CHAPTER 2
LITERATURE REVIEW, OBJECTIVES, AND RESEARCH METHODOLOGY

2.1 INTRODUCTION

Commercial banks are integral part of financial system of any country in the world. In case of India, they have undergone massive overhauling in the last six decades. From the days of independent indigenous bankers and manipulative money lenders, they have traversed successfully through the period of nationalization. The post reform period has further witnessed widening and deepening of banking system in India so that they can face challenges of a new emerging global economy.

The ownership of commercial banks is heavily inclined towards public sector ever since fourteen major banks were nationalized in 1969. To add upon this, six more banks were nationalized in 1980. As such, at that time the economic reforms were ushered in, more than 90 percent of deposits and advances were controlled by the public sector banks. The banks’ nationalization brought in a lot of financial repression. They were forced through regulation to accept a type of social banking hitherto unheard of in western countries. As such, the traditional freedom of choice of assets in the portfolio became meaningless to the banks as substantially large part of their assets were directed under the control of the Government and the RBI. This together with high interest rate on deposits siphoned off whatever little opportunity they had to improve their margin of earnings. Admittedly there was a little scope for any study on banks’ portfolio behavior.

The hope of financial liberalization got some ground with the submission of Chakravarty Committee Report in 1985. It was for the first time in the history of commercial banks the committee recommended that the banks must be given greater freedom to determine their lending rates and also discourage concessional rates of interest for allocation of funds. The overall compulsion of economic reforms in 1991 and the submission of Narasimham
Committee report in 1992 prepared the ground for further financial liberalization. Interest rates were set free and prudential norms for asset classification came into being.

The ownership of banks is still complex in nature and heavily biased towards public sector. However, banks are now relatively free to take their own decisions in relation to composition of their deposits, advances and investments. The lowering of SLR and CRR has further added potentials for growth in earning. On the other hand, there are serious concerns among bankers and policy makers regarding deteriorating quality of bank assets. The requirement of increased capital due to Basel III accord has become a matter of challenge for the banks in general and the government in particular. Time is therefore ripe for undertaking a comprehensive study to understand various aspects of portfolio behavior of Indian commercial banks.

2.2 SURVEY OF LITERATURE.

In the following review of literature survey we have divided literature relevant to our study in different parts. This will help us to understand our topics of study in a smooth manner.

2.2.1 STUDY OF PORTFOLIO OF BANKS

Balance sheet of a bank for all practical purposes represents the bank’s portfolio which can be further divided into an asset portfolio and liability portfolio. However there are doubts regarding the extent of effectiveness and efficiency to which a balance sheet can reveal the financial position Felix P. Kollaritsch (1960). This is admittedly so because there are different stake holders in the society and their approaches and perspectives towards the balance sheets may not be the same. Therefore, from management point of view a single concept of financial position cannot be developed as all necessary information cannot be recorded in a single financial statement such as a balance sheet (Felix P. Kollaritsch, 1960).

Nevertheless, attempts have been made to study either the whole balance sheet of a bank as a portfolio statement or components of balance sheets representing assets or liabilities depending on the interest of researcher. William R. Russell (1964) presented an overall
framework for the analysis of commercial banks' portfolio. A microeconomic model has been constructed based on the assumptions of maximizing behavior. The model indicated that for any asset in the portfolio, the proportion of that asset would increase when its expected rate of return increases in comparison to other assets. The regression analysis yielded results consistent with this hypothesis. The model also suggested that as inflows of funds were expected, the proportion of cash held in the portfolio would decrease while the proportion of earning assets would increase. The regression results were again consistent with the hypothesis. Favorable results on balance were obtained in a separate test of the regression estimates with data drawn from a time period not used in the estimations. These results indicated that commercial banks' adjustments toward the equilibrium composition appear to be rather slow, taking approximately twenty months to reduce the cash share by about a third. Moreover, it seems that although the structure of interest rates appears to have small explanatory value considering short period changes, it nevertheless determines to a considerable extent the ultimate asset composition.

Leonall C. Andersen and Albert E. Burger (1969) in their work concluded that the study of commercial bank portfolio behaviour is important for at least two major reasons; FIRST, Commercial bank portfolio behaviour is an important explanatory factor for the magnitudes and changes in the economic quantities like overall savings and credit creation in economy. SECOND, Portfolio behaviour is a key determinant of the cost and flow of credit to specific sectors of the economy. The authors define bank behaviour regarding asset portfolio as a process of allocating a given amount of total deposits between non-earning assets and earning assets. The earning assets are actually allocated to loans and advances.

S. N. Kapur (1972) empirically studied the portfolio behavior of Indian Commercial banks and found that the rate of interest remains a key factor to influence crucial variables of bank portfolio. In the same paper he studied the banks behavior in the context of loans and advances and holding of government securities.

There are number of studies available on specific issues of portfolio behavior of commercial banks, particularly in the context of banks in the western countries. For example, the study by Jack Clark Francis (1978) deals with asset liability management of
banks of different size and concludes that large banks can manage their assets and liabilities better than small and medium sized banks. The large banks also earn a better return on their assets, although, the small banks generally tend to take more risk. The study also suggests that large banks are more capable to diversify across different types of assets.

Another paper by Hendershott and Winder (1979) make a comprehensive study on the changes in the composition of bank portfolio and conclude that there were long run shifts in the allocation of bank funds in favor of housing finance and consumer credit. These two sectors find favor because they are more stable and less risky to the banks. In general more lending options have great impact on temporary and extraordinary demand of the fund. Even the short term borrowing options may lead to changes in bank portfolio. The authors find that the proportion of extraordinary inventory investment financed rose from two-fifth to three-fifth and unusual fixed investment financing increased from zero to three-fifth in 1970s. The authors presumed that the economic conditions would remain stable for a long period of time. However economic system itself undergoes dynamic changes and influenced the behavior of commercial banks. A recent study by Bergstresser Daniel (2008) suggests that U S banks tended to reduce their exposure to very high risk loans such as construction and land development loans.

N. Kavitha (2012) in her paper used various kinds of ratios to study the asset and liability management in as many as 56 banks from various categories. She found that the group of SBI and its associates performed better as compared to private sector banks and nationalized banks group. It is witnessed that borrowing of private banks group have the least variability in terms of measures of dispersion.

Kanhaiya Singh (2013) in his paper opined that there are serious attempts by banks to minimize the asset liability mismatch since the implementation of RBI guidelines in 1997. Banks have made adequate follow up and monitoring arrangements at different levels. Individual banks have also fixed maximum tolerance limits of the mismatch for close monitoring. The study suggests that there is substantial scope for banks to improve profitability by monitoring and reducing short term liquidity. One of the observations of the study is that to fill the short term liquidity gap, banks resort to market borrowings at
higher rate of interest which reduces interest margin and profitability of banks. Banks have
greater scope to manage interest rate risk through various techniques.

The paper of M R Das (2013) attempts to investigate whether there exist any maturity
mismatch between assets and liabilities of public sector banks and seeks to measure the
extent of concentration of assets (loans, advances and investment securities) and liabilities
(deposit and borrowing) in various maturity buckets. There is maturity mismatch in assets
and liabilities of public sector banks basically because of differences in portfolio selection
by different banks. Moreover, there may be lack of awareness across the branches,
particularly those in the remote rural areas as they do not know the implications of the asset
liability mismatch. The author suggested that by educating the branch level operators about
the subjects of asset liability mismatch, reviewing the maturity wise position of assets and
liabilities at various levels and by computerizing and networking the branches, assets
liabilities mismatch can be detected and problem can be minimized.

2.2.2 STUDY OF BANK DEPOSITS

Banks deposits have been studied by various economists in different manners. In a
comprehensive case study Jayanal Ud-din Ahmed (2009) finds that growth of deposit is
affected by various factors such as GDP, interest rate and expansions of bank branches.
However these factors do not effect deposit growth directly and in order to have a
comprehensive picture the macroeconomic condition of the country must be studied.

Study of deposit and credit deposit ratio by M. Syed Ibrahim (2011) suggests that there is
a positive relationship between demand and time deposits. The growth of deposits per bank
office since 2000 has been more than the growth of credit per bank office. His study also
shows that investment deposits ratio and ratio of priority sector advances to total advances
have improved during the period. The author concludes that overall operational efficiency
of scheduled commercial banks has improved.

S. Venkatesan (2012) studied the trend and growth of deposit mobilization of scheduled
commercial banks in Tamil Nadu for a period of 10 years (1999-2009). He used compound
growth rate and substantiated his findings with simple regression analysis. He concluded that deposit mobilization in all forms of deposit shows considerable growth barring certain exceptions in case of term deposits. A significant decline in number of accounts of current deposit was noticed along with a rise in average amount per account. The author did not study the business implications of the changing structure of current deposits. K.Karthikeyan and S.Vadivel Raja (2014) noticed that deposit mobilized by public sector banks during 2003 to 2012 reflect increasing trend although there is no significant difference between current, savings and term deposits of public sector banks in India.

J.U.J Onwumere, et. al. (2012) studies the impact of interest rate liberalization on savings and investment. Finding of the study shows that deposit rate had a negative non-significant impact on savings in Nigeria. It is evident from the study that high interest rate due to liberalization have not helped to increase savings and investments of the depositors in Nigeria.

V L Deekshitulu and Kumar (2012) observed that there are no general explanation for the growth or decline of deposit and the same will depend on many individual bank specific, category specific, industry specific, and sector specific factors. Banks should plan their strategies keeping in view of all these specific factors to which they are more exposed.

Tomola M. Obamuyi (2013) attempts to study deposit mobilization and loan diversification functions performed by banks in Nigeria. Banks were found to perform efficiently both this functions. The author found that there is positive relation between deposits mobilized and bank lending and majority of the bank income is generated from advance and investments and therefore, bank should concentrate on both the factors to increase their profitability.

Rubina Afroze (2013) aims to give an overall idea on the Interest Rate Spread of the commercial banks in Bangladesh from 1974-2011. She concluded that their lies a significant correlation between spread and deposit rates. There is no significant relationship between lending rate and spread. Study also concluded that spread prevailing in the Bangladesh banking system was high as compared to those of its neighboring countries.
M R Das (2013) observed that interest rate deregulation has not made huge impact on growth of deposit mobilized and sluggish macroeconomic situation prevailing in 2011-12 are one of the biggest reason for decline in the growth rate of (Current and Saving Account) CASA deposits as well as their share in respective banking group. He suggested that bank should provide interests on current account, open more branches in rural areas, and intensify their efforts to increase the growth rate of CASA deposits over a period of time. Banks are also advised to differently classify their interest rates on short term deposits and advances.

After analyzing the data from 2000-01 to 2012-13 and studying the impact of total saving deposit on GDP, Deepti Sharma and Mamta Ranga in 2014 observed that there exists a strong relation between total savings and deposits. They added that deposits must be attracted from all sources to enable the banks to increase their credit and positively influenced the GDP and economic growth of the country.

Tafirei Mashamba, et. al. (2014) used ordinary least square method to analyze the relationship between interest rate and deposit mobilized in Zimbabwean commercial banks for the period 1980-2006. Taking natural logarithms, the analysis shows that with increase in inflation, deposits decreases because households are expected to buy properties to cushion themselves against loss of purchasing power of money. There is negative relationship between interest rate margin and deposits as potential savers gets discourage with low returns but there is positive relationship with financial deepening and deposits. Thus it can be said that interest rate is major determinant of deposit mobilization. Such conclusions were also drawn by Siyanbola Trimisiu Tunji, Sobande David and Adedeji, Samuel Babatunji (2012) earlier. However the study of Paul Ojeaga and Omosefe Odejimi (2014) observed that although nominal interest rate had strong positive effects on deposits, income was also found to be significant variable influencing deposits. The authors conclude that in the context of Nigerian economy, institutional factors and monetary policy had little influence on commercial banks.
2.2.3 STUDY OF CAPITAL ADEQUACY AND BASEL ACCORD

Capital is the mainstay of a banking institution. The banks are required to keep a minimum amount of capital with respect to their assets weighted by the risk involved in them. This is popularly known as Capital to Risk Weighted Asset Ratio (CRAR). Liberalization and competition all over the world have pushed the banks to such a state that they are exposed to greater volatility and uncertainty. Koehn and Santomero (1980) studied the effect of regulation of capital ratio on portfolio behavior of commercial banks. The purpose of the study was to find out whether regulation of capital ratio by the bank would reduce the risk in the portfolio of banks and thereby bring stability and viability in their operation.

Stressing on the need and importance of adequate capital for commercial banks Prof. Karlyn Mitchell (1984) said that ‘without enforceable minimum capital requirement, banks would tend to maintain capital level that posed too great a risk to the financial system.’

K Satyanarayana (1994) studied the position of bank capital of all 28 public sector banks by the end of March 1992. He observed that the balance sheet data used for the above purpose was not sufficient to analyze all the required parameters. However public sector banks were able to reach half way mark by achieving the target for tier I capital as on March 1992. However the strength of banks in the matter of capital is misleading as the government being the major stake holder injects capital from time to time to the banks after evaluating their requirements. He found that there was some gap in capital adequacy among the banks themselves and considering their social services the banks should be supported by the public at large by participating in capital formation as and when the banks enter into the capital market.

Brinda Jagirdar’s (1996) paper addresses the issues of capital adequacy of banks and suggests that adequateness of capital only cannot serve the purpose unless combined with sound lending practices. Frauds in banks are relatively more dangerous than non-maintenance of capital adequacy because the former can wipe out the entire capital base of the bank. The author also questions the norm of holding same level of capital adequacy ratio for all banks irrespective of their size.
Heath Price Tarbert, (2001) stated that bank capital serves four primary functions. First, it inspires public confidence in the bank's viability by absorbing unanticipated losses. Second, it protects uninsured depositors in the event of bank insolvency. Third, it pays for the acquisition of physical plants and other resources necessary to operate the bank. Finally, it serves as a regulatory restraint on unjustified asset growth.

D M Nachane, et.al. (2001) found that capital requirements seem to affect bank behavior over and above the influence of the banks’ own internally generated capital targets. This fact assumes all the more importance in view of the growing concerns about banking stability. In other words, higher levels of capital are prerequisite to prevent a systematic crisis and therefore is an important weapon in the hands of policy maker.

Nachane in 2002 further lend credence to the fact that inadequacy of minimum capital would be one of the major factors leading to failure of banks. In one of the study in Korea for 1997 it was found that the replacement of old capital base with a risk based capital increased no of banks below the regulatory requirements. Dr Paul in 2002 gave the argument that capital should cover both expected and unexpected losses. Sharpe (1977) who defined capital as a difference between assets and deposits stated that the larger the ratio of capital to assets or capital to deposit the safer will be deposit liability of commercial banks.

Ashok K. Nag & Abhiman Das (2002) attempted to assess the impact of imposition of uniform capital requirement on pattern and flow of credit to the business sector by Indian public sector banks. In the post reform period public sector banks have managed to reduce capital requirement by changing their portfolio but stricter risk management practice in respect of bank lending. This may result into reduction of overall credit flow by the public sector banks.

Saibal Ghosh, et. al. (2004) opined that internal factors are relevant for banks capital structure. Even in the absence of regulatory requirements, banks would choose to have a certain ratio of capital to assets. The analysis reveals that there is not much difference between capital structure of big and small banks. When GDP growth is above average, capital ratios increase more than proportionately whereas when GDP growth is below
average the capital ratios declined less than proportionately. The study observed that cost of capital remains an important factor to determine capital ratio.

In a study presented by Mandira Sarma & Yuko Nikaido (2007) it was observed that the Indian banks performed reasonably well under BASEL-I norms. They had larger than required capital adequacy ratio under Basel I accord and therefore when they shifted to Basel II norms there requirement for additional capital was relatively less. The view has been supported by Sahila Chaudhry (2012).

Manmeet Singh and Dr. R. K. Vyas (2009) used multiple regression models to compare mean capital to risk weighted assets ratio of various bank groups. They found a significant difference in the CRAR (Capital to Risk Weighted Asset Ratio) of State Bank of India group and Foreign Banks operating in India in comparison to that of nationalised banks group. The latter (nationalised banks) had lowest mean CRAR in comparison to other bank groups but the group recorded highest mean growth in CRAR during the period under study. There is no significant difference in the CRAR of Indian private banks and that of nationalised banks, the study observed.

T. Velnampy and J. Aloy Niresh (2012) attempted to study the relationship between capital structure decision and profitability of ten listed Sri Lankan banks during the period 2002 to 2009. Their analysis reveals that the banks in Sri Lanka rely more on long term loans and are highly leveraged. Moreover, debt finance was found to be inversely related to profitability because its contribution to cost is larger than risk associated with it. The study suggests that the bank manager must concentrate on financing decision to increase profitability.

Mohammed Arif Pasha et.al. (2012) studied Basel II norms with special emphasis on capital adequacy ratio of Indian Banks. They observed that overall position of banks capital adequacy ratio was comfortable according to Basel I norms. Although in the new set up, Basel II posed some problems, because of separation of operational risk. Under the Basel II norms the SBI groups and nationalized banks had already enough capital cushions for better management of risk. The same cannot be said in support of private sector banks.
Asikhia Olalekan and Sokefun Adeyinka (2013) try to find out the effect of capital adequacy on profitability of both foreign and domestic banks in Nigeria from 2006 to 2010. Their analysis supports the view that changes in capital adequacy affects the profitability of the banks. However their own analysis is contentious as one set of secondary data supports the hypothesis and the other set of primary data rejects the hypothesis.

A comprehensive study of capital adequacy ratio and its implication has been undertaken by Subhasish Roy (2013). The author suggests that the government has to infuse larger amount of capital to keep its shareholding of public sector banks intact under Basel III reforms. This means that the government will have to mobilize Rs.910 billion which may have adverse fiscal implication. If resources are mobilized through government borrowing the fiscal deficit is likely to rise. As such the fiscal deficit to GDP ratio is not in the comfortable zone for the government. If quality of asset deteriorates and the banks have to increase their provisions, than the profitability of the banks will also take a backseat which will further hamper the capital mobilization drive of the banks. In the face of short run troubles arising due to implementation of Basel III norms the banks may feel confidence that in the long run period their strength will improve.

Anita Mirchandani, and Swati Rathore (2013) assessed the readiness of public sector banks in India for implementation of Basel III norms. They studied the impact of new norms on growth of business of selected banks during the period 2008 to 2012. The study observed that the Basel III norms affect individual banks differently. Some banks require larger funds for implementation of Basel III norms whereas others are likely to struggle for it.

A study conducted by Mustari Hnamanth N and Waghmare Shivaji (2014) suggest that Indian banks follow retail business model and they do not rely on short term or wholesale overnight funding therefore liquidity is not the major issues with the banks. Moreover there is a strong tendency to invest in government securities which keep the banks in comfortable zone with respect to liquidity aspects. The authors are of the firm opinion that implementation of Basel III norms will not trouble the Indian banks.
2.2.4 STUDY OF BANK ADVANCES

V Subramanian and K U Umakrishnan (2004) attempt to understand the role of banks as a source of debt capital for different groups of firms in India, the paper analyzed that size is an important factor which in turn depends on the nature of bank credit. Long term loans are positively related to size whereas short term loans are negatively related. Export propensity was not found to be significant in debt decision. FDI firms are less dependent on bank debt than non FDI group. Firm with better gross profit ratio are less dependent on banks. Age of the firm and efficiency in asset utilization is found to be positively associated with level of debt.

Jitendra Mahakud and L.M.Bhole (2006) analyses the trends in commercial banks financing of public limited companies, private limited companies and foreign companies during the period 1966-67 to 2001-02. The result shows that banks have reduced finance to public limited companies whereas the financing to private limited companies has increased. The study notes that construction business is one of the steady industries to avail bank financing.

The issue of credit deposit ratio has been analyzed by Puneet Verma and Nitin Kumar (2007) with reference to three important states of India - Rajasthan, Gujarat and Maharashtra. The study relates to the period 1977-2005. Important conclusion of the study is that Gujarat being a rich and economically active state, had recorded lower Credit-Deposit ratio than the other two states Maharashtra and Rajasthan. This is an important conclusion because credit deposit ratio is a crucial factor to understand the growth of banking business in the state. The poor credit deposit ratio in Gujarat and thereby underdevelopment of banking business might restrict the economic development of not only the state but also the associated regions through trickledown effect. This argument has been further supported by Khyati Shah and Dr. Jayant Kumar (2014)

The implication of CD ratio to the economic system is important. This is because a high credit deposit ratio may lead towards inflationary situation and a very low CD ratio might lead country towards recession (Sukanta Chandra Swain, 2008). Therefore it is important
that the banks should undertake liquidity management and use their funds in the most profitable manner.

An important study of Usha Arora, et.al. (2009) revels that some selected public and private sector banks (such as OBC, PNB and ICICI) were strategically superior in terms of recovery methods where as other banks (such as SBI and HDFC) had poor mechanism of recovery. The study was limited to a period of five years.

Operational performance of scheduled commercial banks in 2000-2009 was studied by M. Syed Ibrahim (2011). His study analyzed deposit and advances, credit deposit ratio and investment deposit ratio. With the help of statistical tools the author concluded that Indian commercial banks improved its performance over the years. The study concludes that banks require significant improvement in strategies of both deposit mobilization and credit allocation.

In the time series analysis undertaken by Felicia Omowunmi Olokoyo (2011) it was observed that the loans and advances were significantly related to growth of GDP in Nigeria during the period 1980-2005. The lending behavior of the commercial banks was observed to be determined by the volume of deposits, interest rate and liquidity position of the banks. The author studied the co-integration results to understand long run relationship between loan portfolio and the determining values.

M. S. Nazir, et.al. (2013) attempted to study the effect of rate of return, deposits and inflation on loan supply in Pakistan during the period 1991 to 2009. He found that inflation is an important factor affecting the supply of credit in the country. Moreover higher interest rate has negative effect on bank advances as people find it difficult to repay. Advances are positively related to bank deposit and there is one period lag between deposit and advances.

Mohd Anwar (2014) attempted to study the effect of expansion of branches of scheduled commercial banks on the credit disbursement. The regression equation validate that branch expansion have positive effect on flow of credit across various states and in various sectors like industry, transport operators, professionals and other services.
Dhanuskodi Rengasamy (2014) has attempted to find impact of loan deposit ratio on profitability of eight commercial banks in Malaysia during 2009 to 2013. Out of eight banks, profitability of six banks were affected by credit deposit ratio. He strongly believes that bank can increase their profitability if they concentrate on increasing their loan deposit ratio. The study is limited to only locally owned banks and no foreign banks were included.

Richards Mileris (2015) analyzed effect of the country’s economic downturn (macroeconomic indicators) on bank’s loan portfolio. The cluster analysis, polynomial regression, factorial regression and association rules method were used as a tool to analyze statistical data. His studies show that the selected bank’s loan portfolio is negatively affected by downturn in the country during 2009-2010. According to the author the main problem during the period was growth of NPAs which reduces the banks interest income and therefore profitability of the bank.

2.2.5 STUDY OF PRIORITY SECTOR LENDING BY BANKS

The necessity of priority sector lending was felt in the early years of 1970’s. This was because commercial banks in India were reluctant to finance agriculture and other priority sectors in the economy (K. M. Shajaha, 1998). It was one the reason why nationalization of commercial banks was enforced in the country. Since then the commercial banks had to shift their approach from class banking to mass banking.

P. Ganesan (2003) examined whether the priority sector advances have actually eroded the profitability of the public sector banks during the period 1974-99. The outstanding credit to priority and non-priority sector increased during the period under study. The author is of the opinion that lending at subsidized rate of interest is an important factor which has affected profitability of public sector banks.

R.K. Uppal (2009) attempts to study the trend of priority sector lending and target achieved in public sector banks, private sector banks and foreign banks in India during 2006 and 2007. Study analyzed that advances to priority sector has increased in the entire bank group. There were some banks who had not achieved target given by RBI even though their
total advances were increasing. Author did not recommend any concrete solution to the problem although he said that there were qualitative issues hampering the banks to lend to the priority sector. A similar study of priority sector lending by public sectors banks during the period 1991-2008 was made by Jasmindeep Kaur and Silony (2011). The authors stated that priority sector lending of private sector banks grew faster than that of public sector banks. However in the context of agriculture lending both public and private sector banks couldn’t achieve their targets.

Dhiraj Jain and N. Sheikh (2012) studied the performance of loans, net profit and NPAs of eight individual private sector banks. For the period 2002 to 2009 the study noted some strange correlation between the net profit and NPAs and also the trends in the behavior of banks as individual units and the private sector banks as a whole.

A detailed study by Najmi Shabbir (2013) was undertaken to compare bank advances to agriculture sector and small scale industries during the period 1969 to 2011. The author noted that in last few years the share of agriculture credit in the total net bank credit has increased. The concentration of public sector banks on lending to medium and small enterprises was found to be more intense by the public sector banks than the other bank groups. The public sector bank lending to SSI was found to decrease gradually. However the performance of public sector banks with relation to priority sector lending was found superior in comparison to other bank groups.

**2.2.6 STUDY OF BANK INVESTMENTS**

Amadou SY (2007) measures the interest rate risk of banks government securities portfolio in India. He found that investment fluctuation reserve at the end of March 2004 was not significant to cover market loss resulting from a percent shift in the yield curve. Some public sector banks and old private sector banks were weak but foreign banks and new private sector banks have built enough cushions for the loss.

Marwan Mohammad Abu Orabi (2012) evaluated the performance of Jordanian Banks in their alternative investments in general and as a component of portfolio. The study
concluded through regression analysis that Jordanian banks were committed to the theories of investment portfolio and principle of diversification, convenience and trade-off between return and risk. Banks should concentrate on building a composite investment portfolio so as to ensure both stability and returns.

Chetna Parmar (2014) with the help of Markowitz model demonstrated that min-max approach in portfolio selection yields larger profits with reduced risks involved. She advocated for portfolio diversification and rational investments in different sectors of economy.

2.2.7 STUDY OF NON PERFORMING ASSETS

Non-performing assets is an important issue for both the bankers and economist. This is more because over the years the volume of non-performing assets has been rising and quality of asset is deteriorating. This is not just public sector banks who are witnessing higher NPA; the private sector banks and even foreign banks established in India are expressing rising volume of NPAs in their portfolio (Alok Goyal and Harvinder Kaur 2011). Recent studies of many other economists also reveal great concern for rising NPAs in commercial banks (Akshay Kumar Mishra 2013, Nacncy and Nikita 2014, Ashly Lynn Joseph and M.Prakash 2014, Rajeswari Parmar 2014, Najmi Shabbir and Rachna Mujoo 2014). The prudential norms introduced for Indian banks require strict provisioning for all categories of non-performing assets. As a result, the banks are now feeling the heat of increased provisioning and its adverse impact on the profitability of the banks. Sardar N.S.Gujral (2003) concludes from his study that growing NPA has adverse effect on not only profitability of banks but also the entire gamut of capital formation and economic development. The banks have attempted to reduce their NPAs through different channels such as Lok Adalats, Debt Recovery Tribunals, One Time Settlements, Corporate Debt Restructuring and through Asset Reconstruction Company. These measures have positive influence on improvement of NPAs but the fuller benefit can only be availed if our legal system is reformed to keep pace with changing dynamics. In the similar line Suhase Rane and Rajorshi Roy (2005) stated that Corporate Debt Restructuring has opened new door
for financially sick companies and it has also helped the banks and financial institution to get back their blocked fund. This is also to note here that the Reserve Bank of India now seeks to study the quality of bank assets through changes in the proportion of stressed loans comprising of NPAs plus restructured loans.

Gourav Vallabh, et.al (2007) conducted a study on the basis of Altman model. The study considered GDP growth and excise duty as macroeconomic factor and credit deposit ratio, loan exposure to priority sector, capital adequacy ratio and liquidity risk as micro economic factor. The authors in the study believed that the growing NPA is not because of commercial bank’s lending to priority sector. There are certain microeconomic variables such as government policies of tax and excise duty which directly affects the ability of the firms to pay back there loans which in turn results into non-performing assets. The authors stated that since the private sector banks maintained just the necessary capital adequacy ratio, they are better off than those public sector banks those have accumulated idle capital in their coffers. The argument related to capital is supported by R K Uppal (2011). His study suggested that the government should increase capital of banks and also disposed of the non-performing assets so as to mitigate the burden. Uppal also suggested selling of NPAs of commercial banks to Asset Reconstructuring Companies.

M. Jayasree and R. Radhika (2011) evaluated the relationship between NPAs, net profit and advances for the period 2004-05 to 2008-09. Correlation between NPAs with net profit was found to be negative whereas correlation between NPA and advances was found to be positive.

Shyamala’s study about NPA in 2012 found that the ratio of gross NPAs to gross advances was significantly higher for nationalized banks group in comparison to all other bank groups. She suggested that banker – borrower relationship may go a long way in reducing NPAs. The banks can also come out with comprehensive Compromise Settlement Schemes. The bank should also be set free to innovate their own schemes of recovery within the legal framework. Supporting the view further Satpathy and Patnaik (2012) advocated for systematic measures to reduce the NPAs of commercial banks.
Namita Rajput et. al. (2012) studied the nature and magnitude of NPAs and examined relationship between NPA and profitability. The study concludes that the profitability of banks will remain under pressure till the problem of NPAs is not solved. In the similar lines it was found out that rate of interest and growths of NPA have strong relationship (S Kasturi Rangan, 2012).

Vadivalagan and Selvarajan (2013) studied impact of non-performing assets on liquidity of banks in India. They concluded that banks viability and financial health depends on quality of loan assets. However, corrective measures must be taken to increase recovery of non-performing assets, lest the quality of loans would deteriorate and profitability and efficiency of banks will be adversely affected.

Prerna Bamoriya and Rajendra Jain (2013) analyzed effect of total assets, total advances, total deposits and net interest income on NPAs of SBI, Bank of Baroda, ICICI and HDFC bank during the period 2002-03 to 2012-13. The authors concluded that total assets and total deposit had significant impact on NPAs whereas total advances and net interest income had no significant impact. Study added that impact of deposits is huge on NPAs so bank should concentrate on management of deposit.

K. K. Siraj and P. Sudarsanan Pillai (2013) concluded that public sector banks have improved in managing NPAs. Gross NPAs of SBI and group was comparatively less than private sector banks and foreign banks but profitability of foreign banks and private banks were affected to a greater extent by the increased provision towards NPAs.

Seema Gavade-Khompi (2013) attempts to analyze performance of commercial banks in India during the period 1997-2012 in respect of NPAs within the banking group and its share in the total scheduled commercial banks. Study observed that asset quality of banks has improved till 2011 but there after asset quality has declined. The analysis shows that gross NPAs and net NPAs has increased during the period but ratio of it to total advances have reduced. Public sector banks hold highest share of NPAs in comparison to private banks and foreign banks. Advances and NPAs are directly related to each other. With increase in advances, NPAs also increased.
Samir and Deepa Kamra (2013) said that NPAs have negative effect on overall bank performance in the form of reduced interest income, deployment of current profit into provisioning, erosion of capital and creation of reserve as cushions for loan losses. These adverse effects also raise questions about the weightage given to the asset in relation to the risk taken by the banks. The authors concluded that GNPAs as percentage of assets declined during the period 1996-97 to 2009-10 for majority of banks. However the public sector banks continued to reel under pressure. The authors are of the opinion that credits related welfare programs, widespread network in rural areas, poor post loan follow up, politically motivated policy framework, and poor performance on credit recovery are some of the reasons due to which public sector banks have accumulated huge NPAs.

Ramesh Chandra Das et.al. (2014) attempted to study the management of NPA by means of capital adequacy norms. He studied the profile of scheduled commercial banks in relation to capital adequacy and compared their relative positions in different time periods. He correlated CRAR trend with NPA- Deposit ratio and Credit –Deposit ratio. The NPA- Deposit ratio is positively correlated with banks having CRAR below 10% and it is negatively correlated with banks having CRAR above 10%. Reverse relation was found in case of Credit-Deposit ratio. The correlation between NPA- Deposit ratio and Credit- Deposit ratio is negative and significant.

D. Jagan Mohana Rao (2014) examines the trend of NPAs in India from various dimensions and says that growth rate of gross NPAs is negative implying that there is huge decline because of satisfactory regulatory changes. The similar sharper trend was seen in net NPAs. NPA in Small scale industry is higher in comparison to other sectors but there is an improvement in recovery rates and therefore it shows declining trend. NPAs are declining in both public and private banks. Public banks do better than old private sector in most of the years but in comparison to foreign banks their performance is not better.

Saikat Ghosh Roy (2014) wrote in his paper with support of data analysis that China, Malaysia and Thailand have high credit growth. Similarly developed countries like USA, UK and Japan flourish in high level of credit. Credit in India and Brazil increased during the period 2002 to 2012. Gross NPAs as percentage of total loans show a very high rate in
Pakistan throughout the period. NPAs of country like India, Indonesia, Malaysia and Thailand have decreased during the period of study, whereas NPA of banks in USA have increased. Almost all developed and developing countries have learnt to manage their NPAs. However in India the situation is not very comfortable. The author also notes that non-performing assets are related to growth of GDP and the foreign exchange rates. He points out that different factors work in different economies to influence the non-performing assets.

Rajeswari Parmar (2014) attempted to evaluate NPA performance in SBI and ICICI. The regression model analyzed that level of NPAs both gross and net is increasing in SBI but decreasing in ICICI. Overall performance of ICICI is better in comparison to SBI.

2.2.8 STUDY OF DETERMINANTS OF PROFITABILITY

Both Economist and Bankers are interested in the profitability of banks mainly because a profitable bank reflects the characteristics feature of soundness and efficiency. B. S. Bodla and Richa Verma (2006) undertook a study in which they analyzed eight different factors as determinants of profitability of public sector banks in India. The study was related to the period 1991-92 to 2003-04. The authors found that non-interest income and spread was positively related to profits, whereas non-interest income along with operating expenses where negatively related to profits. The study also attempted to explain the relationship between advance deposit ratio, total no of employees and volume of non-performing assets. The findings are also supported by Dr. Hemal Pandya and Mrs. Chetana Parmar (2014).

The analysis of Rakhe P.B (2010) explores that even if cost of borrowings are similar for all bank groups, foreign banks are better placed because they can diversify their portfolio and also can mobilized low cost funds for themselves. Their operating expenses are low and non-interest incomes are relatively higher. Therefore foreign banks have been able to show a greater efficiency and profitability over the years.

Another important study by Dr. Debaprosanna Nandy (2011) examined the linkages between capital adequacy ratio, NPAs, net profit, gross profit, net interest income, interest
expended and provisions on profitability of the banks in different bank groups. He stated that interest expenses are the only good estimator for net profit during the period 2004-05 to 2006-07. He found strong correlation between profitability and independent variables. However he ran into trouble because of high degree of auto correlation and multi colinearity in the model itself.

S. Ayyappan and M. Sakthivadivel (2012) attempted to study factors influencing profitability of scheduled commercial banks in India by way of compounded growth rate and linear trend method during period 2000-01 to 2009-2010. The key factors analyzed by authors were deposits, expenditure, interest income, loans and advances, net profit, net worth, operating expenses and total assets. Study identifies that growth of private sector banks is more in comparison to public sector banks. He also concludes that if private sector banks are allowed to grow in the same manner, they will dominate the Indian banking system in the years to come. As such the RBI has started giving license to private sector players for banking business and IDFC and Bandhan finance have already obtained license to operate as commercial bank in India.

The study of Eliona Gremi (2013) is related to profitability of commercial banks in Albanian during 2005 to 2012. The study suggests that the size of total assets, high volume of advances, higher volume of deposits and higher spread are pre-requisites for strong profitability of commercial banks. Moreover the banks are also required to maintain low level of non-performing assets.

The study of Mohammad and Nusrat (2014) suggested that the loan deposit ratio, deposit asset ratio and cash deposit ratio have significant impact on return on assets and return on equity. The regression result could not ascertain any significant impact of liquidity measures on profitability. His analysis suggested that there is a strong dichotomy between the objectives of depositors and shareholders which is in line with general dilemma between liquidity and profitability of commercial banks. Banks are precariously hung in balance on the path of liquidity and profitability.

James W. Scott and Jose Carlos Arias (2011) presented an econometric model to study the determinants of profitability of the top five banks of United States. The study observed that
capital asset ratio had positive impact on profitability as large banks had ability to compete efficiently even if the macroeconomic factor did not support. They also found that GDP growth had positive influence on banks profitability and declining GDP also lead to fall in profitability.

Shefali Dani (2014) discussed various factors affecting profitability of Indian banks and changes therein. She observed that yield on advance and total deposits were directly related to profitability. Expenses on employee and establishment expenses were also found to be related to profits. Interestingly capital adequacy ratio, growth of net profits, cash to deposits and debt to equity ratios had no impact on profitability of the banks, the study observed.

Hemal Pandya (2014) identified productivity indicators, management of assets, provisions related to NPAs and liquidity position of the banks as important variables affecting profitability. He undertook the study of only 5 major nationalized banks of India.

Haroon Jabbar (2014) conducted a study on 31 commercial banks in Pakistan for the period 2009-2012 to analyze impact of deposit growth, loan loss provision, interest expense, size of the banks and capital adequacy on banks profitability using regression models, random effect model, Houseman test and Hetroskadascity test. The study revealed that there is positive relationship between capital adequacy and size of the bank while loan loss provision, deposit growth and interest expense have negative impact. The analysis also observed that deposits are not properly utilized in banks of Pakistan.

Lavinia (2015) studies impact of size of the bank, financial leverage, loan to asset ratio, deposit to asset ratio, number of employees, liquidity, monetary policy variables on the performance of banks in country during the period 2003 to 2013. The study concluded that the performance of the banks were significantly affected by financial leverage, deposit to asset ratio, no of employees, net result and monetary policy variables.
2.2.9 STUDY OF CAMEL STUDY

Studies like CAMEL analysis are representative of bank level observation and do not come under purview of our study. However they have important implications for the purpose of research. A K Mishra et. al. (2012) found that the private sector banks performed better than most public sector banks particularly with respect to the measures of financial strength. Similar conclusion was drawn by Mihir Dash and Annyesha Das (2013) in their study of various categories of banks.

Sharma and Taneja (2013) studied capital adequacy with respect to asset quality of public and private sector banks. The study using CAMEL analysis provided mixed result regarding relative strength of public sector banks. The study also found noticeable differences with respect to all banks regarding average advances to asset ratio in two separate time periods of four years each, as undertaken by the authors. They also studied the specific banks performance with respect to Non-Performing Assets.

An important study of financial performance of Indian Commercial Banks was conducted by Amita Makkar and Shveta Singh (2013). They too used CAMEL analysis and found that private sector banks performed better in comparison to public sector banks. The study also ranked the banks according to their performance and concluded that some of the banks need considerable improvement in the matter of capital adequacy, profitability, liquidity and solvency.

2.3 OBJECTIVES OF THE STUDY

A glimpse of literature survey suggests that diversified aspects of banks portfolio are studied in isolation. The survey also suggests that there are three important aspects of portfolio behavior of commercial banks. These are issues related to deposits mobilization, capital adequacy and quality of loans and investments including those concerns originating from poor quality of assets particularly NPAs. A comprehensive analysis considering these aspects of banks behavior in a single study is still lacking. The focus of the present study is to bring forth few critical aspects of portfolio behavior of commercial banks for the
purpose of both academic discussion and policy implications. Following are the major objectives of the study:

1. To undertake a comprehensive review of growth and structure of bank deposits in India.
2. To study changes in bank deposits mix with respect to rate of interest changes, and other factors and discuss issues originating therein.
3. To study relationship between deposit with advances and investments.
4. To study composition and structure of capital held by the commercial banks in India.
5. To study the issues of capital adequacy and its impact on commercial banks of different bank groups.
6. To study the sector-wise growth of bank advances and identify the constraints.
7. To study the issues related to recovery of loans of commercial banks.
8. To make a comprehensive study of investments of banks and implications thereof.
9. To study and analyze the issues related to non-performing assets and their implications on commercial banks.
10. To understand and analyze the determinants which are crucial for an optimal portfolio mix of commercial banks.
11. To suggest recommendations on the basis of study so undertaken.

2.4 HYPOTHESIS OF THE STUDY

The hypotheses of the present study are as follows:

1. The structure of bank deposits varies over time due to variation in structure of interest rates.
2. Capital adequacy has serious implications on banking business.
3. The banks’ capitals are sufficiently enhanced to meet adequacy norms over the period under study.
4. The commercial banks suffer from financial repression in the matter of choice of lending to different sectors of the economy.
5. There is substantial preemption of banks resources in the name of statutory requirements.
6. The banks suffered from poor recovery of loans during the period under study.
7. There is not enough freedom of choice in the context of bank investments.
8. Non-performing assets of banks have increased during the period under study.
9. The quality of banks assets and earnings are positively related.
10. The choice of optimum asset portfolio has been less pronounced.

2.5 METHODOLOGY OF STUDY

The present study is a modest attempt to understand various aspects of portfolio behavior of Indian commercial banks. The Reserve Bank of India classifies commercial banks in India differently at different places. Therefore the classification does not remain uniform with respect to the data made available for research work. For the purpose of this study we have taken one of the most popular classifications of commercial banks into four different groups. (i) SBI and its associates, (ii) Nationalized banks, (iii) Private sector banks and (iv) Foreign banks in India. We have also analyzed data as per sub classification such as nationalized banks of 1969 and nationalized banks of 1980 are collectively and separately as required. Similarly private sector banks are sub classified into old private sector banks and new private sector banks, and we have taken note of it. Wherever needed, individual bank’s performance is highlighted as example for substantiation, but the study does not attempt individual or bank-wise analysis. While for policy purposes, group-wise bank analysis are crucial, generality of arguments would require further study of variables at both bank and branch levels.

The study is based mainly on secondary data available over twenty years, that is, 1992-2012. Wherever needed for substantiation of arguments, previous years’ data are analyzed. The period of study would highlight the aspects of portfolio behavior of banks in the last two decades after the economic reforms and liberalization measures were ushered in. The importance of this period of study is immense because banks have traversed through three different but distinguished phases of banking and economic development. The first phase
lasted from 1992 to 2000 was a relatively a softer period for banking development. The period witnessed sound growth of deposits and advances and a comfortable position of capital cushioning and profitability. The second phase can be described as a period of financial moderation with new regulations and prudential norms bringing all kind of structural turmoil’s. The mellowness of the earlier period gone and the banks were thrown towards more hardship. This period lasted for eight years from 2001 to 2008. This period also witnessed onset of the worst ever financial crisis in 2008. The post crisis period since 2008 has put the commercial banks in India on the road of financial deepening and financial widening. This is the third phase of banking development of post reform period. This period is full of both turmoil’s and challenges. On the one hand banks are struggling to maintain new norms of capital adequacy. On the other hand the deterioration of non-performing assets threatens to take away whatever little cushions the banks had.

In the present study, secondary data available from various sources have been analyzed. We have heavily relied upon the Reserve bank of India publications such as Statistical Table Relating to Banks in India, Trend and Progress of Banking in India, Basic Statistical Returns of Scheduled Commercial Banks in India, Handbook of Statistics on Indian Economy and also data given in Reserve Bank of India Occasional Papers and various committee reports. Government publication such as Economic Survey and publications of commercial banks and financial institutions were also found handy for collections of statistical inputs. Various other reports and actual balance sheets of commercial banks were used, wherever found necessary in the study. Data and studies on Indian banks at international level, wherever found suitable, are also incorporated in the study for the purpose of analysis.

The study profoundly uses ratios as a tool of analysis. The ratios are simple to apply and can reveal position of a bank with respect to various variables accurately. The ratios are also important tools for comparison among different bank groups. We have found that

(i) Ratios are meaningful to ascertain financial position and strength of a bank.
(ii) For the purpose of comparison and convenience, ratios can be analyzed in such types of study.
(iii) One type of ratio can be used for comparisons with several other ratios so as to understand the banking activities more deeply.

(iv) For group wise behavior of commercial banks ratios remain as an important tool of analysis.

(v) Ratios can also help for the study of trends during the period under study. They are also helpful to forecast banks performance in the coming years.

Ratios are although helpful for analysis they are not completely reliable because sometimes they can reveal more than what they can conceal. We have found the following limitation of ratio analysis,

(i) The ratios can generate different opinions at different times and it is difficult to get one unanimous view among the bankers.

(ii) Reliability of ratio depends upon type of data available and the correctness of data.

(iii) We cannot move forward with one single ratio. The study requires multiplicity of ratios.

(iv) The use of ratio analysis for futuristic study is limited.

(v) Ratios are quantitative in nature and do not explain important subjective factors responsible for the behavior of the banks.

(vi) If there are dynamic changes in computation of data, ratios become difficult to interpret.

The above advantages and disadvantages notwithstanding, we have profoundly used ratios for the purpose of our study. We are also constrained to use ratios because of type of data available for the group wise analysis of the banks. In order to pull down the limitation further we have used growth rates both simple and compound in our study to show the trends of variables during the period. Simple statistical calculations and ratios to both understand and compare relative significance of items of banks’ assets and liabilities. Growth rates, both simple and compound, are used to show the trends of variables during the period under study. Simple statistical tools such as correlation coefficient are also used to study the interrelationships between the variables, wherever needed. We have also
attempted group wise regression analysis in Chapter 3 and Chapter 6 to substantiate our arguments. The graphs and charts are adequately used to enhance the understanding of comparative trends originating from the data.

2.6 LIMITATIONS OF THE PRESENT STUDY

A bank group-wise study of such kind is always fraught with challenges; more importantly, when it comes to analyse data sets of different sources at one place. Lack of homogeneity of data from different sources even for the same time period has been found to be a major limitation of the analysis. The long gestation period of finalizing the data and multiplicity of provisional data sets add to the difficulties. In some of the aspects such as capital adequacy and non-performing assets data are not available for the whole period of 1992 to 2012. This is because the issues of capital adequacy and non-performing assets were started being tabulated only after 1996. There are also cases where data for only twelve years i.e. 2000 to 2012 where available. Nevertheless, an attempt has been made to use uniform data sets consistent with the analysis.

The other limitation originates from the nature of study itself. Portfolio items appear both as stock and flow variables at different places and mixing the two to make a ratio or otherwise cannot be without disparagement. As such, ratio analysis is notorious for concealing more than what it reveals and therefore adequate care has been taken to substantiate the arguments further, wherever needed.

The study has attempted to explore selected issues of portfolio behavior of the bank groups. Due to enormity of the theme, individual bank’s behavior could not be analysed and the same is a matter of further research based on the emerging dimensions of the study.
2.7 CONCLUSION

The present study has attempted to find out the studies related to various aspects of portfolio behaviour of commercial banks. There is no dearth of literature regarding the progress of commercial banks in terms of deposits, advances and many other variables. Several studies have attempt to concentrate on only one or two aspects of portfolio items. The present study has attempted to broaden the horizon for a more diversified study than available in common literature. Most of the studies related to portfolios have pointed out the asset quality as a critical variable determining the performance of commercial banks. Therefore we have also tried to investigate this matter more closely and deeply in our study in the context the study has highlights significant no of areas which are matter of great concern for the progress of commercial banks. The study of capital adequacy and non-performing assets substantiate our arguments in the study.