KPMG

Recalibration of shocks for IRRBB:

Finalised adjustments to Interest Rate Risk in the Banking Book

July 2024

In December 2023, the Basel Committee on Banking Supervision ("BCBS") released a public consultation[1] document proposing adjustments to its standard on interest rate risk in the banking book ("IRRBB"). As of July 2024, the BCBS has finalised these targeted adjustments and released a document[2] highlighting the key revisions.

The HKMA intends to **locally implement the recalibrated interest rate shocks by 1 January 2026**, in accordance with the BCBS timetable, and to update the Supervisory Policy Manual module "IR-1 Interest Rate Risk in the Banking Book" in due course[3].

We have summarized the key changes in this brief paper which include targeted adjustments made to the specified interest rate shocks as well as to the current shock calculation methodology. This includes expanding the calibration time series, replacing the global shock factors with local ones, shifting from a 99th to 99.9th percentile value in determining the shock factor and reducing the rounding of the interest rate shocks. We also analyze potential implications and mitigation strategies.

Finalised Recalibrations

Area	Finalised Recalibrations
Interest Rate Historical Data Period	• A longer historical time series will be used to derive each scenario for a given currency to capture the local rate environment. Under the proposed recalibration, this was set from January 2000 to December 2022. • Under the final standard, the time series used in the calibration has been **expanded to December 2023** (with the start date remaining unchanged).
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. • There has been no further change to this area in the final standard
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. • There has been no further change to this area in the final standard
Rounding of Interest Rate Shocks	• Under the proposed recalibration, the rounding of the interest rate shocks was adopted as per the current IRRBB standard i.e. to a multiple of 50 basis points • Under the final standard, **the rounding of the interest rate shocks is reduced to a multiple of 25 basis points** in an effort to reduce cliff effects and potential distortions across jurisdictions.

[1] BCBS public consultation: Recalibration of shocks for interest rate risk in the banking book (bis.org)
[2] BCBS finalised standard: Recalibration of shocks in the interest rate risk in the banking book standard
[3] HKMA circular: BCBS recalibration of shocks for IRRBB (hkma.gov.hk)

Insights on the finalised adjustments

The other main elements of the final standard, such as the shock scenarios, time buckets and caps/floors, **remain unchanged** from the current IRRBB standard. The revised text will be incorporated into the consolidated Basel Framework (*chapters SRP31 and SRP98*). Suggested[4] interest rate shock parameters calculated using the new methodology:

Specified Size of Interest Rate Shocks

(using a historical time series ranging from January 2000 to December 2023)

	ARS	AUD	BRL	CAD	CHF	CNY	EUR	GBP	HKD	IDR
Parallel	400	350	400	200	175	225	225	275	225	400
Short	500	425	500	275	250	300	350	425	375	500
Long	300	300	300	175	200	150	200	250	200	300

INR	JPY	KRW	MXN	RUB	SAR	SEK	SGD	TRY	USD	ZAR
325	100	225	400	400	275	275	175	400	200	325
475	100	350	500	500	375	425	250	500	300	500
225	100	225	200	300	250	200	225	300	225	300

Colour guide: Increase Decrease Unchanged

Potential Implications for Banks

- **Earnings and CAR:** We can see from the table above 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 threat to the AIs' earnings and capital adequacy.
- **EVE Declines:** 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 limits and educate the business on these changes and impacts.
- **Balance Sheet Management ("BSM"):** 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. Another angle to consider here is the impact on products and potential flexibilities on how new products respond under changes in rates. Finally, the way institutions set and monitor Risk Appetites will need to be accommodated. Under the new IRRBB regime, banks will need to ensure that balance sheet growth is not artificially constrained by risk managers reducing durations and being too conservative managing to the proposed shocks.
- **Modelling:** These required changes could have impacts on interest rate management, hedging, related modelling, risk appetite setting, governance frameworks and systems used for asset and liability management. Banks will need to quickly assess behavioral models which may need to accommodate the impact of greater volatility and shocks under the new standard.

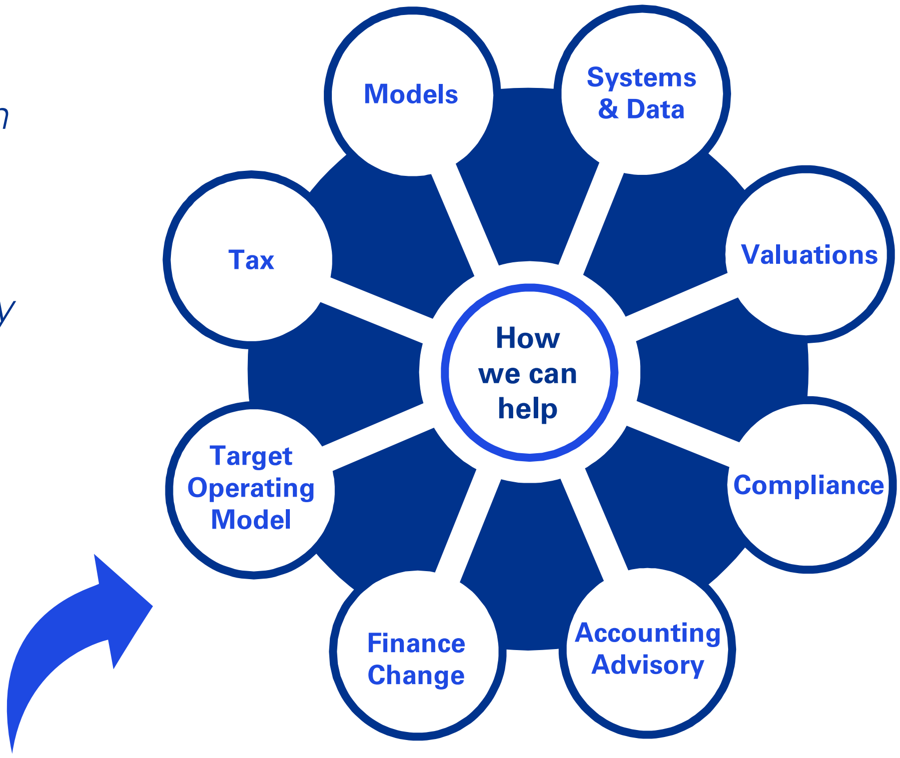
[4] Local jurisdictions and their banking regulators may, under national discretion, recalculate the shocks for their domestic currencies using data that deviate from the initial 16-24-year period to better reflect any idiosyncratic circumstances in their markets.

Balance Sheet Management

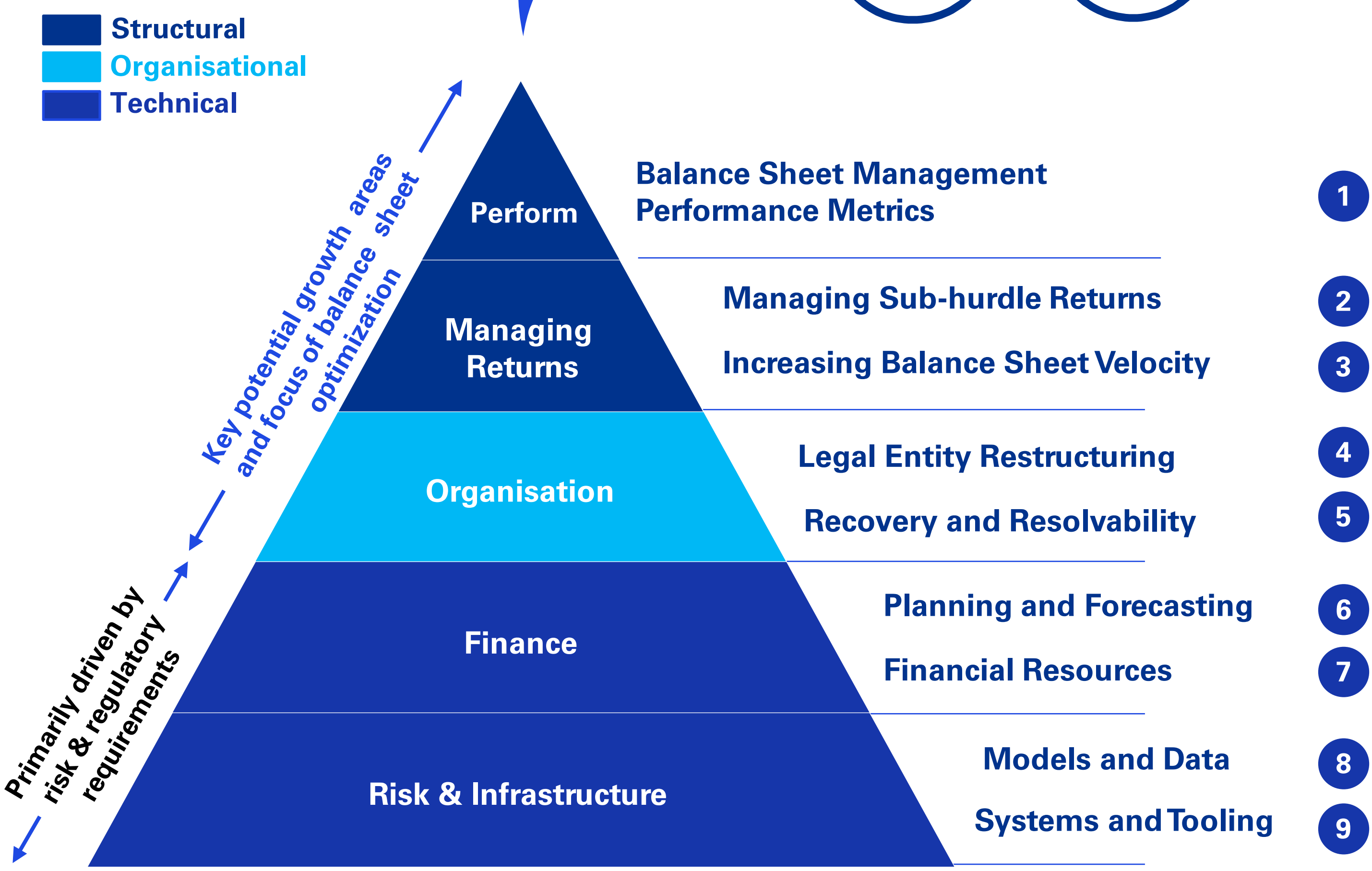
The recent market developments have stressed the need for clients to consider optimizing their balance sheet to improve returns and profitability. Banks should grab this opportunity to optimize and or update their balance sheet management capabilities.

We list below 9 drivers that represent potential ways to optimize balance sheets and ultimately increase profitability. In this constrained and more volatile environment, an increased focus on balance sheet management is crucial to successfully navigate the multiple forces impacting attractiveness and return on equity.

Balance sheet velocity *refers to the **speed** at which banks can **re-allocate financial resources** across business lines, or within a business line, to ensure they are deployed in the most efficient way.*



BSM Value Pyramid



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 services and solutions to help you navigate implementation of the revised standard, 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

Balance Sheet Management
- 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 and option model

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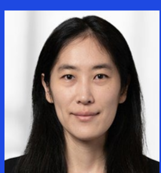

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