Chapter – 2

RESEARCH DESIGN AND METHODOLOGY
1.0 INTRODUCTION

In the modern age, banking industry is the backbone for any economy irrespective of whether it is a developed or developing economy. This places it on a completely different platform from any other industry. In India, origin of banking industry dates back to the 18th century with the establishment of the Bank of Hindustan during 1770. Since then banking sector faced many failures, mergers and amalgamations and liquidations which were considered pre-nationalization developments. The tremendous structural and dimensional changes include nationalization of 14 major banks during 1969. Later, the banking industry witnessed the days of second phase of nationalization during 1980 with the nationalization of 6 banks. During the post-nationalization period also, banks faced several challenges as they have to function sustaining the policy of the government. These include decline in productivity, inefficiency in functioning, erosion of profitability and deterioration in quality loan portfolio, and, thereby accumulation of non-performing assets (NPAs). The accounting and disclosure practices were too poor to allow reflection of true state affairs of the banks. The balance of payments crisis during 1992 added fuel to these fires. In the light of these developments, the government of
India set up a “Committee on the Financial System” under the Chairmanship of Sri M. Narasimham, to examine the structure and functioning of the existing financial system and suggest reforms in the financial sector.

On the basis of recommendations of the Committee, a number of measures such as reduction in cash reserve ratio (CRR) and statutory liquidity ratio (SLR), certain degree of freedom on interest rates, and prudential norms including capital adequacy ratio were initiated so as to improve efficiency and promote competition. Once again, Sri M. Narasimham Committee was constituted in 1998 to recommend reforms concerning banking sector. Thus, new blood was injected with the implementations of returns. Further, when the government has allowed 74 per cent foreign direct investment in banking sector, foreign banks began to function as wholly owned subsidiaries (WOS) since 2005.

2.0 STATEMENT OF THE PROBLEM

In India, the Scheduled Commercial Banks (SCBs) have been functioning under three different operational modes known as public sector, private sector and, foreign sector accounts 75 per cent, 20 per cent and 5 per cent of banking business respectively. Of the total 87 SCBs, 26 are the Public Sector Banks (PSBs) with 67,466 branches, 20 are the Private Sector Banks (PRSBs) with a spread of 13,452 branches and 41 are the Foreign Banks (FOBs), with 322 branches in the country. Two decades have passed since the implementation of the Narasimham Committee recommendations. During this period, Information Technology (IT) has changed the world. Different techniques of Information Technology such as INTERNET, INTRANET and computerization have changed the systems of businesses. The banking sector, therefore, is able to provide various financial services and products besides banking. They have adopted different techniques of IT to provide better services to their customers keeping in view the international standards and norms. In spite of all these changes, the profitability has deteriorated. The
primary reason attributable may be the mounting NPAs. But the degree of variation in profitability across the three sectors of banks is dissimilar. In other words, there exist inter-bank and inter-sectoral differences. Against this backdrop, the present study is proposed to undertake an evaluation of operational and financial performance of banks. The analysis covers inter bank sector i.e., public, private and foreign.

3.0 REVIEW OF LITERATURE

Banking industry has always evoked the interest of many researchers worldwide and more so in recent times in India. The process of liberalization, privatization and globalization to kick start the economic development of the nation, has mandated revitalization of banking sector to play a larger role in anchoring the growth. Thus, focus of policy makers and researchers has shifted to banking industry and many studies were undertaken in this direction. It is proposed to review the literature that exists in the field of banking in general on the performance of banks and in particular, from articles.

Shah (1979)\(^1\) in his study argues that bank profitability is linked with bank management, customer service, and financial performance. He recommended that in order to improve profitability in a bank, emphasis should be laid on reducing costs, creating a team spirit, improving the management, and collecting service charges for the services rendered by the banks.

Srivastava (1981)\(^2\) tried to build a relationship between the productivity and profitability of commercial banks. He argues that an important reason of low profitability is because of low productivity, and low productivity could be the result of ineffective time that occurs due to defects in the form-design, inefficient methods of operations and bad layouts.

Joshi (1986)\(^3\) in his study analyses the profitability and profit planning for the period 1970 – 1982 in all scheduled commercial banks operating in India. The study discusses the trends in profits and profitability of commercial
banks since nationalization. The factors leading to the deterioration of profitability are numerous.

**Keeton and Morris (1987)** were one of the earliest researchers to examine the causes of loan losses. On examining the losses in 2,470 insured commercial banks in the United States (US) from 1979-85 using non performing loans (NPLs) net of charge offs as the primary measure of loan losses, it was observed that local economic conditions along with the weak performance of certain sectors contributed to the variation in loan losses recorded by these banks. The study also showed that commercial banks were greater risk tend to record higher losses.

**Ojha (1992)** in his study attempted to measure the productivity of public sector commercial banks in India. After identifying various measures of productivity like total assets per employee, total credit per employee, total deposits per employee, pre-tax profits per employee, net profit per employee, working funds per employee, ratio of establishment expenses to working funds and net interest per employee, the comparison is made with the banks at the international level. The study concludes that Indian banks have very low productivity ratios compared with western banks.

**Amandeep (1993)** in her study on profitability of commercial banks attempted to examine the trends in profits and profitability of twenty nationalized commercial banks. Using the multivariate analysis, she concluded that it is the efficient management which plays a major role in determining the profitability of commercial banks.

**Buch (1997)** asserts that foreign-owned banks use modern technology and rely on the human capital of their parent banks, so that they would be expected to perform better than government-owned or domestic private banks in transitional economies. On similar lines, private banks would be expected to perform better than government-owned banks.

**Das (1997)** in his paper, studied the productivity in nationalized banks and observed that labour productivity had not only remained low but also substantially declined. He advocated restructuring to improve productivity.
Ramamoorthy (1997) in his paper titled, “Profitability and Productivity in Indian Banking – International Comparisons and Implications for Indian Banking” observed that the old system of regulated market banks did not make banks conscious of their profitability and productivity levels. But the new economic order has compelled these banks to shift towards market-oriented, commercially driven banking system. He also observed in his study that performance of banks operating in different economic systems with different levels of economic development and varying degrees of regulations were not comparable.

The results further revealed that profitability of a bank was a function of allocation efficiency, volume of credit, provisioning for loan losses, interest rate movements and operating costs structure. He suggested that performance incentive plans, motivation, training and leadership of human resources and level of technology absorption can improve the productivity and profitability of the banks.

Ramamurthy (1998) in his technical paper on the profitability and productivity in Indian banking stated that the banking structure and profitability structure of the banking system across the country have a bearing on the profitability of the banks. When banks are considered as groups in terms of big, medium and small, bigger banks have greater scope for economies of scale. The author opined that one of the main determinants of banks’ profitability is the network of branches, frequently termed as franchise strength. The researcher concluded that Indian banks have higher interest spreads than banks abroad, higher operating costs than banks abroad, and higher risk provision level. As far as the impact of liberalization is concerned, the author stated that productivity as measured in terms of per employee business for the banking system as a whole went up from Rs. 45.33 crore to Rs.73.40 crore during the post-reform period of 1992-96.

Krishnamurthi C.V. (2000) in his study observed that gross non-performing assets in public sector banks are mounting heavily. Thereby, they have become a great threat for the survival of banks.
Anantha Swamy, B. N (2001) in his study, covers the survey of the performance of specific bank-groups over the period 1995-96 to 1999-2000 which shows the impact of deregulation and competition in a liberalized economy.

Claessens et al (2001) investigated the performance differences between domestic and foreign banks in eighty countries covering both developed and developing countries, from late-1990’s to mid 2000’s and found that the entry of foreign banks was generally followed by a reduction in both profitability and the overhead expenses of domestic banks suggesting that foreign participation improves the efficiency of domestic banks.

Swamy (2001) undertook a study of the comparative performance of different bank groups since 1995-96 to 1999-2000. An attempt was made by him to identify factors which could have led to the changes in the position of individual banks in terms of their share in the overall banking industry. He analyzed the share of rural branches, average branch size, trends in bank’s profitability, share of public sector assets, share of wages in expenditure, provision and contingencies, and net non-performance assets as percentage of net advances and spread. He concluded that in many aspects, the performance of public sector banks was better than that of private sector and foreign banks.

Ram Mohan (2002) evaluated the performance of public sector banks (PSBs) since deregulation in both absolute and relative terms and highlighted that the performance of public sector banks improved due to the decline in the ratios of spread. The author mentioned that the banking system has neither collapsed nor faced any banking crisis.

Munniappan (2002) stated that non-performing assets accumulate due to internal and external factors. Internal factors include portfolio of funds for expansion, modernization and diversification, accepting new projects etc. External factors are recession in the economy, power shortage, insufficient input, fluctuations in prices natural calamities such as floods, famines etc.

Das and Udaykumar Lal (2002) evaluated the lead bank scheme in the light of banking sector reforms. They observed that high level of NPAs,
large number of un-remunerative branches, low productivity, overstaff and archaic methods of operations have affected the profitability of public sector banks. Das felt that the whole banking sector in India is to be reformed to cope with the changing dimensions of the world. Further, he felt that the backward areas should be given more funds for investment in priority sectors, maximum number of people should be brought under its coverage and the procedures for extending credit should be simplified.

Singh R (2003)\textsuperscript{18} analyzed the performance of banks and concluded that the profitability declined in the deregulated environment in public, private and foreign banks. He laid emphasis on the need to make the banking sector competitive in the deregulated environment. He suggested that the banks should take steps to increase their non-interest income sources.

Shanmugam and Das (2004)\textsuperscript{19} analyzed the efficiency of 94 banks belonging to four different ownership groups in India during 1992–1999 using stochastic frontier production model. The banking industry has shown a progress in terms of efficiency of raising non-interest income, investments and credits. The efficiency improvement is considerable in the case of investments in all banks, particularly in private banks. Thus, the result matches with the economic growth objective of the reform measure. It was found that the State bank group and foreign banks are more efficient than their counterparts. However, they found that there are still large gaps between the actual and potential performance of banks.

Kumbhakar and Sarkar (2004)\textsuperscript{20} estimated the efficiency of public and private banks using stochastic frontier production model with data from 1986–2000. They found that cost inefficiency declined over time, but the rate of decline slowed down after the reforms.

Gupta. S. and Kumar. S (2004)\textsuperscript{21} stated that redeeming features of banking sector reforms are responsible for the increase in gross and net non-performing assets. He concluded that it is high time to take the resolute
measures to reduce the non-performing assets. Otherwise, they can break the backbone of entire economic system.

Raul and Ahmed (2005) conducted an empirical analysis of different aspects of banks’ performance in the Barak Valley, Southern part of Assam in the context of national level performance of public sector banks in particular during two distinct time periods, pre and post - reforms period from 1981 to 91 and 1992-2001 respectively. In their study titled, “Public Sector Banks in India – Impact of Financial Sector Reforms”, they concluded that profitability ratio in banks declined and public sector banks had witnessed a low percentage of profits to total assets during the post-reform years due to lower interest spread and greater priority sector lending. They suggested that corporate governance should be implemented in these banks to encourage and pursue market discipline through transparency, consistency and accountability. They stressed greater autonomy for banks to lay down internal guidance and procedures for transparency, disclosures and risk management.

Sathye (2005) studied the impact of privatization on banks performance and efficiency for the period 1998-2002. It was found that partially privatized banks have performed better than fully public sector banks and they are catching up with the banks in the private sector.

Das et al (2005) analyzed and estimated the efficiency of Indian banks using data envelopment analysis (DEA Analysis) for the period 1997-2003 and found that despite liberalization measures aimed at strengthening and improving the operational efficiency of the financial system, there is not much difference between Indian banks have not yet much differentiated in terms of input/ output-oriented technical and cost efficiency. However, they found that they differ sharply in terms of revenue and profit efficiencies. They also found that bank size, ownership, and the fact of its being listed on the stock exchange has a positive impact on the average profit efficiency, and to some extent on revenue efficiency scores.
Banerjee, B. and Dan, A.K (2006)\textsuperscript{25} analyzed that the problem of non-performing assets is one of the most crucial problems which is faced by banks and it requires greater attention for bringing them down. This problem has become a major threat for public sector banks due to the policies of government and improper utilization of loans lent by banks to private industries and new establishments.

Gopal and Dev (2006)\textsuperscript{26} in their research paper, empirically analyzed the productivity and profitability of select public and private sector banks in India. They evaluated the effect of globalization and liberalization on the productivity and profitability in Indian banks during the period 1996-97 to 2003-04. The author observed that emergence of new private sector banks as well as entry of new foreign banks in this era has thrown tremendous challenges in the form of tough competition among the Indian banks. The spirit of competition and emphasis on profitability are also forcing the public sector banks towards greater profit orientation.

Uppal and Kaur (2007)\textsuperscript{27} in their paper conclude that the efficiency of all the bank groups has increased in the second phase of post banking sector reforms. But these banking sector reforms are more beneficial for new private sector and foreign banks. Their paper also suggests some measures for the improvement of efficiency of nationalized banks. The sample of the study in Indian banking industry comprises five different ownership groups and the ratio method is used to calculate the efficiency of different bank groups. New private sector banks are competing against foreign banks for continuous improvement in their performance.

Mitra (2007)\textsuperscript{28} in his article stated that financial sector reforms have brought tremendous changes in banking sector. He revealed that the essence of financial liberalization lies in three sets of measures: firstly, to open up a country to the free flow of international finance; secondly, to remove controls and restrictions on the functioning of domestic banks and other financial institutions so that they get properly integrated as participants in the world financial markets; and thirdly, to provide autonomy from the government to
central bank so that its supervisory and regulatory role vis-à-vis the banking sector is disassociated from the political process, and, hence, from any accountability to the public.

Ved Pal and Malik (2007)\textsuperscript{29} in their empirical paper examined the difference in financial characteristics of public, private and foreign sector banks based on factors such as profitability, liquidity, risk and efficiency. A sample of 74 Indian commercial banks consisting of 24 public sector, 24 private sector and 23 foreign banks was taken for the period of 2000-2005. Multinomial regression analysis was used and results revealed that foreign banks proved to be high performers in generating business with a given level of resources and they are better equipped with managerial practices and in terms of skills and technology. Foreign banks were more consistent with market system as reflected in terms of net interest margin. The public banks emerged as the next best performer after foreign banks. They were giving a higher return on equity in comparison to foreign and private banks. The public sector banks showed high performance in economizing their expenses which was reflected from expense and efficiency ratio. The private sector banks emerged as better performers in using the resources as compared to public sector banks.

Uhomoibhi Toni Aburime (2008)\textsuperscript{30} extensively reviewed the pros and cons of foreign banks’ penetration. The pros as identified by the review, include better resource allocation, higher competition and efficiency, lower probability of financial crisis, enhanced public confidence in the banking sector, enhanced access to international capital, and development of bank supervisory and legal framework. The cons of foreign banks’ penetration include loss of domestic banks’ market share, instability of the domestic deposit base, credit rationing to small firms, loss of domestic banks’ profitability, foreign domination and control of the banking system, volatility of domestic financial markets, and worsening of the domestic financial system’s ability to respond to large internal and external shocks.

Dash & Charles (2009)\textsuperscript{31} investigated the technical efficiency of Indian banks, using the Data Envelopment Analysis (DEA) model, segmented
in terms of ownership during the period of 2003-08. The efficiency scores were calculated for a sample of forty-nine major banks operating in India. The results of the study showed that foreign banks were slightly more efficient than public and private banks, and that there was not much difference in the efficiency of public and private banks.

**Manish B Raval (2012)** estimated the major composition of non-performing assets in Indian banks by comparing the three compositions i.e. priority sector, non-priority sector and others in public sector banks. The researcher stated that there was no significant difference among three compositions of non-performing assets.

**Rajeshwari Krishnan** focused on the problem of swelling non-performing assets in banks and financial institutions of the country which has become tough to manage and created threats for the financial sector. She found that securitization can be used for the liquidating the illiquid and long term debts like loan receivables. She concluded that the SARFAESI Act is definitely a big leap forward not only in the field of NPAs management but also in promoting the securitizing market in India.

**Prof. G. Chandrashakar Rao** studied the present most critical issue of piling-up of non-performing assets faced by the banking sector. He mentioned that diversification of funds by promoters, tardy legal system, inadequate legislation for recoveries, lack of effective follow up and pre-approved loans sanctioned under sponsored programs by the governments are the main reasons for the banking units to become weak leading to mounting NPAs.

**L.M. Bhole** critically evaluated the trends and progress of commercial banks in India during the period 1971 to 1983. The ratio analysis was used to evaluate the performance of commercial banks with respect to different indicators. However, overall performance of each bank is assessed with the help of Relative Growth Indices. The analysis revealed that commercial banks did very well with respect to branch expansions, deposit mobilization, credit disbursement and priority sector advances. However, it
was observed that banks were plagued with the problem of declining profitability.

4.0 NEED FOR THE STUDY

It is understood from the review of literature that inter-bank and intra-bank studies on the performance of the commercial banks are neglected dimension of research. Hence, the present study is undertaken basically to examine the operational and financial aspects of the select PSBs, PRSBs and FOBs. Consequently, the study is aimed at seeking answers to the issue like; Which of the select bank sectors has the highest share in deposits and advances?; Of these, which one has the highest lending? Where does the credit-deposit ratio stand? Where does the credit-deposit ratio of these banks stand? Which sector bank has the least cost of deposits and borrowings? Of the select bank sectors, whose capital adequacy ratio is the highest? and which category of bank’s recovery performance is better?

5.0 OBJECTIVES OF THE STUDY

The specific objectives of the study are:

(i) to review the origin and growth of Indian Banking Sector;
(ii) to evaluate the operational performance of select commercial banks;
(iii) to appraise the liquidity and solvency performance of sample banks;
(iv) to analyze the magnitude and intensity of NPAs; and
(v) to scan the profitability performance

6.0 HYPOTHESIS

The study presupposes that the mounting NPAs, coupled with declining profitability, are due to inefficient management of credit operation and recovery performance.

7.0 SAMPLE DESIGN

The study is confined to the performance evaluation of commercial banks pertaining to PSBs, PRSBs and FOBs. Of the three sectors, two banks
from each sector are purposely selected. These banks include The State Bank of India (SBI) and Andhra Bank (AB) from public sector, HDFC Bank Ltd. (HDFC) and The Karur Vysya Bank (KVB) from private sector and the Citi Bank N.A. (CB) and the Standard Chartered Bank (STCB) from foreign sector. Thus, the total sample comes to 6 banks.

8.0 DATABASE

The data for the study have been primarily gleaned from the Annual Reports of select banks and the Reports of Reserve Bank of India (RBI) on Trend and Progress of Banking in India. Besides, the published literature on the subject has been gathered from RBI Reports and Bulletins, Reports and Bulletins of IBA, and Various Magazines and Journals.

9.0 REFERENCE PERIOD

The present study requires a moderate period so as to arrive at meaningful and purposeful inferences. Hence, a seven year period which commences from the year 2005-06 has been adopted.

10.0 SCOPE AND LIMITATIONS OF THE STUDY

The present study confines itself, to the operational and financial performance of scheduled commercial banks belonging to the public sector, private sector and foreign sector. The study excludes from its purview the Regional Rural Banks (RRBs), Urban Cooperative Banks (UGBs) and other Non Banking Finance Companies (NBFCs). As there exist differences among the select banks in respect of philosophy and policies, branch net work, human resources, target customers, and banking products and services, the measurement of their operational and financial performance is based on certain variables which are common to all. Since banking is under the strict supervision of the Reserve Bank of India (RBI), it is different from other industries and so the managements are constrained in decision making. This has been kept in mind while making analysis and interpretation of data.
11. TOOLS OF ANALYSIS

The data drawn from various sources are analyzed with the help of various parameters and statistical techniques such as Compound Growth Rate (CGR), indexes and ANOVA. The graphs and charts are drawn to illustrate the facts and figures at appropriate contexts.

12. CHAPTER LAYOUT

The thesis is organized into Eight Chapters as outlined:

**Chapter 1** - Indian Banking: An overview

**Chapter 2** - Research Design and Methodology

**Chapter 3** - Profile of Select Commercial Banks

**Chapter 4** - Evaluation of Operational Performance

**Chapter 5** - Appraisal of Liquidity and Solvency

**Chapter 6** - Analysis of Non-Performing Assets

**Chapter 7** - Assessment of Profitability Performance

**Chapter 8** - Summary of conclusions and suggestions
REFERENCES


