

# Liquidity Risk Management in Banks

A two-day case study based workshop offering a structured approach to the analysis of liquidity challenges in banks, incorporating both lessons learned from the crisis and Basel guidelines for sound liquidity management, including stress testing, liquidity coverage, net stable funding ratios.

## TARGET AUDIENCE

Regulators, analysts, risk and banking professionals who need to better understand the liquidity risk management challenges and strategy within a bank. The course is targeted at an intermediate level and assumes a basic understanding of banking products and services. Related workshops include: Risk Management in Banks & the Capital Implications, which provides a broader overview of all risk management areas.

## COURSE OBJECTIVES

Liquidity risk has been one of the main drivers of the current credit crisis. This workshop will give an overview of the challenges and recommendations for liquidity risk management going forward.

Participants will be equipped to:

- Review liquidity management lessons learned from the current crisis
- Use a structured approach to assess liquidity risk management, asset and liability management and funding strategy
- Understand how banks forecast, control and stress-test their liquidity sources and uses (on and off balance sheet) and build a contingency funding plan to address stress cash outflows
- Identify banks with weak liquidity and contingency planning within the context of the bank's role within the financial system
- Anticipate changing regulations and supervisory guidance on the management of bank liquidity.

## CONTENT

### ANALYTIC OVERVIEW

The aim of this section is to introduce the concept of liquidity risk and explore how it affects banks business models.

- Defining liquidity risk: funding and market liquidity
- Key drivers: asset liquidity and funding needs, funding strategy
- Perception of the relative importance of liquidity risk amongst bankers
- Impact of liquidity crisis: deposits, creditors and systemic issues
- Fundamental principles (Basel Principle 1): risk management framework within the overall risk management of a bank
- Inter-relationship between liquidity, credit, market, operational, legal and reputation risks
- Supervisory role: expectations and remedial actions.
- *Case study/exercise*: Reviewing the challenges facing bank management and financial regulators in monitoring and controlling liquidity risk in their own institutions and on a systemic basis.

## GOVERNANCE

The governance section aims to identify the differing sensitivities and tolerances to liquidity risk for differing bank business models, and how this affects the approach to liquidity risk management taken by individual institutions.

- Liquidity risk tolerance (Basel Principle 2) given different business models, e.g. retail and wholesale banks, multi-nationals and investment banks
- Strategies, policies and practices (Basel Principle 3)
- Liquidity costs, benefits and risks (Basel Principle 4)
- Early warning signals of unacceptable risk tolerance
- Depositor Insurance schemes; underpinning liquidity in the retail market
- Banks which failed due primarily to weak liquidity management.
- *Case study/exercises*: Illustration of the liquidity risks associated with excessive leverage in an opco/holdco structure.
- Costs associated with failure to adequately price for liquidity

## ASSET LIQUIDITY AND FUNDING NEEDS

The aim of this section is to develop quantitative and qualitative techniques for assessing the liquidity risk of financial institutions.

### Identifying and forecasting needs

- Asset and liability management goals: practical considerations
  - Liquidity of Assets under stressed market conditions
  - Contingent liquidity obligations - securitisation, conduits and derivatives
  - Stability of funding and appropriateness for asset base.
- Defining minimum risk assets and liquid assets
- Key matrices to measure asset liquidity and funding needs
- Forecasting funding needs: key assumptions of asset growth, inflows and outflows, contingency funding needs
- Fair valued asset pricing hierarchies (Level 1, 2, 3 assets under SFAS 157 & IFRS 7)
- Collateral assessment: haircuts / margin, available collateral for access to funding, client balances, Central Bank eligibility criteria.
- *Case study/exercises*: Illustration of liquidity risk in a commercial bank caused by excessive contingent liquidity exposures to special-purpose vehicles.
- Calculation of stressed liquidity outflows and cash capital requirements for differing types of financial institution.

### Stress liquidity needs

- Early warning signals: illiquidity spirals, institution specific and market wide stress scenarios
- Interaction between liquidity and other risks: market and credit risk, interest rate, legal, operational and reputation risks
- Systemic risk and impact on market and funding liquidity
- Stress-tests: key scenarios relating to business activities, products and funding sources
- Trigger events: rating changes, market disruption, trigger events in a securitisation.
- *Case studies*: Liquidity risk in an investment bank. This case demonstrates the volatility of an investment bank's funding model and the consequent reliance on asset liquidity. The relationship of liquidity risk to other risk areas such as market and reputational risk is also demonstrated.



### FUNDING STRATEGY

This section aims to demonstrate the importance of a bank's funding strategy and its critical relationship to the bank's business model.

#### Asset and liability Management

- Funding appropriate for the risk profile and commercial needs of the assets, products and business lines
- Issues: stability, diversity and tenor matching of funding sources
- Refinancing risk of bonds and money market funding
- Key issues: off balance sheet, derivatives, securitisation, intraday
- Gap management across tenor and currency buckets
- Cash capital techniques to fund illiquid assets and stress outflows
- Key matrices for measuring funding strategy and refinancing risk
- Forecasting funding cash-flows over different time horizons: intraday, day to day, under and over a year
- Case studies: weak funding strategies and gap management
- Contingency funding plan and stress-testing
- Stress-testing market access, stress market outflows
- Contingency funding plan: sufficient liquidity to meet the potential demands of stress outflows
- Back up liquidity: unencumbered assets, liquidity pool, committed facilities, Central Bank's marginal lending facilities
- Case studies: comparing strong and weak banks under stress.

#### Monitoring and controls

- Funding and liquidity mismatch limits across legal entities, business lines, currencies and jurisdictions
- Cumulative contractual cash-flow mismatch limits, based on risk tolerance, balance sheet size, depth of market, funding structure
- Operational management of intraday payments and settlements: due diligence.
- *Case studies:* Illustration of an international bank and insurance group with excessive reliance on wholesale funding sources
- Illustration of liquidity risk in a bank with over reliance on wholesale and volatile sources of deposit funding.

### SUPERVISION

This section is to identify the regulatory treatment of liquidity risk from both the Basel 2/3 perspective and how approaches taken by individual national regulators within this framework may differ.

- Inter-relationship between liquidity regulation, capital adequacy and other prudential measures
- Comparison across regulatory regimes: qualitative and quantitative standards
- Liquidity risk tolerance given systemic risk: importance of bank within payment and settlement systems
- Role of deposit insurance in a liquidity crisis
- Regulatory responses to liquidity problems: guarantees, insurance, recapitalisation, bad banks
- Remedial actions: required actions from bank to strengthen liquidity risk management and contingency planning, restrictions
- Due diligence synopsis
- Basel II: pillar III disclosure requirements on liquidity.
- Basel III developments: Liquidity Coverage Ratio and the Net Stable Funding Ratio.
- *Case study/exercises:* Principles of calculation of the Net Stable funding ratio illustrating the challenges facing banks to fully comply with the requirements of Basel 3
- Examining regulatory responses and options to bank resolution in a crisis, distinguishing liquidity failure from solvency failure.

#### Learning Paths



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