1.1 Introduction

Banks play an indispensable role in discharging social responsibilities, viz, poverty alleviation, employment generation, fine tuning of industry and agriculture, redistribution of wealth and balanced regional progress. In the industrial field, banks serve as leading lights to industrial units. Banks nurse a large number of sick units with a view to reviving them so that they continue their operations effectively. Through their merchant banking division, several banks have ventured into the field of industrial finance, taking up underwriting of capital issues. Hence, any successful plan of a nation demands a comprehensive expansion along with qualitative improvements in the operations of the banking system, in those areas which are in the priority sector and which shoulder the development of a country. The banking system, which constitutes the core of the financial sector, plays a vital role in transmitting monetary policy impulses to the entire economic scenario. Its efficiency and development, therefore, are crucial for enhancing the economic growth and improving the chances for price stability.

The concentrated economic growth and development of a nation is vested in the hands of commercial banks which provide credit to different sectors of the economy. They serve as a link between those who spend less than they earn and those who spend more than they earn. The gains to the real sector of the economy rely on how effectively the financial sector carries out this fundamental function of financial intermediation. Hence, all policies and programmes of Governments concentrate on strengthening the financial institutions. After nationalization of banks in 1969, the commercial banking operation has become an integral part of India's economic policy. For instance, the aggregate deposit of commercial banks had gone up from Rs.4, 636 crores in 1960 to Rs.18, 35,002 crores in 2005. Consequently, the reform process set in to speed up the effective functioning of the commercial banks. In addition, the globalization scenario also speeded up the reform process of the commercial banks. In this context, a constant review of the effects of the reforms has become imperative.
Banking in India originated in the first decade of 18th century with The General Bank of India coming into existence in 1786. This was followed by The Bank of Hindustan. Both these banks are now defunct. The oldest bank in existence in India is the State Bank of India established as The Bank of Bengal in Calcutta in June, 1806. A couple of decades later, foreign banks like Credit Lyonnais started their operation in Calcutta in 1850s. At that point of time, Calcutta was the most active trading port, mainly due to the trade of the British Empire, and due to which banking activity took roots there and prospered. The first fully Indian owned bank was The Allahabad Bank, which was established in 1865. By the 19th century, the market expanded with the establishment of banks such as Punjab National Bank in 1885 in Lahore and Bank of India in 1906 in Mumbai, both of which were founded under private ownership. The Reserve Bank of India which was established in the year 1935 by an Act of Parliament called Reserve Bank of India Act 1934, formally took on the responsibility of regulating the Indian banking sector from 1935. After India's Independence in 1947, the RBI was nationalized and given broader powers. The Government of India initiated measures to play an active role in the economic life of the nation, and the Industrial Policy Resolution adopted by the Government in 1948 envisaged a mixed economy. This resulted in a greater involvement of the State in different segments of the economy, including banking and finance. By the 1960s, the Indian banking industry had become an important tool to facilitate the development of Indian economy with substantial contribution from State Bank of India, Private Sector Banks and Foreign Banks. Except State Bank of India all the banks were owned and operated by private persons. This scenario changed with the nationalization of 14 major banks in India on 19th July, 1969. A second dose of nationalization of six more banks followed in 1980. Subsequently, until 1990s, the nationalised banks grew at a pace of around 4%, close to the average growth rate of Indian economy.

Banking sector reform is an important element of overall economic reforms of a nation. Before 1991, the Balance Sheet of the performance of banking sector of India was a mixed one, i.e. strong in widening the credit coverage but weak as far as viability and sustainability were concerned. The low productivity, low efficiency and erosion of profitability of the banking sector were diagnosed to be caused due to the following:
• In direct investment and credit programme areas, banks were earning much less than what they could do by alternate mobilisation of funds,

• Administered interest rate for both deposits and advances, which meant banks had little control over their profitability,

• Contamination of the loan portfolio, much of which are conceited due to lack of standard yardsticks for identification and provisioning of impaired debts,

• Inadequate disclosure rules complicated matters further. As a result, it was not possible to quantify to what extent capital had eroded in commercial banks, and

• Banks suffered from excessive administrative and political interference in their internal management and credit decision.

So, by 1990 there was cause for serious concern on account of the poor financial condition of banks. Hence, banking sector reforms were initiated to upgrade the operating standards, health and financial soundness of banks to internationally accepted levels in an increasingly globalised market. With the onset of the liberalization process in 1991, the Narasimham Committee-I was set up by the Government to analyze the various aspects of the functions of the Indian banking system. The Committee aimed at creating a competitive and efficient banking system. In the year 1997, the Khan Committee was constituted by the RBI to examine the harmonization of the role and operations of financial institutions and banks. This was followed by the Verma Committee. The Narasimham Committee-II was constituted on 26th December, 1997, to review the record of banking sector reforms since 1991. In the early 1990s, the then Prime Minister P.V.Narasimha Rao’s Government embarked on a policy of liberalization and gave licenses to private banks, which came to be known as New Generation Tec-Savvy Banks, and which included banks such as UTI Bank (the first new generation bank to be set up), ICICI and HDFC Bank. This move, along with the rapid growth in the economy of India, kick started the banking sector in India which has seen rapid growth with strong contributions from all the three sectors of banks.
1.2 Need for the Study

The Narasimham Committee-I 1991, after analyzing the functions of the Indian banking sector, recommended various norms for capital adequacy, income recognition, asset classification, norms for investment, entry of private sector banks and gradual reduction of SLR and CRR for the future growth of banking sector. Similarly, the Khan Committee 1997, recommended a gradual move towards universal banking, exploring the possibility of gainful mergers between banks, and between banks and financial institutions, encompassing both strong and weak entities or two strong ones, developing a function-specific regulatory framework and a risk based supervisory framework, hastening debt recovery, reducing CRR to the international standards and phasing out SLR\(^5\). The Verma Committee recommended the necessity for greater use of Information Technology even in the weak public sector banks, restructuring the weak banks but not merging them with strong banks, market driven merger sale of foreign branches, closure of subsidiaries of weak public sector banks and voluntary retirement scheme (VRS) for at least 25% of the staff members. The Narasimham Committee-II gave the following recommendations in April 1998:

**Capital Adequacy**

- Capital adequacy ratio to be raised from 8% to 10% by 2002,
- 100% of fixed income portfolio marked-to-market by 2001 (up from 70%),
- 5% market risk weight for fixed income securities and open foreign exchange position limits (no market risk weights previously), and
- Commercial risk weight (100%) to Government-guaranteed advances (previously treated as risk free).

**Asset Quality**

- Banks should aim to reduce gross non-performing assets to 3% and net NPAs to 0% by 2002,
- 90 days overdue norm to be applied for cash-based income recognition (down from 180 days),
• Government-guaranteed irregular accounts to be classified as NPAs and provided for,
• Asset Reconstruction Company to take on NPAs of weak banks against issue of risk free bonds,
• Directed credit obligations to be reduced from 40% to 10%, and
• Mandatory general provisions of 1% of standard assets and specific provisions to be made tax-deductible.

Systems and Methods
• Banks to start recruitment of skilled, specialized manpower from the market,
• Overstaffing to be dealt with by redeployment and right-sizing via VRS,
• Public sector banks to be given flexibility in remuneration structure, and
• Rapid introduction of computerisation and technology.

Industry Structure
• Only two categories of financial sector players to emerge: banks and non-bank finance companies, DFIs to convert to banks or remain non-bank companies,
• Mergers to be driven by market and business considerations, not imposed by regulators,
• Weak banks to convert to “narrow banks”, restructure or close down if proved unviable,
• Entry of new private sector banks and foreign banks to continue, and
• Banks to be given greater functional autonomy, and minimum Government shareholding to be reduced to 33% from 55% for State Bank of India and 51% for other public sector banks.

Regulation and Supervision
• Banking regulation and supervision to be progressively delinked from monetary policy,
• Board for Financial Regulation and Supervision to be constituted with statutory powers; board members should be professionals, and

• Greater emphasis on public disclosure to regulators.

Legal Amendments

• Broad range of legal reforms to facilitate recovery of problem loans,

• Introduction of law governing electronic funds transfer, and

• Amendments in the Banking Regulations Act, Nationalisation Act and State Bank of India Act to allow greater autonomy, higher private sector shareholding, and so on.

On an average, once in five years either the Central Government or the Reserve Bank of India constitutes one or the other Committee to study the functions and operations of the financial sector in general. The banking sector involves direct investment by the public and funds used by the public under various schemes or plans. This requires a sustainable strong growth of banking sector which is aimed at strengthening the economy with long term perspectives. Apart from the recommendations of the various Committees, the functioning of banking system in India were studied and analyzed by various researchers and recommended for the future growth of Scheduled Commercial Banks.

1.3 Review of Literature

Frey (1970) in his detailed study ‘Optimal Asset and Liability Decisions for Rural Bank’ states that the extent to which a rural bank should issue loans depends on the feedback relationships. The resultant notion was the model bank often meeting less than 50 percent of its loan demand. The higher interest rates resulted in a simple increase in loan activity. The study pointed out that decreasing capital and liquidity constraints increased profits of the bank.

Allison (1971) studied the different issues related to the financial performance of banks in his work ‘A Comparative Study of Bank Performance under Branch and Unit
System'. This study is irrelevant to the Indian context due to varied functional and geographical scenarios. But this study presents meaningful deviations in the subject.

Hashem Mohammed Ali (1972)\(^9\) has studied the utilization of marginal accounting concepts and techniques in branch bank management exercise in his study ‘The Utilization of Selected Managerial Accounting Concepts and Techniques in Branch Bank Management’. The purpose of this analysis was to formulate an optimum theoretical accounting information system for a branch bank, and to fix the level at which a branch bank has evolved such a formula. One of the major findings of the study is comprehensive focus on the long term success objective of the branch bank that can be served by a managerial accounting system which is oriented towards acceptable profits and customer satisfaction concepts.

Joagvin (1974)\(^{10}\) in his empirical study 'Profitability of Spanish Private Banks' has assessed that there is a welcome relationship between rediscount rate and profitability. Local banks have a negative relationship between rediscount rate and return on owner’s equity and for the nationalized banks the relationship between owner’s equity and rediscount rate is positive. He has also concluded that there is no consistent relationship between profitability and rate of growth of banks.

Luther (1976)\(^{11}\) was the Chairman of the Committee constituted by the Reserve Bank of India to study the productivity, efficiency and profitability of the commercial banks. The Committee studied the various issues with regard to planning, budgeting and marketing in commercial banks, bank management information system, criteria for evaluation of bank performance, annual accounts of banks, trends in earning and expenses of banks, and profitability as well as pricing of banking services. The major recommendations enumerated by the Committee were: (i) The capital base of banks needs to be improved. For this, banks should transfer atleast 40 percent of disclosed profits to reserves, free of taxation, (ii) The interest on additional cash reserves in excess of the minimum 3 percent should be related to cost of funds for banks, (iii) In the light of social obligations cast on the banks, tax laws are to be revised, (iv) To estimate the cost of various services and profitability of various activities, the RBI in collaboration with commercial banks, should organize periodical and systematic surveys, (v) To improve
productivity, efficiency and profitability of banks, a regular, prompt and systematic flow of information and its analysis is essential for banks to contemplate timely corrective actions, (vi) There should be a uniform system of audit for all kinds of banks, on the lines of one prevailing in the State Bank of India, and (vii) Simplification of systems and procedures in banks is necessary to bring economy in expenses and to provide more efficient customer services.

Klein (1977)\(^{12}\) in his analysis on the effect of long range planning on profit and growth of commercial banks has indicated that the growth tends of commercial banks has been influenced not only by the size of the bank but also by the extent of long range planning efforts taken up.

Mathur (1977)\(^{13}\) analyzed the public sector banks in India by conducting a case study of the State Bank of India. The main observation of this study was that the State Bank of India, in its two decades of service has accelerated the growth of Indian economy in two ways: (i) By pursuing the policy of vigorous branch expansion in general and its rural orientation in particular, and (ii) By paying a leading role in introducing bank credit facility to the new areas of the priority sectors of the Indian economy. The bank has also played a vital role in developing the backward regions of India.

Sapp (1978)\(^ {14}\) showed that banks, which engage in long-range planning, perform better than banks that do not.

Shah, S.G. (1978)\(^ {15}\) in his work 'Bank Profitability – The Real Issues' has concluded that mere increase in the margin between lending and borrowing rates does not improve the profitability, but the efficiency in the cost structure would enhance the income. He has also observed that the spread between interest earned and interest paid has been on a decline, not simply due to squeeze in interest margin but mainly due to inefficiency in staffing and work culture, and improper management of funds and investments mainly due to inadequate supervision of credit and the adoption of complex formalities and forms.

Aggarwal (1979)\(^ {16}\) analyzed the concept of social obligation of banks. The main recommendations of his study were on: (i) Providing more branches to the public, particularly in semi-urban areas, rural areas and in lead district, (ii) Providing more credit
facilities to the public as well as priority and neglected sectors, (iii) Providing employment opportunity, (iv) Financing government securities, and (v) Popularizing bill form of credit.

Ganesh, K. (1979)\textsuperscript{17} in his work ‘Monitoring Profitability in Banks’ inferred that the working fund alone is an insufficient base for comparing profitability at the branch level; the proper measure will be relating it to the sum of total deposits and total advances which constitute a bank’s total business. He has also noted that the success of monitoring system of a bank lies in its profit plan, identification of profit centres, setting up of standards for comparison and evaluation and an adequate management information system.

Zahir (1980)\textsuperscript{18} recommended the following: i) Transfer pricing as an important method for evaluating branch level performance of commercial banks, ii) The concept of opportunity cost for determining the transfer price for branches, iii) Branches should be given credit at a minimum transfer price (at which surplus funds are shifted to the head office), iv) Other than profits, due importance should also be given to management objectives, such as priority sector lending, recovery, deposit mobilization, etc. v) Profitability objective should not be neglected, and vi) The profit statement of branches must be more purposeful and informative.

Bhatia (1980)\textsuperscript{19} made a study on the economic performance of the Indian banking system using the yield on financial instruments owned by the ratios of profits before taxes to capital and profit before taxes to assets.

According to Seshadri (1981)\textsuperscript{20} the profitability ratios were higher for the selected group of private sector banks than for the nationalized banks. Surprisingly, this was despite the fact that the private sector banks had a higher proportion of establishment cost.

Nayan (1982)\textsuperscript{21} proposed a model for evaluation of performance of commercial banks. His study lead to meaningful conclusions: (i) The present system of ranking the banks on the basis of aggregate deposits fails to reflect their comprehensive achievements, (ii) At the micro level, the existing system of performance budgeting is not convincing and thus cannot be objectively used for evaluation of branch level
performance, and (iii) On the basis of all the important and quantifiable parameters of performance, an Integrated Performance Index which will act as a model for evaluation of the performance of commercial banks needs to be identified.

Angadi, V.B. and Devaraj (1983) assessed the efficiency with regard to responsiveness of operating cost, which decided the profitability of banking industry. He pointed out some important yardsticks like operating cost responsiveness and administered prices interest rates to output of operational efficiency of banks.

Varde and Singh (1983) of National Institute of Bank Management conducted innumerable studies on the profitability of Commercial Banks and have compiled them in a work entitled 'Profitability of Commercial Banks'. The work deals with different issues related to profitability of banks like profit management in banks, productivity in banks, profit planning in banks, monitoring profitability of bank branches, measuring cost of funds for banks, matching revenues and costs of commercial banks and operating cost of rural retail banking.

Varghese (1983) made a thorough study on profits and profitability of commercial banks during the decade 1970-79. The major areas analyzed were: (i) Has there been a declining trend in the profits and profitability of Indian Commercial Banks in the seventies?, (ii) What are the main determinants of profits and profitability of Indian banks during this period?, (iii) Are the accepted profit accounting standards adequate to reflect a true picture of the financial performance of the Indian banks?, and (iv) Is the present system and procedures of drawing up the Balance Sheet and Profit and Loss Accounts adequate to give a clear picture of the banks' financial position and if not, what improvements are called for? Due to data and time constraints, however, the scope of the study was limited to the analysis of profits and profitability of groups of Indian commercial banks, leaving aside the analysis of financial performance of individual banks.

Kanthalse (1984) after a thorough investigation opined that credit policy of the government had a great impact on the profitability of banks. He concluded that there was practically no factor of determinant of working result, which was independent of credit and monetary policies. Therefore, the monetary and credit policies of the government had to be formulated keeping in view the needs of the changing scenario.
The Punjab National Bank (1986)\textsuperscript{26} was the host of the 9\textsuperscript{th} Bank Economists' Meet at New Delhi. One of the issues analyzed in the conference was "Profitability and Profit Planning in Banks". The major issue analysed was that bank's profitability is a function of both exogenous and endogenous factors, wherein the former plays a more important role. The exogenous factors include large pre-emption of bank funds for the purpose of liquidity requirements (viz, SLR and CRR with low yields), administered interest rate structure with concessional rates on several categories of loans and unforeseen branch expansion in rural areas. The endogenous factors include increase in establishment expenditure, growing proportion of term deposits in the deposit-mix, inadequate non-fund business and return from ancillary services. The main recommendations of the analysis were:- (i) Paying interest on the first 3 percent of CRR by Reserve Bank of India, although it may mean amendment in the relevant Act, (ii) Professionalisation of credit management, diversification of business, increasing service charges and computerization of operations, (iii) Increase in rates of interest on priority sector credit, (iv) Take over of sick units and their management by banks, (v) More efficient cash management and investment management, (vi) Better cost management, and (vii) Adoption of techniques like linear programming and zero-based budgeting for profit planning.

Joshi, P.N. (1986)\textsuperscript{27} in his work 'Profitability and Profit Planning in Banks', has studied the trend of gross profit and net profit of all Scheduled Commercial Banks and has concluded that the declining trend in profitability has been due to decreasing yield rate and rising cost rate during the following years. He has inferred that the declining demand from the corporate sector for banks fund has adversely affected the bank profitability. He has also observed that the lower capacity of banks fund management is due to SLR, CRR and priority sector lending.

Chopra (1987)\textsuperscript{28} in 'Managing Profits, Profitability and Productivity in Public Sector Banking', analyzed the emerging trends in the profits and profitability of some selected public sector banks at micro level. The researcher highlighted the need for the introduction of management essentials for the better management of profits and profitability of public sector banks and suggested proper management of both costs as well as earnings.
Vashist (1987) in his empirical study ‘Performance Appraisal of Commercial Banks in India’ graded the performance of public sector banks with regard to six indicators, namely, branch expansion, deposits, credit, priority sector advances, DRI advances and net profit over the period 1971-1983. A composite weighted growth index was developed to rank the banks and to classify them into four performance levels, viz, excellent, good, fair and poor. The analysis ranked Indian Overseas Bank at the top and Dena Bank at the bottom. An urgent need to check the working of commercial banks for ensuring rapid and healthy growth in future was stressed. To improve the performance of commercial banks, the study suggested (i) The developing of marketing strategy for deposit mobilization, (ii) Profit planning, and (iii) SWOT (Strength, Weakness, Opportunities and Threats) analysis in banks.

Rao (1987) made a clear-cut comparison of business ratios, profit making and loss incurring rural branches of a nationalized bank for the year 1986. He felt that the foremost reason for less profit is the low volume of business. He suggested that monitoring the break-even business level for the banking sector is of great importance for improving profitability.

Harris James D., JR. (1987-1988) in his memorable study ‘Changes in the Financial Profile of Large Commercial Banks’ Profitability to Compensate for Deregulation’ studied the effect of deregulation on commercial bank profitability profiles and whether or not commercial banks have altered their profiles to compensate for deregulation. Profitability profiles are represented by financial ratios. These ratios are generated from data provided on the Bank Compustant Tape, which contains the financial information for the 147 largest commercial banks in The United States. The periods under study are the pre-deregulation period, i.e., 1978-1979 and the post deregulation period, i.e., 1981-1983. The Canonical Correlation Analysis, Multiple Regression, Financial Ratios and 'T' Statistics were used in this study. The test results indicate that the effect of deregulations on commercial bank profitability was negative. Moreover, the findings suggest that the deregulation was also responsible for significant changes in financial profiles between the two data groups that were acquired during the two periods examined. Of the thirteen variables used in the study, ten post deregulation groups were significantly different from the same ratios in the pre-deregulation groups.
Garg, S. (1989) in his work on cost and profitability has enumerated the margin determinants of costs, profit and profitability of the banking sector and has also enlisted the inter-group differentials of SBI and its subsidiaries, the nationalized banks, foreign banks and private sector banks. He has found that profitability has shown a steep negative trend during 1977-1982, for different bank groups except foreign banks and the decline in profitability has been because of disproportionate increase in the operating income and operating expenses.

Vasiliou, Dinitrios (1990) in his study ‘Profitability of Greek Commercial Banks’ seeks to identify the factors that were responsible for Greek commercial bank profitability. The idea of the study is to isolate the characteristics and the management strategies that are common to high performance financial institutions but are absent among the low performance ones. The main data consists of the 1977-1986 income statements and Balance Sheets of a sample of eight Greek commercial banks. The emphasis of the analysis is upon the empirical evidence rather than upon the theoretical grounds. Chapter One describes and analyses the Greek financial system. Chapter Two explores the profitability path of the sample banks during the period studied and subsequently ranks the firms according to their earnings for the whole period examined by employing a normalization criterion. The relationship between Greek bank earnings performance and their Balance Sheet structure is investigated in Chapter Three. This is done by describing and estimating a statistical cost accounting model. One of the chapters examines the connection between inter bank profitability and various financial ratios.

Karup (1990) conducted a study on nationalised banks based on some unpublished data. The Government of India ranked the nationalized banks in 1984 according to the ratio of gross profit to working funds and classified them in five categories. Group 'A' comprised of 7 banks, which had a ratio of more than 1.5 percent and group 'E' consisted of 8 banks which scored the lowest ratio of below 0.5 percent. The researcher selected sixteen crucial parameters, each having an impact on profitability. The researcher thoroughly analyzed the parameters of 'A' bank group and 'E' bank group to find out the factors that distinguish high profit earning banks in group 'A' from low profit earning banks.
Shanbhag (1991)\textsuperscript{35} has evaluated target based social obligations assigned to banks from time to time after nationalization. The author did not dispute the basic need and principles behind social banking in a highly structured society. However, he stressed the necessity of redefining the basic ideas and concepts behind social banking and suggested re-grouping of the priority sectors with the contemporary needs.

Daves, Joel Thomas, IV (1991)\textsuperscript{36} assessed the options of banks to improve profitability through the use of fee based financial services products. His thesis is an examination of the opportunities of financial services deregulation offers for banks to improve profitability. The thesis begins with a review of forces, which affected bank profitability. The history of the current framework of banking industry regulation is examined with particular emphasis on Glass-Steagall Act and Bank Holding Company Act of 1956. A review of recent de facto deregulation identifies areas wherein banks may now offer fee based financial services. The thesis then enumerates the risks associated with movement into fee based financial services as well as the potential income opportunities. The work concludes with a strategy for selling fee based products; focusing on the need for banks to restructure the way they deliver financial services and the need to develop a culture that will support the sale of financial services.

Vysya Bank hosted the Economists' Conference at Bangalore (1991)\textsuperscript{37} on 'Banking for Better Profitability'. Different experts and eminent persons in banking sectors presented suggestions on profitability of banking operations for enhancing bank profitability.

Panda, J. and Lall, G.S. (1991)\textsuperscript{38} in their study 'A Critical Appraisal of the Profitability of Commercial Banks' have enumerated productivity, organizational set up, information system, development of funds, quality of advances and policy on branch expansion as the most crucial factors deciding the profitability of Indian banks.

Sadare (1992)\textsuperscript{39} in his note has briefly analysed public sector banks, private sector banks and foreign banks for a period of six years, covering 1985 to 1990. He opined that policy supports as well as increasing effectiveness are important factors for improving the profitability of banks.
Ramachandran (1992) felt profitability of banks is on the decline. He traced out in brief the causes for declining profitability and suggests possible measures for arresting this trend. The main causes among the others traced by the researcher are: (a) Emphasis on social goal, (b) Escalation in establishment cost, (c) Blocking fund in sick unit, (d) Compliance of statutory requirement, (e) Rural branch expansion, (f) Leakage in income, and (g) Poor cash management and others.

Goiporia, M.N. (1992) has studied the profitability of banks and has prioritized the activities of the banks to have adequate flow of profits, viz, the lending operations to be channelised towards areas which would result in utmost profitability and growth in keeping with the long-term objectives of the institutions, promoting non-fund based operation after priority sector lending, changing fees for bank services after evaluating the cost-benefit of services and so on.

Mishra, M.N. (1992) in his work 'Analysis of Commercial Banks' has assessed that the growing pre-emption of funds in the form of SLR, CRR, disproportionate increase of expenses to the income, advances and total investment have contributed substantially to the declining profitability of Scheduled Commercial Banks.

Amandeep (1993) in her study on profitability of a group of Commercial Banks has attempted to examine the trends in profitability of twenty nationalized commercial banks, with the help of trend analysis, ratio analysis and concentration indices of the selected parameters. The study identifies the various factors and empirical testing to locate which of the factors have significantly contributed towards bank profitability in either direction. Using the multivariate analysis, she felt that it is the management of the burden (as against the widely believed 'spread' element), which plays a vital role in determining the profitability of Commercial Banks. In spite of lack of control of a few determinants of burden, it is inferred that judicious management of the burden can significantly enhance bank profitability.

Singh (1993) has used seven indicators in his work on productivity of Indian banks and has divided 22 public sector banks into two groups – SBI group and 14 nationalized banks. He has analysed productivity trends of the Indian banking sector to study the inter group differentials of SBI group and nationalized banks over 1969 to 1985.
Rajagopalan (1993) has given an overall perspective of productivity in banks. He opined that profitability and productivity depend on factors like reduction of costs, recovery of overdue, work reorganization, use of computers, etc. He has also identified that establishment expenditure plays a key role in determining the level of profit. Therefore, attention should be paid to the staffing pattern, he concluded.

Toor (1993) tried to formulate a link between the nature of business being handled by banks and the earnings of nationalized banks. The different aspects of the business mix like deposits (category-wise), advances (nature-wise and category-wise), expenditure incurred on deposits and income earned on advances have been examined and analysed by the researcher. The researcher opined that business mix in the nationalized banks is of highly varying degrees and it certainly has a bearing on their operational efficiency and profitability trend. In future, banks have to be alive to the type of business they are handling with reference to the cost and benefit from such business, he viewed.

Balasubramaniam (1994) has conducted a study entitled 'Portfolio Behaviour of Indian Commercial Banks'. This study is of exploratory nature and limitedly demonstrates the use of linear programming in the utilization of bank funds. An econometric model is designed to explain the portfolio behaviour of both the banking system and the individual banks.

Verma, H.L. and Malhotra, A.K. (1995) made a comprehensive and exhaustive study entitled 'Funds Management in Commercial Banks'. The main objective of the study is to look into the mobilization and utilization of funds in the selected banks and also to assess the possible impact of varied sources on profitability. The study examines these policies and also analyses trends in various sources and uses of funds in the selected banks, the results being highly rewarding.

Henage, Richard, T. (1995) made a study which comprised of a series of three separate research papers on bank failure prediction. Through the series, a bank failure prediction model is developed, using commercial bank failures, tested on the full population of commercial banks from 1988 to 1993. Among the three papers, the first
paper develops a bank failure prediction model, which is consistent with financial analysis techniques. The resultant model limits the large menu of predictive variables found significant in earlier studies to a set of five variables, which represent liquidity, leverage, size, profitability and loan quality. The paper demonstrates that it is possible to enhance predictive accuracy over data-driven models by relying on a set of logically developed variables. This model improves on the predictive accuracies of all past research.

Kishore C. Raut and Santhos K. Das (1996) have attempted a serious study entitled 'Commercial Banks in India – Profitability, Growth and Development'. In their study, an attempt is made to examine the profitability trends of the Indian banking sector over the period 1980-1992. In the process of analysis, the factors responsible for the variation of banks' profitability in either direction have been gleaned over. They also incorporate an empirical analysis of profitability as well as of its determinants of the sample bank groups. Ultimately, they encompass the summary of the findings and conclusion of the study, which are highly informative.

Srinivasan, Aruna (1998) in their study 'A Multi-Product Cost Study of Rural Bank Branches in Bangladesh' has adopted two alternative approaches to estimate costs: the production and intermediation perspectives which focus on operating efficiency and economic viability, respectively. The effect of product mix on costs and the relationship between loan recovery and bank viability is also analysed. Data from a sample of rural bank branches of four nationalized commercial banks and the agricultural development bank for a period of two years (1993 and 1994) were used. The researcher identifies the policy of rural lending without committing scarce resources to subsidizing rural bank branches. It must deal with two problems, namely, the minimum spread required for the banks to cover intermediation cost and ways and means to improve loan recovery.

Ganesan, P. (1998) in his work 'Priority Sector Advances vis-à-vis Profit and Profitability of Public Sector Banks in India (1969-1993)', has studied the use of efficiency, liquidity and profitability ratios to assess the operational efficiency of banks, determinants of profitability to derive a profit function model and the economics of priority and non-priority transitions in relation to spread, burden and surplus and also the economics of scale on cost, production and profit functions.
Ganti Subrahmanyan and K. Boovendran (1999) in their article 'Why Inter Bank Liabilities Needed Exemption from CRR?' have noted that the CRR prescription on net inter-bank liabilities (inter-bank liabilities minus inter-bank assets) amount to (i) Multiple taxation of bank deposits, (ii) Contributing to enhanced variance of the money supply and rendering monetary targeting hard to achieve, (iii) Rendering money supply behaviour more complex, (iv) Creation of more volatility in the call money rates and making other rates in the money market behave compassionately, and (v) Apparently not removing an obstacle in the emergence of an inter-bank term money market for hedging interest rate and exchange rate risks by banks.

Ahmad, Taha Khaled (2000) in his work on the efficiency of the banking system in Jordan during 1990-1996, has studied the profit efficiency of the banks with the help of econometric and mathematical programming techniques and by estimating a non-standard profit function. The profit efficiency has been found to possess (i) A positive correlation with growth in bank total assets, age and size of a bank, and (ii) A negative correlation with ratios of branch to total deposits, number of employees and salaries to total assets and risks. He has also concluded that banks with lesser number of employees per total assets, lower ratio of branch per total deposits, higher assets and higher salaries to total assets ratios have been found to be the best cost efficiency banks.

Satyanarayana and Ganti Subrahmanyan (2000) have attempted a draw a clear picture of non-performing advances of commercial banks in India, touching upon various quantitative and qualitative trends in the post-reform period, besides coming out with clear-cut policy and strategic implications. They have concluded that in India, the NPA levels are very high at 15% - 16% of gross advances, eroding their ROA by nearly 50-60 basis points, and after netting the provisions, the net NPA continue 70% of the tangible networth of all public sector banks which represent 80% of the banking systems' ventures. Their study has also concluded that notwithstanding a lower proportion of NPAs at 10%, private sector banks' NPA has shown a phenomenal increase in the recent years making them vulnerable and the proportion of credit risk among priority sector advances pointing to the irrationality of price controls which still persist. The external factors have been identified to outweigh the internal factors resulting in the high
accumulation of NPAs. The quadrant analysis of credit risk has shown that all leading banks in India are affected by NPA levels, which has offered the scope for mergers and acquisition among the banks to face the high risk in the credit market. The public sector banks have been found to be affected by pre-reform legacy of heavy NPA baggage, which has required a one-time asset reconstruction fund pattern in a feasible shape, for this bank. The analysis has also emphasized the increasing role of RBI and the Government in the form of faster recovery climate, especially the legal process of enforcement of contracts, and till such time, the banks may be assisted by recognizing their provision against standard assets, additional provision over and above the prudential norms, etc., as TIER-II Capital.

Ganesan (2001)\textsuperscript{56} has taken up as sample State Bank Group (8 units) and 19 nationalised banks to identify the determinants of profits and profitability. The empirical study of profit function reveals that interest cost, interest income, other income, deposit per branch, credit to total assets, proportion of priority sector advance and interest income loss are the significant determinants of profit and profitability of Indian public sector banks. The study has also concluded that banking sector reforms and individual bank policies towards direct investment and direct credit programmes have played a notable part.

Diamond and Rajan (2002)\textsuperscript{57} examined how open market operations affect aggregate bank lending and output. They concluded that changes in money supply affected the banking system in two ways. First, by changing prices and interest rates, it affected the wealth of demanders of real liquidity, and thus the equilibrium production of liquid assets, aggregate output, and the health of the banking system. In addition, it altered the value of money as a means of payment and also the attractiveness of moving from deposits to currency (the demand for financial liquidity). This had an impact on the health of the banking system and on its lending and aggregate output.

Rameshwari (2003)\textsuperscript{58} after a careful study opined that the monetary tools were crucial parameters of the Banking Financial Performance. But they had low or moderate correlation with the rest of the variables, viz, bank credit, investment, liabilities, assets. Other factors also determined the growth of these variables.
1.4 Problem Statement

The review of literature reveals that various studies were mainly focused on branch banking and unit banking, rural banking, accounting concepts in branch banking, the effect of productivity, efficiency, long range planning, transfer policy, credit policy, operating cost, etc. Some of the studies also focused on social obligations of the banks, open market operation Vs aggregate bank lending and output, monetary tools and banking performances. None of the above studies focused on the impact of liberalization process on the performances of banking sector in India.

The Indian financial system of the pre-reform period primarily catered to the needs of planned development in a mixed economy framework, where the Government sector had a predominant role in economic activities. Large developmental expenditures were channelised to finance large gestation projects, requiring long-term finance. The Government was also expected to raise funds at minimal rates, understandably at below the market rates for private sector. In order to facilitate the massive borrowing requirements of the Government, interest rates on Government securities were artificially kept at low rates which were unrelated to market conditions. As a result, the Government securities market lost its depth. This was because the concessional rates of interest and maturity period of securities reflected only the needs of the issuer, namely, the Government, rather than the market situation. In order to check the monetary effects of large scale money market, the cash reserve ratio (CRR) was increased frequently to control liquidity. The environment in the financial sector during these years was thus characterized by underdeveloped financial markets. By the end of the eighties the financial system was considerably tested. The concessional availability of bank credit to certain sectors adversely affected the profitability of banks. The lack of transparency, accountability and calculated norms in the operations of the banking systems also led to a rising burden of non-performing assets. Hence, there was an emerging requirement to closely introspect the need for immediate reforms.

During recent years, the impact of financial sector reforms on Scheduled Commercial Banks in India has become a novel topic for analysis. The average saving rate in India was 10% in the 1950s and rose to 17.5% in the 1970s and further to 23.41%
in the 1990s. The average gross fiscal deficit of the Central Government as per GDP during the decade of 1980s was 6% as against 3.8% in the 1970s. The RBI had to facilitate the financing of budgetary imbalances from the banking system as also through monetary accommodation. As interest rates were administered and not market determined, the interest rates on public debt were kept artificially low. By the early 1990s, the budgetary imbalances became unsustainable, percolating into the overall macro-economic imbalance. Financial regression ensued and the Government had to initiate a programme of stabilization and structural reforms, inter alia, to bring down the budgetary imbalances.

The Government has brought about significant reform process in the banking sector. Following are some important features of the reform process:-

- Prudential norms and supervisory strengthening were introduced early in the reform cycle, followed by interest rate deregulation and gradual lowering of statutory pre-emptions (reduction of CRR and SLR).

- While the focus of the first phase of reforms was to create an efficient, productive and profitable financial services industry, the second half of the 1990s was aimed at strengthening of the financial system and introduction of structural improvements.

- Promoting financial stability in the face of domestic and external shocks was on top of the agenda of reforms in a more globalised environment, through adoption of international best practices in several crucial areas of importance, such as, prudential norms, banking supervision, data dissemination and corporate governance.

- With a view to increase competition in the banking sector, new private sector banks were licensed with the pre-requisite of total automation from day one. The Government ownership in nationalized banks and SBI was brought down by allowing them to raise capital from the equity market upto 49% and 45 % of paid up capital respectively.
• Process of financial restructuring by public sector banks.

• The subsequent disinvestment of equity and offer to private shareholder was undertaken through a public offer and not by sale to strategic investors.

• Banks were also allowed to diversify into various financial services and are now offering a whole range of financial products like Universal Banks.

• To provide a significant impetus to banks to ensure sustained recovery, the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFESI) was passed in 2002.

Now the question is, whether various measures initiated over the last decade and a half have significantly strengthened the commercial banking sector, in terms of profitability, asset quality and capital position. If yes,

a. Did the reform process really lead to the growth of the banking sector in India?

b. Is the rate of growth of Scheduled Commercial Banks faster than earlier?

c. Has the performance of the banks improved after reform process?

d. Are the factors influencing the performance of Scheduled Commercial Banks the same during pre and post liberalization periods?

1.5 Objectives

The main objectives of the study are to analyse the financial performance of Scheduled Commercial Banks in India during post and pre-reform periods. The study has been undertaken with the following objectives:

a) To analyse the growth of Scheduled Commercial Banks in India, during the pre and post reform periods,

b) To analyse the overall financial performance of Scheduled Commercial Banks during the pre and post reform periods,

c) To determine the variables which influence the operating profit of Scheduled Commercial Banks in India during pre and post reform periods,
d) To determine the factors which discriminate efficiently between pre and post reform periods, and
e) To give findings and recommendations for the improvement of financial performance of Scheduled Commercial Banks.

1.6 Hypothesis

The study mainly aims at examining the following hypothesis with the available data and statistical tools:

a. The growth rate of Scheduled Commercial Banks and the reform process in banking sector are independent of each other,

b. There was no difference in the overall financial performance of the Scheduled Commercial Banks before and after liberalization,

c. All the identified variables equally influence the performance of Scheduled Commercial Banks during pre and post reform periods, and

d. The selected variables do not discriminate the performance of Scheduled Commercial Banks pre and post liberalization periods.

1.7 Period of Study

The research work was started in the year 2000 and the data collection was completed in the year 2006. By that time 15 years of post reform period had elapsed. In order to study the effectiveness of liberalization process on the performance of commercial banks, the selection of 15 years period before liberalization was made essential. Hence, this study covers a period of 30 years, i.e., from 1975 to 2005.

1.8 Sample Design

Keeping in view the problem and the scope of the study, the researcher has decided to include all the Scheduled Commercial Banks in India for the period from 1975 to 2005 (excluding RRB). The banks were grouped into four categories, viz, State Bank of India group (SBI group 8 banks), Nationalised Banks group (NSB group 20 banks), Foreign Banks group (FB group 33 banks) and Other Scheduled Commercial Banks group (OSCB 31 banks) during the study period.
The data for the study has been collected mainly from the secondary sources comprising of various books, periodicals, journals, etc. Further, for the purpose of analysis, detailed information is collected mainly from the various volumes of ‘Statistical Tables Relating to Banks in India’, which was published by the Statistical Department of Reserve Bank of India, Mumbai covering the period between 1975 and 2005.

1.9 Methodology

The comparative performance of Scheduled Commercial Banks during pre-reform and post reform periods can be measured by a number of indicators. Among these, operating profit is the most important and reliable indicator, as it gives a broad indication of the capability of a bank to increase its performance.

a) Assessing the Consistency, Significance and Growth of Selected Variables

To assess the significance, consistency and growth of selected variables between pre and post reform periods, the following variables have been identified:

i) Demand Deposits,
ii) Term Deposits,
iii) Total Investment,
iv) Total Advances,
v) Interest Earned,
vi) Non-interest Income,
vii) Interest Expended,
viii) Non-interest Expenses,
ix) Employee's Cost,
x) Net Profit After Tax, and
xi) Number of Branches.

The identified variables were analysed with the help of the statistical tools such as Standard Deviation ($\sigma$), Coefficient of Variation and the Average Annual Growth Rate. The applicability of the tools was tested with the help of 'F' ratio and 't' test.
b) **Compounded Growth Rate**

The general performance of the banks was analysed meaningfully and objectively for a given period rather than on a year to year basis.

To analyse the Scheduled Commercial Banks' financial health and overall performance, CAMEL Model was used. CAMEL Model is a diagnostic and management tool that measures Capital Adequacy, Asset Quality, Management, Earnings and Liquidity analysis.

The following ratios / variables have been adopted to test the performance of Scheduled Commercial Banks using CAMEL:

i) **Capital Adequacy Analysis**
   a) Debt Equity Ratio,
   b) Advances to Assets, and
   c) G-Sec. to Total Investment Ratio.

ii) **Asset Quality Analysis**
    a) Fixed Assets to Total Assets, and
    b) Total Investment to Total Assets.

iii) **Management Analysis**
     a) Credit Deposit Ratio,
     b) Profit per Employee,
     c) Business per Employee, and
     d) Return on Networth.

iv) **Earning Quality Analysis**
    a) Operating Profit by Average Working Fund,
    b) Spread as a Percentage of Total Assets,
    c) Return on Assets,
d) Percentage Growth in Net Profit,

e) Non-interest Income to Total Income, and

f) Interest Income to Total Income.

v) Liquidity Analysis

a) Liquid Assets to Demand Deposits,

b) Liquidity to Total Deposits,

c) Liquid Assets to Total Assets, and

d) Approved Securities to Total Assets.

To identify the factors which determine the effectiveness of variables of pre and post reform periods, the Multivariate Analysis was carried out. For this purpose, the statistical tools such as Correlation, Step-wise Regression and Discriminate Function Analysis have been used.

The following variables / ratios have been adopted in the multivariate technique:

\[ Y \] - Operating Profit by Average Working Fund,

\[ X_1 \] - Debt Equity Ratio,

\[ X_2 \] - Advances to Assets,

\[ X_3 \] - G-sec to Total Investment,

\[ X_4 \] - Fixed Assets to Total Assets,

\[ X_5 \] - Credit Deposit Ratio,

\[ X_6 \] - Business per Employee,

\[ X_7 \] - Spread as a Percentage to Total Assets,

\[ X_8 \] - Non-interest Income to Total Income,

\[ X_9 \] - Liquid Assets to Total Deposits, and

\[ X_{10} \] - Liquid Assets to Total Assets.
c) Discriminant Function Analysis

Under discriminant analysis, the performance of Scheduled Commercial Banks during pre-reform period and post reform period can be measured in terms of selected financial ratios. Discriminant function analysis attempts to construct a function with all 19 ratios / variables which were taken up for study under CAMEL Model analysis. Out of the 19 ratios, the following variables were selected, based on the correlation among these and other variables, and any variable which was having high correlation (above 0.85) was not selected for analysis:

- $X_1$ - Debt Equity Ratio,
- $X_2$ - Advances to Assets,
- $X_3$ - G-sec to Total Investment,
- $X_4$ - Total Advances to Total Assets,
- $X_5$ - Fixed Assets to Total Assets,
- $X_6$ - Credit Deposit Ratio,
- $X_7$ - Total Investment to Total Assets,
- $X_8$ - Business per Employee,
- $X_9$ - Return on Networth,
- $X_{10}$ - Spread as a Percentage of Total Assets,
- $X_{11}$ - Return on Assets,
- $X_{12}$ - Percentage of Growth in Net Profit,
- $X_{13}$ - Interest Income to Total Income,
- $X_{14}$ - Liquid Assets to Demand Deposits, and
- $X_{15}$ - Approved Securities to Total Assets.

A typical Discriminant Function will be the form,

$$ Z = a_0 + a_1 x_1 + a_2 x_2 \ldots \ldots a_n x_n $$

where $a_0$ = constant

$a_1, a_2 \ldots a_n$ - Discriminant Function coefficients of the independent variables / ratios $x_1, x_2 \ldots x_n$ respectively.
Variable Selection Method

In constructing the function, all ratios which contribute to differentiate these two periods maximally are examined. Among the several methods available for selection of variables, 'Mahalanobis Minimum D Squared' method was employed for this study. The Mahalanobis procedure is based on the generalized squared Euclidean distance that adjusts unequal variances in the variables. The major advantage of this procedure is that it is computed in the original space of the predictor (independent) variables rather than as a collapsed version which is used in other methods. In general, 'Mahalanobis Minimum D Squared' is the preferred procedure as the researcher is concerned with the maximum use of available information.

Step-wise Selection

In the process of constructing Discriminant Function, after deciding the 'Mahalanobis Minimum D Squared' method, the type of computation is also to be decided. One method is the simultaneous method and the other one is the step-wise method. The simultaneous method involves computing the discriminant function, so that, all the independent variables are considered concurrently, regardless of the discriminating power of each independent variable.

The step-wise method is an alternative to the above analysed method. It involves entering the independent variables in the Discriminant Function one at a time on the basis of their discriminating power. The step-wise approach begins by choosing the single best discriminating variable. The initial variable is then paired with each of the other independent variables one at a time and a second variable is chosen. The second variable is the one that is best able to improve the discriminating power of the function, in combination with the first variable. The third and any subsequent variable is selected in a similar manner. As additional variables are included, some already selected variables may be removed, if the information they contain about group differences is available in some combination or the other already included variables (multi-collinearity).

Subsequently, 'tolerance' of each variable / ratio for inclusion in the analysis is also tested. 'Tolerance' specifies the minimum tolerance a variable can have and still be entered into the analysis. The tolerance of a variable that is a candidate for inclusion in
the analysis is the proportion of its within groups variance, not accounted for by other variables in the analysis. A variable with very low tolerance is nearly a linear function of the other variables; its inclusion in the analysis would make the calculation unstable. The default tolerance is kept at 0.001.

Eventually, either all independent variables / ratios will have to be included in the function or the excluded variables will have been judged as not contributing significantly to further discrimination. By sequentially selecting the next best discriminating variable at each step, variables that are not useful in discriminating between the groups are eliminated and reduced set of variables is identified. The reduced set typically is almost as good as and sometimes better than the complete set of variables. The comparative performance of Scheduled Commercial Banks during pre-reform and post reform periods can be measured by a number of indicators. Among these, Operating Profit is the most important and reliable indicator, as it gives a broad indication of the capability of a bank to increase its performance.

Taking into consideration the objectives of the study and its coverage in terms of time span, the number of banks and the period of study have been fixed.

d) Linear Programming

Linear programming is one of the most important tools used in optimization. In unconstrained optimization, there are no limitations on the values of the parameters other than that they maximize the value of function \( f \). The maximization is carried out through sensitivity analysis. Since this problem comprises of 10 independent variables \( X_1 \ldots X_{10} \) and one dependent variable \( Y \) in the span of 30 years, two different groups of dependent and independent variables are separated and maximum and minimum values are identified with the help of sensitivity procedure of group centre. The identified maximum and minimum values of Operating Profit by Average Working Fund (dependent variable) implies that there is no intervention of independent variables. When it depends upon the selected independent variables \( X_1 \ldots \ldots X_{10} \) a perfect linear relationship is necessary. So the Fishers Method of determining the coefficient function
of independent variables is applied and obtains the coefficient function \( f \) and probable minimum and maximum values of independent variables are determined and grouped. So the linear Fisher Equation is given by

\[
Y = \frac{f_1X_1 + f_2X_2 + \ldots + f_nX_n}{N}
\]

where \( Y \) = maximum value of dependent variable for a selected period,

\( f_1 = \) function co-efficient value of independent variable \( X_1 \),

\( X_1 = \) average value for the maximum and minimum value of independent variable (i.e., optimum level), and

\( N = \) number of years.

1.10 Limitations

i) Data collected for the present study is entirely secondary in nature. In such a case, the study carries all the limitations inherent in secondary data,

ii) While computing the data for the purpose of analysis, the approximation of decimal places which leads to minor variations in ratios as well as percentage analysis is bound to exist in the study,

iii) Quantitative study has been undertaken. Qualitative aspects of performance of commercial banks have not been considered,

iv) Various statistical and accounting tools used for the study have their own limitations, and

v) NPAs and Capital Adequacy Ratio are not considered for study as these are available for the last ten years only.

1.11 Scope

The study shows the financial performance of Scheduled Commercial Banks in India during pre and post reform periods. It covers all the Scheduled Commercial Banks in India, which were under the control of the Reserve Bank of India. This study will be a guideline to each bank group in identifying its strength and weak areas which will help
further growth. Moreover, since most of the branches have come out for public issues, this study will also help the investors in the share market and provide security to the deposit holders.

1.12 Chapter Scheme

This study consists of six chapters. The first chapter consists of introduction, design and execution of the study. This includes Introduction, Review of Literature, Problem Statement, Objectives of the Study, Hypothesis, Limitations of the Study, Scope, Period of the Study, Sample Design and Chapter Scheme of the Thesis,

The second chapter presents the growth pattern of Scheduled Commercial Banks during pre and post reform periods,

The third chapter analyses the financial performance of the banks during pre and post reform periods,

The fourth chapter traces the factors influencing the performance of Scheduled Commercial Banks during pre and post reform periods,

The fifth chapter deals with the analysis of variables which discriminate the performance during pre and post reform periods, and

The sixth chapter highlights the summary of findings and recommendations.
References


