# Notes on Asset Liability Management (ALM) framework in Banks in India – ALM Committee, ALM Information system, ALM Process, ALM Techniques and Tools

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## ALM framework for Indian Banks

Over the last few years the Indian financial markets have witnessed wide ranging changes at fast pace. Intense competition for business involving both the assets and liabilities, together with increasing volatility in the domestic interest rates as well as foreign exchange rates, has brought pressure on the management of banks to maintain a good balance among spreads, profitability and long-term viability. These pressures call for structured and comprehensive measures and not just ad hoc action. The Management of banks has to base their business decisions on a dynamic and integrated risk management system and process, driven by corporate strategy. Banks are exposed to several major risks in the course of their business - credit risk, interest rate risk, foreign exchange risk, equity / commodity price risk, liquidity risk and operational risks.

This note lays down broad guidelines in respect of interest rate and liquidity risks management systems in banks which form part of the Asset-Liability Management (ALM) function. The initial focus of the ALM function would be to enforce the risk management discipline viz. managing business after assessing the risks involved. The objective of good risk management programmes should be that these programmes will evolve into a strategic tool for bank management.

From 1 April 1999, Banks in India were expected to implement effective ALM system. Guidelines contained in RBI circular dated 10 February 1999 and salient features are as follows:

**The ALM process rests on three pillars:**

ALM Process- ALM information, ALM organization & ALM process

I. ALM Information- need for accurate & timely information

II. ALM Organization- responsible for ensuring proper asset liability management

III. Scope of ALM process- to address Liquidity and Interest Rate Risk

**1. ALM information systems** Information is the key to the ALM process. Considering the large network of branches and the lack of an adequate system to collect information required for ALM which analyses information on the basis of residual maturity and behavioural pattern it will take time for banks in the present state to get the requisite information. The problem of ALM needs to be addressed by following an ABC approach i.e. analysing the behaviour of asset and liability products in the top branches accounting for significant business and then making rational assumptions about the way in which assets and liabilities would behave in other branches. In respect of foreign exchange, investment portfolio and money market operations, in view of the centralised nature of the functions, it would be much easier to collect reliable information. The data and assumptions can then be refined over time as the bank management gain experience of conducting business within an ALM framework. The spread of computerisation will also help banks in accessing data.

**2. ALCO**

The ALCO is a decision making unit responsible for balance sheet planning from risk - return perspective including the strategic management of interest rate and liquidity risks. Each bank will have to decide on the role of its ALCO, its responsibility as also the decisions to be taken by it. The business and risk management strategy of the bank should ensure that the bank operates within the limits / parameters set by the Board. The business issues that an ALCO would consider, inter alia, will include product pricing for both deposits and advances, desired maturity profile of the incremental assets and liabilities, etc. In addition to monitoring the risk levels of the bank, the ALCO should review the results of and progress in implementation of the decisions made in the previous meetings. The ALCO would also articulate the current interest rate view of the bank and base its decisions for future business strategy on this view. In respect of the funding policy, for instance, its responsibility would be to decide on source and mix of liabilities or sale of assets. Towards this end, it will have to develop a view on future direction of interest rate movements and decide on a funding mix between fixed vs floating rate funds, wholesale vs retail deposits, money market vs capital market funding, domestic vs foreign currency funding, etc. Individual banks will have to decide the frequency for holding their ALCO meetings.

3. **ALM process**: The scope of ALM function can be described as follows: ·

Liquidity risk management ·

Management of market risks (including Interest Rate Risk) ·

Funding and capital planning ·

Profit planning and growth projection ·

Trading risk management

**The guidelines given in this note mainly address Liquidity and Interest Rate risks.**

## a) Liquidity Risk Management

Measuring and managing liquidity needs are vital activities of commercial banks. By assuring a bank's ability to meet its liabilities as they become due, liquidity management can reduce the probability of an adverse situation developing. The importance of liquidity transcends individual institutions, as liquidity shortfall in one institution can have repercussions on the entire system. Bank management

should measure not only the liquidity positions of banks on an ongoing basis but also examine how liquidity requirements are likely to evolve under crisis scenarios. Experience shows that assets Commonly considered as liquid like Government securities and other money market instruments could also become illiquid when the market and players are unidirectional. Therefore, liquidity has to be tracked through maturity or cash flow mismatches. For measuring and managing net funding requirements, the use of a maturity ladder and calculation of cumulative surplus or deficit of funds at selected maturity dates is adopted as a standard tool.

## b) Interest Rate Risk (IRR)

The phased deregulation of interest rates and the operational flexibility given to banks in pricing most of the assets and liabilities have exposed the banking system to Interest Rate Risk. Interest rate risk is the risk where changes in market interest rates might adversely affect a bank's financial condition. Changes in interest rates affect both the current earnings (earnings perspective) as also the net worth of the bank (economic value perspective). The risk from the earnings' perspective can be measured as changes in the Net Interest Income (Nil) or Net Interest Margin (NIM). In the context of poor MIS, slow pace of computerisation in banks and the absence of total deregulation, the traditional Gap analysis is considered as a suitable method to measure the Interest Rate Risk. It is the intention of RBI to move over to modern techniques of Interest Rate Risk measurement like Duration Gap Analysis, Simulation and Value at Risk at a later date when banks acquire sufficient expertise and sophistication in MIS. The Gap or Mismatch risk can be measured by calculating Gaps over different time intervals as at a given date. Gap analysis measures mismatches between rate sensitive liabilities and rate sensitive assets (including off-balance sheet positions).

**Tools and Techniques**

**1. Traditional GAP Analysis**

**The most basic interest rate risk exposure measurement techniques employed by banks.** The Gap Report should be generated by grouping rate sensitive liabilities, assets and offbalance sheet positions into time buckets according to residual maturity or next repricing period, whichever is earlier. The Gap is the difference between Rate Sensitive Assets (RSA) and Rate Sensitive Liabilities (RSL) for each time bucket. The positive Gap indicates that it has more RSAs than RSLs whereas the negative Gap indicates that it has more RSLs. The Gap reports indicate whether the institution is in a position to benefit from rising interest rates by having a positive Gap (RSA > RSL) or whether it is in a position to benefit from declining interest rates by a negative Gap (RSL > RSA). The Gap can, therefore, be used as a measure of interest rate sensitivity.

**2. Earning Sensitive analysis**

It is an extension of static GAP analysis. It helps to evaluate the impact of different interest rate environments on the NII, and allows the bank management to set limits for variability of NII. It sometimes termed as Earning at Risk.

**3. Duration Gap Analysis**

A fundamental criticism of the static GAP and earning sensitivity analyzes pertain to their preoccupation with short term interest rate risk in banks. A bank’s assets and liabilities, however may be mismatched beyond 1 or 2 years and thus expose the bank to substantial risk in the medium

or long term. Such risk may go undetected by the traditional GAP approaches. Banks will also have to look at alternate methods of measuring interest rate risk over the entire life of the assets and liabilities. Duration Gap, it incorporates estimates of duration of assets and liabilities that reflect the value of promised cash flows up to maturity.

**4. Value at Risk**

- Maximum expected loss that a bank can suffer over a target horizon, given a certain confidence interval.
- It enables one to calculate the net worth of the organization at any particular point of time so that it is possible to focus on long term risk implications of decisions that have already been taken or that are going to be taken.