

September 10, 1998

To
All Scheduled Commercial Banks
(excluding Regional Rural Banks)

Dear Sir,

Asset - Liability Management (ALM) System

As you are aware, the RBI has decided to introduce the Asset- Liability Management (ALM) System, as a part of the Risk Management and control Systems in banks. We forward herewith broad Draft guidelines for measurement of liquidity risk and interest rate risk for putting in place the ALM System. The guidelines sent with this letter are intended to form the basis for initiating measures for collection, compilation and analysis of data required to support the ALM System. You may study the guidelines and forward to us your suggestions and difficulties, if any, that may be encountered in implementation of the system.

2. You will observe that the banks will have to analyse the past data for studying their behavioural and seasonal pattern and fix the benchmarks required for preparing maturity profile of various components of Assets and Liabilities including Off-Balance Sheet Items. The guidelines would serve as a benchmark for those banks which lack a formal ALM System. Banks which have already adopted more sophisticated systems may continue their existing systems but they should fine-tune their Information and Reporting Systems. The banks shall also have to take views on the interest rate movements and fix prudential limits on the Gaps. The exercise will require constant review and updating. We therefore, suggest that banks may immediately set up a small Group under the charge of the General Manager (Funds Management/Treasury) with senior officers drawn from Investments, Foreign Exchange, Credit and Management Information departments/areas and entrust them with the tasks of preparing the ground work for implementation of the ALM System.

3. The General Manager in-charge of Funds Management/Treasury may be designated as the 'Nodal Officer' who should be in touch with the RBI (viz. for the present Shri Salim Gangadharan, Deputy General Manager, Central DBOD - Telephone Number is 2184936) for clarifications, if any, required in regard to the proposed ALM System and guidelines. The name, address and Telephone Number (also Telex/Fax Number) of the Nodal Officer may be advised to us immediately.

4. In order to disseminate and impart knowledge on the subject, it has been decided to hold 2/3 days' seminars in Bankers Training College, Mumbai in November 1998 to enable banks to overcome initial difficulties and to implement the system smoothly.

5. Banks should introduce the proposed ALM System positively from April 1, 1999. We shall be glad to receive feed-back from you on the subject before October 15, 1998. A formal Circular will be issued to banks on the subject some time in January 1999.

6. Papers on "Principles for the Management of Interest Rate Risk" and "A Framework for Measuring and Managing Liquidity" issued by the Basle committee on Banking supervision, are enclosed for information and guidance of banks.

Yours faithfully,

(A. Ghosh)

Chief General Manager

ASSET - LIABILITY MANAGEMENT SYSTEM IN BANKS - GUIDELINES

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.

2. 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.

3. The ALM process rests on three pillars:

- ALM information systems
- Management Information Systems
- Information availability, accuracy, adequacy and expediency
- ALM organisation
- Structure and responsibilities
- Level of top management involvement
- ALM process
- Risk parameters
- Risk identification
- Risk measurement
- Risk management
- Risk policies and tolerance levels.

4. 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.

5. ALM organisation

5.1 a) The Board should have overall responsibility for management of risks and should decide the risk management policy of the bank and set limits for liquidity, interest rate, foreign exchange and equity price risks.

b) The Asset-Liability Committee (ALCO) consisting of the bank's senior management including CEO should be responsible for ensuring adherence to the limits set by the Board as well as for deciding the business strategy of the bank (on the assets and liabilities sides) in line with the bank's budget and decided risk management objectives.

c) The ALM desk consisting of operating staff should be responsible for analysing, monitoring and reporting the risk profiles to the ALCO. The staff should also prepare forecasts (simulations) showing the effects of various possible changes in market conditions related to the balance sheet and recommend the action needed to adhere to bank's internal limits.

5.2 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.

Top Management, the CEO/CMD or ED should head the Committee. The Chiefs of Investment, Credit, Funds Management/Treasury (forex and domestic), International banking and Economic Research can be members of the Committee. In addition the Head of the Information Technology Division should also be an invitee for building up of MIS and related computerisation. Some banks may even have sub-committees.

5.4 Committee of Directors

Banks should also constitute a professional managerial and Supervisory Committee consisting of three to four directors which will oversee the implementation of the system and review its functioning periodically.

5.5 ALM process:

The scope of ALM function can be described as follows:

- I Liquidity risk management
- I Management of market risks (including Interest Rate Risk)
- I Funding and capital planning
- I Profit planning and growth projection
- I Trading risk management

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

6. Liquidity Risk Management

6.1 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. The format of the Statement of Structural Liquidity is given in Annexure I.

6.2 The Maturity Profile as given in Appendix I could be used for measuring the future cash flows of banks in different time buckets. The time buckets given the Statutory Reserve cycle of 14 days may be distributed as under:

- i) 1 to 14 days
- ii) 15 to 28 days
- iii) 29 days and upto 3 months
- iv) Over 3 months and upto 6 months
- v) Over 6 months and upto 12 months
- vi) Over 1 year and upto 2 years
- vii) Over 2 years and upto 5 years
- viii) Over 5 years

6.3 Within each time bucket there could be mismatches depending on cash inflows and outflows. While the

5.3 Composition of ALCO

The size (number of members) of ALCO would depend on the size of each institution, business mix and organisational complexity. To ensure commitment of the mismatches upto one year would be relevant since these provide early warning signals of impending liquidity problems, the main focus should be on the short-term mismatches viz., 1-14 days and 15-28 days. banks, however, are expected to monitor their cumulative mismatches (running total) across all time buckets by establishing internal prudential limits with the approval of the Board/Management Committee.

The mismatch during 1-14 days and 15-28 days should not in any case exceed 20% of the cash outflows in each time bucket. If a bank in view of its asset - liability profile needs higher tolerance level, it could operate with higher limit sanctioned by its Board/Management Committee giving reasons on the need for such higher limit. A copy of the note approved by Board/Management Committee may be forwarded to the Department of Banking Supervision, RBI. The discretion to allow a higher tolerance level is intended for a temporary period, till the system stabilises and the bank is able to restructure its asset-liability pattern.

6.4 The Statement of Structural Liquidity (Annexure I) may be prepared by placing all cash inflows and outflows in the maturity ladder according to the expected timing of cash flows. A maturing liability will be a cash outflow while a maturing asset will be a cash inflow. It would be necessary to take into account the rupee inflows and outflows on account of forex operations including the readily available forex resources (FCNR (B) funds, etc.) which can be deployed for augmenting rupee resources. While determining the likely cash inflows/outflows, banks have to make a number of assumptions according to their asset - liability profiles. For instance, Indian banks with large branch network can (on the stability of their deposit base as most deposits are renewed) afford to have larger tolerance levels in mismatches if their term deposit base is quite high. While determining the tolerance levels the banks may take into account all relevant factors based on their asset-liability base, nature of business, future strategy etc. The RBI is interested in ensuring that the tolerance levels are determined keeping all necessary factors in view and further refined with experience gained in Liquidity Management.

6.5 In order to enable the banks to monitor their short-term liquidity on a dynamic basis over a time horizon spanning from 1-90 days, banks may estimate their short-term liquidity profiles on the basis of business projections and other commitments. An indicative format (Annexure III) for estimating Short-term dynamic Liquidity is enclosed.

7. Currency Risk

7.1 Floating exchange rate arrangement has brought in its wake pronounced volatility adding a new dimension to the risk profile of banks balance sheets. The increased capital flows across free economies following deregulation have contributed to increase in the volume of transactions. Large cross border flows together with the volatility has rendered the banks balance sheets vulnerable to exchange rate movements.

7.2 Dealing in different currencies brings opportunities as also risks. If the liabilities in one currency exceed the level of assets in the same currency, then the currency mismatch can add value or erode value depending upon the currency movements. The simplest way to avoid currency risk is to ensure that mismatches, if any, are reduced to zero or near zero. Banks undertake operations in foreign exchange like accepting deposits, making loans and advances and quoting prices for foreign exchange transactions. Irrespective of the strategies adopted, it may not be possible to eliminate currency mismatches altogether. Besides, some of the institutions may take proprietary trading positions as a conscious business strategy.

7.3 Managing Currency risk is one more dimension of Asset - Liability Management. Mismatched currency position besides exposing the balance sheet to movements in exchange rate also exposes it to country risk and settlement risk. Ever since the RBI (Exchange Control Department) introduced the concept of end of the day near square position in 1978, banks have been setting up overnight limits and selectively undertaking active day time trading. Following the introduction of "Guidelines for Internal Control over Foreign Exchange Business" in 1981, maturity mismatches (gaps) are also subject to control. Following the recommendations of Expert Group on Foreign Exchange Markets in India (Sodhani Committee) the calculation of exchange position has been redefined and banks have been given the discretion to set up overnight limits linked to maintenance of additional Tier I capital to the extent of 5 per cent of open position limit.

7.4 Presently, the banks are also free to set gap limits with RBI's approval but are required to adopt Value at Risk (VaR) approach to measure the risk associated with forward exposures. Thus the open position limits together with the gap limits form the risk management approach to forex operations. For monitoring such risks banks should follow the instructions contained in Circular A.D (M.A. Series) No. 52 dated December 27, 1997 issued by the Exchange Control Department.

8. Interest Rate Risk (IRR)

8.1 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 (NII) 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).

- ii) Over one month and upto 3 months
- iii) Over 3 months and upto 6 months
- iv) Over 6 months and upto 12 months
- v) Over 1 year and upto 3 years
- vi) Over 3 years and upto 5 years
- vii) Over 5 years
- viii) Non-sensitive

The various items of rate sensitive assets and liabilities in the Balance Sheet may be classified as explained in Appendix-II and the Reporting Format for interest rate sensitive assets and liabilities is given in Annexure II.

8.3 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.

8.4 Each bank should set prudential limits on individual Gaps with the approval of the Board/Management Committee. The prudential limits should have a bearing on the total assets, earning assets or equity. The banks may work out earnings at risk, based on their views on interest rate movements and fix a prudent level with the approval of the Board/Management Committee.

8.5 RBI will also introduce capital adequacy for market risks in due course.

9. The classification of various components of assets and liabilities into different time buckets for preparation of Gap reports (Liquidity and Interest Rate Sensitivity) as indicated in Appendices I & II is the benchmark. Banks which are better equipped to reasonably estimate the behavioural pattern, embedded options, rolls-in and rolls-out, etc. of various components of assets and liabilities on the basis of past data/empirical studies could classify them in the appropriate time buckets, subject to approval from the ALCO/Board. A copy of the note approved by the ALCO/Board may be sent to the Department of Banking Supervision.