CHAPTER I

Design of the Study

Introduction

The banking sector being the backbone of the economy, social orientation of banking had been considered essential for the planned economic development of India. It is with this acknowledged aim that the Bank Nationalisation was initiated in 1969. The Indian banking system, endowed with a large network of branches and wide range of financial instruments, has achieved considerable progress in the two decades after Nationalisation. The concept of banking had undergone a dynamic change in keeping with the need to achieve rapid socio-economic progress. As against the traditional banking theory, a shift in the approach to lending from security-orientation to purpose-orientation also became a predominant concept during the period. Despite the overall progress made by the financial system, poor capital base, inefficient organisational structure, declining profitability and very high and ever-growing non-performing assets had become the major stumbling blocks in the banking sector during the post-nationalisation decades. It was against this background that the Financial Sector Reforms became inevitable and were initiated in India.

Many of the developing countries have initiated economic reform process since 1980 and financial markets have been deregulated, giving rise to increased competition. The four key developments in the financial sector have been deregulation of interest rates, more prudent
and transparent accounting policies, capital adequacy requirements and entry of private banks, both domestic and foreign.

The Banking Sector Reforms were initiated in India as part of the overall structured reforms aimed at improving the productivity and efficiency of the economy. The banking sector has undergone far-reaching changes since the year 1991 when the Narasimham Committee presented its report on Banking Sector Reform. The highlight of the report was the insight that the balance sheet of a bank was to reflect its actual financial health, a proper system for recognition of income, classification of assets and provisioning for bad and doubtful debts on a prudential basis. The reform package focused on easing of policy framework in terms of administrated structure of interest rates, high levels of pre-emption in the form of reserve requirements and credit allocation to certain sectors, introduction of prudential norms and regulations aimed at ensuring the safety and soundness of the financial system, imparting greater transparency and accountability in operations and restoring the credibility and confidence in Indian Banking System, strengthening the system through recapitalisation, improving the quality of loan portfolio instilling greater element of competition and strengthening the supervisory process.

The Banking Sector Reforms thus can be seen as a turning point aiming at a total transformation of Indian Banking from mere social-oriented lending to purpose and security-oriented lending through several strategic changes implemented in banks in a phased manner.
from 1991 onwards, which is the vital area the present study intends to keep in focus.

**Problem Statement**

The introduction of prudential accounting norms made the balance sheet of banks unimpressive classifying a significant portion of advances as non-performing. The gradual deregulation of interest rate also resulted in an interest rate war reducing the spreads and making the banks focus on profitability. A policy shift thus took place with regard to the business strategy for identifying and controlling the various risks and maintaining the Capital Adequacy and Asset Quality at any cost. The financial experimentation in this line during the last decade converged into a comprehensive technique of managing the total balance sheet dynamics of the bank called Asset Liability Management (ALM), which is at various levels of implementation in Indian Banking. The present study attempts to evaluate the changing perspectives of the banks in identifying and facing the risks and maintaining Asset Quality so as to ensure profitability with the help of ALM techniques. It also tries to assess the effectiveness of Asset Liability Management as a strategy vital to the progress and development of the Indian banking sector in particular and the economy in general making such a study contextually relevant and prospectively significant.
Objectives of the Study

General Objective:

The study aims at analysing and evaluating the changing perspectives in Asset Liability Management of the banks in the Post-Reform Period as its general objective.

Specific Objectives:

The specific objectives of the study are:

1. To trace the historical factors that paved the way for the Banking Sector Reforms.
2. To evaluate the operational efficiency of the banks with regard to the management of assets and liabilities in the Post-Reform Period.
3. To assess the change in the policy shift of the banks from social-oriented banking to profit-oriented banking.
4. To identify the impact of deregulation of interest rate in the Spread and Burden of the banks and to evaluate the Interest Rate Risk Management of the banks.
5. To examine whether the banks in India are facing liquidity crisis and to evaluate the Liquidity Risk Management.
6. To determine the Credit Risk faced by the banks in order to identify the real reason behind the high level of NPA and to assess the Credit Risk Management of the banks.
7. To verify the effectiveness of the present ALM strategies in the light of the above analysis and to propose practical suggestions to
evolve a comprehensive ALM strategy addressing future challenges.

**Hypotheses**

The following hypotheses were framed for the purpose of the study.

**H1** Capital Adequacy Norms have strengthened the resource base of the banks in the Post-Reform Period.

**H2** Banks have shifted their policy to a more profit oriented banking in the Post-Reform Period.

The following subsidiary hypotheses have been tested statistically to verify the main hypothesis H2.

**H2a** Irrespective of the sector the profitability of banks in the Post-Reform Period is greater than that of the Pre-Reform Period.

**H2b** The pattern of variation of the profitability of individual banks in the Pre-Reform and Post-Reform Periods is the same.

**H2c** Private Sector Banks are more profit-oriented in the Pre-Reform Period.

**H2d** Private Sector Banks are more profit-oriented in the Post-Reform Period.

**H2e** There exists a significant difference in the individual profitability among the banks under study in the Pre-Reform Period.
There exists a significant difference in the individual profitability among the banks under study in the Post-Reform Period.

Though the Net Interest Income (Spread) is diminishing in the Post-Reform Period, the increasing Profitability of the banks can be attributed to the reducing Burden of the banks.

NPA of the banks increases with the increase in Advances.

The prescribed minimum Capital Adequacy Ratio has reduced the deployment of funds in Advance.

Scope of the study

The scope of the study is limited to the selected Commercial Banks (i.e. Public Sector Banks and Old Private Sector Banks) in India in the Pre-Reform and Post-Reform Periods. Foreign Banks and New Private Sector Banks have been excluded from the study. As the policies and regulations of Foreign Banks are different from other Commercial Banks they are excluded. New Private Sector Banks started functioning only after the year 1994-95 and they are also excluded.

The study mainly focuses on the following aspects:

(1) The changing strategies in the management of Assets and Liabilities in the Post-Reform Period.

(2) The various risks involved in the Asset Liability Management and its impact on profitability and the management of the same.
(3) The practical difficulties faced by the banks while implementing various norms.

**Data Base and Methodology**

Primary data and secondary data have been used for this study. In order to collect the primary data, a detailed Interview Schedule and a Structured Questionnaire were prepared (*vide* Appendix I & II). In the first stage, in order to evaluate the extent of implementation of various RBI norms related to ALM at different levels in the banks, structured interviews and discussions with the help of the Interview Schedule were conducted with the top officials in the ALM Departments of the Head Offices of the selected banks. In the second stage, the responses of sixty branch managers of the selected banks were collected with the help of a structured questionnaire in order to evaluate the strategies implemented at the branch level. The primary survey was conducted during the year 2001-02.

The secondary data have been collected from the Annual Reports and ALM reports of the selected banks, various publications of RBI such as RBI Bulletins, Banking Statistics - Basic statistical Returns, Statistical Tables relating to Banks in India, Trend and Progress of Banking in India, IBA Bulletins, Publications and Seminar Papers of the National Institute of Bank Management, Basel Committee Reports published by the Bank for International Settlements and also other available publications in the area of study. Websites of RBI and other selected banks have also been referred to collect the latest information.
The collected data have been analysed with the help of computer software. SPSS (Statistical Packages for Social Sciences) and MS Excel were used for this purpose.

**Sample**

The Reserve Bank of India broadly classifies the Commercial Banks into Public Sector Banks, Private Sector Banks, and Foreign Banks. The Private Sector Banks are again categorised into Old Private Sector Banks and New Private Sector Banks after the Banking Sector Reform. For the purpose of the study, Foreign Banks and New Private Sector Banks were excluded as the norms and regulations of the Foreign Banks are different from that of other Commercial Banks and the New Private Sector Banks started functioning only after the year 1994-95.

There are 27 Public Sector Banks and 22 Old Private Sector Banks in India as on March 2002. For the purpose of this study a sample of six banks, i.e. three banks from each sector has been selected. Also the banks have been grouped into three categories on the basis of their Total Fund in each sector. From among the Public Sector Banks, out of those having a Total Fund less than Rs.20,000 crores, between Rs.20,000 to Rs.30,000 crores and above Rs.30,000 crores, one bank each has been selected on a representative basis. As the Total Fund of all the Private Sector Banks are low as compared to the Public Sector Banks, they have been grouped separately into three categories as those having a Total Fund less than Rs.2,000 crores,
between Rs.2,000 crores to Rs.5,000 crores and above Rs.5,000 crores. One bank each has been selected from this category also. Simple Random Sampling method (Lottery Method) has been used for this purpose.

One significant observation that was made from this Random Sampling was that out of the selected six banks, two banks have NPA below three per cent, another two banks have NPA between three to four per cent, and yet another two banks have NPA above four per cent. The selected banks are State Bank of Travancore, Indian Overseas Bank and Union Bank of India in the Public Sector category and The Federal Bank, The South Indian Bank and The Dhanalakshmi Bank in the Private Sector category. Out of the selected banks Indian Overseas Bank and State Bank of Travancore have NPA below three per cent. Union Bank of India and The South Indian Bank have NPA between three to four per cent and The Federal Bank and The Dhanalakshmi Bank have NPA above four per cent. Thus the sample selected has a representative quality.

Ten branch managers were also selected from each of the sample banks on the basis of Two Stage Random Sampling to make an in-depth analysis in the study. Equal representation has been given to rural and urban branches.

Customer level analysis has been excluded from this study as the study is focusing on the impact of the various strategies introduced by
the RBI in the banking sector and the financial performance of banks in the changed set up.

Definitions and Concepts Used in the Study

1. Public Sector Banks: Public Sector Banks include the State Bank group and the 19 nationalised banks in India.

2. Private Sector Banks: The 22 old Private Sector Banks excluding the newly formed Private Sector Banks.


4. Selected Branches: Ten branches each selected from the sample banks to collect the necessary primary data in order to substantiate information for the purpose of the study.

5. Branch Managers/Respondents: The managers of the selected sixty branches in the sample banks.

Resume of the Work Done

The first chapter introduces the area of study, the objectives, hypothesis, limitations and the format of the study. The second chapter focuses on the various socio-economic factors that led to the Banking Sector Reforms and the third chapter deals with the theoretical and strategic relevance of ALM in the Banking Sector.
The fourth, fifth and sixth chapters are analytical and the study has been conducted with the help of primary data and secondary data collected from various sources for the purpose of the study.

The structure of assets and liabilities of the selected banks, efficiency in controlling expenses and in earning revenue after the Reform and overall efficiency are critically analysed in detail in the fourth chapter. Secondary data collected from Annual Reports and RBI has been used for this purpose.

The management of Interest Rate Risk and Liquidity Risk has been evaluated in the fifth chapter. The various norms and strategies introduced by the RBI and the practical implementation of the same in the selected banks are evaluated with the help of data collected from Annual Reports, ALM Reports and RBI Publications. The responses of the top officials in the Head Office and branch managers were also collected and critically analysed.

An attempt has been made to assess the mismatch in Foreign Currency Assets and Liabilities in this chapter.

The management of Credit Risk, the problems of NPA and its Recovery are analysed in the sixth chapter. Data collected from Annual Reports and RBI Publications have been used for this purpose. The problems faced by the branch managers in reducing NPA, the opinion and suggestions given by the branch managers are analysed with the help of primary data.
The conclusion sums up the findings and incorporates suitable and relevant suggestions.

**Period of the Study**

In order to analyse the changing perspectives, the study has been conducted for a period of eleven years, i.e. from the very beginning of the Reform Period (1991-92) to the year 2001-02. The prime objective of Asset Liability Management is improving the profitability of the banks, and for the purpose of comparing the profitability performance in the Pre-Reform and Post-Reform Periods, the concerned data from 1982 onwards have been collected and analysed. As the Post-Reform Period is still in a transitional stage, data relating to Capital Adequacy and Non Performing Assets were available only from 1995-96 onwards and could be analysed from that period.

**Tools for Analysis**

For the purpose of analysis various statistical tools such as Rates and Proportions, Correlation, Regression, ANOVA, Z test, and Weighted Averages have been used.

1. For analysing the efficiency in mobilisation and deployment of resources, efficiency in controlling expenses and earning revenue and also for analysing overall efficiency, proportions have been used in Chapter IV.

2. Average Annual Growth Rate (AAG) is used for the comparison of growth rates of different variables like Total Fund, Owned Fund,
Borrowed Fund, Deposits, Advances, Borrowings, Income, Expenses etc. in chapters IV and V.

3. Regression Analysis has been used to identify the factors affecting the profitability of banks in Chapter IV. The independent variables selected are Interest Income, Non Interest Income, Interest Expenses, Non Interest Expenses and NPA.

4. A Taxonomy Model has been applied and Mean and Standard Deviation are used to assess the Performance Efficiency of the banks in Chapter IV.

5. Karl Pearson's Co-efficient of Correlation has been applied to study the relation between Owned Fund and Capital Adequacy, Advances and Capital Adequacy, the relation between NPA and Advances, and NPA and Profit in Chapters IV and VI.

6. Z test has been used to compare the profitability performance of the banks in the Pre-Reform period and Post-Reform period in Chapter IV.

7. ANOVA has been used to compare the pattern of variation of profitability among the individual banks in the Pre-Reform period and Post-Reform period in Chapter IV. Tukey HSD test has been applied to find out whether there is any significant difference in the profitability of Individual banks both in the Pre-Reform and Post-Reform period in Chapter IV.

8. Summary Statistics and Weighted Averages have been used to analyse the data collected through questionnaire in order to
study the problems faced by the branch managers in controlling various risks faced by the banks in Chapter V and VI.

Limitations

The study has the following limitations:

1. Though the study spans a period of 11 years after the Reform, the various Reform norms of the RBI are still under different stages of implementation. As a result, there have been limitations in the availability of consolidated data related to various periods and stages within the period of study.

2. Foreign Banks and New Private Sector Banks have been excluded from the study. The norms and regulations of Foreign Banks are different from those of the Commercial Banks and the New Private Sector Banks have started functioning since 1994-95 only (i.e. during the period of study) and hence had to be excluded.

3. At the practical level, the mismatch of each individual asset and liability is assessed by the banks as a part of ALM in banks. As such an evaluation is too elaborate and extensive to be within the scope of this study, the mismatch of total assets and liabilities for a period of two years has been taken for the purpose of the analysis.

Lay-out of the Study

The study consists seven chapters.

Chapter I: This chapter gives a brief introduction to the Banking Sector Reform. This is followed by the problem statement, objectives,
hypotheses, methodology, scope and limitations of the study and the lay-out.

Chapter II: This chapter traces the historical factors that made the Banking Sector Reform inevitable and includes a review of the Banking Sector Reforms and the consequent emergence of the ALM strategies.

Chapter III: This chapter evaluates the theoretical and practical aspects of Asset Liability Management with reference to the risks faced by the banks, NPA and Capital Adequacy Norms in detail.

Chapter IV: An extensive analysis of the Efficiency in Mobilization and Deployment of Resources, Efficiency in earning Revenue and controlling Cost and the Overall Efficiency of banks done with the help of various statistical tools is presented in this chapter.

Chapter V: This chapter includes the analysis of Interest Rate Risk Management and the Liquidity Risk Management of banks. The primary data collected from the questionnaire have been analysed and the conceptual and practical aspects of ALM as revealed by top officials of various banks in interviews have been incorporated in this chapter.

Chapter VI: This chapter makes an extensive study of the Credit Risk Management of banks and includes the micro-level analysis of NPA in banks in the Priority and Non-Priority Sectors, reasons for NPA, and the recovery methods of NPA and problems related to recovery. It also includes the macro-level analysis of Credit Risk through Capital Adequacy Norms.
Chapter VII: This concluding chapter systematically sums up the Findings and Conclusions of the study. It also offers creative suggestions for a consistent ALM strategy to be implemented in the banking sector for prospective growth and development.