



**CAFRAL**

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# Basel III Framework on Liquidity Risk – LCR, NSFR & Monitoring Tools

M P Baliga

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# Crisis, Causes & Response

- The crisis highlighted importance of liquidity to the proper functioning of financial markets and the banking sector
- Banks failed despite adequate capital as per Basel II
- Need for 'objective' and 'measurable' criteria felt
- 'LCR' and 'NSFR' introduced as objective ratios without complexities of computing capital charges

## FUNDING LIQUIDITY RISK

- The risk that a bank will not be able to meet efficiently the expected and unexpected current and future cash flows and collateral needs without affecting either its daily operations or its financial condition

## MARKET LIQUIDITY RISK

- The risk that a bank cannot easily offset or eliminate a position at the prevailing market price because of inadequate market depth or market disruption

# BCBS Measures

- September 2008 – Principles for Sound Liquidity Risk Management & Supervision
- December 2010 – Basel III: International Framework for liquidity risk measurement, standards and monitoring – LCR, NSFR & Monitoring Tools
- January 2013 – Basel III: Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools

# RBI GUIDELINES

- February 2012 - Draft guidelines on Liquidity Risk Management and Basel III Framework
- November 2012 – Guidelines on Liquidity Risk Management by Banks
- June 2014 – Basel III Framework on Liquidity Standards – LCR, Liquidity Risk Monitoring Tools and LCR Disclosure Standards

# Principles for Sound Liquidity Risk Management & Supervision - September 2008

- importance of establishing a liquidity risk tolerance;
- maintenance of an adequate level of liquidity, including through a cushion of liquid assets;
- necessity of allocating liquidity costs, benefits and risks to all significant business activities;
- identification and measurement of the full range of liquidity risks, including contingent liquidity risks;
- design and use of severe stress test scenarios;
- need for a robust and operational contingency funding plan;
- management of intraday liquidity risk and collateral; and
- public disclosure in promoting market discipline.

# Liquidity Coverage Ratio

# LCR – Objectives

- To promote short-term resilience of banks to liquidity risk
- Improve banking sector's ability to absorb shocks arising from financial and economic stress, whatever be the source
  - Will thus reduce the risk of spill over from the financial sector to the real economy

# LCR – Objectives

To ensure that banks have an adequate stock of unencumbered high-quality liquid assets (HQLA):

- that can be converted easily and immediately in private markets into cash to meet liquidity needs for a 30 calendar day liquidity stress scenario
- by which time it is assumed that appropriate corrective actions can be taken by management and supervisors, or that the bank can be resolved in an orderly way

This gives central banks time to take appropriate measures, if necessary

## LCR - Timeline

- LCR introduced from 1 January 2015, with set at 60% and rising in equal annual steps to reach 100% on 1 January 2019
- This is to ensure that the LCR can be introduced without material disruption to the orderly strengthening of banking systems or the on going financing of economic activity

Year	1 January 2015	1 January 2016	1 January 2017	1 January 2018	1 January 2019
Minimum LCR	60%	70%	80%	90%	100%

# Components of LCR

**LCR has two components:**

- (a) Value of the stock of HQLA in stressed conditions;
- (b) Total net cash outflows

$$\frac{\text{Stock of HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

- Under the standard, banks must hold a stock of *unencumbered* HQLA to cover the total net cash outflows over a 30-day period under the prescribed stress scenario
- To qualify as “HQLA”, assets should be liquid in markets during a time of stress and, ideally, be central bank eligible

## Scenario for LCR

**The scenario for this standard entails a combined idiosyncratic and market-wide shock that would result in:**

- the run-off of a proportion of retail deposits;
- a partial loss of unsecured wholesale funding capacity;
- a partial loss of secured, short-term financing with certain collateral and counterparties;
- additional contractual outflows that would arise from a downgrade in the bank's public credit rating by up to and including three notches;
- increases in market volatilities that impact the quality of collateral or potential future exposure of derivative positions;
- unscheduled draws on committed but unused credit and liquidity facilities that the bank has provided to its clients; and
- the potential need for the bank to buy back debt or honour non-contractual obligations in the interest of mitigating reputational risk.

# Characteristics of HQLA

- Fundamental Characteristics
  - Low credit and market risk
  - Ease and Certainty of valuation
  - Low correlation with risky assets
  - Listing on a developed and recognised exchange
- Market-related Characteristics
  - Active and sizeable market
  - Low volatility
  - Flight to quality

## HQLA – Operational requirements

- Periodical monetisation of a proportion of HQLA through repo or outright sale to test the saleability of assets
- All assets in the stock should be unencumbered
- Banks should have operational capability to monetise the assets
- Stock should be under the control of function charged with managing liquidity of the bank

# HQLA – Components

- Level 1 – without limit without haircut
- Level 2 – up to 40% of the stock after haircut
- Level 2B – within Level 2 limit and sub limit of up to 15% of HQLA stock after haircut

# Level 1 assets

- **Level 1 assets of banks would comprise of the following and these assets can be included in the stock of liquid assets without any limit or haircut:**
- Cash including cash reserves in excess of required CRR.
- Government securities in excess of the minimum SLR requirement.
- Within the mandatory SLR requirement, Government securities to the extent allowed by RBI, under Marginal Standing Facility (MSF).
- Marketable securities issued or guaranteed by foreign sovereigns satisfying all the following conditions:
- (a) assigned a 0% risk weight under the Basel II standardized approach for credit risk;
- (b) Traded in large, deep and active repo or cash markets characterised by a low level of concentration; and proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions.
- (c) not issued by a bank/financial institution/NBFC or any of its affiliated entities.

## *Level 2 assets*

- Level 2 assets (comprising Level 2A assets and any Level 2B assets permitted by the supervisor) can be included in the stock of HQLA, subject to cap of:
  - 40% for Level 2 assets (level 2A and level 2B) after haircuts have been applied
  - 15% for Level 2B assets

# Level 2 A assets

- **The assets attract a haircut of 15% on current market value:**
- **Level 2A assets are limited to the following:**
  - i. Marketable securities representing claims on or claims guaranteed by sovereigns, PSEs or MDBs - assigned a 20% risk weight under the Basel II Standardised Approach for credit risk and not issued by a bank/financial institution/NBFC or any of its affiliated entities
  - ii. Corporate bonds, not issued by a bank/financial institution/NBFC or any of its affiliated entities, which have been rated AA- or above by an Eligible Credit Rating Agency
  - iii. Commercial Paper not issued by a bank/PD/financial institution or any of its affiliated entities, which have a short-term rating equivalent to the long-term rating of AA- or above by an Eligible Credit Rating Agency

# Level 2B assets

- **The assets attract a haircut of 50% on current market value:**
- **Level 2B assets are limited to the following:**
  - i. Marketable securities representing claims on or claims guaranteed by sovereigns having risk weights higher than 20% but not higher than 50%, i.e., they should have a credit rating not lower than BBB-
  - ii. Common Equity Shares which satisfy all of the following conditions:
    - a) not issued by a bank/financial institution/NBFC or any of its affiliated entities;
    - b) included in NSE CNX Nifty index and/or S&P BSE Sensex index

# Use of buffer

- During periods of financial stress, banks may use their stock of HQLA, thereby falling below 100%
- Banks should immediately report to RBI (DBOD and DBS) giving reasons for such use and corrective steps initiated to rectify the situation

# *Diversification of the stock of HQLA*

- The portfolio of Level 2 assets held by the bank should be well diversified:
  - in terms of type of assets,
  - type of issuers and
  - specific counterparty or issuer.
- Ex-ante it is not possible to know with certainty which specific assets within each asset class might be subject to shocks ex-post
- Banks should therefore have policies and limits in place in order to avoid concentration

# LCR - issues

- Run offs
  - Stable and less stable deposits
  - Insured and fully insured deposits
  - Retail and small business customers
  - Retail term deposits with residual maturity of > 30 days
  - Operational deposits
- Cliff effect
- LCR is expected to be met and reported in a single currency
- Cap on level 2 assets - adjustments
- Cash inflows – cap of 75% of cash outflows

## Jan 2013 - Expanded the definition of HQLA by including Level 2B assets, subject to higher haircuts and a limit

- Corporate debt securities rated A+ to BBB– with a **50%** haircut
- Certain unencumbered equities subject to a **50%** haircut
- Residential mortgage-backed securities rated AA or higher with a **25%** haircut
- Aggregate of Level 2B assets, after haircuts, subject to a limit of **15%** of total HQLA
- Level 2 assets - inclusion of qualifying commercial paper

# INFLOWS AND OUTFLOWS

- **Insured deposits**
  - Reduce outflow on certain types of fully insured retail deposits from **5% to 3%**
  - Reduce outflow on fully insured non-operational deposits from non-financial corporates, sovereigns, central banks and public sector entities (PSEs) from **40% to 20%**
- **Non-financial corporate deposits**
  - Reduce the outflow rate for “non-operational” deposits provided by non-financial corporates, sovereigns, central banks and PSEs from **75% to 40%**
- **Committed liquidity facilities to non-financial corporates**
  - Clarify the definition of liquidity facilities and reduce the drawdown rate on the unused portion of committed liquidity facilities to non-financial corporates, sovereigns, central banks and PSEs from **100% to 30%**
- **Committed but unfunded inter-financial liquidity and credit facilities**
  - Distinguish between interbank and inter-financial credit and liquidity facilities and reduce the outflow rate on the former from **100% to 40%**
- **Central bank operations**
  - Reduce the outflow rate on maturing secured funding transactions with central banks from **25% to 0%**

# Monitoring Tools

# Metrics

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Contractual maturity mismatch

Concentration of funding

Available unencumbered assets

LCR by significant currency

Market-related monitoring tools

# Contractual maturity mismatch

- The contractual maturity mismatch profile identifies the gaps between the contractual inflows and outflows of liquidity for defined time bands
- These maturity gaps indicate how much liquidity a bank would potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date
- This metric provides insight into the extent to which the bank relies on maturity transformation under its current contracts
  - No new return under Basel III is prescribed by RBI for analysing contractual maturity mismatch
  - The existing statement on structural liquidity will continue to address this metric

# Concentration of Funding

- Aims to address the funding concentration from each significant counterparty, each significant product/instrument and each significant currency
- Present regulatory limits on Inter-bank liability and call borrowings will continue to exist

# Available unencumbered assets

- Provides supervisors with data on the quantity and key characteristics of banks' available unencumbered assets.
- These assets have the potential to be used as collateral to raise additional secured funding in secondary markets and/or are eligible at central banks.

# LCR by significant currency

- A currency is considered “significant” if the aggregate liabilities denominated in that currency amount to 5% or more of the bank's total liabilities
  - LCR is required to be met in one single currency i.e. INR.
  - But in order to better capture potential currency mismatches, the LCR in each significant currency needs to be monitored.
- Foreign Currency LCR =  $\frac{\text{Stock of HQLA in each significant currency}}{\text{Total net cash outflows over a 30-day time period in each significant currency}}$

## Market-related monitoring tools

- High frequency market data that can serve as early warning indicators in monitoring potential liquidity difficulties at banks
- Requires banks to report:
  - the price movements in their equity prices (if listed)
  - interest rates at which long-term bonds and CDs are raised
  - Information on breach / penalty in respect of regulatory liquidity requirements

# **LCR DISCLOSURES**

# LCR Disclosures

- Along with Annual Statements - quarterly, simple average basis with monthly observations
- March 31, 2017 onwards the simple average should be calculated on daily observations
- Both unweighted and weighted values of the LCR components must be disclosed as given in the disclosure format
- Qualitative disclosures like composition of HQLA, concentration of funding sources, currency mismatch

Net Stable Funding Ratio (NSFR)

# NSFR - Definition

- $$\frac{\text{Available amount of Stable Funding}}{\text{Required Amount of Stable Funding}} > 100\%$$
- “Stable funding” is defined as the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress

# Definition of available stable funding

**ASF is defined as the total amount of a bank's:**

- Capital
- Preference shares and other liabilities with maturity of equal to or greater than one year
- Portion of non-maturity deposits, term deposits and wholesale funding with maturities of less than one year that is expected to remain for an extended period in an idiosyncratic stress event
- ASF Components assigned ASF Factors of 100%, 90%, 80%, 50% and 0% to indicate the degree of permanence in bank's BS.

# Definition of required stable funding

- RSF is calculated as the sum of the value of the assets held and funded by the institution, multiplied by a specific RSF factor assigned to each particular asset type
- The RSF factor applied to the reported values of each asset or OBS exposure is the amount of that item that supervisors believe should be supported with stable funding
- Assets that are more liquid and more readily available to act as a source of extended liquidity in the stressed environment receive lower RSF factors than assets considered less liquid in such circumstances

THANK YOU

