CHAPTER-VI

SUMMARY AND CONCLUSIONS

The invasion of Indian banking by deregulation, integration, competition, technology etc. has led to increased diversity and complexity and risks faced by banks. Risk being intrinsic to the banking. Management of it has gained prominence in the recent past due to economic integration under globalization process and consequent reforms. The basic underlying building block for the structure of efficient risk management system is the risk assessment and management process for a bank. Such a framework is provided by ALM, which involves planning, directing, controlling and monitoring the flow, level, mix, cost and yield of the funds of the bank and revising or devising models to forecast and avoid risk, at least reduce it to the minimum.

ALM has specially gained prominence after two special events. One was the introduction of guidelines on ALM by RBI in 1999. Another was the inflation and drop in interest rates during the period of present study. Majority of the banks have financed themselves traditionally i.e., through current account and savings account balances which they also used to buy government securities to meet SLR requirements. This manifested the interest rate risk and liquidity risk in banks, respectively. Keeping in view the issue with all its manifestations, the role of ALM in the banking system has time and again been emphasized and its relevance underlined by various authors.

The present treatise, however was a humble attempt to give a historical and conceptual background of ALM, study of ALM practices, study of interest rate risk and liquidity risk of banks.
The main objective of this chapter is to summarize the present study and present conclusions drawn in this research effort.

NEED OF THE STUDY

The concept of Asset Liability Management (ALM) is important to the banking industry. It is likely to further gain momentum in 2009, when India will be implementing Basel II. India will witness entry of world-class banks and competition, if our domestic banking sector has to compete for growth, it should be empowered with all aspects of asset liability management. RBI introduced the guidelines relating to Asset liability management in the year 1999. Since then a number of studies have taken place. The researchers have studied only one of the components of ALM in isolation. The same is the case with the studies in the area of risk assessment and risk identification. The ‘Review of Literature’ brings out the fact that there is a need to study the ALM practices of Commercial Banks repeatedly and closely. Also, there is a need to study the magnitude of risk in Indian Banking Sector. This study is an effort aimed at fulfilling this research gap. The present study has examined all aspects of Asset Liability Management in Commercial Banks in India i.e. (a) study of ALM Practices of banks under study, (b) identification and measurement of Interest Rate Risk and Liquidity Risk banks assume on their balance sheet, (c) Problems encountered in ALM and Risk Management of Commercial Banks.

SCOPE OF THE STUDY

The present study attempted to study the ALM practices and magnitude of interest rate risk and liquidity risk of commercial banks on sample basis. The study attempted to intensively study the various aspects of ALM of banks. The study covered the whole cluster of SBI and its 7 associates, and nationalized banks (19). Out of the cluster of private sector

OBJECTIVES OF THE STUDY

As stated under the need of the study, the objective of the present study was to examine all aspects of ALM in banks under study i.e. (a) Study of ALM practices of banks (b) identification and measurement of IRR and liquidity risk and (c) identification of problems in ALM and Risk Management of banks.

These broad objectives were delineated into further following sub points:

1) To study the asset liability management (ALM) practices of banks under study.

2) To study the interest rate risk and liquidity risk of banks under study.

3) To identify the problems in Asset and Liability Management and Risk Management in banks under study.
4) To make suggestions to improve the position of Asset Liability Management and Risk Management in banks under study.

RESEARCH METHODOLOGY

To fulfill the objectives of the present study, following research methodology was used-

DATA COLLECTION

The present study was based upon both primary and secondary data. Primary data has been collected through Questionnaire. The questionnaire was designed considering three pillars of ALM as defined by RBI – (a) ALM information system (b) ALM organization and (c) ALM process.

Based on these three pillars, questionnaire was divided into four parts consisting of 29 questions in all (copy annexed). This was done to judge the practices and status of ALM in Indian banking Industry. The questionnaire was mailed and e-mailed to the ALM and Risk management departments of banks under study. As all the banks have email Id’s and internet connectivity, in order to get the required information, the link to online questionnaire was sent to ALM departments, risk management departments, officials of banks. A follow up letter was mailed to all non-responding banks. Also, personal visits were made to zonal offices of the banks to get the required information. Twelve (12) usable questionnaires were received from 37 sent. The final response rate, accordingly, was 32.4%.

The sources of secondary data explored for the purpose of this study were – Statistical tables relating to banks in India, Report on Trends and Progress in Banking, Report on Currency and Finance, RBI Bulletin,
RBI Annual Report, Weekly Statistical Supplement, Website of Reuters, Website of NSE, Website of CCIL, PROWESS (a corporate data base developed by CMIE), Annual Reports of Banks, Web sites of various banks, etc.

ANALYSIS OF DATA

The collected data was processed and analysed in tune with the research plan. The process of collected data included its editing, coding, classification and tabulation. For the achievement of objectives, both financial and statistical tools were used. The various techniques used were:

a) For analyzing the responses to questionnaire dealing with ALM practices of banks under study, percentages and frequency distribution were worked out. One way ANOVA was applied to examine whether any difference existed in different groups of independent variables in relation to ALM practices of banks.

b) For measuring the liquidity risk of banks, Ratio Analysis technique has been used.

c) For studying the IRR of banks under study, duration gap approach has been adopted.

FINDINGS OF THE STUDY

The present study is divided into six chapters. The first, and second chapters were devoted to introduction, review of literature and research design, respectively.
The summary and findings of the study are presented below:

**STUDY OF ALM PRACTICES OF BANKS**

The responses to various questions about the ALM practices of the banks under study have been categorized on different basis in chapter 3. The analysis of practices leads us to the following inferences:

1. All the banks under study meet the regulatory norms set by RBI. The banks have put in place a documented ALM Policy. Majority of the banks reported that their policy contains strategies and objectives. The policy is, however, disseminated only to top management. In consonance with this finding of the study, there is another finding which reveals that the banks do not consider ALM policy as a public document and restricts its distribution to only those who require the policy information for discharging their duties.

2. The regulatory norm of RBI also requires banks to have an ALCO and ALM with senior management perspective. To this ALM policy of banks, banks have exhibited ALCO being headed in majority of the banks by CEO/ED.

3. All responding banks reported providing training to employees for ALM. As far as the periodicity of training is concerned, majority of the banks reported imparting training as and when need is felt by bank management.

4. Similarly, all banks reported using software for ALM. However, majority of the banks used software for monitoring and reporting of risk. One important point that requires attention is that training and use of software (technology) must be enhanced to design an effective ALM for a bank.
5. All respondent banks unanimously agreed that the quality of ALM has improved in their banks since the introduction of guidelines in 1999.

6. As far as responses on IRR and liquidity risk are concerned, it may be concluded that majority of the banks have both interest rate risk and liquidity risk policy. Also, the focus of both the policies is, managing the risk. Banks generate reports for both IRR and liquidity risk. The study found that banks are only benchmarking liquidity risk and not interest rate risk. And bankers have most frequently been using gap analysis for IRR analysis. Duration is the next frequently used tool. The banks are not encouragingly engaging themselves in peer group comparison. Only half of the responding banks reported engaging themselves in peer group comparison.

MEASUREMENT OF IRR and LIQUIDITY RISK

The measurement of IRR and liquidity risk has been undertaken in Chapter-4 of this thesis, brief whereof goes as under:-

1) In terms of capital adequacy, there seems to be an adequacy of capital funds in banks under study. By the end of the study period, all the banks had achieved the minimum regulatory requirement of 9% (CAR).

2) The study reveals that, taking all the banks under study as a group, an upward trend in the movement of ratio of net loans to total deposits was discerned for the study period. However, the yearly data did not show any clear-cut trend. But one fact emerged from the analysis that by the end of study period, all the
banks had a ratio below 100% indicating that loan portfolio was funded by customer deposits.

3) The review of ratio of total deposits to total assets reveals that all the banks under study, except ICICI Bank had a ratio higher or at par with the average of all banks. One critical fact that emerged was that ICICI bank faced a marked decline in the ratio for three consecutive years i.e. 2002 to 2004.

4) The ratio of prime assets to total assets for all the banks under study, taken together, exhibited a declining trend except for a slight improvement in 2004. However, the data for the individual banks did not show any set trend.

5) The ratio of liquid assets to total assets showed a declining trend, indicating a decreasing proportion of liquid assets in the total assets of the banks. In 1999, Indian overseas bank showed the highest ratio while the lowest ratio pertained to HDFC bank. In 2004, UTI Bank recorded the highest ratio, the lowest ratio pertained to State Bank of Patiala.

6) The study depicted an erratic trend in ratio of liquid assets to total deposits, in its movement from year to year.

7) The behaviour of net loans to total assets ratio was so erratic that no clear trend emerged in its movements from year to year. The remarkable feature of the ratio was that if we adopted banking literatures’ rule of thumb (55% or lower), then in 2004, all the banks, except IDBI bank, showed a ratio lower than 55%.

8) The movement of total deposits to net loans ratio showed no clear cut trend. A careful analysis of the data revealed that all banks under study, except ICICI Bank, recorded reasonable good
values during the period covered by the study. Punjab and Sind bank (226.2352%) showed the highest ratio; the lowest ratio pertained to IDBI bank (135.8056%).

9) For the year 2000, Duration Gap (D Gap) has ranged between 0.404 to 19.2446. The percentage impact upon equity capital has ranged between – 480.225% to -37.5895%. The study also revealed that none of the banks had a reverse exposure. And all the 21 banks for which data was available had a significant interest rate risk exposure. Our focus was 320 bps interest rate shock.

10) From the study, it is revealed that D gap has ranged between 1.4363 to -0.6270 for the year 2001. The study also revealed that 32 banks out of 36 banks had a negative impact upon equity. The percentage impact upon equity highlighted the fact that one bank had a significant reverse exposure, 12 banks were fairly hedged and 23 banks had a significant interest rate exposure.

11) The behaviour of the Dgap for the year 2002 depicted that five out of 27 banks under study stood to gain in the event of 320 bps interest rate shock. Further analysis of the results indicated that one out of 27 banks had a significant reverse exposure, 15 banks had a significant interest rate exposure and 11 banks appeared to be fairly hedged.

12) For the year 2003, duration gap has ranged between 01.6685 to 4.7563. The study revealed that six out of 37 banks stood to gain in the event of 320 bps rise in interest rates. The percentage impact upon equity capital for the bank under study revealed a range of -417.4879% to 101.888%. The study also highlighted the fact that 5 out of 37 banks had a significant reverse exposure, ten
banks were fairly hedged and twenty two banks had significant interest rate exposure.

13) The behaviour of the D gap for the year 2004 depicted that ten banks in the sample had positive impact upon equity capital against 27 which had a negative impact on equity. The results also revealed that six banks had a significant reverse exposure, seven banks appeared to be reasonably hedged and 24 banks appeared to have a significant interest rate exposure.

A brief perusal of this chapter reveals that the ALM of banks is heavily dependent on the regulatory norms set by RBI. The timely introduction of guidelines, amendments brought to guidelines and proactiveness to some extent on the part of banks to adopt better practices has helped in strengthening the ALM and risk management in banks.

1. It has also made management of banks proactive to risk.
2. It has helped banks in achieving the financial goals.
3. It has improved the balance sheets of banks.
4. It has helped management in identifying, measuring, monitoring and controlling risk.

On the one hand, the study has highlighted the positives but on the other hand, it has brought weaknesses of significant interest rate risk exposure of banks to light.

The banks should develop a continuous quest for risk practice upgradation, development of efficient and effective measurement and management of risk. This will go a long way in developing an efficient risk banking framework in India.
PROBLEMS AND SUGGESTIONS FOR IMPROVING ALM SYSTEM IN BANKS

The study revealed certain problems and weaknesses prevalent in the ALM system of banks which are: Lack of information and data, Lack of Computerisation, outdated MIS, Lack of awareness about ALM, Limited role played by ALCO, dearth of risk expertise in the country etc.

All the short-comings and problems when overcome will provide an effective and efficient ALM and risk management system in a bank.

Concluding Remarks about the Study:

The focus of this research work was to study the ALM practices, liquidity risk and IRR of Commercial Banks in India. It has been observed from the present study that ALM is being given due consideration in all the banks under study. This is a healthy sign. Of the prevalent ALM practices – documented ALM policy, constituting a ALCO, incorporating Senior Management Perspective for ALM, etc. have been successfully introduced and practiced by banks. If these practices are continued and improved in trend with the changing national and global banking industry environment, some better results could be clearly seen in the Indian banking industry. However, there have been some critical areas of observation, which are part of ALM practices and are important from risk profile perspective of banks. These areas are inadequate training facilities, sub optimum utilization of software, lack of computerization etc. These areas needs to be further worked upon for the improvement of ALM in banks under study.

To meet the challenges of Globalization and to remain competitive throughout, the banking industry needs to constantly work upon the areas that create a difference from ALM perspective. An effective ALM in the
bank can make all the difference. Keeping this in mind, the present study also measured the liquidity risk and IRR of banks to find out the present risk profile of banks so that the banks can take appropriate steps based on the magnitude of risk they carry on their balance sheets, as these are the only ones that will help the banks to combat the future challenges. On this front, the present study brings out the fact that banks have been managing the liquidity well as reflected by various ratios calculated to measure the liquidity risk of banks under study. This has happened partly because of the guidelines laid down by RBI on ALM. However, the declining trend in Ratio of Prime Assets to Total Assets (average) and liquid assets to total assets (average) has brought forward a striking fact that liquidity is decreasing in the banking system. As revealed by the study, though liquidity in banks is not a serious issue till date but due to changing micro and macro economic environment banks must identify alternatives to meet any impending liquidity crisis. Some of the options that can be explored by banks are – RBI, Call money, CBLO (Collaterised – Borrowing and Lending Mechanism, Lines of credit, Mutual funds, Certificate of Deposits, securitisations etc. of banks. From the measurement of IRR exposure. It is inferred that majority of the banks under study have a significant IRR exposure which implies that in the event of rise in interest rates by 320 bps, majority of the banks would have a negative impact on the equity. On this front also, banks must keep track of alternatives like – selling assets, extending liabilities, off balance sheet hedging, interest rate derivatives to protect from significant IRR exposure.

The various results of the study match with the results of the various studies discussed in “Review of Literature”. In the study while analyzing whether any difference exists in the different groups of independent variables in relation to ALM practices, it has been observed that in majority
of the cases, we accept the null hypothesis. Apart from a few dimensions across which the study has been conducted, this finding of the study is similar to the study conducted by Cole and Featherstone. Patnaik and Shah, in their study, have concluded that majority of the Indian banks have significant IRR exposure. In present study also, it has been revealed that majority of the banks have significant IRR exposure. Wolff, in his survey, ‘Banks split on where to locate ALM’, has revealed that majority of the banks do gap analysis. In the present study also, it has been revealed that gap analysis is the most frequently used tool to manage IRR. Naji, Mahshid and Deniz in a qualitative study have identified interest rate swaps as the most common tool for measuring and managing IRR. The present study also reveals that interest rate swaps is the most common tool for managing IRR.

SCOPE FOR FURTHER RESEARCH

ALM and Risk Management as a concept is still evolving in India. While conducting the present study, certain aspect could not be dealt with in view of the objectives and other constraints of time and cost. The study contains certain clues on the basis of which the areas for further research can be selected.

1. The present study included the assessment of Liquidity Risk and Interest Rate Risk. Future research can be conducted on Foreign Exchange Risk and Operational Risk.

2. Another aspect of this research was a study of ALM practices of banks in India. A study evaluating the ALM practices can be conducted.
3. Future research can also be conducted on sources and uses of liquidity and a study of impact of each source and use on the liquidity position of bank.

4. The research can also be conducted on the sources of IRR and a study of impact of each source on the IRR of the bank.