Interest Rate Risk in the Banking Book (IRRBB)

IRRBB Overview

Interest rate risk in the Banking Book (IRRBB) is the risk to earnings or capital arising from movement of interest rates. It generally arises from

- Repricing risk, risks related to the timing mismatch in the maturity and repricing of assets and liabilities and off balance sheet short and long term positions
- Basis risk, risks arising from hedging exposure to one interest rate with exposure to a rate which reprices under slightly different conditions
- Yield curve risk, risks arising from changes in the slope and the shape of the yield curve
- Optional risk, risks arising from options, including embedded options, e.g. consumers redeeming fixed rate products when market rates change

Excessive levels of interest rate risks in the banking book can pose a significant threat to an institution’s earnings and capital base. Accordingly, effective risk management that maintains interest rate risks at prudent levels is essential to the safety and soundness of banking institutions.
**Deloitte’s IRRBB Approach**

At Deloitte, we work closely with financial institutions and financial regulators around the world and developed multidisciplinary IRRBB management solutions to support both the capital markets and clients operate effectively in the challenging interest rate environment.

**Interest Rate Risk in the Banking Book Framework**

**Risk Identification**

- Repricing risk
- Yield curve risk
- Basis risk
- Optionality risk
- Concentration risk
- Inter-risk

**Balance Sheet Exposures**

- Asset positions
  - Customer loans
  - AFS
  - Other assets
- Liability positions
  - Retail funding
  - Wholesale funding
  - Equities
  - Other liabilities
- Off-balance sheet positions
  - Pipeline credit
  - Revolving credits

**Rate Profile**

- Fixed rates
- Floating rates
- Rates with embedded options
- Cross-basis rates
- Cross-currency rates
- Offshore RMB rate profile

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**Stress Testing**

- Sensitivity analysis
- Scenario analysis
- Adverse stress tests

**Behavioral Assumptions**

- Effective maturity of assets
  - Performing loans
  - Impairments & provisions
- Effective maturity of liabilities
  - Non-maturity deposits
  - Short-term money-market funds
- Off-balance sheet position
- Intra- & inter-risk correlations
- Prepayments and extensions

**Interest Rate and Income Hedging**

- Derivatives
- Equity investment
- Non-interest rate sensitive hedging
- Interest rate forecast and balance sheet planning

**Governance**

- Governance structure
- Roles & responsibilities
- Processes
- Decision mechanisms

**Strategy**

- Risk appetite statements
- Business model
- Risk warning and triggers
- Hedging strategies
- Balance sheet planning
- Interest rate optimisation

**Controls**

- Reporting
- Monitoring
- Regulatory compliance
- Capital adequacy
- Data & model validation
- Independent review

**Infrastructure**

- IRRBB management system
- Data quality & assumptions
- Resources

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Deloitte’s approach combines the disciplines of economics and management, employing the analytical tools of economics with the insights of business leaders. Our methodology examines both macro- and micro-economic industry trends as well as regulatory evolution to better understand the broad forces affecting business strategy and corporate policy.

Deloitte’s IRRBB teams are led by a group of senior professionals and include consultants from Deloitte’s offices around the world. These teams draw on Deloitte’s global network of partners and industry and management experts.
How Deloitte Can Help

Deloitte's IRRBB Management solutions evolves along with the concurrent financial markets’ and regulatory challenges for improving interest rate risk identification, measurement, valuation, reporting and monitoring, hedging strategies and management governance.

We can help you perform the following interest rate risk management solutions in the banking book activities:

**IRRBB Identification**

- Define banking book boundaries
- Identify on- and off-balance sheet interest rate risk exposures
- Establish IRRBB rate and risk repositories

**IRRBB Measurement and Mitigation**

- Assess the impacts of RMB interest rate liberalization and offshore RMB strategy
- Design IRRBB measurement methodologies, e.g. economic value, maturity gap, duration gap, earning at risk, net interest income and Value at Risk
- Establish behavioral assumption mechanism and conduct behavioral model validations, e.g. non-maturing liability assumptions and effective maturity of the assets and equities
- Design IRRBB stress testing methodologies, e.g. parallel yield curve shifts, PCA approach, non-parallel flattened and steepened yield curve shifts, and firm-wide enterprise scenario stress tests
- Identify hedging strategies to mitigate interest rate risk by identifying appropriate debt and derivative instruments and strategies considering corporate risk tolerances, hedging costs and benefits, and liquidity constraints
- Design and validate interest rate derivative valuation and modeling assumptions to help build and assess existing interest rate risk or valuation assumptions considering defined peer results, industry-accepted ranges, or independent projections

**IRRBB Governance**

- Design and consolidate IRRBB reporting and documentation to streamline existing interest rate risk oversight
- Provide interest rate related accounting assistance to address derivative accounting issues and compliance requirements, e.g. IFRS9 financial instruments
- Validate IRRBB models and internal controls to address independence and governance controls
- Assist in developing IRRBB policies, processes and procedures
- Evaluate IRRBB capital allocations and monitor capital adequacy
- Establish and monitor IRRBB appetites and tolerances
- Provide internet rate risk management infrastructure assistance to address IRRBB management architecture, systems and data qualities
- Assist in the projection of the macro-economic scenarios and the optimization of the interest rate mismatches
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