and it is still used for calibration purposes.

<sup>4</sup> The Internal Ratings-Based Approach is a Simplified Supervisory Formula Approach (SSFA)<sup>4</sup> that uses, among other risk factors,  $K_{IRB}$ . In the first consultative document, the Committee proposed a version of the SSFA, although originally only standardised approach inputs could be used. More details of the SSFA are given in Section 3.

<sup>5</sup> Notably, the Committee has changed some of the underlying modelling assumptions in the MSFA in the light of comments received on the original proposals.

the MSFA but is much simpler in design and would therefore be easier to use and supervise. The Committee proposes that banks should use this approach wherever possible. In other words, the Internal Ratings-Based Approach sits at the top of the hierarchy of approaches.

In jurisdictions that permit the use of external ratings, the Internal Ratings-Based Approach would be followed by the External Ratings-Based Approach (which is a slightly simplified version of the “Revised Ratings-Based Approach” initially proposed) for tranches with an external or inferred credit rating; or by the Internal Assessment Approach (IAA), in the case of unrated exposures to asset-backed commercial paper (ABCP) programmes.

If none of these approaches can be used, the Standardised Approach would be applied. This approach is a slightly revised version of the originally proposed Simplified Supervisory Formula Approach (SSFA), which is based on the underlying capital charge under the Basel framework’s standardised approach for credit risk, and other risk drivers.

The Committee is of the view that these approaches strike the right balance between risk sensitivity, simplicity and comparability.

## (ii) Changes to calibration and other clarifications

As noted above, in the light of comments received, the Committee has revised some of the modelling assumptions underlying the original calibration of approaches proposed in the first consultative document. These changes result in greater consistency with the underlying IRB credit risk framework and in substantial reductions in capital charge levels relative to initial proposals (see Section 4 for a more detailed explanation of changes in calibration).

The Committee also proposes to set a 15% risk-weight floor for all approaches, instead of the 20% floor originally proposed.

With regard to qualitative requirements to applying the approaches, the Committee agreed that the existing practices and standards that apply to the calculation of  $K_{IRB}$  would also apply to the Internal Ratings-Based Approach. Regarding the External Ratings-Based Approach, the requirement for two ratings has been dropped.

The Committee believes that changes in these proposals will facilitate the use of the more risk-sensitive approaches in the hierarchy relative to the first consultation.

## Next steps

The Committee encourages market participants to continue their engagement in a constructive dialogue during the consultation period, and to participate in the Quantitative Impact Study (QIS) on a best-efforts basis. The second QIS will include the collection of loan-level data for securitisations, which will allow the Committee to further assess the impact of the proposed calibration revisions discussed in this consultative paper. Good quality data will be crucial in supporting an appropriate calibration of the revised securitisation framework.

The Committee welcomes comments from the public on all aspects of this consultative document and the proposed standards text. Comments on the proposals should be uploaded by Friday 21 March 2014 using the following link: [www.bis.org/bcbs/commentupload.htm](http://www.bis.org/bcbs/commentupload.htm). All comments will be published on the website of the Bank for International Settlements unless a respondent specifically requests confidential treatment.

Once the Committee has reviewed responses to this consultative document and results of the QIS, it intends to publish the final standard within an appropriate timeframe, and provide sufficient time for implementation without the need for grandfathering provisions. Ahead of publication of the final

standard, implementation arrangements (including the timetable) will be discussed by the Basel Committee, taking into account the range of other reforms that have been, or are due to be, agreed by the Committee.

## Section 1: Background

### Shortcomings in current securitisation framework

As noted in the first consultative document, the global financial crisis revealed a number of shortcomings in the current securitisation framework. These include:

- Mechanistic reliance on external ratings: the current hierarchy of approaches in the securitisation framework places undue mechanistic reliance on external ratings. The G20 Leaders called on the Committee to address adverse incentives arising from the use of credit rating agency (CRA) ratings in the regulatory capital framework.<sup>6</sup>
- Too low risk weights for highly-rated securitisation exposures: capital requirements for highly-rated securitisation exposures proved to be too low, in the light of the performance of securitisations during the crisis. This was due to calibration assumptions that turned out to be questionable and the lack of sufficient risk drivers across approaches in determining risk weights.
- Too high risk weights for low-rated senior securitisation exposures: risk weights for low-rated senior securitisation positions increased rapidly and were found to be too high by the Committee.
- Cliff effects in capital requirements: The deficiencies identified above contributed to procyclical cliff effects in capital requirements, as evidenced by both the rapidity at which risk weights increased and the absolute differences in risk weights under the current securitisation framework.

### Objectives and principles of the revisions

The specific objectives targeted by the revisions to the framework are to:

- (1) Reduce mechanistic reliance on external ratings
- (2) Increase risk weights for highly-rated securitisation exposures
- (3) Reduce risk weights for low-rated senior securitisation exposures
- (4) Reduce cliff effects
- (5) Enhance the framework's risk sensitivity

In addition to considering respondents' comments and the results of the initial QIS, in designing and calibrating the revised capital framework for securitisations, the Committee has been guided by the following principles:<sup>7</sup>

- (i) **Risk sensitivity**: Capital charges should be reasonably related to the risk of the securitisation exposures to which they apply. The relevant risk drivers for securitisation exposures should be

<sup>6</sup> The 2010 G20 Leaders communiqué is available at [www.g20.utoronto.ca/2010/to-communiqué.html](http://www.g20.utoronto.ca/2010/to-communiqué.html).

<sup>7</sup> These principles partly build on the Committee's discussion paper on the balance between risk sensitivity, simplicity and comparability published earlier this year (see *The regulatory framework: balancing risk sensitivity, simplicity and comparability*, July 2013, available at [www.bis.org/publ/bcbs258.pdf](http://www.bis.org/publ/bcbs258.pdf)).

incorporated in order to appropriately differentiate between the risk levels among securitisations.

- (ii) **Prudence:** Capital requirements should be calibrated to reasonably conservative standards. This requires the framework to account for the model risk of determining the risks of specific exposures. Models for securitisation tranche performance depend in turn on models for underlying pools. In addition, securitisations have a wide range of structural features that do not exist for banks holding the underlying pool outright and that are impossible to capture in models. This layering of models and simplifying assumptions can exacerbate model risk, justifying a rejection of a strict “capital neutrality” premise (ie the total capital required after securitisation should not be identical to the total capital before securitisation).
- (iii) **Broad consistency with the underlying framework:** Capital requirements for the underlying pool are assumed to be appropriate. Consistency with the underlying framework in terms of economic models and assumptions should be preserved. Further, while, as stated above, strict capital neutrality is not desirable, capital charges for a securitisation should be broadly consistent with the capital charges for the underlying pool, in particular for senior tranches.
- (iv) **Making use of available information:** The securitisation framework will apply to different types of banks in terms of size, level of sophistication in relation to internal models, and role played in securitisation markets (ie originators, investors or sponsors). The securitisation framework should recognise that different banks may have different levels of detail and information available on the underlying pool of exposures backing a securitisation exposure; and it should allow usage of the best information available and diverse sources of information in order to assign capital requirements.
- (v) **Simplicity:** The way in which capital charges are calculated and assigned to a securitisation’s exposures should be relatively easy to understand and intuitive. To the extent possible, the securitisation framework should include few approaches and be governed by a simple hierarchy. In addition, the implementation and supervision of the revised standards should be as simple as possible given the complexity of securitisations.
- (vi) **Transparency and comparability:** The securitisation framework should not provide unnecessary degrees of freedom for determining capital requirements, for example by providing too many options for assigning capital. Clear rules should govern how regulatory capital is calculated. Banks should use methods that are fit for purpose, and should not be able to choose methods or change methods for a particular situation merely with the aim of reducing regulatory capital requirements. Finally, banks with securitisation exposures to similar risks, and having the same quantity and quality of information on the underlying assets, should be subject to similar capital requirements.

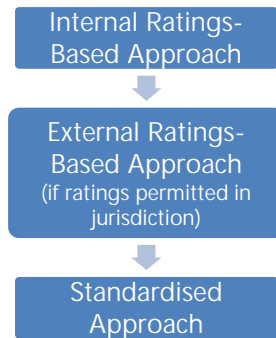
## Section 2: Hierarchy of approaches

### Revised hierarchy

The Committee is proposing a revised hierarchy of approaches, as summarised in Figure 1. Section 3 discusses each of the approaches in the hierarchy in more detail.



Figure 1: Hierarchy of approaches for securitisation exposures<sup>8</sup>



The Internal Ratings-Based Approach is at the top of this hierarchy for all securitisation exposures (except resecuritisation exposures). A bank that has the necessary information to calculate  $K_{IRB}$  on all underlying exposures in a securitisation would be required to use the Internal Ratings-Based Approach for that exposure. Notwithstanding, supervisors might deny the use of Internal Ratings-Based Approach where they lack confidence that this approach can reflect the risk of the transactions due, for example, to the transaction's structural features.<sup>9</sup>

To use the Internal Ratings-Based Approach, a bank should have approval to use the IRB approach, a suitable IRB model and sufficient information to estimate  $K_{IRB}$  for that pool.<sup>10</sup>

Since the Internal Ratings-Based Approach uses IRB information and incorporates other risk parameters into the formula, the priority of this approach reduces mechanistic reliance on ratings while retaining risk sensitivity. Additionally, since capital requirements under the Internal Ratings-Based Approach are broadly lower than under the other approaches, the Committee expects that banks would have incentives to obtain more detailed information on underlying exposures (in order to be able to estimate IRB parameters), and that this would help to improve risk management practices.

A bank that cannot calculate  $K_{IRB}$  for the underlying pool of exposures (or is precluded from using the Internal Ratings-Based Approach by its supervisor for a specific transaction) would be required to use the External Ratings-Based Approach provided that: (i) the jurisdiction in which the bank is located permits the use of credit ratings to calculate regulatory capital; (ii) the tranche has an external or inferred rating; and, (iii) consistent with the Enhancements to the Basel II framework,<sup>11</sup> the rating is not based on a guarantee or similar support provided by the bank itself. An exposure is deemed to be rated if it has at least one external or inferred credit rating, consistent with the standards in the current Basel IRB securitisation framework.<sup>12</sup> A bank that does not meet the conditions for use of the Internal Ratings-Based Approach or the External Ratings-Based Approach should use the Standardised Approach. Where

<sup>8</sup> Subject to certain limitations as under the current framework, banks located in jurisdictions that permit use of the External Ratings-Based Approach and that have an IRB model for the type of underlying exposures, may use an Internal Assessment Approach (IAA) to calculate capital requirements for unrated exposures to ABCP programmes. When the IAA can be used, the exposure should be considered "rated" for the application of the hierarchy. See Section 4 for further details about requirements for the IAA application.

<sup>9</sup> Supervisors may restrict or prohibit use of the Internal Ratings-Based Approach for certain structures or transactions, including tranches for which any credit enhancement could be eroded for reasons other than portfolio losses, transactions with highly complex loss allocations as well as tranches of portfolios with high internal correlations (such as portfolios with high exposure to single sectors or with high geographical concentration).

<sup>10</sup> A bank that has supervisory approval to calculate IRB risk parameters would be expected to explain and justify to its supervisor any instances in which it cannot apply the Internal Ratings-Based Approach for an underlying pool of exposures.

<sup>11</sup> See Basel 2.5: *Enhancements to the Basel II framework*, July 2009, available at [www.bis.org/publ/bcbs157.pdf](http://www.bis.org/publ/bcbs157.pdf).

<sup>12</sup> Paragraphs 611 to 617 of the current securitisation framework.

none of the above approaches can be used, a 1,250% risk weight should be assigned to the exposure.<sup>13</sup> The treatments of mixed pools and caps are discussed in Section 5.

For resecuritisation exposures, an adjusted version of the Standardised Approach would be the only approach available – other than a 1,250% risk weight. This reflects the Committee's view that resecuritisations are inherently difficult to model.

## Background and rationale of the proposed new hierarchy

In revising the securitisation hierarchy, the Committee seeks to align the framework with the principles and objectives discussed in Section 1 and comments received on the consultative document. As a result, the Committee proposes to reduce the number of approaches in the hierarchy and reduce their complexity, while retaining sufficient risk sensitivity.

In the original consultative document, the Committee set out two alternative hierarchies, which used a range of approaches in differing ways. Responses received on these hierarchies suggested that the number of approaches, their ordering in the hierarchy and their implementation would be excessively complex. The Committee shares these concerns, as reflected in the principles set out earlier. As a result, the Committee has revised its proposals to strike a better balance between simplicity and risk sensitivity.

## Section 3: Proposed approaches

### Internal Ratings-Based Approach

A bank with supervisory approval to use an IRB approach would be generally required to use the Internal Ratings-Based Approach if it has a suitable IRB model and sufficient information to estimate  $K_{IRB}$  for a pool.

This approach is based on the Simplified Supervisory Formula Approach that was included in the first consultative document. Generally, the SSFA is a formula that depends on the exposure-weighted average capital requirements for all exposures underlying a securitisation and the attachment and detachment points of the tranche held by the bank. The SSFA formula assigns capital charges to specific tranches based on the subordination level of the tranche within the securitisation structure. In particular, the SSFA assigns relatively higher capital requirements to the riskiest junior tranches of a securitisation that are the first to absorb losses, and relatively lower requirements to the most senior exposures. To securitisation exposures that absorb losses up to the amount of capital that would be required for the underlying exposures if held directly by the bank,<sup>14</sup> the SSFA assigns a 1,250% risk weight.

Under the Internal Ratings-Based Approach, as under the current supervisory formula approach (SFA), the capital requirement would depend on the credit enhancement level and tranche thickness, and calculation of  $K_{IRB}$ . In addition, the capital charge would be based on certain inputs that determine the capital surcharge, or "p" parameter, that determines the overall level of capital required for the portion of tranches that reside above securitisation exposures that absorb losses up to the amount of capital that would be required for the underlying exposures if held directly by the bank. See paragraph 54 of the proposed standards text for further detail.

<sup>13</sup> Banks located in jurisdictions that permit use of the External Ratings-Based Approach may use the internal assessment approach (IAA) to calculate capital requirements for unrated exposures to ABCP programmes.

<sup>14</sup> That is,  $K_{IRB}$ , defined later in the document.

## Treatment of derivative contracts other than credit derivatives

The Committee recognises that certain challenges will exist when a bank uses the Internal Ratings-Based Approach for a securitisation exposure when the SPE has entered into a derivative contract other than a credit derivative (such as a currency swap or interest rate swap). As a simplification, the Committee's proposed standards do not require banks to take into account such exposures in calculating the attachment or detachment point for a given tranche. Also, a bank that enters into an interest rate or currency swap with an SPE may assign its swap-related securitisation exposure a risk weight equal to the risk weight assigned to the most senior tranche that is junior to the swap. The same concept would be applied in the context of the Standardised Approach and the External Ratings-Based Approach.

A bank that enters into a currency or interest rate swap with an SPE must calculate the exposure amount using the measurement approach that the bank would use under the counterparty credit risk framework in Annex 4 of the Basel framework.

When calculating  $K_{IRB}$  under the proposed standards, the positive value of a currency or interest rate swap (from the perspective of the SPE) would be included in the numerator (IRB capital charge including EL), but the denominator would not be affected by this exposure. However, the proposed standards do not require banks to incorporate an add-on, such as potential future exposure, when calculating the numerator of  $K_{IRB}$ .

**Question 1:** *The Committee seeks input as to whether the proposed treatment of derivatives other than credit derivatives achieves an appropriate balance between risk sensitivity and simplicity; and welcomes respondents' views on how to improve upon the proposed treatment.*

## Flexibility in calculating $K_{IRB}$ parameters

One of the key inputs for calculating the capital requirement using the Internal Ratings-Based Approach is the exposure-weighted average capital charge of the underlying pool as determined by  $K_{IRB}$ . The risk parameters needed to calculate  $K_{IRB}$  must be calculated in accordance with applicable minimum IRB standards as set forth in Section III of the Basel framework as if the exposures in the pool were held directly by the bank. Comments received on the first consultative paper raised concern that investing banks (that is, banks that have not originated the underlying exposures in a securitisation pool) with approval to calculate IRB risk parameters would not be able to use the MSFA because of data constraints in estimating parameters used as inputs to the formula.

For calculating the Internal Ratings-Based Approach, the Committee notes that the proposal would not affect (ie neither restrict nor loosen) practices and standards that are currently in place to guide calculation of  $K_{IRB}$ . The Committee believes that the existing IRB credit risk framework provides investing banks with sufficient flexibility to calculate the estimates needed to apply SSFA using  $K_{IRB}$ . In this regard, the Committee expects supervisors and banks to be flexible in the development of IRB estimates, as it showed in its guidance for low default portfolios.<sup>15</sup> Banks can look to different data in different circumstances. This guidance states that the IRB framework in Basel II is intended to apply to all asset classes, and articulates data-enhancing tools for quantification when a relative lack of loss data causes difficulties in using quantitative methods to assess risk parameters.

Any standards put in place by jurisdictions allowing for flexibility in such cases would not be affected by this proposal. Moreover, under the proposed revised securitisation framework, banks would continue to be allowed to use the top-down approach under the current framework to estimate internal PD and/or LGDs for purchased receivables.<sup>16</sup>

<sup>15</sup> Basel Committee Newsletter, no 6, September 2005, [www.bis.org/publ/bcbs\\_n16.pdf](http://www.bis.org/publ/bcbs_n16.pdf).

<sup>16</sup> See paragraphs 362 to 372 of the current Basel framework.

## Application to “mixed pools”

A mixed pool means a securitisation pool for which a bank is able to calculate IRB parameters for some, but not all underlying exposures in a securitisation. In the first consultative document, the Committee proposed restricting the use of the MSFA to instances where a bank could compute IRB parameter estimates for all of the underlying exposures. This approach strengthened the requirements for use of the SFA under the current framework, which specified only that, if the bank is using the IRB approach for some exposures and the standardised approach for other exposures in the underlying pool, it should generally use the approach corresponding to the predominant share of exposures within the pool (paragraph 607 of the current framework).

In the light of comments received about lack of flexibility to use approaches based on  $K_{IRB}$ , the Committee now proposes to allow banks to use a more flexible approach for mixed pools than the method originally proposed, allowing the use of the Internal Ratings-Based Approach provided that banks assign a 1,250% risk weight to exposures for which IRB inputs cannot be calculated. Alternatively, banks may use the other approaches lower in the hierarchy. (For further details see paragraph 48 of the proposed standards text). This flexibility should increase banks' scope for using internal risk assessments and reduce the use of external ratings, where permitted, as well as the use of less risk-sensitive backstop approaches or risk weight and overall capital charge caps.

## External Ratings-Based Approach

### Short-term ratings

For short-term ratings, the risk weights proposed in paragraph 58 of the proposed standards text would apply.

### Long-term ratings

In the first consultative document, the Committee proposed to replace the two ratings-based approaches under the current SA and IRB securitisation frameworks with the Revised Ratings-Based Approach (RRBA). To use this approach for a given long-term securitisation exposure, a bank would need to know:

1. The tranche external or inferred credit **rating**;
2. The **seniority** of the tranche (ie whether the securitisation exposure is a senior or subordinated tranche);
3. The **thickness** of non-senior tranches; and
4. The **maturity** of the tranche.

Respondents strongly criticised the increases in capital requirements and the introduction of additional risk drivers, such as maturity and thickness, arguing that these should already be taken into account by the external ratings. In contrast, respondents questioned why the granularity adjustment was removed.

Limited evidence was presented to refute the choice of risk drivers used in the original proposal, and the Committee continues to support their use. However, the Committee shares concerns about the level of calibration, and has made adjustments. The Committee's analysis underlying the formulation of the External Ratings-Based Approach shows that ratings do not fully reflect the effects of tranche thickness and maturity in a capital adequacy context, and that therefore these aspects need to be taken into account to properly assess the capital requirements of securitisation exposures. In contrast, the Committee found that credit rating agencies already take granularity into account when assigning a rating to a tranche. In particular, in order to achieve a certain rating, credit rating agencies require different levels of credit enhancement depending on the pool's granularity (the less granular is the pool,

the more credit enhancement is required). In consequence, the Committee decided not to include a granularity adjustment when ratings are used.

The Committee has made, however, certain changes to the RRBA, now the External Ratings-Based Approach. Consistent with the Committee's efforts to focus on simplicity and comparability, the External Ratings-Based Approach has been simplified relative to the original version. The number of ratings required for the use of the External Ratings-Based Approach has been reduced from two to one, as in the current framework. While the use of two ratings has become market practice in many jurisdictions, the Committee acknowledges that imposing such requirement in certain jurisdictions would increase costs significantly. Moreover, allowing the use of the External Ratings-Based Approach with one eligible credit rating would reduce the use of less risk-sensitive backstop approaches and caps to capital requirements.

The ratings-based approach version included in the first consultative document consisted of a set of equations and tables. To simplify, the Committee now proposes that risk weights be assigned according to a look-up table where risk weights vary by rating, seniority and maturity (one or five years). To account for the maturity of a tranche, a linear interpolation between the one- and five-year maturity columns in the table would be used. For non-senior tranches, thickness would be accounted for by adjusting down the "thin" tranche risk weight (already adjusted by maturity) by  $[1 - \text{thickness (up to a maximum of 50\%)]}$ . Finally, the resulting risk weight should never be lower than the risk weight corresponding to a senior tranche of the same rating and maturity (see paragraph 62 of the proposed standards text).

### Internal Assessment Approach (IAA)

The IAA, which exists in the current framework (paragraphs 619 to 622), would be retained in the revised framework. This approach can be used in the case of unrated exposures to ABCP programmes. To use the IAA, a bank must have supervisory approval to use an IRB approach for a predominant share of the type of underlying pool exposures. A bank should consult with its national supervisor on whether and when it can apply the IAA to its securitisation exposures, especially where the bank has approval to use IRB for some, but not all underlying exposures. To ensure appropriate capital levels, there may be instances where the supervisor requires a treatment other than this general rule.

When the IAA can be used, the exposure should be considered "rated" for the application of the hierarchy. (See paragraphs 66 to 69 of the proposed standards text).

### Standardised Approach

The Standardised Approach is a revision of the SSFA that was proposed in the first consultative document.

Capital requirements for securitisation exposures using the Standardised Approach would be calculated using the weighted-average standardised approach capital charge for the underlying exposures in the pool (ie  $K_{SA}$ ), and a factor "W", which is the ratio of the sum of the amount of all underlying pool of exposures that are delinquent to the total amount of underlying exposures. The W factor represents an uplift to take into account the deterioration of the underlying pool. The W factor would be used to adjust  $K_{SA}$  and enhance the risk sensitivity of this approach. (See paragraphs 70 to 77 of the proposed standards text for further details about the formulation of Standardised Approach).

The proposed calibration of the SSFA using  $K_{SA}$  is intended to produce capital requirements that, overall, are slightly higher than those generated by the Internal Ratings-Based Approach and roughly comparable to those generated under the External Ratings-Based Approach.

## Section 4: Changes to the calibration

### Overall calibration

The Committee has reviewed the proposed calibration level in light of the results of the first QIS, the principles and objectives discussed above, and comments received on the original consultative document. These revisions seek to ensure greater consistency with the underlying IRB credit risk framework, where appropriate, and result in substantial reductions in capital charges relative to the original proposed calibration level, particularly for senior tranches.

In revising the calibration, the Committee built on the approaches discussed in the first consultative document – most notably the MSFA and the External Ratings-Based Approach – to ensure a consistent set of assumptions and underlying modelling techniques, but which could be applied using simpler and more transparent approaches.

As noted in the initial consultative document and the associated technical working papers, the RRBA parameters were generated using broadly similar formulas to those underlying the MSFA, before the application of the supervisory add-ons present in the final MSFA. Similarly, the Internal Ratings-Based Approach was designed and calibrated to deliver broadly similar risk weights to the revised version of the MSFA with the modifications specified below. So while the MSFA as modified is not used as an explicit approach in the revised framework, it serves as a broad basis for benchmarking the calibration of both the Internal and External Ratings-Based Approaches.

The Committee revised some of the assumptions and theoretical underpinnings of the MSFA and External Ratings-Based Approach – and therefore, the calibration of the Internal Ratings-Based Approach – relative to those discussed in the initial consultative document. In particular, the formulation of the MSFA was revised in the following areas:

1. The extent of recognition of future margin income (or “excess spread”) of the pool was reviewed. In particular, the original formulation of the MSFA assumed no availability of excess spread to offset expected losses beyond one year for a tranche. This assumption has been reviewed and relaxed for senior tranches.<sup>17</sup> This allows for a greater degree of consistency with the IRB credit risk framework.
2. An intra-pool risk factor, which characterises asset correlations among the loans within a pool, was introduced alongside the existing global risk factor and idiosyncratic risk factor. The intra-pool risk factor effectively reallocates pool capital between senior and non-senior tranches.<sup>18</sup> This allows for a more realistic characterisation of pool credit risks for securitisations.
3. The risk metric underlying the MSFA was changed from an expected shortfall approach to a value-at-risk (VaR) approach (set at the 99.9 percentile). In addition to simplifying the underlying modelling, this adjustment provides for greater consistency with the IRB credit risk framework, which also uses a VaR approach.
4. The assumption on loan defaults was modified. More specifically, the revised model assumes that all loan defaults occur at the maturity (M) of the securitisation, rather than at one year and at M. This change simplified the underlying modelling.

These modelling changes reduced capital requirements for securitisation exposures under the proposed framework and achieved closer consistency with the underlying IRB credit risk framework.

<sup>17</sup> In particular, for senior tranches, 80% of the future margin income is recognised.

<sup>18</sup> In particular, an intra-pool risk factor of 6% has been chosen.

## Internal Ratings-Based Approach

In the SSFA, the supervisory adjustment factor “p” represents the relative capital surcharge for all securitisation exposures compared to the capital requirement for the underlying pool. In other words, the “p” parameter is a ratio determined as follows:

$$p = \frac{\left( \begin{array}{c} \text{capital requirements for} \\ \text{all securitisation exposures} \\ \text{under the given approach} \end{array} \right) - \left( \begin{array}{c} \text{capital requirements} \\ \text{for the underlying exposures} \\ \text{if held directly by a bank} \end{array} \right)}{\left( \begin{array}{c} \text{capital requirements} \\ \text{for the underlying exposures} \\ \text{if held directly by a bank} \end{array} \right)}$$

In calibrating the Internal Ratings-Based Approach, the Committee examined various formulations for the supervisory adjustment factor “p” in the Internal Ratings-Based Approach to achieve a degree of risk sensitivity similar to that of the MSFA (after having made the adjustments discussed above). Particularly, the proposed “p” relies on four inputs (maturity, LGD,  $K_{IRB}$  and number of loans), and differs for wholesale (granular and non-granular) and retail transactions. The “p” factor for senior tranches also differs from the “p” for non-senior tranches. (See paragraphs 49 to 56 of the proposed standards text for further details.)

**Question 2:** *While the formulation of the Internal Ratings-Based Approach is much simpler than the MSFA, the Committee recognises that there may be opportunities to make further simplifications by, for example, eliminating one or more of the four variables proposed to calculate “p,” while achieving a degree of risk sensitivity similar to that of the MSFA. The Committee is interested in respondents’ views on ways to simplify the parameterisation of “p”.*

## External Ratings-Based Approach

The modifications to the MSFA discussed above directly affect the calibration of the External Ratings-Based Approach.<sup>19</sup>

These changes in External Ratings-Based Approach calibration flow through to the External Ratings-Based Approach look-up table with adjustments for tranche maturity and thickness. The maturity and tranche thickness adjustments to the External Ratings-Based Approach were calibrated to deliver broadly similar capital charges to the more complex ratings-based approach formulated in the first consultative document.

## Standardised Approach

The Standardised Approach was calibrated to respect its role in the hierarchy of approaches in a simple manner, while also providing for a credible standardised approach as an alternative to the other approaches in the hierarchy. For the Standardised Approach, the Committee proposes to use  $p=1$  for securitisations and  $p=1.5$  when applied to resecuritisations.

<sup>19</sup> The one exception is the revision to the excess spread assumption, which does not materially alter the External Ratings-Based Approach risk weights for a given rating. This is because the model underlying this approach assumes that credit rating agencies incorporate the same excess spread assumptions as the External Ratings-Based Approach model. Therefore, changing the assumption regarding excess spread recognition serves to lower the attachment point that the External Ratings-Based Approach model expects will be required to get a certain rating.

While the Standardised Approach is below the External Ratings-Based Approach in the proposed hierarchy, the Committee nevertheless intends that the relative calibration of the two approaches will be broadly aligned in order to facilitate a level playing field across jurisdictions independent of their use of external credit ratings.

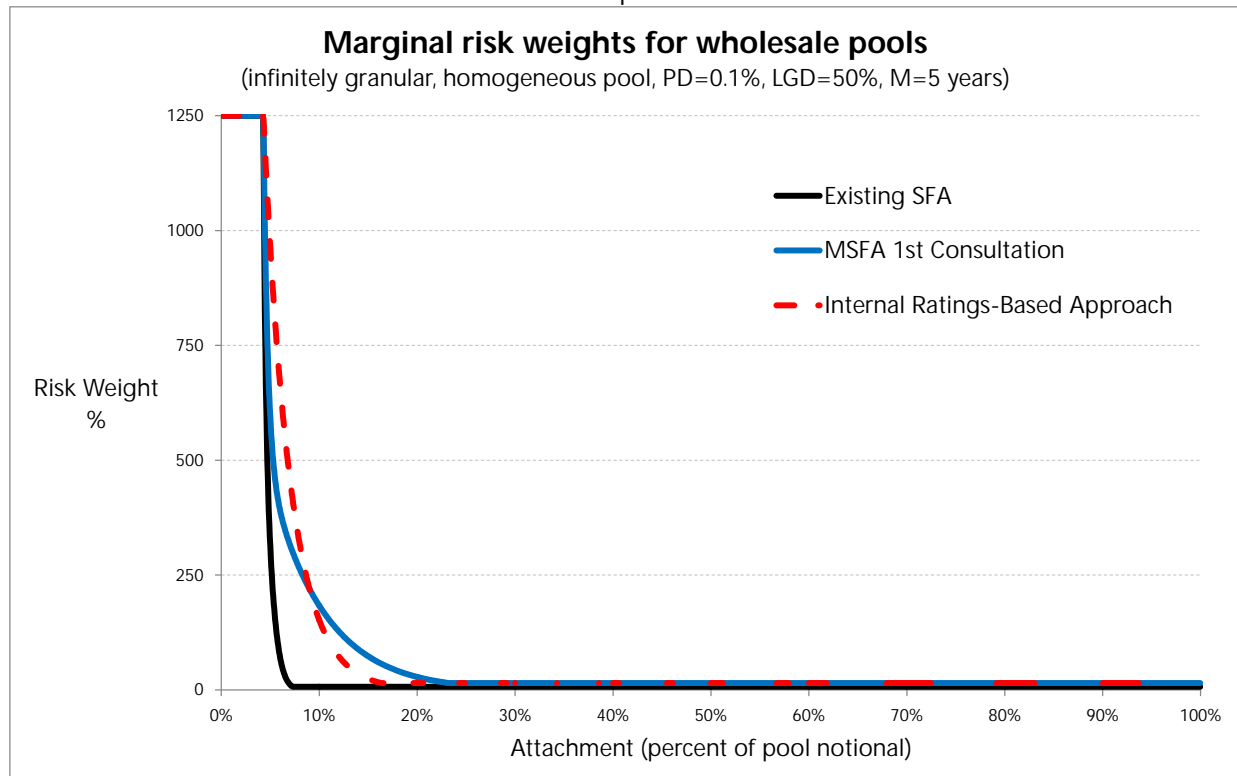
### Impact of revisions

The graphs and table below show reductions in capital requirements relative to the original proposals.

For comparison purposes, the set of graphs below compare the calibration of the Internal Ratings-Based Approach to that of the MSFA as proposed in the original consultative document and the existing SFA.

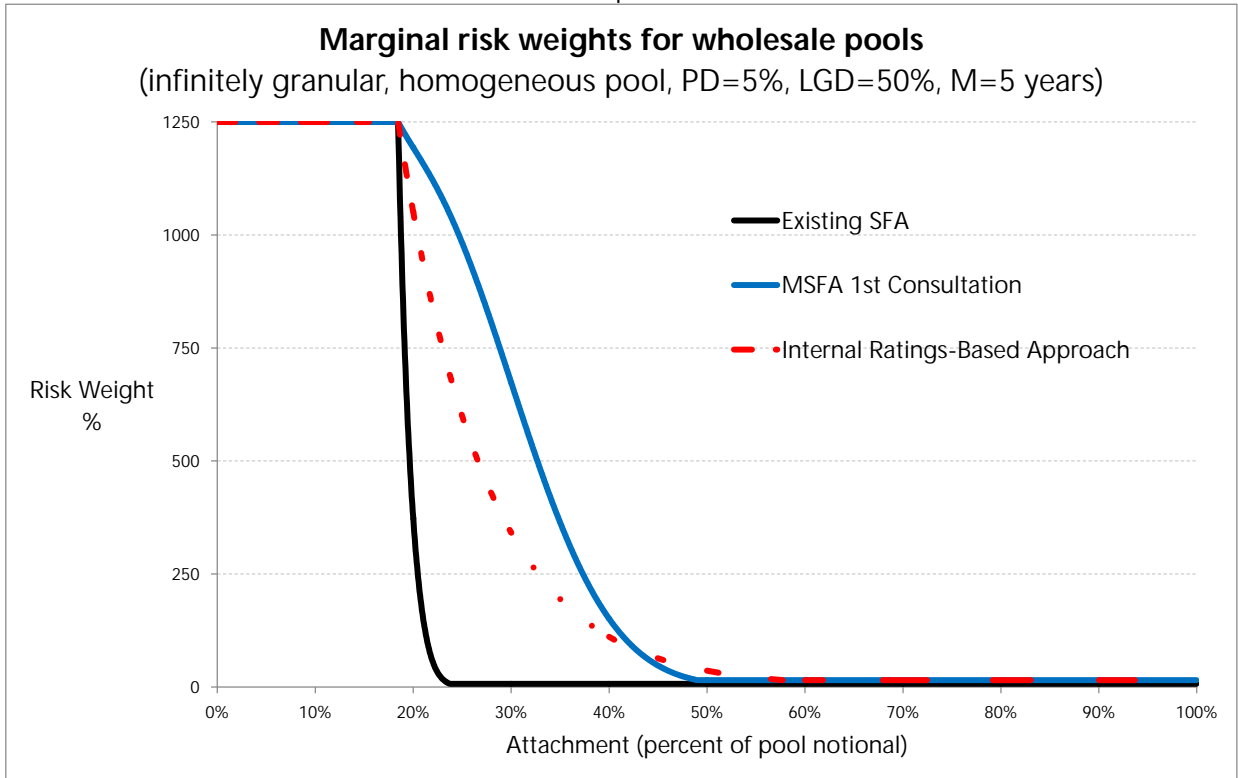
Graphs 1 to 4: Calibration of Internal Ratings-Based Approach (this consultative paper) relative to original MSFA (proposed in the first consultative paper) and existing SFA, for wholesale and retail portfolios

Graph 1

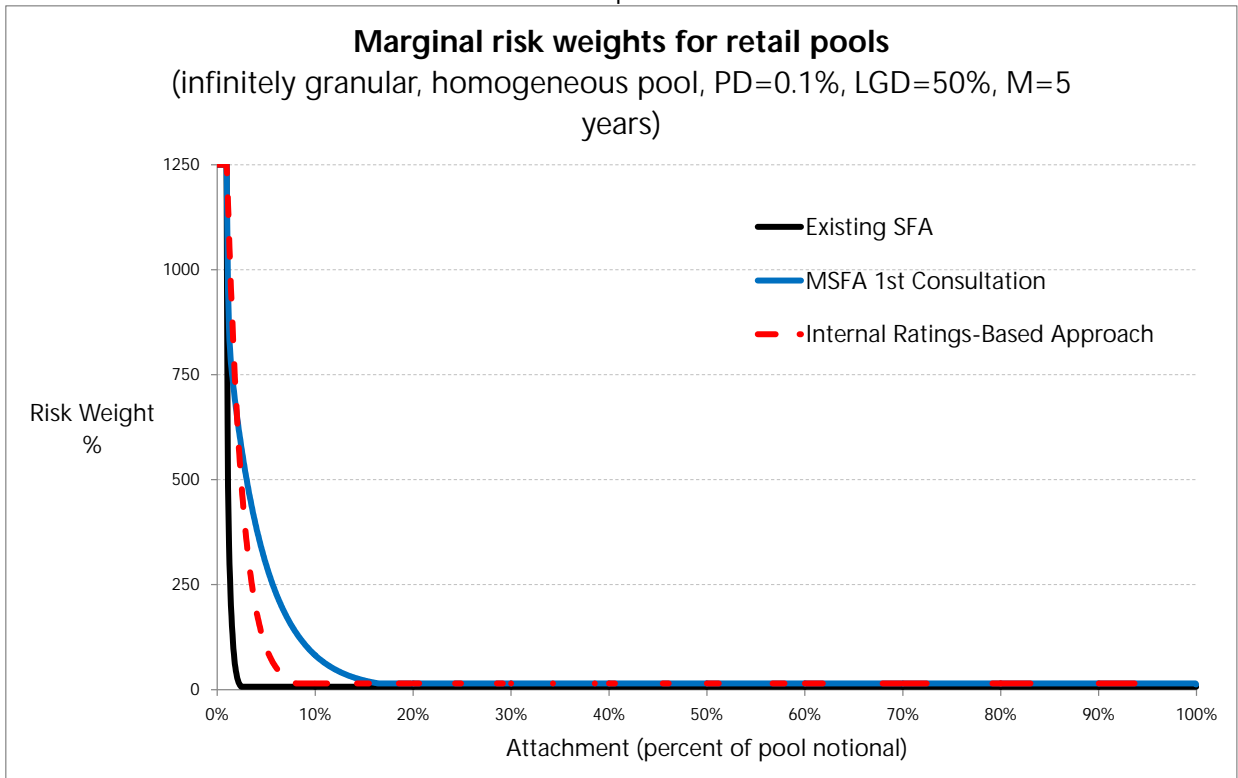




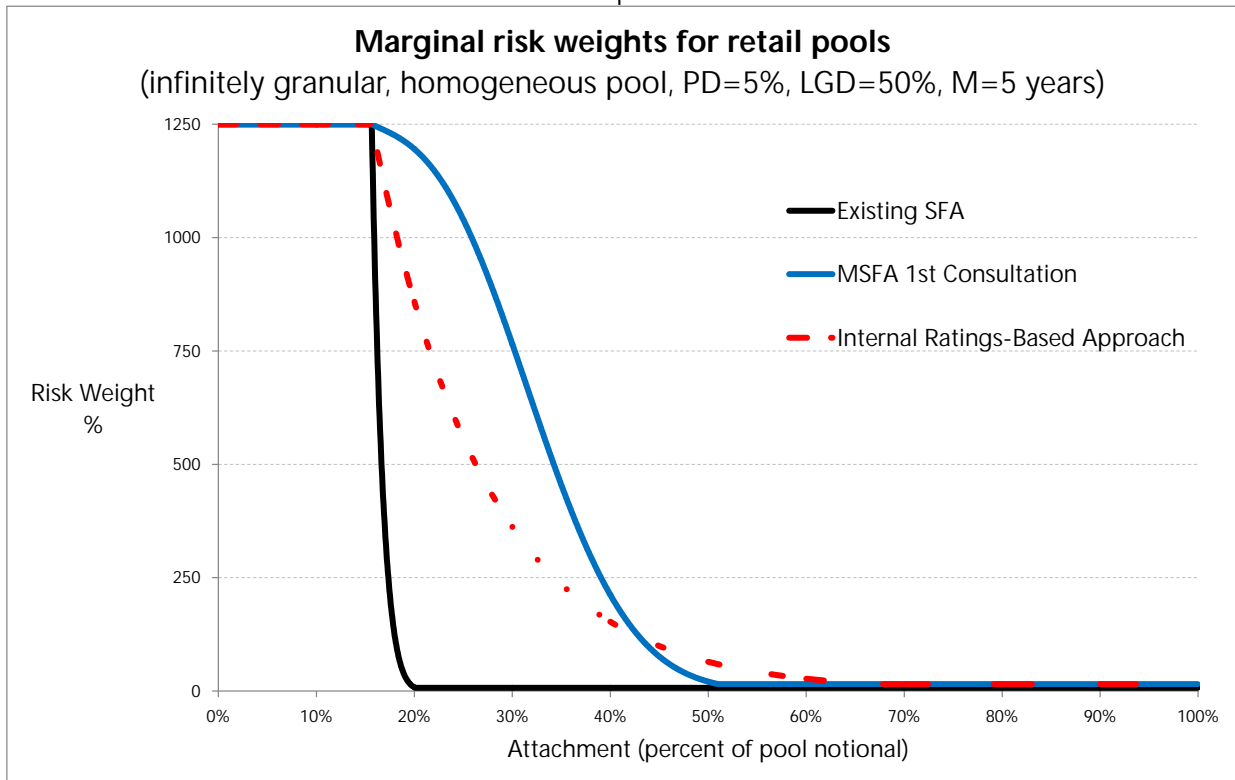
Graph 2



Graph 3



Graph 4



Similarly, Table 1 compares the risk weights under the External Ratings-Based Approach with that of the Revised Ratings-Based Approach in the first consultative proposal, and the current RBA for senior tranches.

Table 1: Calibration of simplified External Ratings-Based Approach (this consultative paper) relative to Revised Ratings-Based Approach (proposed in the first consultative paper) and existing RBA for senior tranches

Rating	External Ratings-Based Approach (2nd consultative document)		Revised Ratings-Based Approach (1st consultative document)		RBA (current framework)	
	Maturity		Maturity		Maturity	
	1 year	5 years	1 year	5 years	1 year	5 years
<b>AAA</b>	15%	25%	20%	58%	7%	7%
<b>AA+</b>	15%	35%	32%	75%	8%	8%
<b>AA</b>	25%	50%	51%	97%	8%	8%
<b>AA-</b>	30%	55%	61%	110%	8%	8%
<b>A+</b>	40%	65%	71%	124%	10%	10%
<b>A</b>	50%	75%	81%	141%	12%	12%
<b>A-</b>	60%	90%	94%	162%	20%	20%
<b>BBB+</b>	75%	110%	106%	183%	35%	35%
<b>BBB</b>	90%	130%	118%	203%	60%	60%
<b>BBB-</b>	120%	170%	136%	235%	100%	100%
<b>BB+</b>	140%	200%	153%	265%	250%	250%
<b>BB</b>	160%	230%	170%	294%	425%	425%
<b>BB-</b>	200%	290%	210%	363%	650%	650%
<b>B+</b>	250%	360%	262%	442%	1,250%	1,250%
<b>B</b>	310%	420%	321%	485%	1,250%	1,250%
<b>B-</b>	380%	440%	389%	502%	1,250%	1,250%
<b>CCC [+/-]</b>	460%	530%	472%	568%	1,250%	1,250%
<b>Below CCC-</b>	1,250%	1,250%	1,250%	1,250%	1,250%	1,250%

## Section 5: Other proposed revisions and clarifications

This section discusses and clarifies other proposed revisions to the existing securitisation framework beyond those described above. Most of the proposed revisions were already included in the first consultative document and have been retained because comments received were supportive, or because no convincing evidence or arguments were provided to change the views of the Committee.

### Proposed changes and clarifications to current framework retained from original proposals

#### (i) Definition of tranche maturity

Tranche maturity, which would be used as a direct input to the Internal and External Ratings-Based Approaches, is proposed to be defined in line with the definition currently used in the wholesale IRB framework (see paragraph 320 of the current Basel framework). If certain conditions are fulfilled, tranche maturity could be calculated as the Euro weighted-average maturity of the contractual cash flows of the tranche. If those conditions are not met, instead of calculating the Euro weighted-average maturity, a bank has to use the final legal maturity. As under the wholesale IRB framework, tranche maturity would have a five-year cap and a one-year floor (see paragraphs 22 and 23 of the proposed standards text).

The initial consultative document proposed to define maturity based on contractual cash flow assuming no prepayments or defaults; or using legal maturity. Respondents raised concerns about the conservatism of this definition, arguing that it does not reflect the actual risk of a transaction and advocating the use of weighted-average life (WAL) instead. Many respondents stated that the proposed definition of maturity would compel the use of excessively long maturities for many securitisation positions.

The Committee has decided to retain its definition of tranche maturity. Allowing a WAL calculation would entail a reliance on banks' internal models and assumptions on defaults, pre-payments and other cash flows. To avoid regulatory arbitrage, detailed guidelines would need to be developed. The Committee is of the view that proposed changes in other aspects of the revisions will address calibration concerns related to maturity effects.

(ii) Elimination of requirement to deduct below investment grade exposures for originators

In the current standardised securitisation framework, originating banks are required to assign a 1,250% risk weight to a below-investment grade securitisation exposure retained by the bank (paragraphs 569 and 570 of the current framework). As in the first consultative document, the Committee proposes to delete this requirement. This should reduce cliff effects and improve consistency of implementation among originators that use different approaches for the underlying pool.

(iii) Use of inferred ratings

Currently, inferred ratings for securitisation exposures are permitted within the IRB securitisation framework (paragraphs 617 and 618 of the current framework), but not within the standardised securitisation framework. The Committee proposes to allow the use of inferred ratings for securitisation exposures held by banks that do not use the Internal Ratings-Based Approach to calculate capital requirements for securitisation exposures, with the same safeguards and requirements for recognition as required under the current IRB securitisation framework. This will provide for greater consistency with the standardised approach for credit risk, which permits use of inferred ratings for wholesale exposures.

(iv) Elimination of special treatment for certain exposures

*Second-loss or better positions in ABCP programs*

The Committee proposes to eliminate the exceptional treatment for exposures in a second-loss position or better in ABCP programmes under the SA (paragraphs 574 and 575 of the current securitisation framework). Instead, these positions would be subject to the hierarchy of approaches, which in most instances would result in treatment under the Standardised Approach, which should provide greater consistency within the securitisation framework and reduce complexity.

*Fallback option for IRB liquidity facilities*

For the reasons just noted (under second-loss positions), the possibility for IRB banks to use SA risk weights when calculating the capital requirements for a liquidity facility (paragraph 639 of the current securitisation framework) is no longer needed and would be eliminated.

*Preferential credit conversion factor for eligible liquidity facilities under the SA*

Under the current standardised securitisation framework (as revised by Basel 2.5), eligible liquidity facilities are subject to a 50% credit conversion factor. The availability of the SA mitigates the need for these exceptional approaches. Therefore, in an effort to further simplify the framework by reducing the number of exceptional approaches, the Committee proposes to eliminate the special treatment for eligible liquidity facilities (articulated in paragraphs 576 and 579 of the current securitisation framework).

#### (v) Early amortisation provision revisions

The Committee continues to propose revising the treatment of revolving credit exposures (eg revolving credit card, mortgage and home equity loan transactions) that incorporate early amortisation provisions which, if triggered, would in any way increase the bank's exposure to losses associated with the underlying revolving credit facilities. In particular, the Committee has observed that securitisations with (both controlled and non-controlled) early amortisation provisions typically result in very limited, if any, transfer of risk to investors. The Committee proposes to prevent an originator or seller of assets into such a securitisation from applying the securitisation framework to the sold assets when specific operational requirements are not met. That is, all of the securitised assets in these circumstances would be assessed as if they were "on-balance sheet" for regulatory capital purposes.

Under the proposed revised securitisation framework, the special treatment that currently exists for controlled and non-controlled early amortisations would be eliminated (paragraphs 548–550, 590–592, 594–605, and 643 of the current framework) or amended accordingly (see paragraphs 26 and 27 of proposed standards text which modifies current paragraph 337). Similarly, some considerations related to Pillar 2 would also be modified as shown in the accompanying proposed standards text. However, the exceptions contained in paragraph 593 of the current framework would be retained provided that the early amortisation provision does not result in subordination of the originator's interest.

#### (vi) Treatment of write-downs and purchase discounts

As indicated in the first proposals, the Committee identified important differences in the treatment of write-downs and purchase discounts for securitisation exposures across member jurisdictions. The differences emanate from differing amounts of "capital credit" given for purchase discounts or write-downs of securitisation exposures.

In some jurisdictions, write-downs and purchase discounts are allowed to reduce the amount of an exposure that must be risk-weighted. Instead of using the notional or face value of a securitisation exposure, for example, banks are allowed to apply the applicable risk weight to the carrying value of securitisation exposures. In other jurisdictions, write-downs and discounts are given full capital credit by offsetting capital requirements by the amount of the write-down or discount.

To develop a more consistent treatment, the Committee considered whether write-downs and discounts should be treated in the same manner. The Committee favours treating write-downs and discounts on a consistent basis and believes that trying to differentiate among the causes for write-downs or discounts (credit vs interest rate etc) would add excessive complexity to the framework.

The Committee still proposes that write-downs and discounts be addressed in the securitisation framework by using the carrying value as the amount to be risk-weighted, rather than the notional value, consistent with the approach employed currently in some jurisdictions.

The Committee does not agree that purchase discounts and write-downs should be allowed to directly offset capital requirements. While this method is computationally simple, the Committee is concerned that it would grant excessive capital benefit to write-downs and discounts. Whenever the discount is greater than the capital requirement, as is common, such a treatment could result in zero capital requirements against exposures that entail substantial risk.

## Changes to original proposals

#### (i) Risk weight floor of 15%

In response to comments received to the first consultative document, the Committee now proposes a risk-weight floor of 15% rather than 20%.

The objectives of a risk-weight floor are:

- Mitigate concerns related to incorrect model specifications and error from banks' estimates of inputs to capital formulas (ie model risk); and
- Reduce the variation in outcomes for similar risks.

In the current securitisation framework, the risk-weight floor is 7% for senior, granular securitisation exposures under the IRB and 20% under the SA. Considering the need to better take model risk into account and the fact that the ratings-based approach would no longer differentiate IRB and SA exposure, the Committee originally proposed a 20% risk-weight floor for both long- and short-term securitisation exposures.

Certain respondents observed that the proposed 20% risk-weight floor greatly reduced risk sensitivity. They demonstrated cases of the risk-weight cap overriding the risk-weight floor for senior tranches where the average risk weight of the underlying pool is below 20%, and argued that a 20% risk-weight floor may not fully recognise credit enhancement for some senior tranches. With changes to calibration and the level of the floor, the Committee believes that these concerns are addressed.

## (ii) Maximum capital requirement (overall cap)

An originator can view securitisation as similar to credit risk mitigation, as at least some of the risk of the underlying exposure(s) is transferred to another party. On this view, it would be inappropriate for a bank to be compelled to hold more capital after securitisation than before. Supporting this concept is the operational requirement that significant risk be transferred in order to recognise any benefits from a securitisation for originators and sponsors.

Following this rationale, the Committee initially proposed to apply an overall cap to capital requirements not only to IRB banks (as in the current paragraph 610 for IRB banks, whether they are originators, sponsors or investors), but also to all originators and sponsors, even if they cannot calculate IRB inputs for the underlying pool.

The Committee proposes that the overall cap be applicable regardless of the approach that is applied: Internal Ratings-Based Approach, External Ratings-Based Approach or Standardised Approach.

In the case of mixed pools it would be inappropriate for a bank to be compelled to hold more capital after securitisation than before, as its risk should be reduced through the process of securitisation, subject to the significant risk transfer requirement. The implication is that the overall cap should be calculated by adding up the capital before securitisation; that is, by adding up the capital required under the general credit risk framework for the IRB and for the SA part of the pool.

In order to apply the maximum capital requirement to a bank's securitisation exposure in cases where a bank holds a portion of a tranche rather than an entire tranche, the Committee is considering whether it should allow a pro rata calculation of the maximum capital requirement. Under such a pro rata approach, a bank would determine its maximum capital requirement by multiplying (i) the largest proportion of interest that the bank holds for each tranche of a given pool<sup>20</sup> (ii) by the capital charge for the underlying pool. The Committee has concerns that such an approach would not be appropriately conservative, especially given that the maximum capital requirement under this consultative paper is being extended to the standardised approach and, as a result, a pro rata cap could potentially override the risk sensitivity that is built into the risk weight approaches under the securitisation framework.

<sup>20</sup> For a bank that has one or more securitisation exposure(s) that reside in a single tranche of a given pool, this equals the proportion (expressed as percentage) of securitisation exposure(s) that the bank holds in that given tranche (calculated as the total nominal amount of the bank's securitisation exposure(s) in the tranche) divided by the nominal amount of the tranche. For a bank that has securitisation exposures that reside in different tranches of a given securitisation, this equals the maximum proportion of interest across tranches, where the proportion of interest for each of the different tranches should be calculated as described above.

**Question 3:** *If respondents favoured a pro rata calculation of the maximum capital requirement, the Committee would welcome arguments that justify that a pro rata cap would result in appropriately conservative capital requirements.*

(iii) Maximum risk weight for senior securitisation exposures (risk-weight cap)

A risk-weight cap effectively exists in the current SA securitisation framework, although its scope is limited. Specifically, paragraphs 572 and 573 of the current framework allow a bank (either originator or investor) to apply a “look-through” approach to senior, non-rated securitisation exposures. Under this approach, the unrated most senior securitisation exposure receives a maximum risk weight equal to the average risk weight applicable to the underlying exposures, subject to supervisory review.

The Committee is of the view that a bank should not have to apply to a senior tranche a higher risk weight than if it held the underlying exposures directly, given the credit enhancement it receives from subordinated tranches. Consequently, this cap should apply whether or not the securitisation exposure is rated, provided that the bank is able to determine risk weights assigned to the underlying credit exposures. Hence, the Committee proposes to allow a bank to apply a look-through approach to senior securitisation exposures, whether or not the tranche is rated and regardless of the approach used for the underlying pool (SA or IRB).

In the case of pools where the bank uses exclusively the SA or IRB, the risk-weight cap for senior exposures would equal the average risk weight that would apply to the underlying exposures under the SA based on  $K_{SA}$  as defined in paragraph 71 of the proposed standards, or IRB framework based on  $K_{IRB}$  as defined in paragraph 50 of the proposed standards, respectively.

In the case of mixed pools, when applying the Internal Ratings-Based Approach, the SA part of the underlying pool for which no IRB risk weights can be calculated, would receive the corresponding SA risk weight. When applying the Standardised Approach or External Ratings-Based Approach, the risk-weight cap for senior exposures would be based on the standardised average risk weight of the underlying assets, whether or not they are originally IRB.

*Interaction between floors and caps*

As stated in the first consultative document, the Committee’s view is that, where the cap implies a lower risk weight than the floor, the risk weight resulting from the cap should be used.

The Committee expects that the frequency of a conflict between a floor and cap should be rare, and generally would be most likely to occur in relation to senior tranches of high-quality underlying pool – where model risk that is meant to be addressed by floors is less of a concern.

(iv) Definition of resecuritisation exposure

The previous consultation revealed some uncertainty within the industry regarding the scope of resecuritisation as defined in Basel 2.5. The Committee clarifies that an exposure is considered a resecuritisation exposure if its cash flows depend on the performance of a pool of assets that contains one or more securitisation exposures. For example, exposures resulting from retransching are not resecuritisation exposures if, after retransching, they act like a direct tranching of a pool with no securitised assets. Here retransching does not increase correlation risk, which was the rationale for assigning higher risk weights to resecuritisation exposures.

# Annex I

## Proposed rules text<sup>21</sup>

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  - Operational requirements for synthetic securitisations
  - Operational requirements for securitisations containing early amortisation provisions
  - Operational requirements and treatment of clean-up calls
- D. Due diligence requirements
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- xx. Non-securitisations parts of the framework**
- Components of capital (as revised by Basel III)
- Credit Risk – The Standardised Approach
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- The Second Pillar – Supervisory Review Process for securitisation

<sup>21</sup> Once the final standards text is published, the numbering of paragraphs might change. References to other paragraphs are internal references to paragraphs in this consultative document, unless otherwise noted.



## IV. Credit Risk — Securitisation Framework<sup>22</sup>

### A. Scope and definitions of transactions covered under the securitisation framework

1. Banks must apply the securitisation framework for determining regulatory capital requirements on exposures arising from traditional and synthetic securitisations or similar structures that contain features common to both. Since securitisations may be structured in many different ways, the capital treatment of a securitisation exposure must be determined on the basis of its economic substance rather than its legal form. Similarly, supervisors will look to the economic substance of a transaction to determine whether it should be subject to the securitisation framework for purposes of determining regulatory capital. Banks are encouraged to consult with their national supervisors when there is uncertainty about whether a given transaction should be considered a securitisation. For example, transactions involving cash flows from real estate (eg rents) may be considered specialised lending exposures, if warranted.

2. A *traditional securitisation* is a structure where the cash flow from an underlying pool of exposures is used to service at least two different stratified risk positions or tranches reflecting different degrees of credit risk. Payments to the investors depend upon the performance of the specified underlying exposures, as opposed to being derived from an obligation of the entity originating those exposures. The stratified/tranched structures that characterise securitisations differ from ordinary senior/subordinated debt instruments in that junior securitisation tranches can absorb losses without interrupting contractual payments to more senior tranches, whereas subordination in a senior/subordinated debt structure is a matter of priority of rights to the proceeds of liquidation.

3. A *synthetic securitisation* is a structure with at least two different stratified risk positions or tranches that reflect different degrees of credit risk where credit risk of an underlying pool of exposures is transferred, in whole or in part, through the use of funded (eg credit-linked notes) or unfunded (eg credit default swaps) credit derivatives or guarantees that serve to hedge the credit risk of the portfolio. Accordingly, the investors' potential risk is dependent upon the performance of the underlying pool.

4. Banks' exposures to a securitisation are hereafter referred to as "securitisation exposures". Securitisation exposures can include but are not restricted to the following: asset-backed securities, mortgage-backed securities, credit enhancements, liquidity facilities, interest rate or currency swaps, credit derivatives and tranched cover as described in paragraph 199 of the Basel II framework. Reserve accounts, such as cash collateral accounts, recorded as an asset by the originating bank must also be treated as securitisation exposures.

5. A resecuritisation exposure is a securitisation exposure in which the risk associated with an underlying pool of exposures is tranched and at least one of the underlying exposures is a securitisation exposure. In addition, an exposure to one or more resecuritisation exposures is a resecuritisation exposure. Exposures resulting from retranching are not resecuritisation exposures if, after retranching, they act like a direct tranching of a pool with no securitised assets.

6. Underlying instruments in the pool being securitised may include but are not restricted to the following: loans, commitments, asset-backed and mortgage-backed securities, corporate bonds, equity securities, and private equity investments. The underlying pool may include one or more exposures.

<sup>22</sup> These paragraphs replace the existing securitisation framework, namely paragraphs 538 to 643 of Basel II (*International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version*), available at [www.bis.org/publ/bcbs128.htm](http://www.bis.org/publ/bcbs128.htm); as well as revisions related to securitisation included in Basel 2.5 (*Enhancements to the Basel II framework*, July 2009), available at [www.bis.org/publ/bcbs157.pdf](http://www.bis.org/publ/bcbs157.pdf).

Given the amount of changes, in this section no tracked changes are shown relative to existing framework.

## B. Definitions and general terminology

### Originating bank

7. For risk-based capital purposes, a bank is considered to be an originator with regard to a certain securitisation if it meets either of the following conditions:

- (a) The bank originates directly or indirectly underlying exposures included in the securitisation; or
- (b) The bank serves as a sponsor of an asset-backed commercial paper (ABCP) conduit or similar programme that acquires exposures from third-party entities. In the context of such programmes, a bank would generally be considered a sponsor and, in turn, an originator if it, in fact or in substance, manages or advises the programme, places securities into the market, or provides liquidity and/or credit enhancements.

### Asset-backed commercial paper (ABCP) programme.

8. An ABCP programme predominantly issues commercial paper with an original maturity of one year or less that is backed by assets or other exposures held in a bankruptcy-remote, special purpose entity.

### Clean-up call

9. A clean-up call is an option that permits the securitisation exposures (eg asset-backed securities) to be called before all of the underlying exposures or securitisation exposures have been repaid. In the case of traditional securitisations, this is generally accomplished by repurchasing the remaining securitisation exposures once the pool balance or outstanding securities have fallen below some specified level. In the case of a synthetic transaction, the clean-up call may take the form of a clause that extinguishes the credit protection.

### Credit enhancement

10. A credit enhancement is a contractual arrangement in which the bank or other entity retains or assumes a securitisation exposure and, in substance, provides some degree of added protection to other parties to the transaction.

### Credit-enhancing interest-only strip

11. A credit-enhancing interest-only strip (I/O) is an on-balance sheet asset that (i) represents a valuation of cash flows related to future margin income, and (ii) is subordinated.

### Early amortisation

12. An early amortisation provision is a mechanism that, once triggered, accelerates the reduction of the investor's interest in underlying exposures of a securitisation of revolving credit facilities and allows investors to be paid out prior to the originally stated maturity of the securities issued. A securitisation of revolving credit facilities is a securitisation in which one or more underlying exposures represent, directly or indirectly, current or future draws on a revolving credit facility. Examples of revolving credit facilities include but are not limited to credit card exposures, home equity lines of credit, commercial lines of credit, and other lines of credit.

### Excess spread

13. Excess spread (or future margin income) is defined as gross finance charge collections and other income received by the trust or special purpose entity (SPE, as defined below) minus certificate interest, servicing fees, charge-offs, and other senior trust or SPE expenses.

## Implicit support

14. Implicit support arises when a bank provides support to a securitisation in excess of its predetermined contractual obligation.

## IRB pool

15. For risk-based capital purposes, an IRB pool means a securitisation pool for which a bank is able to use an IRB approach to calculate capital requirements for all underlying exposures given that it has approval to apply IRB for the type of underlying exposures and it has sufficient information to calculate IRB capital requirements for these exposures. Supervisors should expect that a bank with supervisory approval to calculate capital requirements for the underlying pool of exposures be able to obtain sufficient information to estimate capital requirements for the underlying pool of exposures using an IRB approach. A bank that cannot estimate capital requirements for all underlying exposures using an IRB approach for a given securitisation exposure for which it has a supervisory-approved IRB approach would be expected to demonstrate to its supervisor why it cannot calculate capital requirements for all underlying pool of exposures using an IRB approach. However, a supervisor may prohibit a bank from treating an IRB pool as such in the case of particular structures or transactions, including transactions with highly complex loss allocations, tranches whose credit enhancement could be eroded for reasons other than portfolio losses, as well as tranches of portfolios with high internal correlations (such as portfolios with high exposure to single sectors or with high geographical concentration).

## Mixed pool

16. For risk-based capital purposes, a mixed pool means a securitisation pool for which a bank is able to calculate IRB parameters for some, but not all underlying exposures in a securitisation.

## SA pool

17. For risk-based capital purposes, an SA pool means a securitisation pool for which a bank does not have approval to calculate IRB parameters for any underlying exposures; or for which, while the bank has approval to calculate IRB parameters for some or all the types of underlying exposures, it is unable to calculate IRB parameters for any underlying exposures because of lack of relevant data, or is prohibited by its supervisor from treating as an IRB pool pursuant to paragraph 15.

## Senior securitisation exposure (tranche)

18. A securitisation exposure (tranche) is considered to be a senior exposure (tranche) if it is effectively backed or secured by a first claim on the entire amount of the assets in the underlying securitised pool.<sup>23</sup> While this generally includes only the most senior position within a securitisation transaction, in some instances there may be some other claim that, in a technical sense, may be more senior in the waterfall (eg a swap claim) but may be disregarded for the purpose of determining which positions are treated as senior. Different maturities of several senior tranches that share pro-rata loss allocation shall have no effect on the seniority of these tranches, since they benefit from the same level of credit enhancement. The material effects of differing tranche maturities are adequately captured by maturity adjustments on the risk weights to be assigned to the securitisation exposures.

Examples:

- (a) In a typical synthetic securitisation, an unrated tranche would be treated as a senior tranche, provided that all of the conditions for inferring a rating from a lower tranche that meets the definition of a senior tranche are fulfilled.

<sup>23</sup> If a senior tranche is retransched or partially hedged (ie not on a pro-rata basis), only the new senior part would be treated as senior for capital purposes.

- (b) In a traditional securitisation where all tranches above the first-loss piece are rated, the most highly-rated position would be treated as a senior tranche. When there are several tranches that share the same rating, only the most senior tranche in the cash flow waterfall would be treated as senior (unless the only difference among them is the effective maturity). Also, when the different ratings of several senior tranches only result from a difference in maturity, all of these tranches should be treated as a senior tranche.
- (c) Usually a liquidity facility supporting an ABCP programme would not be the most senior position within the programme; the commercial paper, which benefits from the liquidity support, typically would be the most senior position. However, a liquidity facility may be viewed as covering all losses on the underlying receivables pool that exceed the amount of over-collateralisation/reserves provided by the seller and as being most senior if it is sized to cover all of the outstanding commercial paper and other senior debt supported by the pool, so that no cash flows from the underlying pool could be transferred to the other creditors until any liquidity draws were repaid in full. In such a case, the liquidity facility can be treated as a senior exposure. Otherwise, if these conditions are not satisfied, or if for other reasons the liquidity facility constitutes a mezzanine position in economic substance rather than a senior position in the underlying pool, the liquidity facility should be treated as a non-senior exposure.

### Securitisation exposure amount

19. For risk-based capital purposes, the exposure amount of a securitisation exposure is the sum of the on-balance sheet amount of the exposure, or carrying value - which takes into account purchase discounts and write-downs/specific provisions the bank took on this securitisation exposure, and the off-balance sheet exposure amount, where applicable.

20. A bank must measure the exposure amount of its off-balance sheet securitisation exposures as follows:

- for credit risk mitigants sold or purchased by the bank, use the treatment in paragraphs 85 to 87;
- for facilities that are not credit risk mitigants, use a credit conversion factor (CCF) of 100%. If contractually provided for, servicers may advance cash to ensure an uninterrupted flow of payments to investors so long as the servicer is entitled to full reimbursement and this right is senior to other claims on cash flows from the underlying pool of exposures. At national discretion, the undrawn portion of servicer cash advances or facilities that are unconditionally cancellable without prior notice may be eligible for a 0% CCF. For this purpose, a national supervisor that uses this discretion must develop an appropriately conservative method for measuring the amount of the undrawn portion; and
- for derivatives contracts other than credit risk derivative contracts, such as interest rate or currency swaps sold or purchased by the bank, use the measurement approach that the bank would use under the counterparty credit risk framework.

### Special purpose entity (SPE)

21. An SPE is a corporation, trust, or other entity organised for a specific purpose, the activities of which are limited to those appropriate to accomplish the purpose of the SPE, and the structure of which is intended to isolate the SPE from the credit risk of an originator or seller of exposures. SPEs are commonly used as financing vehicles in which exposures are sold to a trust or similar entity in exchange for cash or other assets funded by debt issued by the trust.

### Tranche Maturity

22. For risk-based capital purposes, tranche maturity ( $M_T$ ) is the tranche's remaining effective maturity in years measured as the Euro weighted-average maturity of the contractual cash flows of the

tranche. Alternatively, a bank may use final legal maturity of the tranche. In all cases,  $M_T$  will have a floor of one year and a cap of five years.

23. For a securitisation exposure residing in a tranche subject to a determined cash flow schedule, tranche maturity ( $M_T$ ) is defined as:

$$M_T = \sum_t t \cdot CF_t / \sum_t CF_t,$$

where  $CF_t$  denotes the cash flows (principal, interest payments and fees) contractually payable by the borrower in period  $t$ .

The contractual payments must be unconditional and must not be dependent on the actual performance of the securitised assets. If such unconditional contractual payment dates are not available, the final legal maturity shall be used.

When determining the maturity of a securitisation exposure, banks should take into account the maximum period of time they are exposed to potential losses from the securitised assets. In cases where a bank provides a commitment, the bank should calculate the maturity of the securitisation exposure resulting from this commitment as the sum of the contractual maturity of the commitment and the longest maturity of the asset(s) to which the bank would be exposed after a draw has occurred. If those assets are revolving, the longest contractually possible remaining maturity of the asset that might be added during the revolving period would apply, rather than the (longest) maturity of the assets currently in the pool.

The same treatment applies to all other instruments where the risk of the commitment/protection provider is not limited to losses realised until the maturity of that instrument (eg Total Return Swaps).

For credit protection instruments that are only exposed to losses that occur up to the maturity of that instrument, a bank would be allowed to apply the contractual maturity of the instrument and would not have to look through to the protected position.

## C. Operational requirements for the recognition of risk transference

### 1. Operational requirements for traditional securitisations

24. An originating bank may exclude underlying exposures from the calculation of risk-weighted assets only if all of the following conditions have been met. Banks meeting these conditions must still hold regulatory capital against any securitisation exposures they retain.

- (a) Significant credit risk associated with the underlying exposures has been transferred to third parties.
- (b) The transferor does not maintain effective or indirect control over the transferred exposures. The exposures are legally isolated from the transferor in such a way (eg through the sale of assets or through subparticipation) that the exposures are put beyond the reach of the transferor and its creditors, even in bankruptcy or receivership. Banks should obtain legal opinion<sup>24</sup> that confirms true sale.

The transferor is deemed to have maintained effective control over the transferred credit risk exposures if it: (i) is able to repurchase from the transferee the previously transferred exposures in order to realise their benefits; or (ii) is obligated to retain the risk of the transferred exposures. The transferor's retention of servicing rights to the exposures will not necessarily constitute indirect control of the exposures.

<sup>24</sup> Legal opinion is not limited to legal advice from qualified legal counsel, but allows written advice from in-house lawyers.

- (c) The securities issued are not obligations of the transferor. Thus, investors who purchase the securities only have claim to the underlying exposures.
- (d) The transferee is an SPE and the holders of the beneficial interests in that entity have the right to pledge or exchange them without restriction.
- (e) Clean-up calls must satisfy the conditions set out in paragraph 28.
- (f) The securitisation does not contain clauses that (i) require the originating bank to alter the underlying exposures such that the pool's credit quality is improved unless this is achieved by selling exposures to independent and unaffiliated third parties at market prices; (ii) allow for increases in a retained first-loss position or credit enhancement provided by the originating bank after the transaction's inception; or (iii) increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the underlying pool.
- (g) There must be no termination options/triggers except eligible clean-up calls, termination for specific changes in tax and regulation or early amortisation provisions which according to paragraph 26 result in the securitisation transaction failing the operational requirements in paragraph 24 or 25.

## 2. Operational requirements for synthetic securitisations

25. For synthetic securitisations, the use of CRM techniques (ie collateral, guarantees and credit derivatives) for hedging the underlying exposure may be recognised for risk-based capital purposes only if the conditions outlined below are satisfied:

- (a) Credit risk mitigants must comply with the requirements as set out in Section II.D of the Basel II framework.
- (b) Eligible collateral is limited to that specified in paragraphs 145 and 146 of the Basel II framework. Eligible collateral pledged by SPEs may be recognised.
- (c) Eligible guarantors are defined in paragraph 195 of the Basel II framework. Banks may not recognise SPEs as eligible guarantors in the securitisation framework.
- (d) Banks must transfer significant credit risk associated with the underlying exposures to third parties.
- (e) The instruments used to transfer credit risk may not contain terms or conditions that limit the amount of credit risk transferred, such as those provided below:
  - Clauses that materially limit the credit protection or credit risk transference (eg an early amortisation provision in a securitisation of revolving credit facilities that effectively subordinates the bank's interest; significant materiality thresholds below which credit protection is deemed not to be triggered even if a credit event occurs; or clauses that allow for the termination of the protection due to deterioration in the credit quality of the underlying exposures);
  - Clauses that require the originating bank to alter the underlying exposures to improve the pool's average credit quality;
  - Clauses that increase the banks' cost of credit protection in response to deterioration in the pool's quality;
  - Clauses that increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to a deterioration in the credit quality of the reference pool; and

- Clauses that provide for increases in a retained first-loss position or credit enhancement provided by the originating bank after the transaction's inception.
- (f) A bank should obtain legal opinion that confirms the enforceability of the contract.
- (g) Clean-up calls must satisfy the conditions set out in paragraph 28.

### 3. Operational requirements for securitisations containing early amortisation provisions

26. A securitisation transaction is deemed to fail the operational requirements in paragraph 24 or 25 if the bank (1) originates/sponsors a securitisation transaction that includes one or more revolving credit facilities, and (2) the securitisation transaction incorporates an early amortisation or similar provision that, if triggered, would (a) subordinate the bank's senior or pari passu interest in the underlying revolving credit facilities to the interest of other investors; (b) subordinate the bank's subordinated interest to an even greater degree relative to the interests of other parties; or (c) in other ways increases the bank's exposure to losses associated with the underlying revolving credit facilities.

27. If a securitisation transaction contains one of the following examples of an early amortisation provision and meets the operational requirements set forth above in paragraphs 24 and 25, an originating bank may exclude the underlying exposures associated with such a transaction from the calculation of risk-weighted assets, but must still hold regulatory capital against any securitisation exposures they retain in connection with the transaction:

- (a) Replenishment structures where the underlying exposures do not revolve and the early amortisation ends the ability of the bank to add new exposures;
- (b) Transactions of revolving credit facilities containing early amortisation features that mimic term structures (ie where the risk on the underlying revolving credit facilities does not return to the originating bank) and where the early amortisation provision in a securitisation of revolving credit facilities does not effectively result in subordination of the originator's interest;
- (c) Structures where a bank securitises one or more revolving credit facilities and where investors remain fully exposed to future drawdowns by borrowers even after an early amortisation event has occurred; or
- (d) The early amortisation provision is solely triggered by events not related to the performance of the underlying assets or the selling bank, such as material changes in tax laws or regulations.

### 4. Operational requirements and treatment of clean-up calls

28. For securitisation transactions that include a clean-up call, no capital will be required due to the presence of a clean-up call if the following conditions are met: (i) the exercise of the clean-up call must not be mandatory, in form or in substance, but rather must be at the discretion of the originating bank; (ii) the clean-up call must not be structured to avoid allocating losses to credit enhancements or positions held by investors or otherwise structured to provide credit enhancement; and (iii) the clean-up call must only be exercisable when 10% or less of the original underlying portfolio, or securities issued remain, or, for synthetic securitisations, when 10% or less of the original reference portfolio value remains.

29. Securitisation transactions that include a clean-up call that does not meet all of the criteria stated in paragraph 28 result in a capital requirement for the originating bank. For a traditional securitisation, the underlying exposures must be treated as if they were not securitised. Additionally, banks must not recognise in regulatory capital any gain on sale, in accordance with paragraph 37. For synthetic securitisations, the bank purchasing protection must hold capital against the entire amount of the securitised exposures as if they did not benefit from any credit protection. If a synthetic securitisation incorporates a call (other than a clean-up call) that effectively terminates the transaction and the purchased credit protection on a specific date, the bank must treat the transaction in accordance with paragraph 94.

30. If a clean-up call, when exercised, is found to serve as a credit enhancement, the exercise of the clean-up call must be considered a form of implicit support provided by the bank and must be treated in accordance with the supervisory guidance pertaining to securitisation transactions.

#### D. Due diligence requirements

31. In order for a bank to use the securitisation framework, it must have the information specified in paragraphs 32 to 34.

32. As a general rule, a bank must, on an ongoing basis, have a comprehensive understanding of the risk characteristics of its individual securitisation exposures, whether on- or off-balance sheet, as well as the risk characteristics of the pools underlying its securitisation exposures.

33. Banks must be able to access performance information on the underlying pools on an ongoing basis in a timely manner. Such information may include, as appropriate: exposure type; percentage of loans 30, 60 and 90 days past due; default rates; prepayment rates; loans in foreclosure; property type; occupancy; average credit score or other measures of creditworthiness; average loan-to-value ratio; and industry and geographic diversification. For resecuritisations, banks should have information not only on the underlying securitisation tranches, such as the issuer name and credit quality, but also on the characteristics and performance of the pools underlying the securitisation tranches.

34. A bank must have a thorough understanding of all structural features of a securitisation transaction that would materially impact the performance of the bank's exposures to the transaction, such as the contractual waterfall and waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, and deal-specific definitions of default.

35. A bank must assign a 1,250% risk weight to any securitisation exposure for which it cannot perform the level of due diligence specified in paragraphs 32 to 34.

#### E. Treatment of securitisation exposures

##### 1. Calculation of capital requirements and risk-weighted assets

36. Regulatory capital is required for banks' securitisation exposures, including those arising from the provision of credit risk mitigants to a securitisation transaction, investments in asset-backed securities, retention of a subordinated tranche, and extension of a liquidity facility or credit enhancement, as set forth in the following sections. Repurchased securitisation exposures must be treated as retained securitisation exposures.

37. Banks must deduct from Common Equity Tier 1 any increase in equity capital resulting from a securitisation transaction, such as that associated with expected future margin income resulting in a gain on sale that is recognised in regulatory capital.<sup>25</sup>

38. For the purposes of the expected loss (EL) provision calculation as set out in Section III.G of the Basel framework, securitisation exposures do not contribute to the EL amount. Similarly, neither general nor specific provisions against securitisation exposures or underlying assets still held on the balance sheet of the originator are to be included in the measurement of eligible provisions; however, specific provisions on underlying assets and non-refundable purchase price discounts on such underlyings can offset 1,250% risk weighted securitisation exposures under the Internal Ratings-Based Approach. Specific provisions on securitisation exposures will be taken into account in the calculation of the exposure amount, as defined in paragraphs 19 and 20. General provisions on underlying securitised exposures are not to be taken into account in any calculation.

<sup>25</sup> As discussed in paragraph 74 of *Basel III: A global regulatory framework for more resilient banks and banking systems*.



39. The risk-weighted asset amount of a securitisation exposure is computed by multiplying the exposure amount, as defined in paragraphs 19 and 20, by the appropriate risk weight determined in accordance with the hierarchy of approaches in paragraphs 43 to 48. Risk-weight caps for senior exposures in accordance with paragraphs 78 and 79 or overall caps in accordance with paragraphs 80 to 82 may apply. Overlapping exposures will be risk-weighted as defined in paragraphs 40 and 41 below.

#### *Treatment of overlapping exposures*

40. A bank may provide several types of facilities that can be drawn under various conditions. The same bank may be providing two or more of these facilities. Given the different triggers found in these facilities, it may be the case that a bank provides duplicative coverage to the underlying exposures. In other words, the facilities provided (or exposures held) by a bank may overlap since a draw on one facility may preclude (in part) a draw under the other facility. In the case of overlapping facilities provided by the same bank, the bank does not need to hold additional capital for the overlap. Rather, it is only required to hold capital once for the position covered by the overlapping facilities (whether they are liquidity facilities or credit enhancements). The bank must attribute the overlapping part to the facility with the highest risk weight. However, if overlapping facilities are provided by different banks, each bank must hold capital for the maximum amount of the facility.

41. Banks may also recognise overlap in their exposures, consistent with paragraph 581. For example, a bank providing a liquidity facility supporting 100% of the ABCP issued by an ABCP programme and purchasing 20% of the outstanding ABCP of that programme could recognise an overlap of 20% (100% liquidity facility + 20% commercial paper held – 100% commercial paper issued = 20%). If a bank provided a liquidity facility that covered 90% of the outstanding ABCP and purchased 20% of the ABCP, the two exposures would be treated as if 10% of the two exposures overlapped (90% liquidity facility + 20% commercial paper held – 100% commercial issued = 10%). If a bank provided a liquidity facility that covered 50% of the outstanding ABCP and purchased 20% of the ABCP, the two exposures would be treated as if there were no overlap.

42. Overlap could also be recognised between specific risk capital charges for exposures in the trading book and capital charges for exposures in the banking book, provided that the bank is able to calculate and compare the capital charges for the relevant exposures.

## 2. Hierarchy of approaches

43. Securitisation exposures will be treated differently depending on the type of underlying exposures and/or on the type of information available to the bank, as described below. Securitisation exposures to which none of the approaches laid out in paragraphs 44 to 48 can be applied must be assigned a 1,250% risk weight.

### *(i) Securitisation exposures for IRB pools*

44. A bank must use the Internal Ratings-Based Approach as described in paragraphs 49 to 56 for a securitisation exposure of an IRB pool as defined in paragraph 15, unless otherwise determined by the supervisor.

### *(ii) Securitisation exposures for SA pools*

45. A bank must use the External Ratings-Based Approach as described in paragraphs 57 to 62 for a securitisation exposure to an SA pool as defined in paragraph 17 provided that the bank is located in a jurisdiction that permits use of the External Ratings-Based Approach and the exposure has an external credit assessment that meets the operational requirements for an external credit assessment in paragraph 63, or there is an inferred rating that meets the operational requirements for inferred ratings in paragraphs 64 and 65.

46. A bank that is located in a jurisdiction that permits use of the External Ratings-Based Approach may use an Internal Assessment Approach (IAA) as described in paragraphs 66 to 69 for its unrated securitisation exposure (eg liquidity facilities and credit enhancements) to an ABCP programme that is an SA pool. In order to use the IAA, a bank must have supervisory approval to use the IRB approach. A bank should consult with its national supervisor on whether and when it can apply the IAA to its securitisation exposures, especially where the bank can apply IRB for some, but not all underlying exposures. To ensure appropriate capital levels, there may be instances where the supervisor requires a treatment other than this general rule.

47. A bank that cannot use the External Ratings-Based Approach or the IAA for its exposure to an SA pool may use the Standardised Approach as described in paragraphs 70 to 77.

*(iii) Securitisation exposures for mixed pools*

48. A bank may choose either of the following options for mixed pools, as defined in paragraph 16, where a bank can calculate  $K_{IRB}$  on some but not all underlying exposures of a securitisation:

(1) Calculate a capital charge for the underlying pool as follows:

Step 1: Calculate (d) as the percentage of the exposure amount of underlying exposures for which the bank can calculate  $K_{IRB}$  over the exposure amount of all underlying exposures.

Step 2: Multiply  $K_{IRB}$  by (d), the percentage calculated in step 1.

Step 3: For the underlying exposures for which  $K_{IRB}$  cannot be calculated, multiply (1-d) by an assumed capital charge of 100%.

Step 4: Add percentages calculated in steps 2 and 3.

Step 5: Apply Internal Ratings-Based Approach by using as input the percentage calculated in step 4:  $(1-d) + d * K_{IRB}$ .

(2) Use the hierarchy for securitisation exposures for SA pools in paragraphs 45 to 47.

3. Approaches

*(i) Internal Ratings-Based Approach*

49. To calculate capital requirements for a securitisation exposure to an IRB pool, a bank must use the Internal Ratings-Based Approach and the following bank-supplied inputs: the IRB capital charge had the underlying exposures not been securitised ( $K_{IRB}$ ), the tranche attachment point (A), the tranche detachment point (D), and the supervisory parameter 'p', as defined below.

Definition of  $K_{IRB}$

50.  $K_{IRB}$  is the ratio of (a) the IRB capital requirement (including the expected loss portion) for the underlying exposures in the pool to (b) the exposure amount of the pool (eg the sum of drawn amounts related to securitised exposures plus the exposure-at-default associated with undrawn commitments related to securitised exposures).<sup>26</sup> Quantity (a) above must be calculated in accordance with applicable minimum IRB standards as set forth in Section III of the Basel framework as if the exposures in the pool were held directly by the bank. This calculation should reflect the effects of any credit risk mitigant that is applied on the underlying exposures (either individually or to the entire pool), and hence benefits all of

<sup>26</sup> The scaling factor of 1.06 referenced in paragraph 44 of the Basel II framework is applied to the unexpected loss portion of the calculation of  $K_{IRB}$ . The calculation of  $K_{IRB}$  as described in this paragraph and the calculation of caps as determined in paragraphs 78 to 82 [of this consultative document] are the only occurrence of use of the scaling factor in the securitisation framework; ie the risk-weighted assets resulting from the different approaches (Internal Ratings-Based Approach, External Ratings-Based Approach or Standardised Approach are not subject to the scaling factor).

the securitisation exposures.  $K_{IRB}$  is expressed in decimal form (eg a capital charge equal to 15% of the pool would be expressed as 0.15). For structures involving an SPE, all the assets of the SPE that are related to the securitisations are to be treated as exposures in the pool, including assets in which the SPE may have invested a reserve account, such as a cash collateral account or claims against counterparties resulting from interest swaps or currency swaps. In the case of funded synthetic securitisations, any proceeds of the issuances of credit-linked notes or other funded obligations of the SPE that serve as collateral for the repayment of the securitisation exposure in question must be included in the calculation of  $K_{IRB}$ .

51. In cases where a bank has set aside a specific provision or has a non-refundable purchase price discount on an exposure in the pool, quantity (a) defined above and quantity (b) also defined above in paragraph 50 must be calculated using the gross amount of the exposure without the specific provision and/or non-refundable purchase price discount. In this case, the amount of the non-refundable purchase price discount on a defaulted asset or the specific provision can be used to reduce the amount of any 1,250% risk-weighted exposure in the given transaction (see also paragraph 38).

#### Definition of Attachment Point (A)

52. The input A represents the threshold at which credit losses would first be allocated to the exposure. This input, which is a decimal value between zero and one, equals the ratio of the nominal size of all tranches that provide full credit enhancement to the tranche that contains the securitisation exposure of the bank to the nominal size of all underlying exposures in the securitisation.

Relative seniority of the exposure and all funded credit enhancements are recognised as part of the calculation. Any overcollateralisation or reserve account funded by accumulated cash flows from the underlying exposures that are junior to the tranche of interest may be included as credit enhancements for this purpose. Unfunded reserve accounts, such as those to be funded from future receipts from the underlying exposures, may not be included.

#### Definition of Detachment Point (D)

53. The input D represents the threshold at which credit losses of principal allocated to a securitisation exposure results in a total loss of principal. This input, which is a decimal value between zero and one, equals the value of A plus the ratio of the sum of the nominal amount of the tranche in which the securitisation exposure resides and all *pari passu* exposures (with respect to loss allocation), over the nominal amount of all underlying exposures.

#### Formulation of supervisory parameter (p)

54. The supervisory parameter “p” in the context of Internal Ratings-Based Approach is as follows:

$$p = \max [0.3; (A + B*(1/N) + C*K_{IRB} + D*LGD + E*M_T)], \text{ where}$$

the terms are defined as follows:

- 0.3 denotes the p-parameter floor;
- N is the effective number of loans in the underlying pool, calculated as described in paragraph 54(i);
- $K_{IRB}$  is the capital charge of the underlying pool (as defined in paragraph 50)
- LGD is the exposure-weighted average loss given default of the underlying pool, calculated as described in paragraph 54(ii);
- $M_T$  is the maturity of the tranche; and
- The parameters A, B, C, D, and E are determined according to the following look-up table:

		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>Wholesale</b>	<b>Senior</b> , Granular (N ≥ 25)	0	3.56	-1.85	0.55	0.07
	<b>Senior</b> , Non-granular (N < 25)	0.11	2.61	-2.91	0.68	0.07
	<b>Non-senior</b> , Granular (N ≥ 25)	0.16	2.87	-1.03	0.21	0.07
	<b>Non-senior</b> , Non-granular (N < 25)	0.22	2.35	-2.46	0.48	0.07
<b>Retail</b>	<b>Senior</b>	0	0	-7.48	0.71	0.24
	<b>Non-senior</b>	0	0	-5.78	0.55	0.27

#### Calculation of effective number of exposures (N)

54(i). The effective number of exposures is calculated as:

$$N = \frac{(\sum_i EAD_i)^2}{\sum_i EAD_i^2}$$

where  $EAD_i$  represents the exposure-at-default associated with the  $i^{\text{th}}$  instrument in the pool.

Multiple exposures to the same obligor must be consolidated (ie treated as a single instrument).

#### Calculation of exposure-weighted average LGD

54(ii). The exposure-weighted average LGD is calculated as follows:

$$LGD = \frac{\sum_i LGD_i \cdot EAD_i}{\sum_i EAD_i}$$

where  $LGD_i$  represents the average LGD associated with all exposures to the  $i^{\text{th}}$  obligor. When default and dilution risks for purchased receivables are treated in an aggregate manner (eg a single reserve or over-collateralisation is available to cover losses from either source) within a securitisation, the LGD input must be constructed as a weighted-average of the LGD for default risk and the 100% LGD for dilution risk. The weights are the stand-alone IRB capital charges for default risk and dilution risk, respectively.

#### Simplified method for computing N and LGD

54(iii). Under the conditions provided below, banks may employ a simplified method for calculating the effective number of exposures and the exposure-weighted average LGD. Let  $C_m$  in the simplified calculation denote the share of the pool corresponding to the sum of the largest "m" exposures (eg a 15% share corresponds to a value of 0.15). The level of "m" is set by each bank.

- If the portfolio share associated with the largest exposure,  $C_1$ , is no more than 0.03 (or 3% of the underlying pool), then for purposes of the Internal Ratings-Based Approach, the bank may set  $LGD=0.50$  and  $N$  equal to the following amount:

$$N = \left( C_1 \cdot C_m + \left( \frac{C_m - C_1}{m - 1} \right) \cdot \max\{1 - m \cdot C_1, 0\} \right)^{-1}$$

- Alternatively, if only  $C_1$  is available and this amount is no more than 0.03, then the bank may set  $LGD=0.50$  and  $N=1/C_1$ .

#### Calculation of risk weight

55. The formulation of the Internal Ratings-Based Approach is as follows:

$$K_{SSFA(K_{IRB})} = \frac{e^{a \cdot u} - e^{a \cdot l}}{a(u - l)}$$

Capital requirements per unit of securitisation exposure under the Internal Ratings-Based Approach is a function of three variables, labelled a, u, and l. The constant e is the base of the natural logarithms (which equals 2.71828). The variables a, u, and l are defined as follows:

$$a = -(1 / (p * K_{IRB}))$$

$$u = D - K_{IRB}$$

$$l = \max (A - K_{IRB}; 0)$$

56. The risk weight assigned to a securitisation exposure when applying the Internal Ratings-Based Approach is calculated as follows:

- When D for a securitisation exposure is less than or equal to  $K_{IRB}$ , the exposure must be assigned a risk weight of 1,250%.
- When A for a securitisation exposure is greater than or equal to  $K_{IRB}$ , the risk weight of the exposure, expressed as a percentage, would equal  $K_{SSFA(K_{IRB})}$  times 12.5.
- When A is less than  $K_{IRB}$  and D is greater than  $K_{IRB}$ , the applicable risk weight is a weighted average of 1,250% and 12.5 times  $K_{SSFA(K_{IRB})}$  according to the following formula:

$$RW = \left[ \left( \frac{K_{IRB} - A}{D - A} \right) \cdot 12.5 \right] + \left[ \left( \frac{D - K_{IRB}}{D - A} \right) \cdot 12.5 \cdot K_{SSFA(K_{IRB})} \right]$$

The risk weight for market-risk hedges like currency or interest-rate swaps will be inferred from the next subordinated tranche.

#### (ii) External Ratings-Based Approach

57. For securitisation exposures that are externally rated, or for which an inferred rating is available, risk-weighted assets under the External Ratings-Based Approach will be determined by multiplying securitisation exposure amounts (as defined in paragraph 19) by the appropriate risk weights as determined by paragraphs 58 to 62, provided that the operational criteria in paragraphs 63 to 65 are met.<sup>27</sup>

#### Short-term ratings

58. For exposures with short-term ratings, or when an inferred rating based on a short-term rating is available, the following risk weights will apply:

Table 1: External Ratings-Based Approach risk weights for short-term ratings

External credit assessment	A-1/P-1	A-2/P-2	A-3/P-3	All other ratings
Risk weight	15%	50%	100%	1,250%

#### Long-term ratings

59. For exposures with long-term ratings, or when an inferred rating based on a long-term rating is available, the risk weights depend on (i) the external rating grade or an available inferred rating; (ii) the seniority of the position; (iii) the tranche maturity; and (iv) in the case of non-senior tranches, the tranche thickness.

<sup>27</sup> The rating designations used in Tables 1 and 2 are for illustrative purposes only and do not indicate any preference for, or endorsement of, any particular external assessment system.

60. Specifically, for exposures with long-term ratings, risk weights will be determined according to Table 2 and will be adjusted for tranche maturity, and tranche thickness for non-senior tranches according to paragraph 61.

Table 2: External Ratings-Based Approach risk weights for long-term ratings

Rating	Senior tranche		Non-senior (thin) tranche	
	Maturity		Maturity	
	1 year	5 years	1 year	5 years
AAA	15%	25%	15%	80%
AA+	15%	35%	15%	100%
AA	25%	50%	30%	130%
AA-	30%	55%	40%	150%
A+	40%	65%	60%	170%
A	50%	75%	80%	190%
A-	60%	90%	120%	220%
BBB+	75%	110%	170%	270%
BBB	90%	130%	220%	320%
BBB-	120%	170%	330%	430%
BB+	140%	200%	470%	590%
BB	160%	230%	620%	770%
BB-	200%	290%	750%	870%
B+	250%	360%	900%	960%
B	310%	420%	1050%	1050%
B-	380%	440%	1130%	1130%
CCC+/CCC/CCC-	460%	530%	1,250%	1,250%
Below CCC-	1,250%	1,250%	1,250%	1,250%

61. The risk weight assigned to a securitisation exposure when applying the External Ratings-Based Approach is calculated as follows:

- To account for tranche maturity, banks shall use linear interpolation between the risk weights for one and five years.
- To account for tranche thickness, banks shall calculate the risk weight for non-senior tranches as follows:

$$\text{Risk weight} = [\text{risk weight from table after adjusting for maturity}] * [1 - \min(T; 50\%)];$$

where T equals tranche thickness, and is measured as the ratio of (a) the nominal size of the tranche of interest including all pari passu tranches (with respect to loss allocation) to (b) the notional amount of exposures in the pool.

In the case of market risk hedges such as currency or interest-rate swaps, the risk weight will be inferred from the next subordinated tranche.

62. The resulting risk weight should never be lower than the risk weight corresponding to a senior tranche of the same securitisation with the same rating and maturity.

#### Operational requirements for use of external credit assessments

63. The following operational criteria concerning the use of external credit assessments apply in the securitisation framework:

- (a) To be eligible for risk-weighting purposes, the external credit assessment must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all

- payments owed to it. For example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest.
- (b) The external credit assessments must be from an eligible ECAI as recognised by the bank's national supervisor in accordance with paragraphs 90 to 108 of the Basel II framework with the following exception. In contrast with bullet three of paragraph 91 of the Basel II framework, an eligible credit assessment, procedures, methodologies, assumptions, and the key elements underlining the assessments must be publicly available, on a non-selective basis and free of charge.<sup>28</sup> In other words, a rating must be published in an accessible form and included in the ECAI's transition matrix. Also, loss and cash-flow analysis as well as sensitivity of ratings to changes in the underlying ratings assumptions should be publicly available. Consequently, ratings that are made available only to the parties to a transaction do not satisfy this requirement.
  - (c) Eligible ECAIs must have a demonstrated expertise in assessing securitisations, which may be evidenced by strong market acceptance.
  - (d) A bank must apply external credit assessments from eligible ECAIs consistently across a given type of securitisation exposure. Furthermore, a bank cannot use the credit assessments issued by one ECAI for one or more tranches and those of another ECAI for other positions (whether retained or purchased) within the same securitisation structure that may or may not be rated by the first ECAI. Where two or more eligible ECAIs can be used and these assess the credit risk of the same securitisation exposure differently, paragraphs 96 to 98 of the Basel II framework will apply.
  - (e) Where CRM is provided to specific underlying exposures or the entire pool by an eligible guarantor defined in paragraph 195 of the Basel II framework and is reflected in the external credit assessment assigned to a securitisation exposure(s), the risk weight associated with that external credit assessment should be used. In order to avoid any double counting, no additional capital recognition is permitted. If the CRM provider is not recognised as an eligible guarantor in paragraph 195 of the Basel II framework, the covered securitisation exposures should be treated as unrated.
  - (f) In the situation where a credit risk mitigant solely protects a specific securitisation exposure within a given structure (eg ABS tranche) and this protection is reflected in the external credit assessment, the bank must treat the exposure as if it is unrated and then use the CRM treatment outlined in Section II.D of the Basel II framework or in the foundation IRB approach of Section III of the Basel II framework, to recognise the hedge.
  - (g) A bank is not permitted to use any external credit assessment for risk-weighting purposes where the assessment is at least partly based on unfunded support provided by the bank. For example, if a bank buys ABCP where it provides an unfunded securitisation exposure extended to the ABCP programme (eg liquidity facility or credit enhancement), and that exposure plays a role in determining the credit assessment on the ABCP, the bank must treat the ABCP as if it were not rated. The bank must continue to hold capital against the other securitisation exposures it provides (eg against the liquidity facility and/or credit enhancement).

#### Operational requirements for inferred ratings

64. A bank is allowed to infer a rating for an unrated position and use the External Ratings-Based Approach provided that the requirements in paragraphs 65 are met. These requirements are intended to

<sup>28</sup> Where the eligible credit assessment is not provided free of charge, the ECAI should provide an adequate justification, within their own publicly available Code of Conduct, in accordance with the "comply or explain" nature of the IOSCO Code of Conduct Fundamentals for Credit Rating Agencies.

ensure that the unrated position is senior in all respects to an externally rated securitisation exposure termed the "reference securitisation exposure".

65. The following operational requirements must be satisfied to recognise inferred ratings.
- (a) The reference securitisation exposure (eg ABS) must be subordinate in all respects to the unrated securitisation exposure. Credit enhancements, if any, must be taken into account when assessing the relative subordination of the unrated exposure and the reference securitisation exposure. For example, if the reference securitisation exposure benefits from any third-party guarantees or other credit enhancements that are not available to the unrated exposure, then the latter may not be assigned an inferred rating based on the reference securitisation exposure.
  - (b) The maturity of the reference securitisation exposure must be equal to or longer than that of the unrated exposure.
  - (c) On an ongoing basis, any inferred rating must be updated continuously to reflect any subordination of the unrated position or changes in the external rating of the reference securitisation exposure.
  - (d) The external rating of the reference securitisation exposure must satisfy the general requirements for recognition of external ratings as delineated in paragraph 63.

*(iii) Internal Assessment Approach (IAA)*

66. Subject to supervisory approval a bank may use its internal assessments of the credit quality of the securitisation exposures the bank extends to ABCP programmes (eg liquidity facilities and credit enhancements) if the bank's internal assessment process meets the operational requirements below. Internal assessments of exposures provided to ABCP programmes must be mapped to equivalent external ratings of an ECAI. Those rating equivalents are used to determine the appropriate risk weights under the External Ratings-Based Approach for purposes of assigning the notional amounts of the exposures.

67. A bank's internal assessment process must meet the following operational requirements in order to use internal assessments in determining the IRB capital requirement arising from liquidity facilities, credit enhancements, or other exposures extended to an ABCP programme.

- (a) For the unrated exposure to qualify for the IAA, the ABCP must be externally rated. The ABCP itself is subject to the External Ratings-Based Approach.
- (b) The internal assessment of the credit quality of a securitisation exposure to the ABCP programme must be based on ECAI criteria for the asset type purchased, and must be the equivalent of at least investment grade when initially assigned to an exposure. In addition, the internal assessment must be used in the bank's internal risk management processes, including management information and economic capital systems, and generally must meet all the relevant requirements of the IRB framework.
- (c) In order for banks to use the IAA, their supervisors must be satisfied (i) that the ECAI meets the ECAI eligibility criteria outlined in paragraphs 90 to 108 and (ii) with the ECAI rating methodologies used in the process. In addition, banks have the responsibility to demonstrate to the satisfaction of their supervisors how these internal assessments correspond with the relevant ECAI's standards.

For instance, when calculating the credit enhancement level in the context of the IAA, supervisors may, if warranted, disallow on a full or partial basis any seller-provided recourse guarantees or excess spread, or any other first-loss credit enhancements that provide limited protection to the bank.



- (d) The bank's internal assessment process must identify gradations of risk. Internal assessments must correspond to the external ratings of ECAIs so that supervisors can determine which internal assessment corresponds to each external rating category of the ECAIs.
- (e) The bank's internal assessment process, particularly the stress factors for determining credit enhancement requirements, must be at least as conservative as the publicly available rating criteria of the major ECAIs that are externally rating the ABCP programme's commercial paper for the asset type being purchased by the programme. However, banks should consider, to some extent, all publicly available ECAI rating methodologies in developing their internal assessments.
- In the case where (i) the commercial paper issued by an ABCP programme is externally rated by two or more ECAIs and (ii) the different ECAIs' benchmark stress factors require different levels of credit enhancement to achieve the same external rating equivalent, the bank must apply the ECAI stress factor that requires the most conservative or highest level of credit protection. For example, if one ECAI required enhancement of 2.5 to 3.5 times historical losses for an asset type to obtain a single A rating equivalent and another required two to three times historical losses, the bank must use the higher range of stress factors in determining the appropriate level of seller-provided credit enhancement.
  - When selecting ECAIs to externally rate an ABCP, a bank must not choose only those ECAIs that generally have relatively less restrictive rating methodologies. In addition, if there are changes in the methodology of one of the selected ECAIs, including the stress factors, that adversely affect the external rating of the programme's commercial paper, then the revised rating methodology must be considered in evaluating whether the internal assessments assigned to ABCP programme exposures are in need of revision.
  - A bank cannot utilise an ECAI's rating methodology to derive an internal assessment if the ECAI's process or rating criteria is not publicly available. However, banks should consider the non-publicly available methodology — to the extent that they have access to such information — in developing their internal assessments, particularly if it is more conservative than the publicly available criteria.
  - In general, if the ECAI rating methodologies for an asset or exposure are not publicly available, then the IAA may not be used. However, in certain instances, for example, for new or uniquely structured transactions, which are not currently addressed by the rating criteria of an ECAI rating the programme's commercial paper, a bank may discuss the specific transaction with its supervisor to determine whether the IAA may be applied to the related exposures.
- (f) Internal or external auditors, an ECAI, or the bank's internal credit review or risk management function must perform regular reviews of the internal assessment process and assess the validity of those internal assessments. If the bank's internal audit, credit review, or risk management functions perform the reviews of the internal assessment process, then these functions must be independent of the ABCP programme business line, as well as the underlying customer relationships.
- (g) The bank must track the performance of its internal assessments over time to evaluate the performance of the assigned internal assessments and make adjustments, as necessary, to its assessment process when the performance of the exposures routinely diverges from the assigned internal assessments on those exposures.
- (h) The ABCP programme must have credit and investment guidelines, ie underwriting standards, for the ABCP programme. In the consideration of an asset purchase, the ABCP programme (ie the programme administrator) should develop an outline of the structure of the purchase transaction. Factors that should be discussed include the type of asset being purchased; type and monetary value of the exposures arising from the provision of liquidity facilities and credit

enhancements; loss waterfall; and legal and economic isolation of the transferred assets from the entity selling the assets.

- (i) A credit analysis of the asset seller's risk profile must be performed and should consider, for example, past and expected future financial performance; current market position; expected future competitiveness; leverage, cash flow, and interest coverage; and debt rating. In addition, a review of the seller's underwriting standards, servicing capabilities, and collection processes should be performed.
- (j) The ABCP programme's underwriting policy must establish minimum asset eligibility criteria that, among other things:
  - exclude the purchase of assets that are significantly past due or defaulted;
  - limit excess concentration to individual obligor or geographic area; and
  - limit the tenor of the assets to be purchased.
- (k) The ABCP programme should have collections processes established that consider the operational capability and credit quality of the servicer. The programme should mitigate to the extent possible seller/servicer risk through various methods, such as triggers based on current credit quality that would preclude co-mingling of funds and impose lockbox arrangements that would help ensure the continuity of payments to the ABCP programme.
- (l) The aggregate estimate of loss on an asset pool that the ABCP programme is considering purchasing must consider all sources of potential risk, such as credit and dilution risk. If the seller-provided credit enhancement is sized based on only credit-related losses, then a separate reserve should be established for dilution risk, if dilution risk is material for the particular exposure pool. In addition, in sizing the required enhancement level, the bank should review several years of historical information, including losses, delinquencies, dilutions and the turnover rate of the receivables. Furthermore, the bank should evaluate the characteristics of the underlying asset pool (eg weighted-average credit score) and should identify any concentrations to an individual obligor or geographic region and the granularity of the asset pool.
- (m) The ABCP programme must incorporate structural features into the purchase of assets in order to mitigate potential credit deterioration of the underlying portfolio. Such features may include wind-down triggers specific to a pool of exposures.

68. The exposure amount of the securitisation exposure to the ABCP programme must be assigned to the risk weight in the External Ratings-Based Approach appropriate to the credit rating equivalent assigned to the bank's exposure.

69. If a bank's internal assessment process is no longer considered adequate, the bank's supervisor may preclude the bank from applying the IAA to its ABCP exposures, both existing and newly originated, for determining the appropriate capital treatment until the bank has remedied the deficiencies. In this instance, the bank must revert to the Standardised Approach described in paragraphs 70 to 77.

*(iv) Standardised Approach*

70. To calculate capital requirements for a securitisation exposure to a SA pool using the Standardised Approach, a bank would use a supervisory formula and the following bank-supplied inputs: the SA capital charge had the underlying exposures not been securitised ( $K_{SA}$ ), the ratio of delinquent underlying exposures to total underlying exposures in the securitisation pool ( $W$ ), the tranche attachment point ( $A$ ), and the tranche detachment point ( $D$ ). The inputs  $A$  and  $D$  are defined above in paragraphs 52 and 53, respectively.  $K_{SA}$  and  $W$  are defined below in paragraphs 71 and 72.

71.  $K_{SA}$  is defined as the weighted-average capital charge of the underlying exposures, calculated using the risk-weighted asset amounts in the SA in Section II of the Basel framework in relation to the

sum of the exposure amounts of underlying exposures, multiplied by 8%. This calculation should reflect the effects of any credit risk mitigant that is applied to the underlying exposures (either individually or to the entire pool), and hence benefits all of the securitisation exposures.  $K_{SA}$  is expressed as a decimal between zero and 1 (that is, a weighted-average risk weight of 100% means that  $K_{SA}$  would equal 0.08). For structures involving an SPE, all the assets of the SPE that are related to the securitisation are to be treated as exposures in the pool, including assets in which the SPE may have invested a reserve account, such as a cash collateral account or claims against counterparties resulting from interest swaps or currency swaps. For funded synthetic securitisations any proceeds of the issuances of credit-linked-notes or other funded obligations of the SPE that serve as collateral for the repayment of the securitisation exposure in question have to be included in the calculation of  $K_{SA}$ .

72. The variable  $W$  equals the ratio of the sum of the nominal amount of delinquent underlying exposures (as defined in paragraph 73) to the nominal amount of underlying exposures.

73. Delinquent underlying exposures are underlying exposures that are 90 days or more past due, subject to bankruptcy or insolvency proceeding, in the process of foreclosure, held as real estate owned, or in default.

74. The inputs  $K_{SA}$  and  $W$  are used as inputs to calculate  $K_A$ , as follows:

$$K_A = (1 - W) \cdot K_{SA} + W \cdot 0.5$$

75. Capital requirements are calculated under the Standardised Approach as follows:

$$K_{SSFA(K_A)} = \frac{e^{a \cdot u} - e^{a \cdot l}}{a(u - l)}$$

Where  $K_{SSFA(K_A)}$  is the capital requirement per unit of the securitisation exposure and the variables  $a$ ,  $u$ , and  $l$  are defined as follows:

$$a = -(1 / (p \cdot K_A))$$

$$u = D - K_A$$

$$l = \max(A - K_A; 0)$$

76. The supervisory parameter “ $p$ ” in the context of the Standardised Approach is set equal to 1 for a securitisation exposure that is not a resecuritisation exposure.

77. The risk weight assigned to a securitisation exposure when applying the Standardised Approach would be calculated as follows:

- When  $D$  for a securitisation exposure is less than or equal to  $K_A$ , the exposure must be assigned a risk weight of 1,250%.
- When  $A$  for a securitisation exposure is greater than or equal to  $K_A$ , the risk weight of the exposure, expressed as a percentage, would equal  $K_{SSFA(K_A)}$  times 12.5.
- When  $A$  is less than  $K_A$  and  $D$  is greater than  $K_A$ , the applicable risk weight is a weighted average of 1,250% and 12.5 times  $K_{SSFA(K_A)}$  according to the following formula:

$$RW = \left[ \left( \frac{K_A - A}{D - A} \right) \cdot 12.5 \right] + \left[ \left( \frac{D - K_A}{D - A} \right) \cdot 12.5 \cdot K_{SSFA(K_A)} \right]$$

The risk weight for market risk hedges such as currency or interest-rate swaps will be inferred from the next subordinated tranche.

#### 4. Caps

##### (i) *Maximum risk weight for senior securitisation exposures*

78. Banks may apply a “look-through” approach to senior securitisation exposures by which, the senior securitisation exposure could receive a maximum risk weight equal to the average risk weight applicable to the underlying exposures, provided that the bank has knowledge of the composition of the underlying exposures at all times. The applicable risk weight under the IRB framework would be calculated taking into account the application of the 1.06 scaling factor pursuant to paragraph 44 of the IRB credit risk framework, and would also be inclusive of the expected loss portion multiplied by 12.5. In particular:

- In the case of pools where the bank uses exclusively the SA or IRB approach, the risk-weight cap for senior exposures would equal the average risk weight that would apply to the underlying exposures under the SA or IRB framework, respectively.
- In the case of mixed pools, when applying the Internal Ratings-Based Approach, the SA part of the underlying pool for which no IRB risk weights can be calculated, would receive the corresponding SA risk weight. When applying the Standardised Approach or the External Ratings-Based Approach, the risk-weight cap for senior exposures would be based on the standardised average risk weight of the underlying assets, whether or not they are originally IRB.

79. Where the risk-weight cap results in a lower risk weight than the floor risk weight of 15%; the risk weight resulting from the cap should be used.

##### (ii) *Maximum capital requirements*

80. A bank (originator, sponsor or investors) using the Internal Ratings-Based Approach for a securitisation exposure may apply a maximum capital requirement for the securitisation exposures it holds equal to the IRB capital requirement (including the expected loss portion and the scaling factor of 1.06 for the unexpected loss portion) that would have been assessed against the underlying exposures had they not been securitised and treated under the appropriate sections of the IRB framework including Section III.G of the Basel II framework.

In the case of mixed pools, the overall cap should be calculated by adding up the capital before securitisation; that is, by adding up the capital required under the general credit risk framework for the IRB and for the SA part of the underlying pool.

81. An originating or sponsor bank using the External Ratings-Based Approach or Standardised Approach for a securitisation exposure may apply a maximum capital requirement for the securitisation exposures it holds equal to the capital requirement that would have been assessed against the underlying exposures had they not been securitised.

In the case of mixed pools, the overall cap should also be calculated by adding up the capital before securitisation; that is, by adding up the capital required under the general credit risk framework for the IRB and for the SA part of the underlying pool. For the IRB part the capital requirement includes the expected loss portion and the scaling factor of 1.06 for the unexpected loss portion.

82. In applying the capital charge cap, the entire amount of any gain on sale and credit-enhancing I/Os arising from the securitisation transaction must be deducted in accordance with paragraph 37.

#### F. *Treatment of resecuritisation exposures*

83. For resecuritisation exposures, banks cannot apply any of the approaches in Section E.3 [of this consultative document] other than the Standardised Approach specified in paragraphs 70 to 77, with the following adjustments:

- The capital requirement of the underlying securitisation exposures is calculated using the securitisation framework;
- Delinquencies (W) are assumed to be zero for any securitisation exposure in the underlying pool;
- The supervisory parameter “p” is set equal to 1.5, rather than 1 as for securitisation exposures.

## G. Implicit support

84. When a bank provides implicit support to a securitisation, it must, at a minimum, hold capital against all of the underlying exposures associated with the securitisation transaction as if they had not been securitised. Additionally, banks would not be permitted to recognise in regulatory capital any gain on sale, in accordance with paragraph 37. Furthermore, the bank is required to disclose publicly that (a) it has provided non-contractual support and (b) the capital impact of doing so.

## H. Treatment of credit risk mitigation for securitisation exposures

85. The treatment below applies to a bank that has obtained a credit risk mitigant on a securitisation exposure, as well as when a maturity mismatch arises in the context of synthetic securitisations. Credit risk mitigants include guarantees, credit derivatives, collateral and on-balance sheet netting. Collateral in this context refers to that used to hedge the credit risk of a securitisation exposure rather than the underlying exposures of the securitisation transaction.

86. Notwithstanding the definition of tranche maturity specified in paragraph 23, when a bank provides credit protection to a securitisation exposure, it must calculate a capital requirement on the covered exposure as if it were directly holding the securitisation exposure.

87. When applying credit risk mitigation techniques, the bank may reduce the capital charge proportionally when the credit risk mitigant covers first losses or losses on a proportional basis. For all other cases, the bank must assume that the credit risk mitigant covers the most senior portion of the securitisation exposure (ie that the most junior portion of the securitisation exposure is uncovered).

### Collateral

88. Eligible collateral is limited to that recognised under the credit risk mitigation framework; in particular, paragraphs 145 and 146 of the Basel II framework when the bank applies SA to the underlying exposures, and paragraph 289 of the Basel II framework when the bank applies foundation IRB. Collateral pledged by SPEs may be recognised.

### Guarantees and credit derivatives

89. Credit protection provided by the entities listed in paragraph 195 of the Basel II framework may be recognised. SPEs cannot be recognised as eligible guarantors.

90. Where guarantees or credit derivatives fulfil the minimum operational conditions as specified in paragraphs 189 to 194 of the Basel II framework, banks can take account of such credit protection in calculating capital requirements for securitisation exposures.

91. Capital requirements for the guaranteed/protected portion will be calculated according to CRM (particularly, according to paragraphs 196 to 201 of the Basel II framework when the bank applies SA to the underlying exposures, and paragraphs 300 to 305 of the Basel II framework when the bank applies foundation IRB).

## Maturity mismatches

92. A maturity mismatch exists when the residual maturity of a hedge is less than that of the underlying exposure.

93. When protection is bought on (a) securitisation exposure(s), for the purpose of setting regulatory capital against a maturity mismatch, the capital requirement will be determined in accordance with paragraphs 202 to 205 of the Basel II framework. When the exposures being hedged have different maturities, the longest maturity must be used.

94. When protection is bought on the securitised assets, maturity mismatches may arise in the context of synthetic securitisations (when, for example, a bank uses credit derivatives to transfer part or all of the credit risk of a specific pool of assets to third parties). When the credit derivatives unwind, the transaction will terminate. This implies that the effective maturity of *all* the tranches of the synthetic securitisation may differ from that of the underlying exposures. Banks that synthetically securitise exposures held on their balance sheet by purchasing tranching credit protection must treat such maturity mismatches in the following manner: For securitisation exposures that are assigned a risk weight of 1,250%, maturity mismatches are not taken into account. For all other securitisation exposures, the bank must apply the maturity mismatch treatment set forth in paragraphs 202 to 205 of the Basel II framework. When the exposures being hedged have different maturities, the longest maturity must be used.

## XX. Other non-securitisation parts

### A. Components of capital (as revised by Basel III)

#### 2. *Limits and minima*

43. Banks using ~~the IRB approach for securitisation exposures or~~ the PD/LGD approach for equity exposures must first deduct the EL amounts subject to the corresponding conditions in paragraphs 563 and 386, respectively. Banks using the IRB approach for other asset classes must compare (i) the amount of total eligible provisions, as defined in paragraph 380, with (ii) the total expected losses amount as calculated within the IRB approach and defined in paragraph 375. Where the total expected loss amount exceeds total eligible provisions, banks must deduct the difference. **Securitisation exposures will be subject to paragraph 38 and will neither contribute to the total expected losses amount nor the total eligible provisions.**

## II. Credit Risk – The Standardised Approach

### A. Individual claims

#### 11. *Higher-risk categories*

79. The following claims will be risk-weighted at 150% or higher:

- Claims on sovereigns, PSEs, banks, and securities firms rated below B–.
- Claims on corporates rated below BB–.
- Past due loans as set out in paragraph 75.
- ~~Securitisation tranches that are rated between BB+ and BB– will be risk-weighted at 350% as set out in paragraph 567.~~

### C. Credit risk mitigation

#### (ii) *First-to-default credit derivatives*

208. With regard to the bank providing credit protection through such an instrument, ~~if the product has an external credit assessment from an eligible credit assessment institution, the risk weight in paragraph 567 applied to securitisation tranches will be applied. If the product is not rated by an eligible external credit assessment institution, the risk weights of the assets included in the basket will be aggregated up to a maximum of 1,250% and multiplied by the nominal amount of the protection provided by the credit derivative to obtain the risk-weighted asset amount.~~

## III. Credit Risk – The Internal Ratings-Based Approach

### B. Mechanics of IRB approach

#### 1. *Categorisation of exposures*

217. For a discussion of the ~~IRB~~ treatment of securitisation exposures, see Section IV.

### C. Rules for corporate, sovereign and bank exposures

*Exposure measurement for off-balance sheet items (with the exception of FX and interest-rate, equity, and commodity-related derivatives)*

310. For off-balance sheet items, exposure is calculated as the committed but undrawn amount multiplied by a CCF. There are two approaches for the estimation of CCFs: a foundation approach and an advanced approach. **When only the drawn balances of revolving facilities have been securitised, banks must ensure that they continue to hold required capital against the undrawn balances associated with the securitised exposures.**

D. Rules for retail exposures

(iii) *Exposure at default (EAD)*

337. When only the drawn balances of **revolving** retail facilities have been securitised, banks must ensure that they continue to hold required capital against **the undrawn balances associated with the securitised exposures using the IRB approach to credit risk for commitments.** ~~their share (ie seller's interest) of undrawn balances related to the securitised exposures using the IRB approach to credit risk. This means that for such facilities, banks must reflect the impact of CCFs in their EAD estimates rather than in the LGD estimates. For determining the EAD associated with the seller's interest in the undrawn lines, the undrawn balances of securitised exposures would be allocated between the seller's and investors' interests on a pro rata basis, based on the proportions of the seller's and investors' shares of the securitised drawn balances. The investors' share of undrawn balances related to the securitised exposures is subject to the treatment in paragraph 6.~~

*(This revision would replace the existing paragraph 337 and would require that if banks are able to securitise revolving retail credits using an amortising structure, 100% of the undrawn lines multiplied by the appropriate EAD would be included in the IRB retail capital calculation.)*

F. Rules for purchased receivables

3. *Treatment of purchase price discounts for receivables*

371. In many cases, the purchase price of receivables will reflect a discount (not to be confused with the discount concept defined in paragraphs 308 and 334 [of the Basel II framework]) that provides first loss protection for default losses, dilution losses or both (see paragraph 51 [of this consultative document]). ~~To the extent a portion of such a purchase price discount will be refunded to the seller, this refundable amount may be treated as first loss protection under the IRB securitisation framework.~~ **To the extent a portion of such a purchase price discount may be refunded to the seller based on the performance of the receivables the purchaser may recognise this refundable amount as first-loss protection and hence treat this exposure under the securitisation framework; while the seller providing such refundable purchase price discount must treat the refundable amount as a first-loss position under the securitisation framework.** Non-refundable purchase price discounts for receivables do not affect either the EL-provision calculation in Section III.G [of the Basel II framework] or the calculation of risk-weighted assets.

372. When collateral or partial guarantees obtained on receivables provide first-loss protection (collectively referred to as mitigants in this paragraph), and these mitigants cover default losses, dilution losses, or both, they may also be treated as first-loss protection under the ~~IRB~~ securitisation framework (see **paragraph 51** [of this consultative document]). When the same mitigant covers both default and dilution risk, banks using the ~~Supervisory Formula~~ **Internal Ratings-Based Approach** that are able to calculate an exposure-weighted LGD must do so as defined in **paragraph 54(ii)** [of this consultative document].



### Part 3.V: The Second Pillar – Supervisory Review Process for securitisation

Revise paragraphs 801- 807 so as to keep consistency with the new treatment to these structures as follows:

*(In particular, delete paragraphs 805 and 807 and references to early amortisation Pillar 1 capital requirements in paragraphs 801 and 804).*

801. Supervisors should review how banks internally measure, monitor, and manage risks associated with securitisations of revolving credit facilities, including an assessment of the risk and likelihood of early amortisation of such transactions. At a minimum, supervisors should ensure that banks have implemented reasonable methods for allocating economic capital against the economic substance of the credit risk arising from revolving securitisations and should expect banks to have adequate capital and liquidity contingency plans that evaluate the probability of an early amortisation occurring and address the implications of both scheduled and early amortisation. ~~In addition, the capital adequacy plan should address the possibility that the bank will face higher levels of required capital under the early amortisation Pillar 1 capital requirement.~~

802. Because most early amortisation triggers are tied to excess spread levels, the factors affecting these levels should be well understood, monitored and managed to the extent possible (see paragraphs 790 to 794 on implicit support) by the originating bank. For example, the following factors affecting excess spread should generally be considered:

- Interest payments made by borrowers on the underlying receivable balances;
- Other fees and charges to be paid by the underlying obligors (eg late-payment fees, cash advance fees, over-limit fees);
- Gross charge-offs;
- Principal payments;
- Recoveries on charged-off loans;
- Interchange income;
- Interest paid on investors' certificates;
- Macroeconomic factors such as bankruptcy rates, interest rate movements, unemployment rates etc.

803. Banks should consider the effects that changes in portfolio management or business strategies may have on the levels of excess spread and on the likelihood of an early amortisation event. For example, marketing strategies or underwriting changes that result in lower finance charges or higher charge-offs, might also lower excess spread levels and increase the likelihood of an early amortisation event.

804. Banks should use techniques such as static pool cash collection analyses and stress tests to better understand pool performance. These techniques can highlight adverse trends or potential adverse impacts. Banks should have policies in place to respond promptly to adverse or unanticipated changes. Supervisors will take appropriate action where they do not consider these policies adequate. Such action may include, but is not limited to, directing a bank to obtain a dedicated liquidity line or ~~raising the early amortisation credit conversion factor, thus,~~ increasing the bank's capital requirements.

~~805. While the early amortisation capital charge described in Pillar 1 is meant to address potential supervisory concerns associated with an early amortisation event, such as the inability of excess spread to cover potential losses, the policies and monitoring described in this section recognise that a given level of excess spread is not, by itself, a perfect proxy for credit performance of the underlying pool of exposures. In some circumstances, for example, excess spread levels may decline so rapidly as to not provide a timely indicator of underlying credit deterioration. Further, excess spread levels may reside~~

~~far above trigger levels, but still exhibit a high degree of volatility which could warrant supervisory attention. In addition, excess spread levels can fluctuate for reasons unrelated to underlying credit risk, such as a mismatch in the rate at which finance charges reprice relative to investor certificate rates. Routine fluctuations of excess spread might not generate supervisory concerns, even when they result in different capital requirements. This is particularly the case as a bank moves in or out of the first step of the early amortisation credit conversion factors. On the other hand, existing excess spread levels may be maintained by adding (or designating) an increasing number of new accounts to the master trust, an action that would tend to mask potential deterioration in a portfolio. For all of these reasons, supervisors will place particular emphasis on internal management, controls, and risk monitoring activities with respect to securitisations with early amortisation features.~~

806. Supervisors expect that the sophistication of a bank's system in monitoring the likelihood and risks of an early amortisation event will be commensurate with the size and complexity of the bank's securitisation activities that involve early amortisation provisions.

~~807. — For controlled amortisations specifically, supervisors may also review the process by which a bank determines the minimum amortisation period required to pay down 90% of the outstanding balance at the point of early amortisation. Where a supervisor does not consider this adequate it will take appropriate action, such as increasing the conversion factor associated with a particular transaction or class of transactions.~~