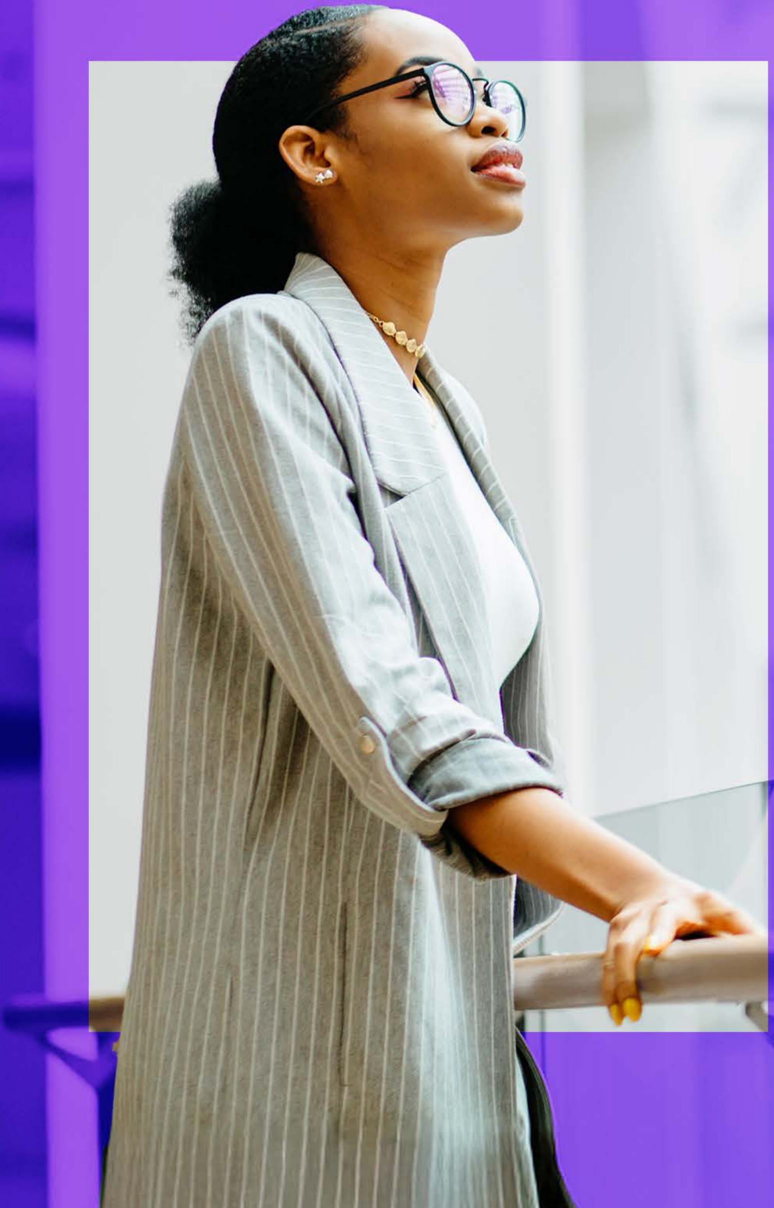


Interest Rate Risk in the Banking Book

Navigating complexity with strategic foresight

January 2025 | www.kpmg.com/ae

Foreword

In today's rapidly evolving financial landscape, Interest Rate Risk in the Banking Book (IRRBB) has emerged as a critical focus for banks and regulators alike.

IRRBB, defined as the risk to earnings, value, and capital due to interest rate fluctuations affecting banking book positions, has taken center stage amidst unprecedented market volatility and regulatory scrutiny.

The global financial sector is grappling with a number of challenges

Extreme interest rate volatility: Recent years have seen sharp interest rate hikes followed by expectations of potential cuts, creating a complex and unpredictable environment for risk management.

Quantitative tightening: Central banks' shift from quantitative easing to tightening has reshaped market dynamics, impacting liquidity and asset valuations.

High-profile bank failures: Recent bank collapses in the US and Europe have heightened awareness of interest rate and credit spread risks, prompting regulators to reevaluate existing frameworks.

Evolving regulatory landscape: Authorities worldwide, including the Central Bank of the UAE (CBUAE), are intensifying their focus on IRRBB, with the Model Management Standards (MMS) and Model Management Guidance (MMG) having been issued since 2022 with the same key objectives. These objectives include ensuring models employed by UAE banks meet quality standards, minimizing Model Risk and supporting decision-making, improving homogeneity of model management and mitigating risk of provision and capital underestimations across UAE banks.

Technological disruption: The rapid advancement of fintech and digital banking is introducing new complexities in interest rate risk assessment and management.

In response to these challenges, regulators are demanding that banks implement comprehensive IRRBB management strategies. These strategies must encompass:

- Rigorous identification, measurement, and evaluation of risks
- Continuous monitoring and reporting mechanisms
- Effective mitigation strategies aligned with the bank's overall risk appetite

The CBUAE, in line with global trends, has introduced regulation aimed at ensuring bank soundness and enhancing financial stability. These regulations mandate annual reviews, board-level approvals, and active senior management involvement in IRRBB strategy implementation.

As the financial sector navigates this complex terrain, banks face the dual challenge of compliance and strategic risk management. The ability to turn IRRBB management from a regulatory burden into a competitive advantage will distinguish industry leaders in the years to come.

This paper explores the multifaceted nature of IRRBB in today's market, offering insight into best practices, regulatory expectations, and innovative approaches to transform challenges into opportunities for growth and stability.

Regulatory developments

Basel IRRBB refinements

In a significant development for banking risk management, the Basel Committee on Banking Supervision (BCBS) has initiated targeted adjustments to the specified interest rate shocks in the IRRBB standard, consistent with commitments in the standard to periodically update their calibration.

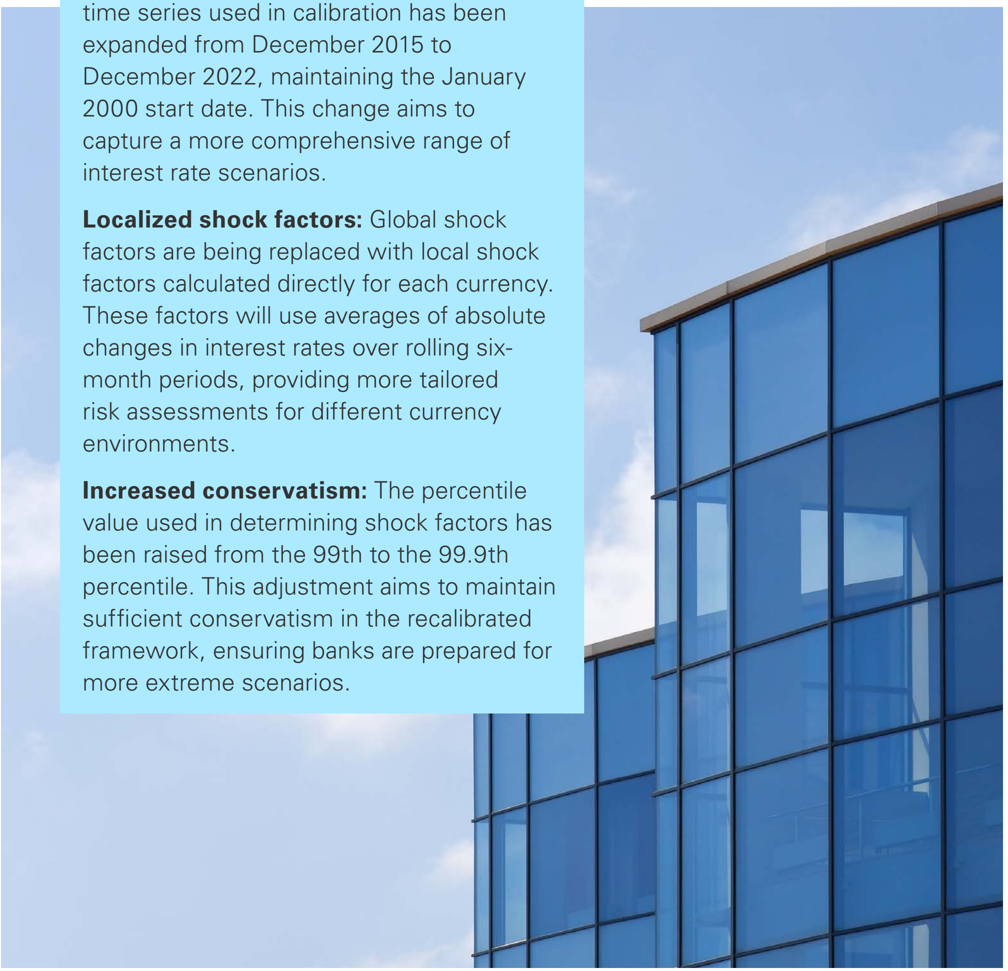
It has also incorporated targeted adjustments to the current methodology used to calculate the shocks.

Following a public consultation in December 2023, the BCBS has finalized the following key adjustments as of July 2024, including:

Extended calibration period: The time series used in calibration has been expanded from December 2015 to December 2022, maintaining the January 2000 start date. This change aims to capture a more comprehensive range of interest rate scenarios.

Localized shock factors: Global shock factors are being replaced with local shock factors calculated directly for each currency. These factors will use averages of absolute changes in interest rates over rolling six-month periods, providing more tailored risk assessments for different currency environments.

Increased conservatism: The percentile value used in determining shock factors has been raised from the 99th to the 99.9th percentile. This adjustment aims to maintain sufficient conservatism in the recalibrated framework, ensuring banks are prepared for more extreme scenarios.



These proposed changes reflect efforts to enhance the robustness and accuracy of IRRBB assessments considering recent market volatility and diverse global economic conditions, particularly addressing problems with how the current methodology captures interest rates during periods when rates are close to zero.

As the UAE banking sector continues to strengthen its risk management frameworks in line with international standards, understanding and preparing for these adjustments now is crucial for maintaining competitive advantage and ensuring robust risk management frameworks.

Banks and Financial institutions have until 1st January 2026 to implement these revised standards, which will be integrated into the consolidated Basel Framework.

IRRBB regulation timeline

2000-2010

2004

The Basel committee on banking supervision issues principles for the management and supervision of interest rate risk, setting out expectations for Banks identification, monitoring and control of IRRBB, as well as its supervision.

2010

CBUAE publishes regulations for the classification of loans and determining provisions.

2016 - 2020

2016

The Basel committee on Banking Supervision publishes IRRBB standards.

2018

CBUAE outlines risk management regulation and IRBB regulation.

2019

CBUAE publishes IRRBB standards.

2020 - 2024

2022

CBUAE issues model management guidelines (MMG) including specific guidelines on IRRBB.

2024

The Basel committee on Banking Supervision issues recalibration of shocks in the IRRBB standard.

CBUAE requirements on IRRBB

The Central Bank of the UAE (CBUAE) aims to promote the effective and efficient development of the UAE's banking system. To this end, it has emphasized the need for robust IRRBB governance and for systems that can identify, aggregate, monitor and report IRRBB.

The CBUAE's IRRBB regulations were last updated in 2018, with the introduction of the MMS and MMG guidelines in 2022.

These regulations include IRRBB standards around governance, measurement, and the use of models, information systems and reporting requirements.

In line with these standards, the CBUAE released the MMG guidelines in 2022, which include specific provisions on IRRBB, as well as the estimation of IRRBB metrics such as the estimation of gap risk, net interest income (NII) and the economic value of equity (EVE).

The MMG guidelines also emphasize that banks should define additional scenarios that combine shifts in yield curves with changes in basis and commercial margins, alongside the standard shocks as defined by Basel.

SAMA requirements on IRRBB

The Saudi Arabian Monetary Agency (SAMA) released a set of standards in January 2017 applicable to all domestic banks regarding IRRBB.

These standards were introduced to revise the Basel Committee's 2004 principles for managing and supervising interest rate risk. Key enhancements introduced by SAMA include:

- More guidance on the expectations for a bank's IRRBB management process, including the development of interest rate shock scenarios and key behavioral and modelling assumptions
- Enhanced disclosure requirements to promote greater consistency, transparency and comparability in the measurement and management of IRRBB. This includes quantitative disclosure requirements based on common interest rate shock scenarios on a semi-annual basis for regulatory return to SAMA and annual disclosure for Pillar 3 requirements
- An updated standardized framework
- A stricter threshold for identifying outlier banks, reduced from 20% of a bank's total capital to 15% of a bank's tier 1 capital.

Current challenges

IRRBB has evolved from a regulatory requirement to a critical operational challenge in the modern banking environment.

The complexities banks face are multifaceted and intertwined:

Economic volatility and market uncertainty

- **Interest rate turbulence:** The abrupt shift from a prolonged low-interest rate environment to sharp increases, coupled with expectations of future decreases, has created unprecedented volatility.
- **Inflationary pressures:** Surging inflation rates globally are forcing frequent recalibrations of monetary policies.
- **Systemic risks:** Recent liquidity and balance sheet-related crises have exposed vulnerabilities in many banks' IRRBB frameworks.
- **Impact:** Banks without robust IRRBB systems have seen capital charges increase by up to 20%, directly impacting profitability and shareholder value.

Regulatory complexity and divergence

- **Cross-jurisdictional challenges:** Banks operating across multiple regions face a patchwork of varying regulations and requirements.
- **Regulatory acceleration:** The pace of new regulations and amendments has intensified, making compliance a moving target.
- **Regional specifics:** In the UAE, Islamic banking introduces unique complexities, including specific reporting requirements and the potential adoption of EBA-style distinctions between IRRBB and CSRBB.

Technical and operational hurdles

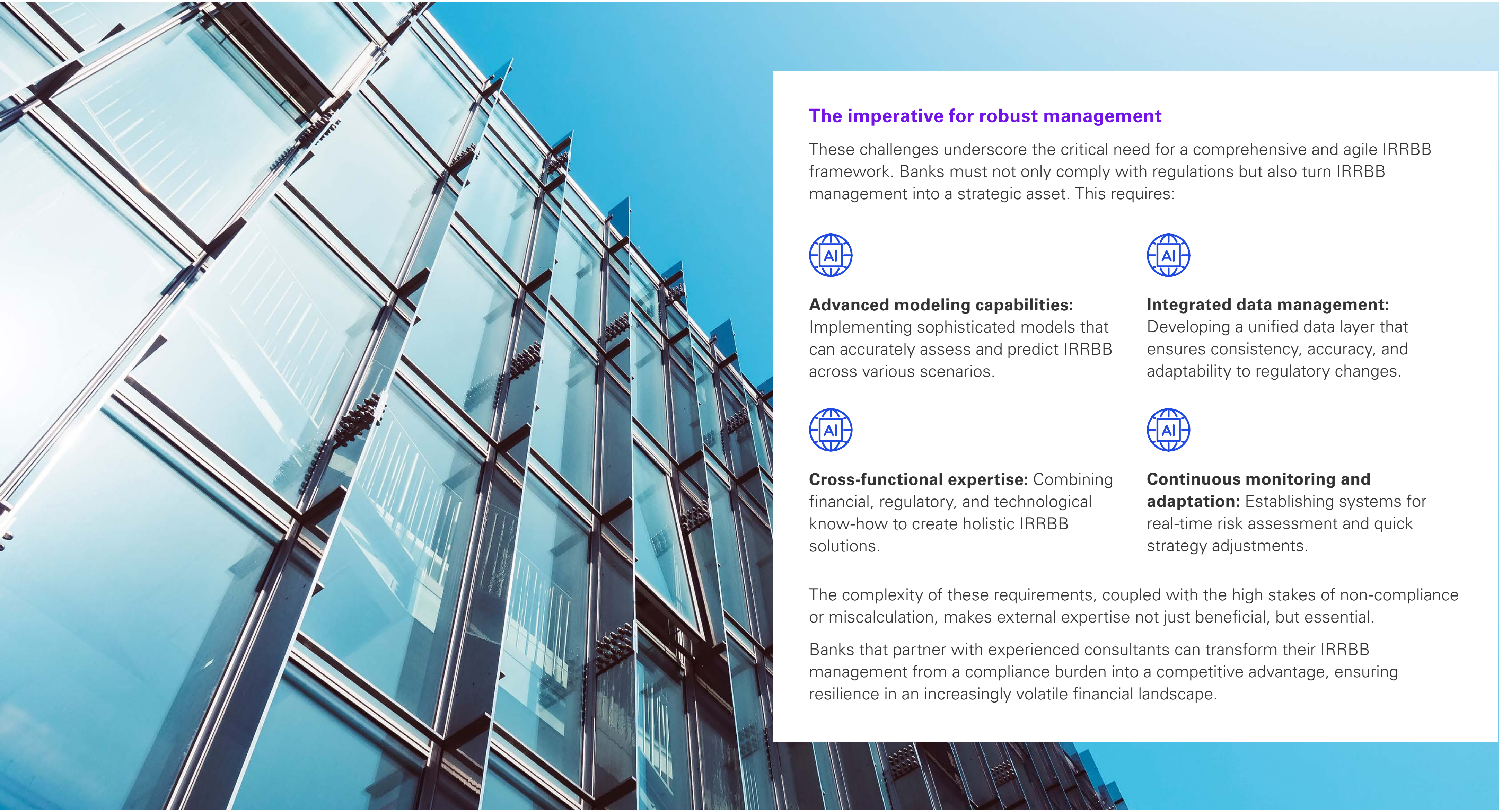
- **Data management deficiencies:** Many banks struggle with outdated, Excel-based systems instead of specialized ALM solutions.
- **System fragmentation:** The use of separate systems for internal risk management and regulatory reporting leads to inconsistencies and inefficiencies.
- **Modeling complexities:** Banks often grapple with the intricate modeling required for accurate IRRBB assessment. Without specialized expertise, they risk miscalculating their exposure, potentially leading to regulatory penalties and capital inadequacy.

Resource and expertise constraints

- **Skill gap:** The sophisticated nature of IRRBB management demands specialized skills that are often in short supply.
- **Cost pressures:** Implementing robust IRRBB frameworks requires significant investment at a time when many banks are under pressure to cut costs.
- **Continuous adaptation:** The need for frequent recalibration of models and strategies in response to market changes strains internal resources.

Strategic implications

- **Product strategy impact:** IRRBB considerations are increasingly influencing product design and pricing, affecting banks' competitiveness.
- **Capital allocation:** Effective IRRBB management has become crucial for optimal capital allocation.



The imperative for robust management

These challenges underscore the critical need for a comprehensive and agile IRRBB framework. Banks must not only comply with regulations but also turn IRRBB management into a strategic asset. This requires:

Advanced modeling capabilities: Implementing sophisticated models that can accurately assess and predict IRRBB across various scenarios.

Integrated data management: Developing a unified data layer that ensures consistency, accuracy, and adaptability to regulatory changes.

Cross-functional expertise: Combining financial, regulatory, and technological know-how to create holistic IRRBB solutions.

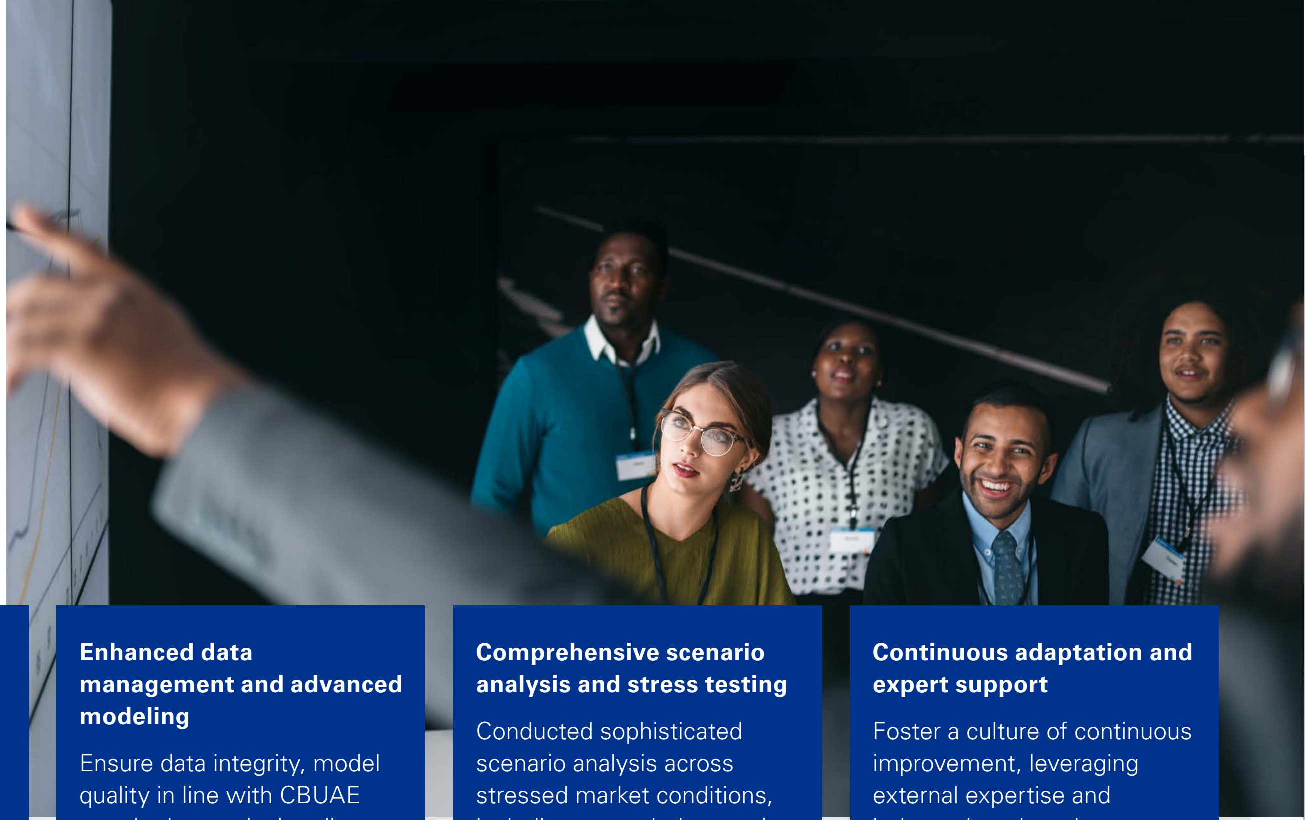
Continuous monitoring and adaptation: Establishing systems for real-time risk assessment and quick strategy adjustments.

The complexity of these requirements, coupled with the high stakes of non-compliance or miscalculation, makes external expertise not just beneficial, but essential.

Banks that partner with experienced consultants can transform their IRRBB management from a compliance burden into a competitive advantage, ensuring resilience in an increasingly volatile financial landscape.

Best practices in IRRBB management

KPMG's analysis indicates that IRRBB will remain a key focus for investors and regulators in the coming years. To turn this challenge into an opportunity, we recommend the following best practices:



Proactive regulatory alignment and comprehensive governance

Implement a flexible compliance framework that aligns with CBUAE requirements and international best practices, balancing NII and EVE in modeling.

01

Robust interest rate steering and risk management

Develop an exhaustive framework that optimizes market rate changes, aligns business strategies, and integrates advanced hedging techniques.

02

Enhanced data management and advanced modeling

Ensure data integrity, model quality in line with CBUAE standards, employing diverse modelling techniques such as behavioral and option modelling, and conducting appropriate third party validations.

03

Comprehensive scenario analysis and stress testing

Conducted sophisticated scenario analysis across stressed market conditions, including expanded scenario ranges.

04

Continuous adaptation and expert support

Foster a culture of continuous improvement, leveraging external expertise and industry benchmarks to stay ahead of emerging trends.

05

Future outlook

IRRBB will play an increasingly important role in financial institutions, with several changes and innovations based on current trends expected in the future, including:

- **Enhanced modelling techniques:** Increased sophistication of models and analytics used to measure IRRBB, including scenario analysis, stress testing and probability modeling to capture a broader range of risks.
- **Behavioral modelling:** Banks will need to make judgements and assumptions about how an instrument's actual maturity or repricing behavior may vary from its contractual terms due to behavioral optionalities. This is particularly important for **fixed-rate loans subject to prepayment risk, fixed-rate loan commitments, term deposits subject to early redemption risk, and non-maturing deposits** (NMDs)**.**
- **ALM integration:** Integration with asset and liability management (ALM), allowing banks to manage interest rate risk holistically across their balance sheet.
- **Regulatory expectations:** Global regulators may continue to refine and expand expectations which could result in increasingly granular reporting, modeling, and risk governance requirements.
- **Technology:** The use of technology, such as AI and machine learning, may increase in IRRBB management, enhancing predictive capabilities and improving decision making.

Furthermore, expected trends in future IRRBB regulations reflect a growing emphasis on risk management and revisions to previous regulations, as seen with the Basel Committee's recent response to the March 2023 banking turmoil.

- **Global harmonization:** Harmonizing IRRBB regulations would ensure consistency across jurisdictions and allow multinational banks to streamline compliance efforts.
- **Enhanced reporting requirements:** Regulations will likely demand more detailed and frequent reporting to improve transparency and oversight of IRRBB.
- **Increased model scrutiny:** Heightened scrutiny on IRRBB model accuracy and reliability is to be expected, requiring banks to validate models more rigorously to ensure all risk factors are accounted for.
- **Stress testing and scenario analysis:** Expectations around stress testing and scenario analysis are likely to evolve, with regulators prescribing more specific methodologies to assess the resilience of banks to IRRBB.
- **Risk governance:** Requirements around risk governance frameworks for IRRBB may become stricter, including but not limited to clear board oversight guidelines, risk appetite frameworks and the roles of senior management in risk management.

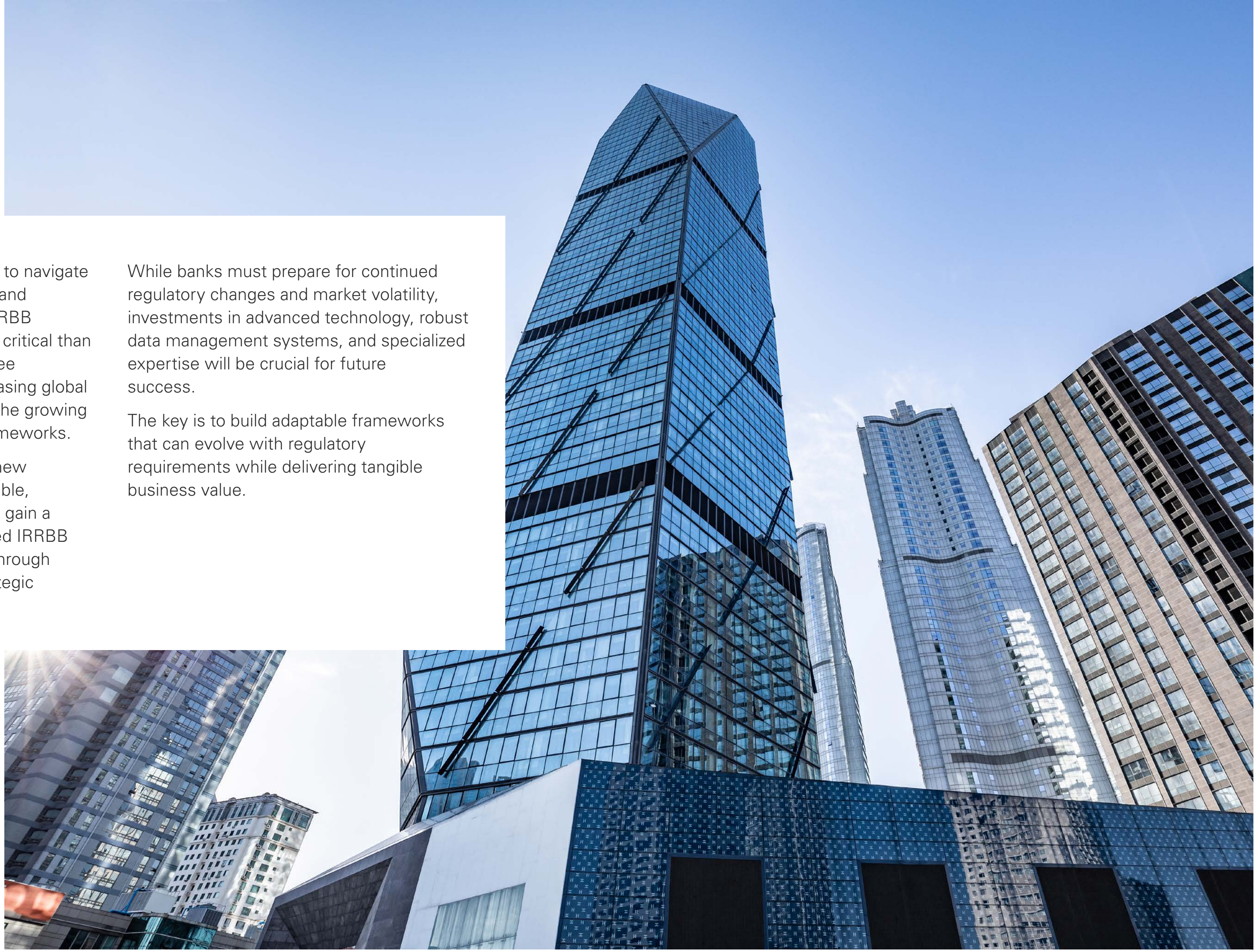
Looking ahead

As the banking sector continues to navigate unprecedented market volatility and regulatory changes, effective IRRBB management has become more critical than ever. The recent Basel Committee refinements, coupled with increasing global regulatory scrutiny, underscore the growing importance of robust IRRBB frameworks.

Banks that proactively adapt to new requirements while building flexible, forward-looking frameworks will gain a competitive advantage. Enhanced IRRBB management can unlock value through better capital allocation and strategic decision making.

While banks must prepare for continued regulatory changes and market volatility, investments in advanced technology, robust data management systems, and specialized expertise will be crucial for future success.

The key is to build adaptable frameworks that can evolve with regulatory requirements while delivering tangible business value.



How KPMG can help

KPMG remains at the forefront of evolving IRRBB standards and their implementation. Our dedicated team actively monitors and analyses regulatory developments from both the Basel Committee and the Central Bank of the UAE, translating complex requirements into actionable strategies for our clients.

We offer a suite of services and solutions to help you navigate the implementation of the revised standard in the following key areas:

Impact assessment

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

IRRBB framework review

Perform an 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 (ICAPP) for IRRBB.

Validation of EVE and NII models

Validate EVE and NII models according to the principles outlined in the CBUAE's Model Management Standards specifically regarding model lifecycle management.

Balance sheet management

Optimize product structures, enhance the bank's capability in balance sheet forecast management, and reposition the balance sheet and adjust the IRRBB profile.

IRRBB stress testing

Perform both qualitative and quantitative stress tests based on institution-specific scenarios and the standard six supervisory interest rate shock scenarios, focusing on the bank's IRRBB profile and market development.

IRRBB model development

- Develop a set of IRRBB metrics to compute changes in expected earnings and economic value, including gap risk, gap risk duration, EVE and NII.
- Development of IRRBB behavioral models, as well as option models for products with automatic option risk.

Tailored solutions

Every bank's risk profile is unique. KPMG's approach combines deep industry knowledge with cutting-edge analytics to deliver tailored IRRBB solutions that align with each client's specific strategy and risk appetite.

With regulations varying across jurisdictions and frequent updates, banks need a partner with global insight and local expertise. KPMG's dedicated regulatory teams stay ahead of changes, ensuring our clients are always prepared for what's next.

Continuous support

IRRBB management is not a one-time exercise. KPMG offers continuous support, from initial assessment and implementation to ongoing monitoring and optimization, ensuring our clients stay ahead in a dynamic risk environment.

Partner with KPMG to transform your IRRBB framework from a regulatory burden into a strategic asset. Contact us for an assessment of your IRRBB readiness.

About KPMG Lower Gulf

For more than 50 years, KPMG Lower Gulf Limited has been providing audit, tax and advisory services to a broad range of domestic and international, public and private sector clients across all major aspects of business and the economy in the United Arab Emirates and in the Sultanate of Oman.

KPMG Lower Gulf is part of KPMG International Cooperative's global network of professional member firms. KPMG firms operate in 142 countries and territories. Established in 1973, KPMG in the UAE and Oman is well connected with its global member network and combines its local knowledge with international expertise.

We are committed to quality and service excellence in all that we do, helping to bring our best to clients and earning the public's trust through our actions and behaviors both professionally and personally.

Our Values guide our behavior day-to-day, informing how we act, the decisions we make, and how we work with each other, our clients, and all of our stakeholders. They are: Integrity: We do what is right; Excellence: We never stop learning and improving; Courage: We think and act boldly; Together: We respect each other and draw strength from our differences; For Better: We do what matters.

To meet the changing needs of our clients, we have adopted an approach aligned with our global purpose: Inspiring Confidence, Empowering Change.

At KPMG Lower Gulf, we believe that ESG is core to sustainable growth. KPMG's Global ESG Plan details its commitments across four ESG categories: planet, people, prosperity, and governance. These four priority areas assist us in defining and managing our environmental, social, economic and governance impacts to create a more sustainable future. We aim to deliver growth with purpose. We unite the best of KPMG to help our clients fulfil their purpose and deliver against the SDGs, so all our communities can thrive and prosper.

Disclaimer: Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

Contact us

Abbas Basrai

Partner
Financial Risk Management
KPMG Lower Gulf Limited
E: abasrai1@kpmg.com
T: +971 56 683 3197

Slim Ben Ali

Director
Financial Risk Management
KPMG Lower Gulf Limited
E: sbenali2@kpmg.com
T: +971 50 899 0463

www.kpmg.com/ae

Follow us on:

@kpmg_lowergulf

Publication name: AI, data and sustainability in focus
Publication number: 5413
Publication date: January 2025