On December 7, 2017, the Basel Committee on Banking Supervision (BCBS) published a document finalizing the Basel III reforms, also known informally as Basel IV. The document concludes the proposals and consultations ongoing since 2014 in relation to credit risk, credit value adjustment (CVA) risk, operational risk, output floors and leverage ratio.

The key objective of the revisions is to reduce excessive variability of risk-weighted assets (RWAs). At the peak of the global financial crisis, a wide range of stakeholders lost faith in banks’ reported risk-weighted capital ratios. The Committee’s own empirical analyses also highlighted material variability in banks’ calculation of RWA.

The revisions to the regulatory framework are intended to help restore credibility in the calculation of RWA by:

1. Enhancing the robustness and risk sensitivity of the standardized approaches for credit risk and operational risk, which will facilitate the comparability of banks’ capital ratios

2. Constraining the use of internally modeled approaches

3. Complementing the risk-weighted capital ratio with a finalized leverage ratio and a revised and robust capital floor

The implementation date is 1 January 2022, with the output floor phased from 1 January 2022 to 1 January 2027.

The BCBS also published the results of the cumulative quantitative impact study (QIS) and concluded that the aggregate capital shortfall as a result of the revisions is €90.7b, of which €85.7b relates to G-SIBs; and an average impact to G-SIBs’ CET1 ratio of 0.3% points.
Key Points

1. Internal ratings-based (IRB) approaches for credit risk

The regulations meet the consistency goals by removing the option to use the advanced IRB (A-IRB) approach for asset classes that are not amenable to robust and prudent modeling. These restrictions apply to:

- Large and mid-sized corporates (with consolidated revenues above €500m): Foundation IRB (F-IRB) or Standardized approach (SA) only
- Banks and other financial institutions: F-IRB or SA only
- Equities: SA only

Specialized lending can remain advanced, although earlier drafts suggested it would be restricted. The BCBS noted that it will review the slotting approach at a later point.

In addition, the regulation imposes parameter floors applicable to any advanced or foundation calculation:

- Probability of default (PD): 5bp except for qualifying retail revolving exposure (QRRE) revolvers at 10bp
- Loss given default (LGD): 25% to 50% for unsecured depending on product, and 0% to 15% for secured depending on product
- Exposure at default (EAD): Sum of on-balance sheet +50% off-balance sheet exposure * credit conversion factor (CCF) under standardized approach

There are also a number of amendments to the foundation parameter values.

Finally the regulation removes the requirement for the 1.06 scaling factor.

2. Standardized approach for credit risk

The regulations aim to improve granularity and risk-sensitivity.

- Banks: Risk weights are driven by the external rating, ranging from 20%-150%. For jurisdictions that do not permit ratings, or for unrated exposures, the risk weights range from 20% to 150%, depending on newly defined risk categories.
- Covered bonds: A new standalone treatment based on external ratings is introduced, with risk weights ranging from 10% to 100%.
- Corporates: The risk weight is driven by external ratings, ranging from 20% to 150%. For jurisdictions that do not permit ratings, or for unrated exposures, the risk weights range from 65% to 100%, depending on newly defined risk categories. SMEs are separately identified and apply an 85% risk weight.
- Project finance: If issue-specific ratings exist and are permitted, the corporate weightings described above will apply. If not, the risk weight depends on the project phase and will be 130% in the pre-operational phase, 100% in the operational phase unless deemed high quality, in which case an 80% weight applies.
- Object and commodity finance: If issue-specific ratings exist and are permitted, the corporate weightings described above apply. If not, then a 100% weight is applied.
- Retail: For residential retail, there is an additional segmentation of exposures relating to dependence on the cash flow from the property (e.g., buy to let). For all exposures, the risk weight becomes primarily LTV driven. For residential exposures not dependent on cash flows, the risk weight varies between 20% and 70%. Where there is a dependency on cash flows, the risk weight ranges from 30% to 105%.
- Commercial real estate: The risk weight is LTV driven and varies between 60% and 150%.
- Subordinated debt and equity: The risk weight is categorized based on exposure type and varies between 100% and 400%.
• Off-balance sheet: Unconditionally cancellable commitments are given a positive CCF of 10%, others 20% to 100% depending on product.

3. CVA framework
The regulations remove the use of internal modeled approaches and requires a standardized approach or a basic approach. It also permits firms with up to €100b in non-centrally cleared derivatives to calculate the CVA charge as a simple scalar of the counterparty credit risk charge.

4. Operational risk
The regulations remove all existing approaches and now require a single, risk-sensitive standardized approach calculated using a combination of the bank’s income and its historical losses.

5. Leverage ratio
Introduction of a leverage ratio buffer for G-SIBs. This buffer needs to be met with Tier 1 capital and equates to 50% of a G-SIB’s risk-weighted higher-loss absorbency requirements.

6. Output floors
The regulations replace the existing Basel1 floor and require that RWAs be calculated as the higher of the approved approaches and 72.5% of the total RWAs using only the standardized approach. The standardized approach includes credit risk, counterparty credit risk, CVA, securitization, market risk and operational risk.

All banks will also be required to disclose their RWAs and capital ratios on two bases: one without the output floor, and another with the floor applied, along with additional, more granular information. Full details will be published at a later date.

Timelines and next steps
The implementation dates are confirmed as January 1 2022 for all frameworks above, plus the revised market risk framework published in 2016. The one exception to this is the output floor of 72.5%, which will be phased as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>January 1, 2022</td>
<td>50%</td>
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<tr>
<td>January 1, 2023</td>
<td>55%</td>
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<tr>
<td>January 1, 2024</td>
<td>60%</td>
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<tr>
<td>January 1, 2025</td>
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<tr>
<td>January 1, 2026</td>
<td>70%</td>
</tr>
<tr>
<td>January 1, 2027</td>
<td>72.5%</td>
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</tbody>
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In addition there will be a 25% transitional cap on the increase of firms’ RWAs. This cap applies until January 1, 2027.

This publication follows approval by the BCBS oversight committee, the Group of Central Bank Governors and Heads of Supervision. It will now be incumbent on supervisors in individual jurisdictions to implement these standards in accordance with the timeline above.
Impact on capital

The commission also published results of the quantitative impact studies performed over the last two years. This highlights that the most significant capital impacts will be on G-SIBs, as a result of the nature of their exposures and their widespread use of A-IRB approaches. The overall impact in capital terms is a CET1 shortfall for Group 1 banks of €27.6b, and a total capital shortfall of €90.7b.

The capital impact will vary materially across firms and within business lines, such that detailed analyses will be required to assess the impact on existing portfolios. However, in general the new regulations will impose higher risk weights compared to A-IRB for better quality loans, but lower risk weights for poor quality ones. Against existing standardized measures, the increased segmentation will result in lower risk weights at better quality, but higher risk weights at lower quality.

The changes to operational risk are also likely to be material for many G-SIBs.

Operational challenges

The requirements impose a significant shift away from modeled approaches, and to more standardized calculations. At a high level banks will need to consider:

- Scenario planning to assess the impact of these changes on business lines, and decision-making regarding the choice of F-IRB or Standardized approaches
- Operating models to support the shift from model-driven approaches to standardized ones, and the ongoing management of floors across portfolios
- Alignment of architecture and systems along with enhanced management information (MI) to support comparisons of multiple calculations with floors
- Data management investment and control to cover new data attribute requirements and ongoing enhancements to support BCBS239 principles
- Increased disclosure requirements, some of which will front run the timeline set out above

It is worth noting that the regulations do not yet address the treatment of provisions in relation to IFRS9. IFRS9 will also require the use of modeling that will become unavailable for regulatory purposes.
Further information

For further information, please contact one of the following or your usual EY contacts:

Henrik Axelsen
Partner, Financial Services Risk
Ernst & Young LLP
T: +44 207 1977317
E: haxelsen@uk.ey.com

Thomas Huertas
Partner, Financial Services Risk and Chair, EY Global Regulatory Network
Ernst & Young LLP
T: +44 7717 588431
E: thuertas@uk.ey.com

John Liver
Partner, Financial Services Risk
Ernst & Young LLP
T: +44 7717 736 246
E: jiliver1@uk.ey.com

Shane O’Neill
Executive Director, Financial Services Risk
Ernst & Young LLP
T: +44 20 7951 1170
E: soneill2@uk.ey.com

Marc Saidenberg
Principal, Financial Services Risk
Ernst & Young LLP
T: +1 212 773 9361
E: marc.saidenberg@ey.com

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