KPMG

Recalibration of Shocks for IRRBB:

Proposed Adjustments to Interest Rate Risk in the Banking Book

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In December 2023, the Basel Committee on Banking Supervision released a public consultation[1] document proposing adjustments to its standard on interest rate risk in the banking book (IRRBB). It proposes making adjustments to the current methodology and calibration to address the current methodology's limitations in capturing interest rate changes when rates are close to zero. Financial institutions will need to review these proposed changes and assess the impact on their interest rate risk and economic value of equity (EVE).

This paper highlights some of the key updates proposed by the Committee and their expected impact on banks. It also provides some guidance on the actions banks need to take to prepare for the revised standard.

The proposed changes have been issued for industry comment by 28 March 2024.

Proposed Recalibrations

The proposed updates are in three main areas: the interest rate data period, interest rate shock parameters, and the percentile value in determining the shock factors.

The key proposed adjustments are summarised below:

Area	Key Proposed Recalibrations
Interest Rate Data Period	• A longer historical time series will be used to derive each scenario for a given currency to capture the local rate environment. • The consultative document proposes to expand the time series used in the calibration from December 2015 used in the IRRBB standard to December 2022 (the start date of January 2000 remains the same).
Localised Interest Rate Shock Parameters	• Local shock parameters to be adopted to better capture the local rate environment and reduce impacts arising from the original level of interest rates. • The consultative document proposes to remove the global shock factors calculated using rolling six-month percentage changes in interest rates. These are replaced with local shock factors calculated directly for each currency using the averages of absolute changes in interest rates calculated over a rolling six-month period.
Recalibration of the Percentile Value in Determining the Shock Factor	• A 99.9th percentile value will be adopted after taking into account the accommodative methodological change and the recent rise in interest rates. • The consultative document proposed to move from a 99th percentile value in determining the shock factor to a 99.9th percentile value, to maintain sufficient conservatism in the proposed recalibration.

[1]*BCBS public consultation: Recalibration of shocks for interest rate risk in the banking book (bis.org)*

The Committee is still discussing whether there are likely to be any unintended impacts of this change. In particular, whether adjustments to the formulas for the non-parallel shocks (i.e., short, long and rotation shocks) are warranted. An impact study will be conducted.

The other main elements of the proposal, such as the shock scenarios, time buckets, caps/floors and approach to rounding **remain unchanged** from the approach used in the current IRRBB standard.

Insights on the Proposed Adjustments

The consultative document also includes the interest rate shock parameters (see Table 1 below) calculated using the proposed new methodology.

Table 1: Specified size of interest rate shocks (99.9th percentile, data until 2022, bp)

	ARS	AUD	BRL	CAD	CHF	CNY	EUR	GBP	HKD	IDR
Parallel	400	350	400	200	150	300	250	300	200	400
Short	500	450	500	250	250	300	350	400	350	500
Long	300	300	300	200	200	300	200	250	200	300

INR	JPY	KRW	MXN	RUB	SAR	SEK	SGD	TRY	USD	IDR
350	100	250	400	400	300	300	150	400	200	350
450	100	350	500	500	350	400	250	500	300	500
250	100	250	200	300	250	200	200	300	250	300

Colour guide: Increase Decrease Unchanged

We can see from the above table that the Authorised Institutions (AIs) will generally face higher interest rate shocks for the major currencies (i.e., HKD, USD, CNY, GBP, EUR etc.), which could pose a significant threat to the AIs' earnings and capital adequacy.

In some cases, it may lead to a larger than expected **EVE decline.** In turn, banks may need to be more proactive to avoid breaching the limit. It will be necessary for AIs to manage IRRBB proactively and enhance their ability to respond to rapidly changing market conditions. Furthermore, AIs could consider setting early warning triggers, adopting behavioural models, and repositioning their balance sheet to mitigate the risks.

How KPMG can help

KPMG is a market leader in the implementation of IRRBB standards. We will continue to monitor revisions of the standards published by the Basel Committee on Banking Standards, and corresponding guidelines made by the HKMA.

In the meantime, we offer a suite of solutions to help you navigate IRRBB implementation, including in the following key areas:

Impact Assessment

- Undertake a quantitative impact assessment of the proposed new calibration of the shock factors and updated methodology

Early Warning Triggers

- Develop a set of criteria and early warning triggers for AIs to mitigate the risks of reaching the outlier threshold set by the HKMA

IRRBB Stress Testing

- Perform qualitative and quantitative stress tests under institution-specific scenarios and standard six supervisory interest rate shock scenarios, with regard to the AI's IRRBB profile and market development

IRRBB Framework Review

- Perform independent review of IRRBB policies and procedures, the calculation of NII, EVE and Basis Risk Exposures, as well as the relevant Internal Capital Adequacy Assessment Process (ICAAP) for IRRBB

Reposition the Balance Sheet

- Optimise product structures, enhance the AI's capability in balance sheet forecast and management, as well as the ability to reposition the balance sheet and adjust the IRRBB profile

IRRBB Behavioural Model and Option Model

- Develop a set of IRRBB behavioural models for products with behavioural optionality, including fixed-rate loans subject to prepayment risk, fixed-rate loan commitments, term deposits subject to early redemption risk, and non-maturity deposits (NMDs)
- Develop IRRBB option models for products with automatic option risk, and perform independent validations on the IRRBB behavioural model and option model

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