

Stand out for the right reasons

Financial Services Risk and Regulation

Hot Topic

'Basel IV' constrains the use of IRB approach to credit risk

Highlights

On 7 December, the Basel Committee on Banking Supervision (BCBS) published its package of reforms known as 'Basel IV'. The package includes the final rules on constraining the use of the Internal Ratings based approach (IRB) to credit risk. The revised IRB framework will be implemented on 1 January 2022 and applies to firms that have received supervisory approval

Background and timeline of developments

The Basel Committee (BCBS) published its outstanding Basel III post-crisis regulatory reforms on 7 December 2017. These reforms include constraints to the use of the internal model approaches, including the internal-ratings based approach ('IRB') for credit risk. Other parts of the reform package are dealt with in other separate PwC Hot Topics including revisions to the standardised approach for credit risk, the leverage ratio and the aggregate output floor.

IRB-approved banks (in general these are global systemically important banks (G-SIBs) and some of the larger domestic systemically important banks) rely on their own internal estimates of risk components to determine the capital requirement for a given credit exposure. Firms have to meet certain risk and model management, as well as disclosure ('Pillar 3') standards in order to use the IRB approach, and require national supervisory approval.

The use of models has been at the core of supervisory scrutiny and debate as regards the variability in risk-weighted assets, following the 2007-08 credit crisis.

These latest revisions follow the consultation paper issued in March 2016 ('BCBS 362'). Additionally, BCBS had proposed limitations on the use of internal models for market risk (through the introduction of the Fundamental Review of the Trading Book 'FRTB') and operational risk. Collectively, the revisions aim to restore credibility in the calculation of banks' risk weighted assets ('RWAs') under Pillar 1 as well as transparency and comparability in capital ratios to allow stakeholders to properly assess the risk profile of banks. To this end, a third wave of revisions to the BCBS 'Pillar 3' disclosure standards is forthcoming.

Revisions to IRB

On the basis of various analyses conducted by the BCBS and the 'lessons learnt' following the 2007-08 crisis, the Committee concluded that not all credit risk exposures can be modelled sufficiently reliably, or consistently for the purpose of calculating regulatory capital requirements.

The BCBS had therefore initially proposed to remove altogether the use of the IRB approach for a number of portfolios, meaning that IRB banks would have to revert back to the use of the standardised approach to credit risk in order to calculate their RWAs. The portfolios most affected by the BCBS revisions were exposures to banks and other financial institutions, and to large corporates. This was heavily criticised by the industry, particularly in Europe, given the extensive use of the IRB framework. In the US, the adoption of Basel III had already extended the use of standardised approaches and restricted the dependence of external ratings.

It is notable that in the finalised standards, BCBS has not eliminated altogether the use of model-based approaches; rather it has constrained them with increased use of the Foundation approach, which has supervisory prescribed inputs. In addition, regarding specialised lending, the BCBS also retained the use of IRB – both advanced approach ('A-IRB') and foundation approach ('F-IRB'), which should be positive news for the industry, given the consultation originally proposed to eliminate this option.

The BCBS has also adopted 'input floors' (for metrics such as probabilities of default (PD) and loss-given-default (LGD)) to ensure a minimum level of conservatism in model parameters for asset classes where the IRB approaches remain available, and provided greater guidance on parameter estimation practices to reduce RWA variability.

It also reconsidered and adjusted accordingly a number of other changes, such as the exposure thresholds for corporates and the definition of income-producing real estate.

Changes since the consultation

The changes can be grouped under two categories:

- Restrictions on the use of the IRB methods; and
- Changes to risk parameters.

Use of the IRB methods

The table below summarises the changes in the final standards on asset classes for which IRB-approved banks can continue to use model-based methods.

Asset class	Use of A-IRB	Use of F-IRB	Outcome compared to proposals
Financial institutions	Removed	Permitted	Positive as F-IRB retained
Large corporates	Removed	Permitted	Positive as F-IRB retained
Corporates with revenues below €500m	Permitted	Permitted	Positive as threshold increased from €200m
Specialised lending	Permitted	Permitted	Positive as both approaches retained

Additionally, BCBS has allowed for income-producing real estate (IPRE) to continue to be recognised as general corporate collateral in well-developed and long established markets rather than being reclassified as part of specialised lending.

The definition for qualifying revolving retail exposures has also been adjusted; these are now defined as 'facilities such as credit cards where the balance has been repaid at each scheduled repayment date during the previous 12 months'. BCBS has made the final definition more precise by narrowing the time dimension (12 months) rather than the original proposal of 'always repaid'.

Risk parameters

BCBS has also revised a number of risk parameters to ensure a more conservative and/or consistent approach in the modelling of the parameters:

- IRB Scaling factor:** Given the enhancements to the IRB framework and the introduction of an aggregate output floor, the Committee agreed to remove the 1.06 scaling factor currently applied to RWAs determined by the IRB approach to credit risk;
- Corporates:** The Loss-Given-Default ('LGD') parameter has been recalibrated to a lower 40% from 45%;
- Real estate:** An exposure level LGD input floor of 5% has been introduced for residential mortgages; and
- Collateral:** The final text introduces input floors for secured LGD estimates between 0%-15% depending on type of collateral. The secured LGD floor for all non-financial collateral has now been decreased by 5 percentage points.

What does this mean for firms?

- As evidenced by the cumulative impact assessment of the Basel reform package published by the EBA on 7 December, the revised framework is expected to mainly impact the larger, globally active banks. The larger banks (Group 1) in particular GSIBs, reported a 4.5% and 5.1% increases respectively in the baseline minimum required capital as a result of the IRB changes. These were amongst the highest rates in terms of impact, together with the output floor.
- One of the main concerns around the move to more standardised approaches for Pillar 1 RWA calculations is the potential reduction in banks' ability to price and manage risk according to a detailed analysis of the credit-risk profile of their borrower. This may lead to 'unwanted' herd behaviour of maximising risk per unit of capital. This may also incentive firms to pass down the cost of increased capital requirements to their customers.
- A number of other accounting and regulatory changes also are happening in parallel, such as the implementation of the IFRS9, which has also triggered changes to the design and use of models and introduced loss estimates over the life of a loan.
- Banks should assess how the parameterisation of their models will need to change as they have to meet the various new standards. They also need to perform a cost benefit analysis overall for the on-going use of models.

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Stand out for the right reasons



Alert

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