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Regulation and Public Policies

# Basel III End Game

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The Basel Committee on Banking Supervision (BCBS) announced on December 7th that an agreement was reached on the finalisation of the Basel III post-crisis framework. Among the pieces that were approved, the calibration of the output capital floor was the most significant pending element and the main focus of negotiations among members of the Committee. New standards are set to be implemented by January 2022. Additionally the group of Governors and Head of Supervision (GHOS) stated that more time was provided for the review of the market risk framework (January 2022) and that no consensus was reached on the treatment of sovereign risk. These announcements will help bring clarity to the banking regulatory framework. Some stability in regulation can now be expected.

After several years of work aimed at increasing simplicity, risk sensitivity and comparability of capital ratios, the BCBS has finally reached an agreement on the pending issues of the finalisation of the Basel III framework, the so-called Basel IV. The GHOS has endorsed the agreement, which ends the design phase of the global regulatory agenda. Now it is time for the implementation of these remaining issues. Together with the announcement of the finalisation of this package, it was also announced that after nearly 3 years, no consensus was reached in the Committee regarding potential changes to the treatment of sovereign exposures. This is based on the lack of will of a majority of the member states to introduce changes for now. Nevertheless, the Committee has issued a discussion paper with views to serve as technical input for future discussions.

**Figure** 1 Overview of the main pieces of the agreement

**Credit risk**

**Standardised approach**:
- Wider range of risk weights, especially for residential and commercial real estate
- Requirement to perform due diligence when using external ratings

**Internal Models Approach**:
- SA for equity exposures
- A-IRB removed for financial institutions and large corporates
- Floors to internal parameters

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**Operational risk**

- Removal for internal models approach
- Replacement of the four existing methods for one standardised approach.
- Capital requirements to depend on:
  - **Business indicator** (progressive measure of income that increases with bank size) and
  - **Loss component** based on bank's internal losses of the last 10 years.

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**Credit Valuation Adjustment**

- Includes the exposure component of CVA risk along with its associated hedges
- Removes the internal model approach
- Options available are: i) standardised approach and ii) basic approach

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**Leverage Ratio**

- Buffer for G-SIBs is set at 50% of risk-based capital buffer
- Capital distribution constrains if the add-on is not met
- Refinements to the leverage ratio measure affecting mainly to derivatives and treatment of off-balance sheet exposure

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**Output floor**

- Aggregate out put floor
- Fixed at 72,5% of the risk-weighted assets computed with the standardised approaches.
- SAs included:
  - Credit risk
  - Operational risk
  - Market risk
  - Securitisation
  - CVA
- 5 year phase-in

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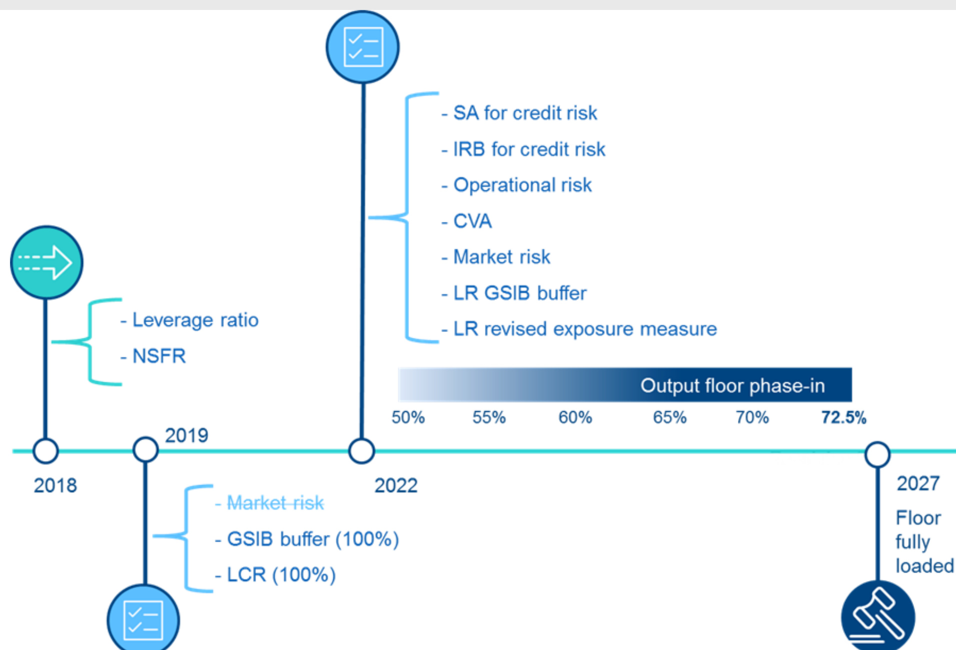
Source: BBVA Research based on BCBS Basel III Finalising post-crisis reforms document

## Implementation dates and transitional arrangements

**Figure 2** Basel III final implementation timeline




Source: BCBS, High-level summary of Basel III reforms (Dec 2017) and Basel III Monitoring Report (Dec 2017).

## BBVA Research Assessment

- **A final agreement on the review of Basel III provides much needed regulatory certainty**. After almost a decade of regulatory activism, the banking system and markets needed to have greater clarity about the prudential framework that fully applies to banks. This announcement is very welcomed.

- **Improving RWA comparability is a valid objective that needs to be achieved**. But it is important to be aware that in the search of comparability of capital ratios across banks and jurisdictions there may be a loss in risk sensitivity in bank's capital framework. It is necessary to evaluate within a short timeframe if the adequate risk-sensitivity of capital requirements has been preserved and to continue reinforcing the use of internal models as a management tool.

- **According to the BCBS cumulative quantitative impact study there is a limited average global impact, however there is a large dispersion of the results among jurisdictions.** The more significant impact is mainly focused on some European GSIBs. However, the banking system seems to have sufficient internal capital generation capacity since December 2015 to cover the additional minimum capital requirements.

- **Nevertheless, the implementation of the new standards are likely to be challenging**. These new standards imply significant changes in bank's internal processes that will now need to be adjusted. Moreover, the introduction of the aggregate output capital floor, with the need to disclose capital requirements under the standardised approach also introduce significant compliance costs. Combining restrictions to parameters estimations, input floors and output floors can also end up introducing undue complexity to the framework.

## Annex- Specifics of the proposals

## The revised standardised approach for credit risk.

The standardised approach (SA) for credit risk is widely used by entities across jurisdictions. With the revision the Committee mainly seeked to: i) reduce excessive reliance on external credit ratings and ii) improve risk sensitivity. Moreover, a framework is also developed for those jurisdictions that do not allow the use of external credit ratings for regulatory purposes. This review is especially important given that the SA will be the base for the calculation of the new capital floor. Main novelties in the framework are:

- Improving granularity, with a wider catalogue of risk-weights (RW) for different exposures:
  - **Banks:** recalibration of RW, development of a new approach for unrated banks, which no longer have a flat RW and standalone treatment for covered bonds.
  - **Corporates**: the look-up table has been updated to introduce more granularity in the RW, with specific RW to apply for SMEs exposures. Project finance, object finance and commodities finance count also with a standalone treatment.
  - **Real Estate**: for residential real estate, the determination of the RW is now more sensitive, depending on the LTV. The new framework also includes a more granular approach for commercial real estate.
  - **Retail**: the new approach distinguished between different types of retail exposures and includes an specific treatment for each one of them.
- Reducing dependence on external credit ratings. The new framework includes two main options to assign RW. For rated exposures and for jurisdictions that allow the use of external credit ratings for regulatory purposes, the External Credit Risk Assessment Approach (ECRA) assigns RW according to external ratings ratings. The use of these method will require entities to develop a due diligence. For unrated exposures and for jurisdictions that do not permit to use external credit ratings for regulatory purposes, the Standardised Credit Risk Assessment Approach (SCRA) assigns RW according to three categories depending on several factors of the creditworthiness of the counterpart.

## The revised internal models approach for credit risk

The use of internal models is one of the key features of the risk-based approach Basel framework. Nevertheless, during the last few years, the Committee has found several flaws and unintended consequences associated with the use of these models. The Committee has mainly found that models are often excessively complex and can hinder

comparability of capital ratios between entities. Moreover, the robustness of the models and their results for some kind of exposures have also been put into question.

As a consequence, key features of the new internal model framework are:

- **Constraints to the use of internal models**. With views to enhance the robustness of the models and their outcomes, the Committee has limited the exposures that can use the Advanced-IRB (A-IRB) and even for certain exposures, only the SA will be available. Main exposures affected by the changes are:
  - Equity exposures, for which only the SA will be available.
  - Corporates with consolidated revenues > €500m, for which the A-IRB will no longer be available.
  - Banks and other financial institutions, for which the A-IRB will neither be available.
  - For specialised lending the A-IRB has finally been maintained.
- **Floors to internal parameters (LGD and EAD)**. Differences between the F-IRB and A-IRB are based in the number of risk parameters that the supervisor allows an entity to estimate internally. This way, entities with an F-IRB are allowed to use their own estimations only for the Probability of Default (PD) and entities under a A-IRB are allowed to calculate also the Loss Given Default (LDG) and the Exposure at Default (EAD). With this measure, the Committee is seeking to reduce the variability in capital requirements that can arise from internal estimations of these parameters. The floor will apply to the calculation of the PD for banks under F-IRB and to the PD, LGD and EAD for banks under A-IRB.
- **Further guidance on estimation of internal parameters**. The new standards also introduce more specifications regarding the estimation of internal parameters. Specifically, some adjustments have been made to the supervisory specified parameters in the F-IRB for exposures secured by non-financial collateral and unsecured exposures. As a result of these further enhancements, the Committee has decided to remove the existing 1.06 scaling factor for capital requirements arising from internal models.

## A revised CVA framework.

The CVA risk framework covers potential losses arising from a deterioration in the creditworthiness of a counterpart in a covered transaction (derivatives and securities financing transactions), which was a significant source of losses during the past financial crisis. Within this review, the Committee is seeking to:

- **Enhance risk sensitivity of the framework**. To this end, the new framework includes also the exposure component of CVA risk together with its associated hedges.
- **Strengthen its robustness**. Similarly to the internal models review, the Committee is seeking to restrain the use of internal models for exposures or risks where it is not clear that the modelling can be prudent enough. This is the case of CVA risk, considered as a very complex risk. This way,the use of an internally modelled approach in removed. Approaches to be used are: i) standardised approach (SA-CVA), which now requires a supervisor authorisation and ii) the basic approach (BA-CVA).

- **Improve consistency.** To this end, both the BA-CVA and the SA-CVA have designed and calibrated consistently with the the new market risk framework.

## New operational risk framework.

The BCBS is of the opinion that the current approaches to calculate capital requirements for operational risk do not cover all sources of this risk and have in occasions resulted in requirements that were no sufficient to cover real losses. That is why, within the finalisation of the BIS III framework, the Committee has decided to substitute all the current existing approaches (including the internal model AMA) by one single standardised approach. This new method tries to combine the simplicity of the standardised approaches with the risk-sensitivity that is associated with internal models.

Main components of capital requirements for operational risk under the new approach are:

- **Business Indicator Component (BIC)**. The Business indicator (BI) is a measure of bank's income that assumes that operational risk increases with bank's size. This indicator is based on financial statements and takes into account: i) interest, leases and dividends, ii) services (fees, commissions and other operating income and expenses) and iii) a financial component based on the net profit or loss on both the trading and the banking book. The BI is multiplied by a marginal coefficient depending on the BI range.
- **Internal Loss Multiplier.** The Committee considers banks that have experienced greater operational risk losses in the past are more likely to experience similar losses in the future. The IML is a function of the BIC and the loss component. The latter is calculated as the average of the internal operational risk losses of the previous 10 years multiplied by 15. National authorities have discretionality to set the IML at 1 for all the banks in their jurisdiction.

## Revised leverage ratio framework and GSIB buffer

One of the main objectives of the BCBS under the Basel III accord was to establish a non risk based capital ratio as a complement to the risk-weighted capital ratio, as excessive leverage of banks proved to be one of the main catalysts of the financial crisis. Another of the main measures of Basel III was to introduce a capital buffer on global systemically important banks (GSIBs) in order to raise their resilience for future crisis and mitigate negative externalities on the financial system and the economy. Therefore in order to fulfill the objective of having a leverage ratio that is complementary and consistent with the risk-weighted capital ratio framework, a GSIB buffer on the leverage ratio was missing.

The GSIB leverage ratio buffer has been set at 50% of the GSIB's risk-weighted higher loss absorbency requirements, for example if a GSIB is subject to a 2% risk-weighted capital buffer, then the leverage ratio buffer is set at 1%. In a similar way to the risk-weighted capital ratio framework, there are distributional constraints on dividend payouts for GSIBs that do not comply with the leverage ratio buffer requirement according to a five range scale.

The framework also includes several refinements to the exposure measure of the leverage ratio. The first makes some adjustments to the treatment of derivatives in the exposure measure. A second measure is to update the treatment of off-balance sheet exposures in order to make it consistent with the standardised approach to credit risk.

One element that is of importance for some banks is that the BCBS recognizes that jurisdictions may exercise national discretion in exempting central bank reserves from the exposure measure in the leverage ratio under exceptional macroeconomic conditions. However such exceptions have to be of a temporary nature and the leverage ratio must be recalibrated in order to offset the exclusion of central bank reserves such that the minimum leverage ratio remains similarly binding. This measure allows for the adjustments made to the leverage ratio in the UK in October 2017 to be considered Basel III compliant if the minimal leverage ratio is recalibrated accordingly.[1]

## New capital output floor

The BCBS has defined that an aggregate capital output floor based on the standardised approaches should apply to banks using internal models. It has agreed that the risk-weighted assets of banks using internal models should not fall below 72.5% of the aggregate risk-weighted assets as computed by the standardised approaches. Therefore the floor limits the regulatory capital benefits that banks can obtain from using internal models. It additionally helps maintain a level playing field among banks using internal models and standardised approaches, limits the variability of risk weighted assets and enhances credibility.

The standardised approaches used as reference for the output floor are: i) the standardised approach to credit risk (SA), ii) to counterparty credit risk (SA-CCR), iii) to credit valuation adjustment risk (SA-CVA) and the basic approach (BA-CVA), iv) to the securitisation framework (SEC-SA), v) the standardised (or simplified standardised) approach of the revised market risk framework, and vi) the standardised approach for operational risk.

Basel Committee members have agreed to implement the output floor in 1 January 2022 with a five year phase-in period beginning at a value of 50%, which raises by 5 percentage points every year until reaching 72.5% by 1 January of 2027. Additionally, national competent authorities are allowed to cap the increase in RWA to 25% of a bank's RWA before the application of the floor. The use of this discretion by national supervisors is only allowed during the transition period and effectively allows them to cap the increase in RWA to 1.25 times the RWA calculated under the internal model. However, since 1 January 2027 the cap is removed.

## A new cumulative quantitative impact study

The BCBS released with the finalisation of Basel III a cumulative quantitative impact study. It is based on data from 248 banks as of December 2015. It includes data from 96 large internationally active banks (Group 1), of which all 30 GSIBs identified at the time by FSB are included, and 152 Group 2 banks. However, for the overall impact analysis the sample is smaller: 71 Group 1 banks (27 of which are GSIBs) and 42 Group 2 banks, for a total of 113 banks.

[1] Prudential Regulation Authority, Policy Statement PS21/17, *UK leverage ratio: treatment of claims on central banks*, October 2017, Bank of England (link).

The main result from the cumulative QIS is that the global average impact of the finalization of Basel III is low: a reduction of 0.5% in the minimum capital requirements (MRC) for Group 1 banks and an increase of 3.8% for Group 2 banks with respect to the pre-finalisation of Basel III pending elements. These results are aligned with the GHOS commitment of not having a significant impact at the global level on average. However there is a large dispersion of the effects on the different GSIBs (from +43% to -28%).

**Figure 3** BCBS Cumulative impact assessment of finalised Basel III

Overview of results — Table 1

| | Number of banks | Change in Tier 1 MRC at the target level (%)[1] | | Change in CET1 capital ratio (percentage points) | Capital shortfalls combined (€ billions) | | |
|---|---|---|---|---|---|---|---|
| | | All | of which: risk-based | | CET1 | Tier 1 | Total |
| Group 1 banks | 71 | –0.5 | 0.2 | 0.2 | 27.6 | 56.4 | 90.7 |
| Of which: G-SIBs | 27 | –1.4 | –0.9 | 0.3 | 27.6 | 55.4 | 85.7 |
| Group 2 banks | 42 | 3.8 | 0.9 | 0.1 | 0.3 | 0.8 | 1.4 |

[1] As a percentage of overall basis MRC at the target level, ie combining risk-based as well as leverage ratio capital requirements and including capital conservation buffers and G-SIB surcharges where respectively applicable.

Source: BCBS Basel III Monitoring Report, 7 December 2017, Table 1

The European Banking Authority (EBA) also released its own comprehensive impact assessment of the finalization of Basel III. The results show that on average European banks are much more significantly impacted. The minimum required capital for all banks in the sample raises by 12.9% on a weighted average term with respect to pre-finalisation of Basel III implementation at each jurisdiction level. This significant impact falls mainly on Group 1 banks and in particular on EU global systemically important institutions GSIIs (+15.2%). Most of the impact is the result of the introduction of the capital output floor and the constraints introduced on the use of internal models.

**Figure 4** EBA Cumulative impact assessment of finalised Basel III - Change in Tier 1 MRC at the target level (%)

| | Total | | Credit risk | | Operational risk | Output floor | Leverage ratio |
|---|---|---|---|---|---|---|---|
| | All factors | of which: risk-based | IRB | SA | | | |
| **All banks** | 12.9 | 14.5 | 4.3 | 1.0 | 2.5 | 6.6 | -1.6 |
| **Group 1** | 14.1 | 15.6 | 4.5 | 1.5 | 2.7 | 6.9 | -1.6 |
| **G-SIIs** | 15.2 | 14.1 | 5.1 | 1.6 | 2.9 | 4.5 | 1.1 |
| **Group 2** | 3.9 | 5.3 | 2.7 | -2.4 | 0.8 | 4.2 | -1.3 |

Source: EBA Cumulative Impact Assessment of the Basel Reform Package, 7 December 2017, Table 1.

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