KPMG

Update on HKMA CA-G-4

Validating Risk Rating Systems under the IRB Approach

In July of 2025, Hong Kong Monetary Authority (HKMA) has released its latest version of guidelines regarding HKMA's approach to the validation of authorised institutions' (AIs) rating systems and its expectations for AIs to qualify for using the internal ratings-based approach (IRB) to calculate credit risk for non-securitisation exposures for capital adequacy purposes "**CA-G-4 Validating Risk Rating Systems under the IRB Approach"**[1]. The guideline has taken effect on 18 July 2025.

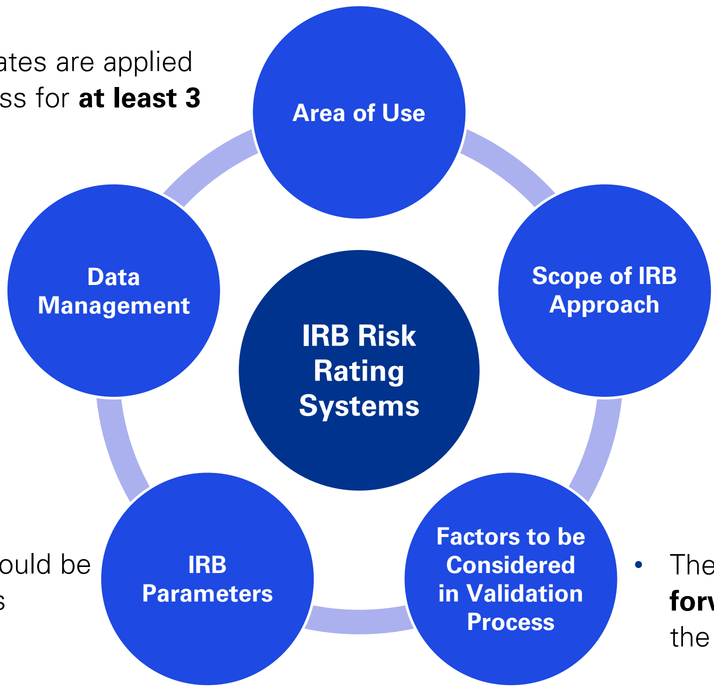
As the Basel III reform package takes effect on January 1, 2025, it significantly impacts how AIs measure their credit risk using the Internal Ratings-Based (IRB) approach. To ensure consistency, the revised Supervisory Policy Manual (SPM) has been updated to align with the changes in the Banking (Capital) Rules (BCR), Banking (Exposure Limits) Rules and SPM CR-G-7 "Collateral and Guarantees".

AIs are no longer required to meet the minimum IRB coverage ratio and thus have greater flexibility for using a combination of the STC and IRB approaches to calculate their credit risk capital charge having regard to their circumstances (e.g. practicality and data limitation) and it would be a motivation for the AIs to adopt the IRB approach for calculating the RWA[2].

Overall, the revised SPM serves as a comprehensive guide for banks to navigate the Basel III reforms for adopting IRB approach, removing the minimum IRB coverage ratio requirement and it helps the AIs to ensure compliance with new standards.

Key changes to the SPM CA-G-4:

- Internal ratings and estimates are applied for decision making process for **at least 3 years**
- Data collection and storage should be effective to support **regulatory reporting**



- Group level rating systems can be adopted if **regulatory requirements** are met
- **Economic downturns** should be considered for parameters estimation
- The need to iincorporate **forward-looking elements** in the rating systems

1 https://brdr.hkma.gov.hk/eng/doc-ldg/docId/getPdf/20250718-2-EN/CA-G-4.pdf
2.The AIs were required to fulfill the minimum IRB coverage ratio (i.e. 85% for general AIs and 75% for AIs during transitional period).

Key changes to the SPM CA-G-4

We have summarised the **key updates and changes** for the SPM CA-G-4, which includes the Scope of IRB approach, Factors to be Considered in Validation Process, Data management and Area of use for Internal Rating System.

Area	Key Points	Interpretation from CA-G-4
Scope of IRB Approach	• Groupwide rating system: **Headquarters outside Hong Kong**	• Local AIs can assess their credit risk under the IRB approach with a centrally developed and monitored rating system (**"group-wide" rating system**). Still their rating system will need to demonstrate compliance with the BCR and the Home supervisor's requirements. • AIs are expected to perform **adequate user acceptance tests** to ascertain that new or changes to IT systems. • When applying the group-wide rating system, AI should follow the guidance set out in **TM-G-1** and the relevant documents issued by the HKMA. • AIs should maintain complete **rating histories** on obligors and credit protection providers; The relevant data used in IRB system should be retained by the AIs. • When a banking group's overseas office handles data management for an AI, the AI's management must ensure that the data management standards **meet HKMA requirements**. The responsibilities of both the entity and the AI should be clearly **documented** (e.g., in policies, procedures, or service agreements) and effectively **implemented**.
	• Groupwide rating system: AI in Hong Kong with **oversea branches**	• AIs are expected to perform **adequate user acceptance tests** to ascertain that new or changes to IT systems. • When applying the group-wide rating system, AI should follow the guidance set out in **TM-G-1** and the relevant documents issued by the HKMA. • AIs should maintain complete **rating histories** on obligors and credit protection providers; The relevant data used in IRB system should be retained by the AIs.
Treatment for Connected Groups	• Rating assignment for individual obligors in a **connected group**	• When assigning ratings to individual obligors in a connected group, AIs may recognise the group support from the parent company or other entities according to **BELR** and **CR-G-7**. • In cases where the support provider and the beneficiary obligors fall under the purview of different regulators and/or are located in different jurisdictions, any **cross sector** and **cross-border** restrictions and **country risk** that may hinder the availability of the support should be taken into account. • AIs should exercise **prudence**, **conservatism** and **consistency** in rating individual obligors in a connected group, in order not to under-estimate the default risk of such obligors. • AIs must ensure that there is no **double-counting** of credit risk mitigating benefits. • In the context of rating systems and other established policies, AIs should subject the **group support framework** to proper approval procedures, ongoing monitoring, regular independent reviews, and validation. Timely updates should be made as necessary to maintain the framework's effectiveness.
Factors to be Considered in Validation Process	• Incorporate **forward-looking elements**	• Now **forward-looking elements** (e.g. individual risk factors, overlays, judgmental adjustments, econometric forecasting) need to be incorporated into the IRB rating system with **adequate monitoring**. • These factors should consider **economic conditions** and **market developments**, into the risk profile of obligors and facilities to form a forward-looking perspective.
Data Management	• Effectiveness of data and IT systems on credit risk measurement and **regulatory reporting**	• **Data collection** and **storage** should be able to show the ability of providing effective support the internal credit risk measurement in accordance with HKMA's requirements. • The AI's are expected to demonstrate that the system is suitable for calculating the credit risk of its exposures for **regulatory capital reporting** and the data collection and IT systems should serve as a basis for regulatory reporting.
Area of use for Internal Rating System	• **Eligibility** of applying IRB approach	• Internal ratings and estimates are applied for decision making process **for at least 3 years** • Covering credit approval, credit monitoring, reporting of credit risk information to the AI's Board of Directors and senior management

Key changes to the SPM CA-G-4: Parameters

We have summarised the **key updates and changes** for the SPM CA-G-4, which includes the Scope of IRB approach, Factors to be Considered in Validation Process, Data management and Area of use for Internal Rating System.

Probability of Default (PD)

- Internal tolerance limits for the difference between estimated credit risk components and realised value should be constructed.
- AIs could use (i) Binomial test with assumption of independent default events; and ii) Binomial test with assumption of non-zero default correlation for assessing the accuracy of PD estimation.
- Upward revision to the PD estimates may be made if the deviation breach the tolerance limit (e.g. 99% confidence level for binomial test)

Loss Given Default (LGD)

- The LGD assigned to a defaulted exposure should reflect the possibility that an AI would have to incur additional, unexpected losses during the recovery period.
- The estimation of LGD should incorporate the recognition of recovery and collateral, economic downturn and the AI's condition. The AI must also construct its best estimate of the expected loss on each defaulted exposure based on current economic circumstances and facility status
- Comparison should be performed against regulatory LGD before applying in calculation and realised LGD for each default facility must be measured.

Exposure At Default (EAD)

- The AI should extract the exposure data from obligors identified as problematic (e.g., delinquent, on watch lists, restricted from drawdowns) 12 months before default, when applying the model to current obligors with no known issues.

Bench-marking

- For LDPs with insufficient default and loss data, the HKMA requires AIs to use benchmarking in their annual validation processes instead of back-testing.
- If AIs have sufficient default and loss data for back-testing, the HKMA encourages them to also use benchmarking to supplement their analyses, particularly when third-party benchmarks are available.

Length of Data History

Parameter	Minimum History	Best Practice
PD	5 yrs	7+ yrs (full economic cycle)
LGD	7 yrs	10+ yrs (including downturn)
EAD	7 yrs	10+ yrs (including downturn)

AIs must ensure that they are fully compliant with the revised CA-G-4 requirements, which include:

i. Documentation of IRB approach implementation decisions;

ii. Validation of all rating used for regulatory capital calculation;

iii. Evidence of at least 3 years of internal use for decision-making

iv. Demonstration of effective data management systems

The 3-years use requirement means AIs must have fully operational IRB systems in production by January 1, 2022 to qualify for IRB approach at Basel III implementation. If your institution has not yet met this requirement, prepare fallback plans for standardised approach compliance while developing a roadmap to IRB qualification.

How KPMG can help?

KPMG is a market leader in the implementation of IRB standards. We offer a suite of solutions to help you navigate the new requirements of IRB system enhancement and implementation, including in the following key areas:

1. Conduct a Gap Analysis Against the Latest HKMA CA-G-4

- Conduct a detailed gap analysis and provide you best practice enhancement recommendations and benchmarking.
- Suggest action items and potential solutions to mitigate all identified gaps.

2. IRB System and Model Validation

- Conduct IRB models validation based on latest HKMA regulatory requirements.
- Validate the accuracy, reliability, and robustness of your IRB models.
- Address any identified weaknesses or biases in the models.

3. IRB System Model Development and Model Enhancement

- Develop new IRB models for the latest Basel IV specific asset classes that meet your business, lending, and risk management needs.
- Provide IRB models enhancement and optimisation based on the result of independent validation.
- Develop model maintenance and monitoring procedures using the latest industry standards.

4. Quantitative Impact Assessment (RWA)

- Conduct RWA calculations under the latest IRB requirements per the HKMA updated SPM to quantify the possible movement of CAR and impacts on specific asset classes.

5. Assist on the SAQ

- Enhance policies and procedures on IRB system to allow more accurate IRB model estimation, monitoring and daily use .
- Assist bank on self-review of IRB implementation readiness for related perspectives.

For further information related to the Basel III reform package, please refer to the hyperlink: Basel III Reform Package

Contact Us

Michael Monteforte
Partner,
Financial Risk Management
KPMG China
+852 2847 5012
michael.monteforte@kpmg.com

Robert Zhao
Partner,
Financial Risk Management
KPMG China
+852 2978 8939
robert.zhao@kpmg.com

Gemini Yang
Partner,
Financial Risk Management
KPMG China
+852 3927 5731
gemini.yang@kpmg.com

Guy Isherwood
Senior Advisor
KPMG China
+852 2522 6022
guy.isherwood@kpmg.com

Yi-Hsin Wang
Director,
Financial Risk Management
KPMG China
+852 6715 0966
yihsin.wang@kpmg.com

Terence Fong
Associate Director,
Financial Risk Management
KPMG China
T: +852 2913 2503
E: tc.fong@kpmg.com

kpmg.com/cn/socialmedia