ASSET LIABILITY MANAGEMENT IN BANKS

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Post liberalization, the Indian banking system has performed exceedingly well despite the various economic and political upheavals. But, in spite of its consistent performance and strong fundamentals, one grueling problem continues to plague the banking industry – the management of its assets and liabilities. With several risks that banks face on a regular basis, problems concerning assets and liabilities have always been a cause of concern for all bankers.

Asset Liability Management (ALM) is an integral part of the financial management process of any bank. ALM is concerned with strategic balance sheet management involving risks caused by changes in the interest rates, exchange rates and the liquidity position of the bank. While managing these three risks forms the crux of ALM, credit risk and contingency risk also form a part of the ALM. The Indian financial markets have witnessed wide reaching changes at an unprecedented pace over the last five years. Intense competition for business on the assets and liabilities sides combined with increasing volatility in both domestic interest rates as well as foreign exchange rates is putting pressure on the management of banks and financial institutions to maintain spreads, profitability and long-term viability. These pressures need to be addressed, not on an ad-hoc, fire-fighting basis, but from a strategic perspective. The search for rewards by bank managements’ has to be tempered with an understanding of the risks that need to be taken to gain these rewards.

ALM can be termed as a risk management technique designed to earn an adequate return while maintaining a comfortable surplus of assets beyond liabilities. It takes into consideration interest rates, earning power, and degree of willingness to take on debt and hence is also known as Surplus Management. But in the last decade the meaning of ALM has evolved. It is now used in many different ways under different contexts. ALM, which was actually pioneered by financial institutions and banks, are now widely being used in industries too. The Society of Actuaries Task Force on ALM Principles, Canada, offers the following definition for ALM: "Asset Liability Management is the on-going process of formulating, implementing, monitoring, and revising
strategies related to assets and liabilities in an attempt to achieve financial objectives for a given set of risk tolerances and constraints."

The Asset Liability Management is all about efficient management of balance sheet dynamics with regard to its size, constituents and quality. More specifically, it is the process of managing the Net Interest Margin (NIM) within the overall risk bearing ability of a bank. The entire ALM process depends on the understanding of the balance sheet; the availability, accuracy, adequacy and expediency of the data and the MIS system of banks.

The significance of ALM has increased due to the dramatic changes that have occurred in recent years in the assets (uses of funds) and liabilities (sources of funds) of banks. Competition among banks has grown manifold and with the spread in the banks interest income coming closer day by day, banks have forayed into several other avenues of revenue generation. This has lead to an increase in the size of their business, resulting in increasing the nature and complexity of a bank’s operations. In essence, the entire process of Asset Liability Management in banks has graduated to a more sophisticated plane.

One way to measure the direction and extent of asset-liability mismatch is by using gap analysis. The analysis derives its name from the “gap” which is the difference between the amounts of Rate Sensitive Asset (RSA) and Rate Sensitive Liabilities (RSL). Managing this “gap” is in large part what Asset Liability Management is all about. The goal of the Asset Liability Committee (ALCO) at many banks is to price and market loans and deposits in such a way as to eliminate the gap.

**Introduction on Asset Liability Management**

On the threshold of the new millennium, the Indian banking sector is waking up to a concept of Asset Liability Management. ALM as a practice has been in existence for quite a long time. The emergence of this concept can be traced to the mid 1970s in the US when deregulation of the interest rates compelled the banks to undertake active planning for the structure of the balance sheet.

As financial intermediaries banks are known to accept deposit to lend money to entrepreneurs to make profit – of course, all within the norms of the Central Bank. They essentially intermediate between the opposing liquidity needs of depositors and borrowers. In the process, they function with an embedded mismatch between highly liquid liabilities on the one side and less liquid and long term
assets on the other side of their balance sheets. Over and above this balance sheet conflict, they also stand exposed to a wide array of risk such as market risk, transformation risk, credit risk, liquidity risk, forex risk, legal risk, operation risk, reputation risk, interest rate risk, etc. The uncertainty of interest rate movements gave rise to interest rate risk thereby causing banks to look for processes to manage their risks. In the wake of interest rate risk came liquidity risk and credit risk as inherent components of risk for banks. The recognition of these risks brought Asset Liability Management to the center-stage of financial intermediation. The ongoing process of “globalization” has only further accentuated these risks.

The Indian economy has witnessed a similar scenario. The post-reform banking scenario is marked by interest rate deregulation, entry of new private banks, gamut of new products and greater use of information technology. To cope with these pressures banks were required to evolve strategies rather than ad hoc fire fighting solutions. These strategies are executed in the form of ALM practices. An efficient ALM technique aims to manage the volume, mix, maturity, rate sensitivity, quality and liquidity of the assets and liabilities as a whole so as to earn a predetermined, acceptable risk/reward ratio.

In India, the post liberalization period witnessed a rapid industrial growth, which has further stimulated the growth in the fund raising activities. With the rise in demand for funds, there has also been a remarkable shift in the features of the sources and uses of funds of banks. Traditionally administered rates were used to price the assets and liabilities of banks. However, in the deregulated environment, competition has narrowed the spreads of the banks. This not only has lead to the introduction of discriminate pricing policies, but has also highlighted the need to match the maturities of the assets and liabilities. The developments that have taken place since liberalization has led to a remarkable transition in the risk profile of the financial intermediaries.

Risk per se is not bad. Indeed, without risk there is no return. So what is needed here is not avoiding risks, but taking risks prudently and managing them with due diligence. Effective management of risk is must, particularly in organizations like banks, which operate in highly, leveraged balance sheets. Otherwise, risks can rattle banks and even throw them out of the business in no time. Hence, the need for banks to adopt sophisticated risk management systems. It is in this context that the context of concept of “ALM” has entered Indian banks as a Risk – Management tool.
Banks and financial institutions are prone to more than one risk. The importance of an effective asset-liability management in banks ensures that all these risks are accounted for and due care is taken. Traditionally, Indian banking business can be looked upon as the business of taking on credit risk. Market risk is the risk that the net income and capital of a bank are adversely affected by changes in interest rates and foreign exchange rates. Market risk was virtually non-existent in a regulated regime where market rates and prices were stable for relatively long periods of time. This is no longer true in today's scenario. The past year has already seen several banks coming out with disastrous financial results, due to a combination of adverse credit and market risk impact on their performances. Thus, while credit risk continues to be the largest of the risks taken by Indian Banks, control of market risk is also assuming importance to senior bank managers and regulators alike. ALM is the process of facilitating the control of risks and by doing so helping banks achieve their financial goals.

**Definition of ALM**

ALM is defined as, “the process of decision – making to control risks of existence, stability and growth of a system through the dynamic balances of its assets and liabilities.”

The textbook definition of ALM is “a risk management technique designed to earn an adequate return while maintaining a comfortable surplus of assets beyond liabilities. It takes into consideration interest rates, earning power and degree of willingness to take on debt. It is also called surplus- management”.

**ALM is the strategic positioning of the Balance Sheet to:**

- Immunize profitability from core banking activities
- Optimize intrinsic value of the bank
- Ensure ability at all times to meet claims by creditors

**What is Asset Liability Management?**

ALM has been described as ‘a continuous process of planning, organizing and controlling Asset and Liability volumes, maturities, rates and yields.’ In the present environment it is aptly defined as the process of adjusting bank liabilities to meet loan demands, liquidity needs and safety requirements.
In the process, ALM manages the Net Interest Margin within the overall risk bearing capacity of a bank.

It is essentially the art of manipulating a bank’s balance sheet and income statement to accomplish the desired goals. It enables banks to sustain their required growth rate by systematically managing market risk, liquidity risk, capital risk, etc. It inter alias involves the following, all with a focus on profit and long term stability of the bank:

- Adjusting a bank’s liability in such a way that it can meet its liquidity and safety needs, besides being able to service the customer’s demands for loans.
- Directing, controlling the flow of funds, its means, the cost thereof and the yield on consolidated funds of banks.
- Managing maturity profile of assets and liabilities in such a way that interest rate risk is kept under check.
- Managing net interest margin within the overall risk appetite of a bank.

All these measures are interlinked and hence call for deft handling by the corporate leadership.

Implementation of ALM can be broken down into three phases:

1. Choosing an appropriate length of planning horizon of say one, two or three months ahead depending upon the bank’s ability to collect the necessary financial information from the profit centers;
2. Based on the collected information working out estimates of return and risk under different models and
3. Choosing a right model that results in a stable net interest income consistently.

Asset Liability Management (ALM) is a tool that enables bank managements’ to take business decisions in a more informed framework. The ALM function informs the manager what the current market risk profile of the bank is and the impact that various alternative business decisions would have on the future risk profile. The manager can then choose the best course of action depending on his board’s risk appetite. Consider for example, a situation where the chief of a bank’s retail deposit mobilization function wants to know the kind of deposits that the branches should be told to encourage. To answer this question correctly he would need to know inter alias the existing cash flow profile of the bank. Let us assume that the structure of the existing assets and liabilities of the bank are such that at the aggregate the maturity of assets is longer than maturity of liabilities. Thus,
given the above information on the existing risk profile of the bank, the retail deposits chief knows that the bank can reduce its future risk by marketing its long-term deposit products more aggressively. If necessary he may offer increased rates on long-term deposits and/or decreasing rates on the shorter-term deposits.

The above example illustrates how correct business decision-making can be added by the interest rate risk related information. The real world of banking is of course more complicated. The risk related information is just one of many pieces of information required by a manager to take decisions. In the above example itself the retail deposits chief would also have considered a host of other factors like competitive pressures, demand and supply factors, impact of the decision on the banks retail lending products, etc before taking a final decision. The important thing, however, is that ALM is a tool that encourages business decision making in a more disciplined framework with an eye on the risks that the bank is exposed to. ALM is thus a comprehensive and dynamic framework for measuring, monitoring and managing the market risks, i.e. liquidity interest and exchange rate risks of a bank. It has to be closely integrated with the bank’s business strategy as this affects the future risk profile of the bank.

This framework needs to be built around a foundation of sound methodology and human and technological infrastructure. It has to be supported by the board's risk philosophy, which clearly specifies the risk policies and tolerance limits.

**Purpose of Asset Liability Management**

The enhanced level of importance of ALM has led to the change in the nature of its functions. It is no longer a stand-alone analytical function. While there are macro and micro-level objectives of ALM, it is, however, the micro-level objectives that hold the key for attaining the macro-level objectives. At the macro-level, ALM leads to the formulation of critical business policies, efficient allocation of capital and designing of products with appropriate pricing strategies. And at the micro-level, the objective functions of the ALM are two-fold. It aims at profitability through price matching while ensuring liquidity by means of maturity matching. Price matching basically aims to maintain spreads by ensuring that the deployment of liabilities will be at a rate higher than the costs. Similarly, grouping the assets/liabilities based on their maturing profiles ensures liquidity. The gap is then assessed identify the future financing requirements. This ensures liquidity. However, maintaining
profitability by matching prices and ensuring liquidity by matching the maturity levels is not an easy task. The following tables explain the process involved in price matching and maturity matching.

**Price Matching**

(Rs. cr.)

<table>
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<tr>
<th>Liabilities</th>
<th>Amount</th>
<th>Rate (%)</th>
<th>Assets</th>
<th>Amount</th>
<th>Rate (%)</th>
<th>Liabilities</th>
<th>Amount</th>
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* Average cost/return on liabilities/assets.

**Maturity Matching**

(Rs. cr.)

(Period in months)

<table>
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<tr>
<th>Liabilities</th>
<th>Maturing within (months)</th>
<th>Assets</th>
<th>Maturing within (months)</th>
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<th>Assets</th>
<th>Gap</th>
<th>Cumulative Gap</th>
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Table 1 shows how a proper deployment of liabilities can ensure positive spreads. These spreads can, however, be attained if the interest rate movements are known with accuracy, and the forecasts made fall close to actual movements. This approach further ignores maturity mismatches, which may to a certain extent affect the expected results.

Similarly, table II helps in determining the Gap that exists by using forecasted cash flows, both inflows and outflows. It further forecasts the surplus/deficit fund position and thereby enables better financing plan. Maturity matching, however, is possible if the financial requirements are forecasted accurately. This approach does not integrate fully with the price-matching concept. Though these two approaches i.e. price matching and maturity matching effectively reduce risks the methodology adopted may not be feasible in reality.

The above approaches help the management to have an understanding of the structure of the balance sheet. In fact these two approaches contradict each other to some extent because a spread is possible when a mismatch of maturity is taken up. There has to be a trade-off between the two.

Similar position may occur when the exchange rate risk is tackled without considering the interest rate risk. Thus, risk management approaches for ALM cannot be one-dimensional since the risks need to be managed collectively. The interlinkage present between them also emphasizes this point. An effective ALM technique aims to manage the volume, mix, maturity, rate sensitivity, quality and liquidity of the assets and liabilities as a whole so as to attain a predetermined acceptable risk/reward ratio. The purpose of ALM is thus, to enhance the asset quality, quantify the risk associated with the assets and liabilities and further manage them. The process will involve the following steps:

- Firstly, review the interest rate structure and compare the same to the interest/product pricing of both assets and liabilities. This to a certain extent will highlight the impending risks and the need for managing the same.
Secondly, examine the loan and the investment portfolios in the light of the foreign exchange risk and liquidity risk that might arise. At the same time the affect of these risks on the value and cost of liabilities should also be given due consideration.

Thirdly, examine the probability of the credit risk and contingency risk that may originate either due to rate fluctuations or otherwise and assess the quality of assets.

Finally, reviews the actual performance against the projections made and analyzes the reasons for any affect on the spreads.

The above-mentioned steps evolve the task of asset-liability management i.e. identification of the various risks present in the system and designing an appropriate ALM technique that suits the organizational requirements. The ALM technique so designed to manage the various risks will primarily aim to stabilize the short-term profits, long-term earnings and long run sustenance of the bank. The parameter that is selected for the purpose of stabilizing will also indicate the target account that needs to be managed. The most common target accounts in ALM of banks are:

**Net Interest Income (NII):** The impact of volatility on the short-term profits is measured by NII. Hence, if a bank has to stabilize its short-term profits, it will have to minimize the fluctuations in the NII.

**Market Value of Equity (MVE):** The market value of equity represents the long-term profits of the bank. The bank will have to minimize the adverse movement in this value due to rate fluctuations. The target account will thus be MVE. In the case of unlisted banks, the difference between the market value of assets and liabilities will be the target account.

**Economic Equity Ratio:** The ratio of the shareholder’s funds to the total assets measures the shifts in the ratio of owned funds to total funds. This in fact assesses the sustenance capacity of the bank. Stabilizing this account will generally come as a statutory requirement.

While the bank can target any one account, it is, however, essential to observe the impact on the other accounts also. While both NII and MVE may be affected favorably/adversely, there may also be instances where one may be affected favorably while other may be affected adversely. Considering these different situations, the bank may sometimes lay exclusive focus on the short-term profits and take decisions that have an adverse impact on the long-term profits of the bank and vice versa. It is not possible to simultaneously eliminate completely the volatility of both income and market value. Hence it should balance between these two objectives.
Evolution of Assets Liability Management

ALM developed over the years in three phases in order to keep up with the increasingly volatile financial market.

Phase 1: This phase began with the advent of a highly volatile global financial environment during mid 1970s.

Phase 2: This phase followed the explosive growth of new financial products offered by financial institutions in the early 1980s.

Phase 3: This phase was a result of increasing awareness of the top management as to how much risk they were actually taking. The derivatives disaster and a plethora of other market risks to which institutions were exposed to, culminated in top management taking significant cognizance of the growing need for ALM to be part of their institution’s strategic planning. This was in early 1990s, when this phase saw the birth of new asset and liability management technology and software.

Evolution of Asset Liability Management in India

While most of the banks in other economies began with strategic planning for asset and liability management as early as 1970, the Indian banks remained unconcerned about the same. Till the eighties, the Indian banks continued to operate in a protected environment. In fact, at the time when deregulation began in international markets during the 1970s, banks were nationalized in India (in 1969).

It was only in 1992, that there was a need to restructure the Indian banking industry, to deregulate the financial sector, particularly the banking sector. This brought about a paradigm shift in the banking industry and the Reserve Bank of India (RBI) issued ‘guidelines for ALM’.

Banks have initiated the ALM process on the lines prescribed by the RBI. However, the key to the successful implementation of the process is information technology and having the necessary MIS in place to get the benefits of these modules. With ALM taking the center stage, India banks have no choice but to re-orient their strategies today, to meet the challenges of tomorrow.

Evolution of Asset Liability Management as a Discipline
It is not that there was no asset liability management in the past. In fact, it was earlier carried out in a fragmented manner throughout the institutions. Different ALM functions were carried out at different levels. For example, planning for capital was done by the corporate finance department, risk management by the treasury group, investment functions by the investment planning group and so on. Hence, the exercise was carried out in a disjointed manner and was function-specific, which leads to different approaches, logical applications and methodologies being adopted. The ALM function has emerged as a discipline in its own right. With professionals at top senior level managing this exercise, it is no longer fragmented. It is not a by-product of the growing size of corporations; it is a pressing need of the today.

Objectives of Asset Liability Management

The objective of ALM is to manage risk and not eliminate it. Risks and rewards go hand in hand. One cannot expect to make huge profits without taking a huge amount of risk. Because without risk, the expected profitability is also minimized. The objectives do not limit the scope of the ALM functionality to mere risk assessment, but expanded the process to the taking on of risks that might conceivably result in an increase in economic value of the balance sheet.

The ALM function is not simply about Risk Protection. It should also be about enhancing the net worth of the institution through opportunistic positioning of the balance sheet. The more leveraged an institution, the more critical is the ALM function with enterprise.

The following are some of the fundamental objectives that an ALM function must strive to address:

- To protect and enhance the net worth of the institution.
- Formulation of critical business policies and efficient allocation of Capital.
- To increase the Net Interest Income (NII) and to control volatility of NII from changes in interest rates.
- To maintain and protect spreads or Net Interest Margin (NIM).
- It is a quantification of the various risks in the balance sheet and optimizing of profit by ensuring acceptable balance between profitability, growth and risks.
ALM should provide liquidity management within the institution and choose a model that yields a stable net interest income consistently while ensuring liquidity.

Choosing a suitable length of planning horizon – say one, two, three months ahead.

To actively and judiciously leverage the balance sheet to streamline the management of regulatory capital.

Funding of banks operation through capital planning.

Product pricing and introduction of new products.

To control volatility of market value of capital from market risk.

Working out estimates of return and risk that might result from pursuing alternative programs.

To minimize physical cash holding and to maximize Per Employee Business (PEB).

In other words, the ultimate objective of the ALM is profitability and long term operating viability of the organization in otherwise risky environment.

**Organization of ALM**

ALM Organization broadly consists of the following structure in Banks and Financial Institutions:
A committee headed by the Chief Executive Officer of the Bank handles the reins of ALM of the Bank. Other members in the committee are Functional Heads of the Department like:

1. Treasury / Investments;
2. Credit/Advances;
3. Resource Mobilization/Deposits;
4. Economic Research and Market Intelligence;
5. Corporate Policy Management;
6. Information and Technology.

This committee which is known as Asset Liability Management Committee, based on the Corporate policy / target, draws up strategy plans covering short-term, medium-term and long term plans to ALM.

The Executive Director and other vital department heads head ALCO in banks. ALCO meets at regular intervals and also as and when need – based decisions have to be taken.

ALCO has to be assisted by the ALM desk consisting of operating level staff. The three major functions of ALCO are threefold:

- Strategic Planning
- Product Pricing and
- Risk Management.
Significance of Asset Liability Management

The main reasons for the growing significance of Asset Liability Management are:

1. Volatility
2. Product innovations
3. Regulatory environment
4. Enhanced awareness of top management

Need and Importance of Asset Liability Management

Till early 90s, the banks were under a protected environment provided by RBI, which included regulated deposit rates, minimum lending rates and administered prime rates. The reforms process brought phased deregulation, new instruments or products and a number of risks such as credit, interest rate, disintermediation, liquidity, foreign exchange, prepayment and market risk. To manage some of these risks and maintain and improve the bottom lines, ALM is an effective and important tool. It informs the management as to what the current market risk profile of the bank is and the impact that various alternate business decisions would have on the future risk profile.
In a deregulated environment since 1999, Indian banks have been free to determine their own interest rates on deposits and advances in both domestic and foreign currencies on a dynamic basis. To decide a priori the impact of positive or negative changes on the existing interest rate along with the target value of change one needs to do a sensitivity analysis of interest rate with respect to profitability, interest spread and long-term viability. This scenario gives rise to the basic risk outlined as follows:

**Interest Rate Risk:** It is the risk of having a negative impact on a bank’s future earnings and on the market value of its equity due to changes in interest rates.

**Liquidity Risk:** It is the risk of having insufficient liquid assets to meet the liabilities at a given time.

**Forex Risk:** It is the risk of having losses in foreign exchange assets and liabilities due to exchanges in exchange rates among multi-currencies under consideration. In order to address various financial risks and take perspective steps, banks are required to introduce effective risk management systems in place.

ALM is concerned with risk management and it provides a comprehensive and dynamic framework for measuring, monitoring and managing associated risks. ALM enforces the best practices of risk management to fulfill business and strategic objectives of an organization. ALM provides best strategies for managing public funds for best return and for working towards increasing the market value of equity.

**Institutions Benefiting from Asset Liability Management**

**Which institutions would benefit from ALM?**

The scope of ALM covers various institutions. Since the asset comprise of Plant, Machinery and Equipment in corporate and securities and loans in financial institutions, the approach to each one of them differs. However, whether they are financial institutions or corporate, the techniques are basically the same.
The use of ALM in a corporation is slightly different from a financial institution. Although the techniques and the products are almost the same, there is one different factor. The bulk of assets of a corporation are generally non-financial whereas for a financial institution most of the assets are financial assets e.g. securities and loans.

ALM is a term whose meaning has evolved. It is used in slightly different ways in different contexts. Although financial institutions pioneered ALM, now even corporations have adopted ALM techniques for optimum risk management.

Components of Asset Liability Management

Framework for Asset Liability Management

ALM framework rests on three pillars
1. **ALM Organization:** The ALCO consisting of the bank's senior management including CEO should be responsible for adhering to the limits set by the board as well as for deciding the business strategy of the bank in line with the bank's budget and decided risk management objectives. ALCO is a decision-making unit responsible for balance sheet planning from a risk return perspective including strategic management of interest and liquidity risk.

2. **ALM Information System:** ALM Information System for the collection of information accurately, adequately and expeditiously. Information is the key to the ALM process. A good information system gives the bank management a complete picture of the bank's balance sheet.

3. **ALM Process:** The basic ALM process involves identification, measurement and management of risk parameters.

In order to carry out efficient ALM, it is necessary to pull all the basic elements into place. The different components of the ALM function should blend together so that there is smooth operation. All components should be given equal focus; no single component should be given more attention or importance than the others. ALM operates as a grid of various aspects, each integrating into each other.

The Elements of the ALM function are depicted in the diagram below:
1. **STRATEGIC FRAMEWORK**

   The Board of Directors is responsible for setting the limits for risk at global as well as domestic levels. They have to decide how much risk they are willing to take in quantifiable terms. Also it is necessary to determine who is in charge of controlling risk in the organization and their responsibilities.

2. **ORGANISATIONAL FRAMEWORK**

   All elements of the organization like the ALM Committee, sub-committees, etc., should have clearly defined roles and responsibilities. The top management with proper resource allocation and personnel committee should support ALM activities.

3. **OPERATIONAL FRAMEWORK**

   There should be a proper direction for risk management with detailed guidelines on all aspects of ALM. The policy statement should be well articulated providing a clear direction for ALM function.

4. **ANALYTICAL FRAMEWORK**

   Analytical methods in ALM require consistency, which includes periodic review of the models used to measure risk to avoid miscalculation and verifying their accuracy. Various analytical components like Gap, Duration, and Stimulation and Value-at-Risk should be used to obtain appropriate insights.

5. **TECHNOLOGY FRAMEWORK**

   An integrated technological framework is required to ensure all potential risks are captured and measured on a timely basis. It would be worthwhile to ensure that automatic information feeds into the ALM systems and the latest software is utilized to enable management perform extensive analysis, planning and measurement of all facets of the ALM function.

6. **INFORMATION REPORTING FRAMEWORK**

   The information – reporting framework decides who receives information, how timely, how often and in how much detail and whether the amount and type of information received is appropriate and necessary for the recipient’s task.

7. **PERFORMANCE REPORTING FRAMEWORK**

   The performance of the traders and business units can easily be measured using valid risk measurement measures. The performance measurement considers approaches and ways to adjust performance measurement for the risks taken. The profitability of an institution comes from three sources: Asset, Liabilities and their efficient management.
8. REGULATORY COMPLIANCE FRAMEWORK

The objective of regulatory compliance element is to ensure that there is compliance with the requirements, expectations and guidelines for risk – based capital and liquidity ratios.

9. CONTROL FRAMEWORK

The control framework covers the control over all processes and systems. The emphasis should be on setting up a system of checks and balances to ensure the integrity of data, analysis and reporting. This can be ensured through regular internal / external reviews of the function.

Survey Results

In the context of RBI guidelines, 17 banks in different sectors were investigated to study the level of preparedness for ALM in India. While the names of the banks and the people interviewed cannot be disclosed, the banks were classified into foreign banks, Indian private sector banks and Indian public sector banks.

MIS capability:

As expected all top foreign banks with their fully computerized networks have access to complete and reliable data. Some of the top private sector banks are also at par with foreign banks in this context. Most of these banks are in a position to access their balance sheet on-line. It is the public sector banks that are struggling in this area due to their unwieldy size and geographical spreads.

ALM Organization:

In line with the RBI guidelines, all banks have their ALCO in place. However foreign banks and private banks have their Alco’s in place much before the guidelines, to keep pace with global practices. Some progressive public sector banks like Corporation Bank too had ALCO in place, before the guidelines. It was also observed that the foreign banks and the private sector banks accorded greater seriousness to their Alco’s vis-à-vis the PSBs.

ALM process:

The RBI in its guidelines has asked Indian banks to use traditional techniques like Gap Analysis for monitoring interest rate and liquidity risk. However RBI is expecting Indian banks to move towards sophisticated techniques like Duration, Simulation, and VaR in the future.
As regards the trading portfolio all foreign banks and top Indian private sector banks use Value at Risk (VaR). For the accrued portfolio, most Indian private sector banks use Gap analysis, but are gradually moving towards duration analysis. Most of the foreign banks use duration analysis and are expected to move towards advanced methods like Value at Risk for the entire balance sheet. Some foreign banks are already using VaR for the entire balance sheet.

The presentation critically evaluated the Maturity gap method, Duration analysis on the parameters of their theoretical efficacy and also their practical implications. However, the area of maximum interest was the Value at Risk method.

Scope of Asset Liability Management

Basis of Asset Liability Management – Asset–Liability Risk

Traditionally, banks used accrual system of accounting for all their assets and liabilities. They would take on liabilities - such as deposits, life insurance policies or annuities. They would then invest the proceeds from these liabilities in assets such as loans, bonds or real estate. All these assets and liabilities were held at book value. Doing so disguised possible risks arising from how the assets and liabilities were structured.

Consider a bank that borrows 1 Crore (100 Lakhs) at 6 % for a year and lends the same money at 7 % to a highly rated borrower for 5 years. The net transaction appears profitable-the bank is earning a 100 basis point spread - but it entails considerable risk. At the end of a year, the bank will have to find new financing for the loan, which will have 4 more years before it matures. If interest rates have risen, the bank may have to pay a higher rate of interest on the new financing than the fixed 7 % it is earning on its loan.

Suppose, at the end of a year, an applicable 4-year interest rate is 8 %. The bank is in serious trouble. It is going to earn 7 % on its loan but would have to pay 8 % on its financing. Accrual accounting does not recognize this problem. Based upon accrual accounting, the bank would earn Rs 100,000 in the first year although in the preceding years it is going to incur a loss. So for this the bank will have to secure financing for the loan at the new higher rate, so it will accrue the as-yet unrecognized loss over the 4 remaining years of the position.
The problem in this example was caused by a mismatch between assets and liabilities. Prior to the 1970's, such mismatches tended not to be a significant problem. Interest rates in developed countries experienced only modest fluctuations, so losses due to asset-liability mismatches were small or trivial. Many firms intentionally mismatched their balance sheets and as yield curves were generally upward sloping, banks could earn a spread by borrowing short and lending long.

Things started to change in the 1970s, which ushered in a period of volatile interest rates that continued till the early 1980s. *US regulations that had capped the interest rates so that banks could pay depositors, were abandoned which led to a migration of dollar deposit overseas.* Managers of many firms, who were accustomed to thinking in terms of accrual accounting, were slow to recognize this emerging risk. Some firms suffered staggering losses. Because the firms used accrual accounting, it resulted in more of crippled balance sheets than bankruptcies. Firms had no options but to accrue the losses over a subsequent period of 5 to 10 years.

*One example, which drew attention, was that of US mutual life insurance company "The Equitable." During the early 1980s, as the USD yield curve was inverted with short-term interest rates sky rocketing, the company sold a number of long-term Guaranteed Interest Contracts (GICs) guaranteeing rates of around 16% for periods up to 10 years. Equitable then invested the assets short-term to earn the high interest rates guaranteed on the contracts. But short-term interest rates soon came down. When the Equitable had to reinvest, it couldn't get even close to the interest rates it was paying on the GICs. The firm was crippled. Eventually, it had to demutualize and was acquired by the Axa Group.*

Increasingly banks and asset management companies started to focus on Asset-Liability Risk. The problem was not that the value of assets might fall or that the value of liabilities might rise. It was that capital might be depleted by narrowing of the difference between assets and liabilities and that the values of assets and liabilities might fail to move in tandem. Asset-liability risk is predominantly a leveraged form of risk. The capital of most financial institutions is small relative to the firm's assets or liabilities, and so small percentage changes in assets or liabilities can translate into large percentage changes in capital.

The diagram below illustrates the evolution over time of a hypothetical company's assets and liabilities. Over the period shown, the assets and liabilities change only slightly, but those slight
changes dramatically reduce the company’s capital (which, for the purpose of this example, is defined as the difference between assets and liabilities).

In Exhibit 1, the capital falls by over 50%, a development that would threaten almost any institution.

**ASSET – LIABILITY RISK**

Asset-liability risk is leveraged by the fact that the values of assets and liabilities each tend to be greater than the value of capital. In this example, modest fluctuations in values of assets and liabilities result in a 50% reduction in capital.

Accrual accounting could disguise the problem by deferring losses into the future, but it could not solve the problem. Firms responded by forming asset-liability management (ALM) departments to assess this asset-liability risk. They established ALM committees comprised of senior managers to address the risk.

Some techniques of ALM—such as duration analysis—do not address liquidity issues at all. Others are compatible with cash-flow analysis. With minimal modification, a gap analysis can be used for cash flow analysis. Scenario analysis can easily be used to assess

**Liquidity risk:**

Firms recognized a potential for liquidity risks to be overlooked in ALM analyses. They also recognized that many of the tools used by ALM departments could easily be applied to assess liquidity risk. Accordingly, the assessment and management of liquidity risk became a second function of ALM departments and ALM committees. Today, liquidity risk management is generally considered a part of ALM.
ALM has evolved since the early 1980's. Today, financial firms are increasingly using market value accounting for certain business lines. This is true of universal banks that have trading operations. For trading books, techniques of market risk management—value-at-risk (VaR), market risk limits, etc.—are more appropriate than techniques of ALM. In financial firms, ALM is associated with those assets and liabilities—those business lines—that are accounted for on an accrual basis. This includes bank lending and deposit taking. It includes essentially all traditional insurance activities.

Techniques of ALM have also evolved. The growth of OTC derivatives markets has facilitated a variety of hedging strategies. A significant development has been securitization, which allows firms to directly address asset-liability risk by removing assets or liabilities from their balance sheets. This not only eliminates asset-liability risk; it also frees up the balance sheet for new business.

The scope of ALM activities has widened. Today, ALM departments are addressing (non-trading) foreign exchange risks and other risks. Also, ALM has extended to non-financial firms. Corporations have adopted techniques of ALM to address interest-rate exposures, liquidity risk and foreign exchange risk. They are using related techniques to address commodities risks. For example, airlines' hedging of fuel prices or manufacturers' hedging of steel prices are often presented as ALM.

**Risk Management, Risk Measurement, Risk Monitoring**

**Risk Measurement**

The first step in setting up the ALM function in a bank would be to decide upon the measurement framework, i.e. what should be the risk measure parameters that the management would need to focus on. The appropriate parameters would depend on the volatility in the operating environment, availability of supporting data, the expertise available within the bank and expected market and business developments, for instance the introduction of derivative and securitisation. The risk parameters chosen should be capable of capturing the risks to the immediate profitability as well as the risks on long term viability, i.e. future spreads, balance sheet value and economic capital adequacy with changes in interest/exchange rates. Typically, banks the world over use two major parameters to measure their balance sheet risks. The first parameter is the risk to the net interest income of the bank, which measures the risk to the immediate accounting year profits that arises from cash flow mismatches occurring in the accounting year. The other parameter is the Market Value of Portfolio Equity (MVPE). MVPE is the difference between the marked-to-market values of
the bank’s assets and liabilities. It measures the risk that lies embedded in the bank's balance sheet due to the maturity mismatches in its assets and liabilities over the future years. These two parameters together capture the short term and long term balance sheet risks.

**Risk Monitoring**

A robust mechanism needs to be built in so as to enable constant monitoring by the senior management as regards the risk parameters and to ensure adherence to policy limits. The frequency of monitoring the risks would be determined keeping in mind the availability of data, volatility of interest and exchange rates and the pace of change of the risk profile on the bank's balance sheet. In the current Indian scenario banks would attempt to measure their risks once in every quarter initially. This needs to be eventually extended to monitoring risks on a monthly basis once the ALM process stabilizes in the bank.

**Risk Management**

Management of market risk in a bank should be at two levels. These are:

I. The Board of Directors should bear the overall responsibility for risk management. The board should clearly communicate to the management the acceptable level of risks in terms of the parameters chosen. It is also the board's responsibility to ensure that the bank puts in place software and management systems and expertise to regularly monitor and report these risks and

II. The Asset Liability Committee (ALCO) consisting of the banks senior management (including the CEO) should be responsible for the strategic management of risks. It is responsible for ensuring adherence of the board limits as well as deciding the business strategy of the bank on the asset and liability sides in-line with the risk management objectives. The ALCO will be assisted by the ALM desk consisting of operating level staff that will be responsible for analyzing, monitoring and reporting the risk levels to the ALCO.

The actual tools for management of market risks would primarily be of balance sheet nature, owing to the absence of derivatives in the Indian market. Thus, management techniques would mainly be driven by both target maturity/ product strategy and structure of incremental business on the borrowing and lending side. A sound pricing strategy based on adequate risk/ return payoffs as well as diversification into activities, which reduce earnings, volatility fee based/ annuity services. With the expected growth of the domestic derivatives market in the medium term, banks will eventually
have more flexibility in charting business strategies as resultant market risks can be hedged off the balance sheet.

**Asset Liability Management Approach (Integrated)**

**Asset-Liability Management Approach**

ALM in its most apparent sense is based on funds management. Funds management represents the core of sound bank planning and financial management. Although funding practices, techniques, and norms have been revised substantially in recent years, it is not a new concept. Funds management is the process of managing the spread between interest earned and interest paid while ensuring adequate liquidity. Therefore, funds management has following three components, which have been discussed briefly.

**A. Liquidity Management**

Liquidity represents the ability to accommodate decreases in liabilities and to fund increases in assets. An organization has adequate liquidity when it can obtain sufficient funds, either by increasing liabilities or by converting assets, promptly and at a reasonable cost. Liquidity is essential in all organizations to compensate for expected and unexpected balance sheet fluctuations and to provide funds for growth. The price of liquidity is a function of market conditions and market perception of the risks, both interest rate and credit risks, reflected in the balance sheet and off-balance sheet activities in the case of a bank. If liquidity needs are not met through liquid asset holdings, a bank may be forced to restructure or acquire additional liabilities under adverse market conditions. Liquidity exposure can stem from both internally (institution-specific) and externally generated factors. Sound liquidity risk management should address both types of exposure. External liquidity risks can be geographic, systemic or instrument-specific. Internal liquidity risk relates largely to the perception of an institution in its various markets: local, regional, national or international. Determination of the adequacy of a bank's liquidity position depends upon an analysis of its:

- Historical funding requirements
- Current liquidity position
- Anticipated future funding needs
- Sources of funds
Present and anticipated asset quality
Present and future earnings capacity
Present and planned capital position

As all banks are affected by changes in the economic climate, the monitoring of economic and money market trends is key to liquidity planning. Sound financial management can minimize the negative effects of these trends while accentuating the positive ones. Management must also have an effective contingency plan that identifies minimum and maximum liquidity needs and weighs alternative courses of action designed to meet those needs. The cost of maintaining liquidity is another important prerogative. An institution that maintains a strong liquidity position may do so at the opportunity cost of generating higher earnings. The amount of liquid assets a bank should hold depends on the stability of its deposit structure and the potential for rapid expansion of its loan portfolio. If deposit accounts are composed primarily of small stable accounts, a relatively low allowance for liquidity is necessary.

Additionally, management must consider the current ratings by regulatory and rating agencies when planning liquidity needs. Once liquidity needs have been determined, management must decide how to meet them through asset management, liability management, or a combination of both.

B. Asset Management

Many banks (primarily the smaller ones) tend to have little influence over the size of their total assets. Liquid assets enable a bank to provide funds to satisfy increased demand for loans. But banks, which rely solely on asset management, concentrate on adjusting the price and availability of credit and the level of liquid assets. However, assets that are often assumed to be liquid are sometimes difficult to liquidate. For example, investment securities may be pledged against public deposits or repurchase agreements, or may be heavily depreciated because of interest rate changes. Furthermore, the holding of liquid assets for liquidity purposes is less attractive because of thin profit spreads. Asset liquidity, or how "salable" the bank's assets are in terms of both time and cost, is of primary importance in asset management. To maximize profitability, management must carefully weigh the full return on liquid assets (yield plus liquidity value) against the higher return associated with less liquid assets. Income derived from higher yielding assets may be offset if a forced sale, at less than book value, is necessary because of adverse balance sheet fluctuations.
Seasonal, cyclical, or other factors may cause aggregate outstanding loans and deposits to move in opposite directions and result in loan demand, which exceeds available deposit funds. A bank relying strictly on asset management would restrict loan growth to that which could be supported by available deposits. The decision whether or not to use liability sources should be based on a complete analysis of seasonal, cyclical, and other factors, and the costs involved. In addition to supplementing asset liquidity, liability sources of liquidity may serve as an alternative even when asset sources are available.

C. Liability Management

Liquidity needs can be met through the discretionary acquisition of funds on the basis of interest rate competition. This does not preclude the option of selling assets to meet funding needs, and conceptually, the availability of asset and liability options should result in a lower liquidity maintenance cost. The alternative costs of available discretionary liabilities can be compared to the opportunity cost of selling various assets. The major difference between liquidity in larger banks and in smaller banks is that larger banks are better able to control the level and composition of their liabilities and assets. When funds are required, larger banks have a wider variety of options from which to select the least costly method of generating funds. The ability to obtain additional liabilities represents liquidity potential. The marginal cost of liquidity and the cost of incremental funds acquired are of paramount importance in evaluating liability sources of liquidity. Consideration must be given to such factors as the frequency with which the banks must regularly refinance maturing purchased liabilities, as well as an evaluation of the bank's ongoing ability to obtain funds under normal market conditions.

The obvious difficulty in estimating the latter is that, until the bank goes to the market to borrow, it cannot determine with complete certainty that funds will be available and/or at a price, which will maintain a positive yield spread. Changes in money market conditions may cause a rapid deterioration in a bank's capacity to borrow at a favorable rate. In this context, liquidity represents the ability to attract funds in the market when needed, at a reasonable cost vis-à-vis asset yield. The access to discretionary funding sources for a bank is always a function of its position and reputation in the money markets.

Although the acquisition of funds at a competitive cost has enabled many banks to meet expanding customer loan demand, misuse or improper implementation of liability management can have severe
consequences. Further, liability management is not risk less. This is because concentrations in funding sources increase liquidity risk. For example, a bank relying heavily on foreign inter bank deposits will experience funding problems if overseas markets perceive instability in U.S. banks or the economy. Replacing foreign source funds might be difficult and costly because the domestic market may view the banks sudden need for funds negatively. Again over-reliance on liability management may cause a tendency to minimize holdings of short-term securities, relax asset liquidity standards, and result in a large concentration of short-term liabilities supporting assets of longer maturity. During times of tight money, this could cause earnings squeeze and an illiquid condition.

Also if rate competition develops in the money market, a bank may incur a high cost of funds and may elect to lower credit standards to book higher yielding loans and securities. If a bank is purchasing liabilities to support assets, which are already on its books, the higher cost of purchased funds may result in a negative yield spread.

Preoccupation with obtaining funds at the lowest possible cost, without considering maturity distribution, greatly intensifies a bank’s exposure to the risk of interest rate fluctuations. That is why banks that particularly rely on wholesale funding sources, management must constantly be aware of the composition, characteristics, and diversification of its funding sources.

**Integrated ALM Approach:**

Traditionally only interest rate risk and liquidity risks have been considered in the ALM framework. A bank would have managed a major portion of its risks by having in place a proper ALM policy attending to its interest rate risk and liquidity risk. These two risks when managed properly lead to enhanced profitability and adequate liquidity.

ALM is an important tool in the overall risk management process for any bank. ALM should be used strategically for deciding the pricing and structure of assets and liabilities in such a way that profitability, liquidity and credit exposure is maintained. Hence one cannot neglect credit risk in the ALM process. Based on this rationale, the students presented a qualitative argument why credit risk should be incorporated in the overall ALM framework.

Consider the procedure for sanctioning a loan. The borrower who approaches the bank, is appraised by the credit department on various parameters like industry prospects, operational efficiency,
financial efficiency, management evaluation and others which influence the working of the client company. On the basis of this appraisal the borrower is charged certain rate of interest to cover the credit risk. For example, a client with credit appraisal AAA will be charged PLR. While somebody with BBB rating will be charged PLR + 2.5 %, say. Naturally, there will be certain cut-off for credit appraisal, below which the bank will not lend e.g. Bank will not like to lend to D rated client even at a higher rate of interest. The guidelines for the loan sanctioning procedure are decided in the ALCO meetings with targets set and goals established. The role-played by the treasury in the loan sanctioning process is limited to satisfying the demands for funds. All exceptional cases however, are referred to the treasury, which looks at the gaps created by the proposal and based on the policies of the bank and its long-term objectives the proposal is either rejected or sanctioned with appropriate pricing.

The students proposed that all the three parameters viz. Interest rate, credit risk and liquidity positions should be dynamically looked at simultaneously for better decision making.

In the proposed approach, the credit appraisal comes out with a credit score, the treasury comes up with a liquidity score, the corporate banking division comes up with a interest rate score. This information is used to arrive at a composite score to evaluate the proposal.

**Risk Scores**

Now let us see on what basis the scores are arrived at.

The credit score is the result of the credit appraisal process. It is at this stage that the credit risk is quantified in terms of default probabilities. The interest rate score reflects the spread earned by the corporate bank over and above the transfer price.

The liquidity score reflects the impact of the proposal on the liquidity profile of the bank. Every bank would have certain target Gaps. Every proposal either takes the bank away from the target Gap or brings it closer to the same. This score reflects the impact of the proposal on the Gap profile of the bank. The score also is a reflection of the cost of funding the liquidity mismatch that it might create. This looks at the possibility of a credit default. This kind of arrangement, however, demands, diligent monitoring of the asset to keep the bank updated with its liquidity profile.
Asset Evaluation

Once the three performance scores are available, the entire evaluation of the asset can be condensed to a one-page report. Here the performance measures are graded on a scale of 1-5. The weighted average of these scores will give us the COMPOSITE SCORE of the loan, the weights being assigned on the basis of the relative strategic importance of each of these three parameters specific to the bank. Higher the composite score, better is the chance of the loan being accepted.

The calculation of the composite score has certain underlying requirements:

Every bank should have a minimum composite score based on its risk appetite. Eg., if we fix a minimum composite score of 2, then any loan with a score below 2 should be rejected, no questions asked.

A bank might have a minimum composite score of two, but care should be taken to see to it that most of the loans in the portfolio do not fall very close to the minimum composite score as this would worsen its risk profile.

Weights should be assigned to the different performance scores based on the bank’s future strategies and the current balance sheet status. E.g., a bank with heavy focus on the control of already high NPAs should give higher weights to credit performance score.

Advantages of the integrated ALM approach:

A bank will price the loan even taking the liquidity risk, i.e. considering the impact of loan on the gap mismatch of the balance sheet. Incorporating the default probabilities helps the bank to price the loan appropriately in line with its risk profile. Hence bank would also look at the impact of such a loan on its liquidity along with the credit risk and not in isolation.

The bank would now have flexibility in accepting and rejecting the loan only after having considered all parameters.

It will provide the necessary direction to the bank in structuring the loan in such a way, that liquidity profile of the bank is improved. If the liquidity profile of the portfolio is improved the loan can be priced favorably for the borrower.
Dr. Varish Chaturvedi

This model helps us to identify those loans that contribute to the ROA and Roe of the bank. This puts the bank on the road to *SHAREHOLDER VALUE CREATION*. By identifying the acceptable risk limits, the bank achieves greater stability thus ensuring higher returns for the shareholders.

While a similar system might already be in use in several competitive banks in one form or the other, other banks that do not employ such a system in totality might find it useful to adopt the integrated ALM approach, which has been presented as a conceptual argument.

**Procedure for examining Asset Liability Management**

**Procedure for Examination of Asset Liability Management**

In order to determine the efficacy of Asset Liability Management one has to follow a comprehensive procedure of reviewing different aspects of internal control, funds management and financial ratio analysis. Below a step-by-step approach of ALM examination in case of a bank has been outlined.

**Step 1**

The bank/financial statements and internal management reports should be reviewed to assess the asset/liability mix with particular emphasis on:

- Total liquidity position (Ratio of highly liquid assets to total assets).
- Current liquidity position (Minimum ratio of highly liquid assets to demand liabilities/deposits).
- Ratio of Non Performing Assets to Total Assets.
- Ratio of loans to deposits.
- Ratio of short-term demand deposits to total deposits.
- Ratio of long-term loans to short term demand deposits.
- Ratio of contingent liabilities for loans to total loans.
- Ratio of pledged securities to total securities.

**Step 2**

It is to be determined that whether bank management adequately assesses and plans its liquidity needs and whether the bank has short-term sources of funds. This should include:
• Review of internal management reports on liquidity needs and sources of satisfying these needs.
• Assessing the bank's ability to meet liquidity needs.

**Step 3**

The bank's future development and expansion plans, with focus on funding and liquidity management aspects, has to be looked into. This entails:

• Determining whether bank management has effectively addressed the issue of need for liquid assets to funding sources on a long-term basis.
• Reviewing the bank's budget projections for a certain period of time in the future.
• Determining whether the bank really needs to expand its activities. What are the sources of funding for such expansion and whether there are projections of changes in the bank's asset and liability structure?
• Assessing the bank's development plans and determining whether the bank will be able to attract planned funds and achieve the projected asset growth.
• Determining whether the bank has included sensitivity to interest rate risk in the development of its long-term funding strategy.

**Step 4**

Examining the bank's internal audit report in regards to quality and effectiveness in terms of liquidity management.

**Step 5**

Reviewing the bank's plan of satisfying unanticipated liquidity needs by:

• Determining whether the bank's management assessed the potential expenses that the bank will have as a result of unanticipated financial or operational problems.
• Determining the alternative sources of funding liquidity and/or assets subject to necessity.
• Determining the impact of the bank's liquidity management on net earnings position.

**Step 6**
Preparing an Asset/Liability Management Internal Control Questionnaire, which should include the following: -

1. Whether the board of directors has been consistent with its duties and responsibilities and included: -
   - A line of authority for liquidity management decisions.
   - A mechanism to coordinate asset and liability management decisions.
   - A method to identify liquidity needs and the means to meet those needs.
   - Guidelines for the level of liquid assets and other sources of funds in relationship to needs.

2. Does the planning and budgeting function consider liquidity requirements?

3. Are the internal management reports for liquidity management adequate in terms of effective decision making and monitoring of decisions.

4. Are internal management reports concerning liquidity needs prepared regularly and reviewed as appropriate by senior management and the board of directors.

5. Whether the bank’s policy of asset and liability management prohibits or defines certain restrictions for attracting borrowed means from bank related persons (organizations) in order to satisfy liquidity needs.

6. Does the bank's policy of asset and liability management provide for an adequate control over the position of contingent liabilities of the bank?

7. Is the foregoing information considered an adequate basis for evaluating internal control in that there are no significant deficiencies in areas not covered in this questionnaire that impair any controls?

**Asset Liability Management in Indian Context**

The post-reform banking scenario in India was marked by interest rate deregulation, entry of new private banks, and gamut of new products along with greater use of information technology. To cope with these pressures banks were required to evolve strategies rather than ad hoc solutions. Recognizing the need of Asset Liability management to develop a strong and sound banking system, the RBI has come out with ALM guidelines for banks and FIs in April 1999. The Indian ALM framework rests on three pillars: -

**ALM Organization (ALCO)**
The ALCO or the Asset Liability Management Committee consisting of the banks senior management including the CEO should be responsible for adhering to the limits set by the board as well as for deciding the business strategy of the bank in line with the banks budget and decided risk management objectives. ALCO is a decision-making unit responsible for balance sheet planning from a risk return perspective including strategic management of interest and liquidity risk. The banks may also authorize their Asset-Liability Management Committee (ALCO) to fix interest rates on Deposits and Advances, subject to their reporting to the Board immediately thereafter. The banks should also fix maximum spread over the PLR with the approval of the ALCO/Board for all advances other than consumer credit.

ALM Information System

The ALM Information System is required for the collection of information accurately, adequately and expeditiously. Information is the key to the ALM process. A good information system gives the bank management a complete picture of the bank's balance sheet.

ALM Process

The basic ALM processes involving identification, measurement and management of risk parameter. The RBI in its guidelines has asked Indian banks to use traditional techniques like Gap Analysis for monitoring interest rate and liquidity risk. However RBI is expecting Indian banks to move towards sophisticated techniques like Duration, Simulation, and VaR in the future. For the accrued portfolio, most Indian Private Sector banks use Gap analysis, but are gradually moving towards duration analysis. Most of the foreign banks use duration analysis and are expected to move towards advanced methods like Value at Risk (VaR) for the entire balance sheet. Some foreign banks are already using VaR for the entire balance sheet.

Conclusion

ALM has evolved since the early 1980's. Today, financial firms are increasingly using market value accounting for certain business lines. This is true of universal banks that have trading operations. Techniques of ALM have also evolved. The growth of OTC derivatives markets has facilitated a variety of hedging strategies. A significant development has been securitization, which allows firms to directly address asset-liability risk by removing assets or liabilities from their balance sheets. This not only eliminates asset-liability risk; it also frees up the balance sheet for new business.
Thus, the scope of ALM activities has widened. Today, ALM departments are addressing (non-trading) foreign exchange risks as well as other risks. Also, ALM has extended to non-financial firms. Corporations have adopted techniques of ALM to address interest-rate exposures, liquidity risk and foreign exchange risk. They are using related techniques to address commodities risks. For example, airlines’ hedging of fuel prices or manufacturers’ hedging of steel prices are often presented as ALM. Thus it can be safely said that Asset Liability Management will continue to grow in future and an efficient ALM technique will go a long way in managing volume, mix, maturity, rate sensitivity, quality and liquidity of the assets and liabilities so as to earn a sufficient and acceptable return on the portfolio.

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