The review of earlier studies on this topic and related topic is essential to have a clear view on the areas already studied. Based on the reviews of earlier studies, it is possible to know the research gap in the field of the study. In this part of the study, the researcher has presented the various studies done in the field of banking and financial management. It covers various areas in the field of banking sector related to financial performance, deposits and lending, non-performance asset and other aspects.

**Studies related to financial performance**

Sangami.M. (2002)\(^1\) analyzed the profitability of ten selected commercial banks in India. Five best performing banks were taken in class-1 and five poor performing banks were taken in class-2 categories. The period of study was from 1991-92 to 1997-98. The profitability ratios like spread, burden, interest revenue, non-interest revenue, interest cost, manpower cost and facility cost have been calculated. The study revealed that operating cost was higher in the case of class-2 banks and in these banks the profitability was affected due to the low level of spread. These banks required more scientific attempts for the investment of funds. The researcher suggested that the position of operating cost can be improved with the introduction of high level technology as well as by improving the per employee productivity.

Chandan and Rajput (2002)\(^2\) has evaluated the performance of banks on the basis of profitability analysis. The researchers have analysed the factors determining the profitability of banks in India with the help of multiple regression technique. They found out that spread, i.e., net interest income is the major source of income for banks. The study has found that the public sector banks are at
weaker position in relation to foreign banks and private sector banks. The researchers have suggested that the public sector banks should concentrate on non performing asset management and also make investment in technology upgradation for better data management and quicker flow of information.

Kumari (2003)\textsuperscript{3} has studied the profitability and productivity of both public and private sector banks in India. The study is primarily based on the secondary data covering the time period from 1980 to 1999 by taking into account the 50% of total public and private sector banks in India. Various indicators relating to employee and branch productivity as well as ratios relating to financial productivity and profitability of commercial banks have been employed for the purpose of study. The researcher has found out that in terms of deposit mobilization, branch expansion, credit deployment and employment generation both public and private sector banks have shown increasing trend. Bank-wise analysis has revealed that private sector banks have shown higher growth when compared to the public sector banks.

Qamar (2003)\textsuperscript{4} made a study on Profitability and resource use of efficiency in scheduled commercial banks in India. He examined 100 scheduled commercial banks including 42 foreign banks, 8 new private sector banks, 23 old private sector banks and 27 PSBs in terms of endowment factors, risk factors, revenue diversification, profitability and efficiency parameters. Data relating to financial year 2000-01 has been used from the annual accounts of the banks. Banks for the study purpose were categorized into PSBs, old private sector banks, new private sector banks and foreign sector banks. The study has indicated that all the selected scheduled commercial banks were found to be different in terms of total assets, share capital, capitalization ratio and efficiency factors. Much difference in the profitability performance of banks was found due to the human resources efficiency as measured in terms of business per employee.
Kumar (2004) has analyzed the efficiency of Indian banking sector which comprises of four groups, i.e., SBI and its associates, nationalized banks, Indian private sector banks, new private sector banks and foreign banks for the period 1992-93 to 2002-03 by using indicators. The study was primarily based on secondary data; and data envelopment analysis has been employed on various financial parameters to compute the productivity and efficiency of bank groups. The researcher has found that PSBs outperformed in case of total income, total expenditure, net profits, number of branches, return on equity, return on assets, spread as per cent of total income and volume of business, while private sector banks and foreign banks were better in terms of net profit as per cent to spread, per employee and per branch productivity. It was found that the private sector banks and foreign banks have branches mainly in metropolitan cities, whereas the public sector banks have small sized bank branches covering small masses. The study suggested the scope of further improvement for PSBs by following appropriate marketing practices.

Shannugam and Das (2004) made an attempt to measure the efficiency of banks in India during the period 1992-99 by using stochastic frontier approach. The four outputs, namely interest margin, non-interest income, investment and credit; and four inputs, i.e., deposits, borrowing, labour and fixed assets have been used to analyse the efficiency of banks. The results revealed that there has been the dominance of deposits in producing all the outputs during the study period and an improvement in banking industry to increase non-interest income, investments and credits. The study indicated that state bank group and private owned foreign group have performed better than the counterparts.

Sooden and Bali (2004) have made an attempt to find out the major determinants of profitability in banks. Different indicators of profitability have been formulated with a view to make a comparison in the profitability trend in all 27
public sector banks. A rising value of the indicators had taken as a positive sign in the sense that profits were increasing directly or indirectly with the only exception of establishment expenses to total expense. The analysis revealed that in later years of 1990s the economic profitability of public sector banks have an improvement. But at the same time, the falling priority sector lending had the chances to erode the social profitability linked with the public sector banks in coming years.

Kohli and Chawla (2006) made an attempt to analyze the emerging trends in profits and profitability. The study is related to four banks, two each from the public sector and private sector banks. The study has covered a time period of ten years from 1995-96 to 2003-04, and data relating to variables like interest income, interest expenditure, non-interest income, non-interest expenditure, total assets, operating expenditure, deposits and advances have been utilized for the purpose. Trend analysis and ratio analysis have been employed to measure the profitability and efficiency in banking operations. The study revealed that the performance of selected private sector banks (ICICI bank and Bank of Punjab) was better than the selected public sector banks (SBI group and PNB). The researchers have recommended that the use of information technology should be expanded to public sector banks as in the changing scenario volume of business, growth and profitability of banks would be determined by the technology.

Bodla and Verma (2006) evaluated and compared the performance of two banks in India, one from the public sector, i.e., SBI and the other from the private sector, i.e., ICICI bank. The analysis was done on the basis of CAMEL model. The study covered the time period from 2000-01 to 2004-05. The results showed that both the banks have maintained higher level of capital adequacy ratios than the level prescribed by RBI. Assets quality ratios of both the banks have been improved. SBI has an edge over the ICICI bank in terms of liquidity ratios and
ICICI bank has outperformed SBI bank in terms of operating profit to average working funds and net profits to average assets. On the whole, ICICI bank has performed better than the SBI.

Vaithyanathan (2009)\(^{10}\) made a study on CAMEL approach for evaluating the performance of commercial banks in Tamilnadu. He analysed three banks, City Union bank Ltd, Lakshmi Vilas bank Ltd from private sector, Indian Overseas bank from public sector banks and examined capital adequacy, asset quality, management efficiency, earnings quality and liquidity. It has been observed from the study that trend related to the sources of working funds of the banks projected a manifold increase in terms of accumulated total funds and revealed the share capital holdings are meagre and minimum when compared with the debt content. The branch expansion was positively correlated with total deposits and total advances which exhibited their development in the regular banking activities.

MD Aminul Islam (2014)\(^{11}\) made an analysis of the financial performance of national bank limited using financial ratio. The study attempted to measure the financial performance of National Bank Limited which is one of the largest and prominent private commercial banks in Bangladesh for the period 2008-2013 and to identify whether any difference exists between a bank’s years of operation and its performance classifying two periods (2008-10 & 2011-13). The study found out that the financial position of NBL is satisfactory compared to other commercial bank but has some problems. There was some problems in balance sheet in other areas. The overall performance would not been satisfactory level because they have improved and steadily maintained the assets and income position. Share price also needs to increase with dividend for bank stakeholder. The study concluded, that as the economy of Bangladesh increases so is the foreign trade and the NBL Bank always has played its role so as to make sure that things go smoothly. The bank does its best to provide better portfolio to its stakeholder.
Income, total assets, investment activity, export, import and remittance are all showing positive trends even after the global challenges that we face today. But the little concerned on financial stability of the bank has decreased in recent year, this may be because of opening of new branches in different business centres and the instability in the economy of the world.

Indirani Ghosh and Debdas Rakshit (2014)\textsuperscript{12} studied the financial performance of select commercial banks in India using the camel approach. They attempts to gauge the relative financial performance of ten select commercial banks (incorporating five public sector and five private sector banks) in India during the period 1998-1999 to 2012-2013. The CAMEL approach has been used for the purpose of such study. This approach takes into consideration five aspects – Capital adequacy, Asset quality, Management efficiency, Earnings quality and Liquidity. The relative position of the sample banks under each of the five aspects has been ascertained and eventually a composite ranking has been arrived at by taking into consideration all the five aspects as a whole. The best performers in each group as per this study are as follows: IndusInd Bank is the best one in terms of Capital adequacy. Corporation Bank tops the list in case of Asset quality ranking. Management efficiency of Axis Bank Ltd. is the best among all the sample banks. Earnings quality of the HDFC Bank Ltd. is the best. Bank of Baroda is the best one in terms of Liquidity. This study is confined only to the determination of the relative position of the banks. Detailed analysis of the financial soundness of individual bank is beyond the scope of this paper.

D. Guruswamy (2014)\textsuperscript{13} analysis of profitability performance of SBI and its associates. He attempted to analyze the profitability performance of SBI and its associates. The objectives of the analysis are to study the profitability of SBI and Its Associates and to analyze the profitability performance of SBI and Its Associates. The study is primarily based on secondary data. In order to derive the
open handed results from the information collected through secondary data, various statistical tools like mean, S.D, variance, CAGR, and ANOVA have been accomplished. The scope of the study is confined to all the banks of SBI group for a data period from 1996-97 to 2007-08. In the present study, five profitability ratios have been considered for the purpose of evaluating the performance of SBI and its associates. On the basis of analysis of profitability ratios it is printout that all the five ratios shows fluctuating trend during the study period in all the banks. The analysis revealed that an associate bank has outstanding performance in respect of earning profits in relation to working fund compared to SBI.

S.C.Mohanty (2014)\textsuperscript{14} made an analysis of working capital management in select organizations in the mining sector of Orissa. The study revealed that Working capital management is considered to be a very important element to analyze the organizations’ performance while conducting day to day operations, by which balance can be maintained between liquidity and profitability. From the analysis of data collected in respect of the sample companies, viz. three public sector and one private sector company, no definitive conclusion can be drawn as regards observed differences in liquidity management between public and private companies as the data varies from one parameter to another. The average value of inventory as a percentage

Shveta Singh and Anita Makkar (2016)\textsuperscript{15} analyzed impact of financial crisis on the volatility of Indian commercial banks’ Stock prices. The study assessed the impact of recession and its affect on volatility of bank stock prices of Indian commercial banks. Bankex stock index is used as a proxy of stock returns of Indian commercial banks. The data is collected for the period of 1\textsuperscript{st} January 2004 to 31\textsuperscript{st} December 2011. The study examined the impact of financial crisis on the volatility of bank’s daily closing stock prices and compared the stock price volatility of pre-recession period and post-recession period with GARCH
model. The study found out that there is a significant difference in the volatility of bank stock prices during pre-recession period and post-recession period. The study concluded that the news of recession in the international market had increased the volatility of Indian commercial bank’s stock prices. This volatility in the bank’s stock prices is persisting due to old news in the market and will take a long time to die away.

Ishaq AB, Karim A, Ahmed S and Zaheer A (2016) studied the evaluating performance of commercial banks in Pakistan; “An application of Camel Model”. The study has revealed the impact of CAMEL model parameters on bank performance. CAMEL model parameters, for example, capital adequacy, asset quality, management efficiency earnings & profitability and liquidity are considered as independent variable while an earnings per share as a measure of bank performance is considered as the dependent variable. The sample size of this research is the 10 commercial banks operating in Pakistan. The financial data of 7 years (from 2007 to 2013) were collected from the official website of the banks, annual reported and from other related websites. The study utilized numerous statistical tools like regression analysis, descriptive analysis, and correlation analysis to analyse the data and interpret the findings. The study concluded that at this point of time CAMEL model has a significant impact on the bank’s performance. The findings of the research will be very helpful for the management of the banks in the banking industry of Pakistan. The investors and shareholders can also assess the bank’s performance in order to make right and timely investment decisions.

Studies related to deposits and lending

Avneet Kaur (2012) has made an empirical study on the performance evaluation of public sector banks in India. Banking in the India is highly fragmented with 30 banking units contributing to almost 50 percent of deposits and 60 percent
of advances. Public sector commercial banks namely, State Bank of India, its seven subsidiaries and nineteen other nationalized banks. These PSCB’s in India continue to be the major lenders in the economy due to their sheer size and penetrative networks which assure them high deposit mobilization and control of 80 percent of banking business in India. This study concentrates on the profitability analysis of Public Sector Banks in India. The study is based on the secondary data from the period of ten years from 2000 - 01 to 2009 -10. It has been observed from the study that the banks should take necessary steps to increase the non interest income, which only constitutes less than 20 percent of the total income, by way of collection of cheques and bills, giving guarantees, locker facilities, acting as agent providing merchant banking services and so on. The banks should conduct awareness programmes among the rural poor about the repayment of loans and saving habits. With regards to deposits, the current deposits carry zero rate of interest. Therefore, the banks have to concentrate on mobilizing current deposits. To maintain a steady growth rate of deposits, it is recommended that the banks should come forward to offer some subsidiary services like marketing assistance, technological assistance, insurance facilities, and export facilities and so on.

Ram Jass Yadav (2014) analysed SME lending models of public sector banks in India: innovative thinking. The study revealed that Innovation is something that cannot be introduced by force because it is like invention to enhance efficiency of existing system. For banks in India innovating thinking for adopting right serving models does not remain a choice but compulsion owing to the contribution of SME sector in employment, export, manufacturing and economy growth (GDP). Empirical observations based on the present study suggest that competition especially through innovation require to move banks out of their comport zones where lower yields on large corporate loans is disincentive for banks with higher concentration risks. Future banking is predicted in SME
lending because of higher NIM, sustainable growth and longer relationship with them owing to the facts that today’s SME is tomorrow MNCs. Public Sector Banks have though started to give special treatment to SMEs, however, study reveals that there is scope of innovative Best Business Practices (BBP) to have leverage of large branch network as compared to private banks and foreign banks operating in India. The recommendation that emerged from the study will help to grab huge business opportunities from SMEs which is a bonanza for banks as approximately 95 per cent MSMEs are still not availing institution credit. Innovating Thinking towards SME lending will realize the theme “…faster, sustainable & more inclusive growth…” of 12th Five Year Plan of our country. Let us join move of ‘Thinking New’ to deliver things differently.

Gourab Chakraborty & J K Das (2015) made a critical review of some measures to quantify credit risk in lending. The study indicates that every Credit Risk measure has its strengths and weaknesses. Historically banks employ accounting based measures to appraise individual borrowers. But sweeping changes in the global financial system in the past two decades have led banks to rely more on sophisticated credit risk models that can predict default and losses at early stages and measure Credit Risk of large loan portfolios at more frequent intervals. However, these measures produce remarkably different estimates for Credit Risk and also have methodological inconsistencies, especially as regards loans. Moreover, banks lack huge and accurate long-term time series database of loan default experiences needed to render the outcomes of the models statistically reliable. All these constraints undermine assessment of Credit Risk in lending.

J.D. Sharma (2015) analysed risk management in banks. The study revealed that the Government would do well to bring out the legislations to make the loan default for whatever reasons a non-bailable criminal offense. The
Government should also allow ‘lifting of corporate veil’ to track the money trails at the corporate levels and also the individual share holders/ promoters so as to unearth the diversion of bank loans. Radical reforms in the loan recovery framework in the banks are the need of the hour so as to manage effectively the risks of losing money in frauds and loan defaults. RBI, as a Regulator, must coordinate with the Government of India to carry out reforms aiming at managing the risks of depositors and other stake holders who are made to suffer at the hands of loan defaulters.

Tarun Sengupta, Salil Kumar Mukherjee and Debasis Banerjee (2015) analyzed impact of financial inclusion in the districts of West Bengal. They try to derive two separate indicators, one for financial inclusion and another for social development for the 19 districts of West Bengal separately. This study showed a strong, positive relationship between financial inclusion and development. The process of social development is linked with financial inclusion and vice versa. They suggest that supply of formal financial services is more important than number of users in explaining our index. Access represents a necessary but not sufficient condition for using formal financial services. They found that the degree of financial inclusion is highly correlated with some important social development indicators. The creation of such an index is useful to shed some light on the determinants of financial inclusion as well as its contribution to economic growth and development. Without proper social development the dream of complete financial inclusion will remain elusive.

Jayanta Mitra and Pramit Sengupta (2015) studied a management accounting tool to analyse profits by customers. The study revealed that now a days, almost all prudent firms analyze profits by customers but few take recourse to activity based customer profitability analysis. Quite naturally, these firms allocate customer related expenses on an arbitrary basis. Activity based
customers profitability analysis helps to reveal that customers with the same sales value can generate significantly different profits. Accordingly, activity based customer profitability analysis provide scope for developing a more market oriented approach to management accounting.

Malyadri P and Sirisha S (2015) made an analytical study on trends and progress of Indian banking Industry. The study is mainly concerned with the analysis of comparative profiles of public banks, private banks and foreign banks in India during the period of 2006-13 that reflects the impact of new competitive environment on the bank’s performance in terms of various selected parameters. The results have found strong evidence that the private sector banks surpasses the other bank groups and topped the position in all the parameters, while public sector banks and foreign banks are just competing for the 2nd and the 3rd position. The study found out that the new private sector banks have shown the highest annual expansion in terms of number of branches vis-à-vis old private sector banks. The capitalization profile of private banks continues to be better than that of public sector banks. Private sector banks have very good Return on Assets (ROA) as compared to other bank group. As far as interest income is concerned, private banks are ahead in the race by reporting 61.93% growth, followed by public banks (58.7%) and then by foreign banks (55.61%). Foreign banks have the highest business per employee as well as profit per employee and the NPA of public sector bank was also significantly higher than that of private and foreign banks.

Jeevan Jayant Nagarkar (2015) made an analysis of financial performance of banks in India. The study attempted to analyze performance of five major public, private and foreign sector banks with principle component analysis on the financial parameters. The weights are assigned on the basis of importance of the parameters on financials. The study concluded that the commercial banks depend on deposits received from all types of depositors. Achieving and
maintaining faith of depositors is a key to banks success. Commercial banks need to check credit appraisal process to reduce the non-performing assets. It has been seen that couple of banks depend on borrowing for giving advances. Banks are better if they depend on deposit money rather than borrowed money for disbursing advances. It was seen that though the overall deposits of commercial banks have gone down. The credit growth has slowed down. This is not reflected in the banks analyzed for the study. This is because large national level banks are able to withstand business cycle better than regional banks. The objective of government to create bigger national level banks by merging smaller banks is justified by this study.

K.V. Ramesh (2016) analyzed performance of Canara bank and State Bank of India. The study revealed that based on the recommendations of the Narasimham Committee (1991 and 1997), as part of the financial sector reforms the Reserve Bank has introduced the internationally recognized prudential norms for income recognition, asset classification and provisioning. PSBs to foster and stabilize the healthy financial condition and viability has taken up norms like transparency in balance sheets, up gradation of technology, entry of private sector banks and partial deregulation. One of the greatest challenges of PSBs is competition, up gradation of technology, customer satisfaction and profit consideration. It has been observed from the study that the performance of Canara bank and SBI both in finance and physical framework of parameters selected during the period of study 1995-96 to 2014-15 has been good with regard to all the parameters taken for consideration. Canara bank has shown an impressive financial performance in most of the indicators/ratios when compared to the SBI.

Vijaykumarsharma and Anujkumar (2016) analysed an evaluation of performance of Indian public sector banks. The study has analyzed that impact of
banking sector reforms on the performance of all 26 public sector banks in India in the pre (1980-1995) and post reform period (1996-2010). The undertaken variables have shown significant impact on total income in the post-reform period. The study concluded that banking sector reforms had significant impact on the performance of public sector banks. It has been well reflected through the various undertaken indicators. Almost, all public sector banks had shown that more than 80 percent of variation in profitability was due to underlying explanatory variables, and small proportion of variation was unaccounted. The return to scale in both stages of regression had revealed that, except one or two banks had managed to operate on increasing return to scale in the post-reform period. The analysis of bi-variate correlation analysis had shown high degree of inter correlation between different variables. The multicollinearity analysis was performed in order to know the impact of individual variables on the profitability of banks using step wise analysis. It had depicted that none of the explanatory variables were found superfluous variables. Therefore, it was pointed out that, all explanatory variables had significant impact on profitability of banks, as shown by the behaviour of regression coefficients, which turned out to be significant in the post-reform period as compared to pre-reform period.

R. Gandhi (2016)\textsuperscript{27} analysed financial stability – Issues and concern: Are we banking up all right trees? The study concluded that the best of the macro prudential policies may fall short when it comes to addressing a serious crisis. Future crisis also may still evade all our efforts to foresee it. Future crises also may not replicate any of the past ones; hence history might not always be of help. Complacency may slowly set in even as our memories of the bad times are gradually fading away. But, the challenge is how do we establish an implementable framework to deal with the emerging systemic risks at their incipient stages?
Siva Rama Prasad (2016) studied Quality of Lending vs. Credit risk. The study revealed that ‘Quality of Credit’ and ‘Credit Risk’ is interrelated. Credit Risk is inversely proportionate to Quality of lending. Credit Risk will decrease, if Quality of lending increases and vice versa. Due to poor quality of lending, banking industry is suffering with huge Non-performing Assets (NPAs). Thereby higher provisions for NPAs, lower profits, additional capital to maintain CRAR and decrease in rating of the bank etc are the side effects of poor quality of credit or lending. He suggested that Prevention is better than cure. Instead of putting more efforts on side effects of Credit Risk like providing more provisions, decrease in net profit and net worth, attracting more Tier-I and Tier-II Capital to maintain the required CRAR etc., banks should give more focus on “Quality of Lending”. This is only one way or remedy or best solution to overcome all problems relates to the Credit Risk in the Banks. ‘Quality Control’ of each and every step of credit delivery process is the need of hour to mitigate the credit risk in the banks.

Florentin Butaru, Qingqing Chen, Brian Clark, Sanmay Das, Andrew W. Lo and Akhtar Siddique (2016) analysed risk and risk management in the credit card industry. The study used account-level credit card data from six major commercial banks from January 2009 to December 2013; they apply machine-learning techniques to combined consumer tradeline, credit bureau, and macro-economic variables to predict delinquency. In addition to prove accurate measures of loss probabilities and credit risk, their models can also be used to analyze and compare risk management practices and the drivers of delinquency across banks. They found substantial heterogeneity in risk factors, sensitivities, and predictability of delinquency across banks, implying that no single model applies to all six institutions. They measure the efficacy of a bank’s risk management process by the percentage of delinquent accounts that a bank manages effectively, and found that efficacy also varies widely across institutions. These results suggest the need
for a more customized approach to the supervision and regulation of financial institutions, in which capital ratios, loss reserves, and other parameters are specified individually for each institution according to its credit risk model exposures and forecasts.

Jing Li (2016) analyzed accounting for banks, capital regulation and risk-taking. He examines risk-taking incentives in banks under different accounting regimes in presence of capital regulation. In the model the bank jointly determines the capital issuance and investment policy. Given an exogenous minimum capital requirement, lower-of-cost-or-market accounting is the most effective regime that induces the bank to issue more excess equity capital above the minimum required level and implement less risky investment policy. However, the disciplining role of lower-of-cost-or-market accounting may discourage the bank from exerting project discovery effort ex-ante. From the regulator’s perspective, the accounting regime that maximizes the social welfare is determined by a tradeoff between the social cost of capital regulation and the efficiency of the bank’s project discovery efforts. When the former effect dominates, the regulator prefers lower-of-cost-or-market accounting; when the latter effect dominates, the regulator may prefer other regimes.

Saeed MS and Zahid N (2016) analysed the impact of credit risk on profitability of the commercial banks. The study aimed to analyse the impact of credit risk on profitability of five big UK commercial banks. For measuring profitability, two dependent variables ROA and ROE were considered whereas two variables for credit risks were: net charge off (or impairments), and non-performing loans. Multiple statistical analyses were conducted on bank data from 2007 to 2015 to cover the period of financial crisis. It was found that credit risk indicators had a positive association with profitability of the banks. This means that even after the deep effects of credit crisis in 2008, the banks in the UK are taking credit
risks, and getting benefits from interest rates, fee, and commissions etc. The results also reveal that the bank size, leverage, and growth were also positively interlinked with each other, and the banks achieved profitability after the financial crisis and learned how to tackle the credit risk over the years.

Reeta (2016)\textsuperscript{32} has studied interest rate risk – A comparative study of public and private sector banks in India. The study revealed that the Indian banks are exposed to so many risks like interest rate risk, liquidity risk, credit risk and exchange rate risk which affect the net interest income and profitability of the banks. The study is aimed at measuring interest rate risk in public and private sector banks in India with the help of gap analysis. It is also found out whether there is any difference in the level of interest rate risk in the selected public and private sector banks of India. The findings revealed that both the private sector banks and public sector banks are exposed to interest rate risk.

\textbf{Studies related to non-performing assets}

Bloem and Gorter (2001)\textsuperscript{33} suggested that a more or less predictable level of nonperforming loans, though it may vary slightly from year to year, is caused by an inevitable number of ‘wrong economic decisions by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, etc.). Under such circumstances, the holders of loans can make an allowance for a normal share of non-performance in the form of bad loan provisions, or they may spread the risk by taking out insurance. Enterprises will pass a large portion of these costs to customers in the form of higher prices. For instance, the interest margin applied by financial institutions will include a premium for the risk of non-performance on granted loans. At this time, banks' non-performing loans increase, profits decline and substantial losses to capital may become apparent. Eventually, the economy reaches a trough and turns towards a new expansionary phase, as a
result the risk of future losses reaches a low point, even though banks may still appear relatively unhealthy at this stage in the cycle.

Prashanth K. Reddy (2002)\textsuperscript{34} in his research paper on the topic, “A comparative study of Non Performing Assets in India in the Global context” examined the similarities and dissimilarities, remedial measures. Financial sector reform in India has progressed rapidly on aspects like interest rate deregulation, reduction in reserve requirements, barriers to entry, prudential norms and risk-based supervision. The study reveals that the sheltering of weak institutions while liberalizing operational rules of the game is making implementation of operational changes difficult and ineffective. Changes required to tackle the NPA problem would have to span the entire gamut of judiciary, polity and the bureaucracy to be truly effective. This paper deals with the experiences of other Asian countries in handling of NPAs. It further looks into the effect of the reforms on the level of NPAs and suggests mechanisms to handle the problem by drawing on experiences from other countries.

Rajaseker. P Reddy and D. Ramana Reddy (2003)\textsuperscript{35} have made a conceptualized study in Andhra Pradesh in nonperforming asset. They have noticed that the internal and external causes for NPAs have included for many sector of industry. Failures to introduce financial management, managerial deficiency over the estimation demand, underestimation of capital costs, delay in implementing project which results in cost acceleration, of finance and working capital, surplus labour, recession in demand, inadequate availability of resources like relation caused heavily industrial sickness which paved the way to the evaluation of NPAs in industrial sector. They have figured out the problem of NPAs in state and have given some suggestions. They extend the role of banks and financial institutions not to keep their activity limited to financing but also to monitor the functioning of industry from time to time, introducing entrepreneur training,
counselling and guidance for the new entrepreneurs. They concluded that the growing industrial sickness among private, public an co-operative endeavours, certain selections were suggested to encounter industrial sickness and to minimize the chances of evolution of NPA in any industry.

Samanta Amitava (2006)\textsuperscript{36} in his paper attempted to analyse the impact of NPA on the working of Commercial Banks in India. It is held that India has acquired an alarming number of non-performing assets over the last two decades. NPA has affected the profitability, liquidity and competitive functioning of public and private sector banks. The study has concluded that the banks have the psychology of the banks is to insulate themselves with zero percent risk and paying little attention to fresh credit. Greater emphasis has been laid on credit risk management.

Bhatia (2007)\textsuperscript{37} in his research paper entitled, “Non-Performing Assets of Indian Public, Private and Foreign Sector Banks: An Empirical Assessment”, explores an empirical approach to the analysis of Non-Performing Assets of public, private, and foreign sector banks in India. The NPAs are considered as an important parameter to judge the performance and financial health of banks. The level of NPAs is one of the drivers of financial stability and growth of the banking sector. This paper aims to find the fundamental factors which have the impact NPAs of banks. A model consisting of two types of factors, viz., macroeconomic factors and bank-specific parameters, is developed and the behavior of NPAs of the three categories of banks is observed.

Karunakar M., Vasuki K. and Saravanan S. (2008)\textsuperscript{38} made an attempt is made in the paper that what is NPA? The factors contributing to NPA, the magnitude of NPA, reasons for high NPA and their impact on Indian banking operations. Besides capital to risk weightage assets ratio of public sector banks, management of credit risk and measures to control the menace of NPAs are also
discussed. The lasting solution to the problem of NPAs can be achieved only with the proper credit assessment and risk management mechanism. It is better to avoid NPAs at the market stage of credit consolidation by putting in place of rigorous and appropriate credit appraisal mechanisms.

Meenakshi Rajeev and Mahesh H P (2010)\(^3\) made a study on banking sector reforms and NPA by analysing Indian commercial banks. It is observed in the study that the problem of NPAs, which was ignored till recently, has been given considerable attention after liberalisation of the financial sector in India. This exploratory paper examines the trends of NPAs in India from various dimensions and explains how mere recognition of the problem and self-monitoring has reduced it to a great extent. It also shows that public sector banks in India, which function to some extent with welfare motives, have as good a record in reducing NPAs as their counterparts in the private sector. The paper also discusses the role of joint liability groups or self help groups in enhancing the loan recovery rate. Accounting norms have been modified substantially and mechanisms are in place for reduction of bad loans. The discussions with banks, however, show that such decline is mainly due to the awareness of the problem of bad loans at the bank level. It is concluded that NPA in the priority sector is still higher than that of the non-priority sector.

Pacha Malyadri, S.Sirisha (2011)\(^4\) made a comparative study of nonperforming assets. The Indian banking system has undergone significant transformation following financial sector reforms. It is adopting international best practices with a vision to strengthen the banking sector. Several prudential and provisioning norms have been introduced, and these are pressurizing banks to improve efficiency and trim down NPAs to improve the financial health in the banking system. In the background of these developments, this study strives to examine the state of affair of the NPAs of the public sector banks and private
sector banks in India with special reference to weaker sections. The scope of the study is limited to the analysis of NPAs of the public sector banks and private sector banks NPAs pertaining to only weaker sections for the period of seven years i.e. from 2004-2010. It examines trend of NPAs in weaker sections in both public sector and private sector banks. The data has been analysed by statistical tools such as percentages and CAGR. The study has observed that the public sector banks have achieved a greater penetration compared to the private sector banks vis-à-vis the weaker sections.

Vijaya.N.L and Muralidhar.S (2012)\textsuperscript{41} made a study on management of NPAs through securitization. The data employed in this study comprises of 8 years data from 2003 to 2010, relating to NPA, recovery of NPAs under SARBESI Act, gross income and liquid assets of two PSBs namely Central bank of India and Corporation bank, and analysed that the under t-test and correlation methods to know the impact of securitization. It has been observed from the study despite the problems that exist in the current Indian experimentation, securitization of NPAs has beena positive development for the Indian banking sector. While it has helped to strengthen the banking sector by clearing up funds for more lending. It has also provided an impetus to the development of a stronger fixed income market in India which has the potential to have considerably more depth than its regional counterparts. Such a market is important for a developing economy like India’s so as to provide an alternative avenue of funding for industry. Therefore, in light of the discussion, it may be argued that the current legislative response is a well thought out one.

Selvarajan and Vadivalagan (2013)\textsuperscript{42} have made a study on Management of NPA in priority sector reference to Indian bank and public sector banks. This study has been designed to illustrate the necessity and the nature of NPA in Indian bank, Tamilnadu. Finding out NPA under priority sector lending in Indian bans and
compare with public sector bank and making appropriate suggestions to avoid future NPAs and to manage existing NPAs in Indian bank are the major objectives of this study. This study suggested that the management of Indian bank must pay special attention towards the NPA management and take appropriate steps to arrest the creation of new NPAs, besides making recoveries in the existing Non Performing Assets.

Sankar Majumdar (2014)\textsuperscript{43} analysed non-performing assets: nightmare for banks? The analysis revealed that in absolute terms, the Gross NPA has increased from Rs. 70,063 crore in 2008-09 to Rs.1,93,194 crore, a jump of about 175% in 4 years. This is alarming and there is no way that one can even try to ignore that. The PSU banks have fared very poorly in this respect as compared to private banks again justifying the above contentions of government sponsored advances forced on them.

Goutam Bhowmik (2014)\textsuperscript{44} conducted a comparative assessment of management of non-performing advances (NPAs) in India and China. The analysis was carried out to compare the broad policies and measures that have been adopted to deal with the NPAs in two emerging economic powers of the Asia – India and China. The study revealed that initially, NPLs may not seem to have serious negative effects... However, the size of the problem grows, especially of banks are allowed to accrue interest on their NPLs. Eventually, the efficiency of the banking system is undermined. India has been following a stringent provisioning norms since 1993 and as a result, its provision coverage ratio is much better than that of China (up to 2006).

Banambar Sahoo (2015)\textsuperscript{45} studied non-performing assets in Indian banks: its causes, consequences & cure. He concluded that the NPA demon is eating away the Indian economy slowly and steadily as it is making the edit costly and scarce. Unless it is managed effectively & quickly, it will mar the financial
inclusion as well as infrastructure development in the country. India should learn from the fundamental lesson of banking stress in recent years across the globe. It is high time for all concerned to recognise this gigantic problem and reframe the regulatory measures, strengthen the legal system and create credit discipline & loan repayment culture so as to make the Indian banking system vibrant to sustain the economic development. Bankers should adopt the corrective measures proactively in credit management. They should effectively adopt the 3 ‘r’ measures: rectification, restructuring and recovery.

Dilip Kumar Datta (2015) analysed NPA management by banks: interbank disparities in India. The study analysed performance of 34 banks (6 banks under state bank group, 19 nationalised banks, 7 private sector banks and 2 foreign banks) in managing their NPAs. Two broadly accepted ratios, namely gross NPAs to gross advances (GNGA) and profit to gross NPAs (PGN) have been considered for study. Using statistical tools, namely, σ and β convergence, rank, scatter plot and cluster analyses, it is observed that the average GNGA of all banks is 0.05. GNGA of about 17 banks is above 0.05 and spread in such a manner that 50 to 90 percent of interest earned by these 17 banks is likely to be eaten up by gross NPAs. Similarly, the average PGN of all banks is 0.68 which means if 68 percent of gross NPAs become loss assets, the entire profits by the banks will be eroded leading to bankruptcy while private sector and foreign banks have managed their NPAs well compared to SBI group and nationalised banks, it may be due to their less exposure in term and stock based working capital lendings. Amongst 34 banks, HDFC, Kotak Mahindra and ING Vysya bank are ‘good performing’ and Central Bank of India, Dena Bank and United Bank of India are ‘bad performing’ banks with respect to management of NPAs.

Kr. Baidya (2015) study on India’s NPA management efficiency banks. The survey attempted to fill this gap by proposing an Index of NPA Management
Efficiency (INPA). This research study tries to rank Indian domestic commercial banks on the basis of proposed index scores. The INPA is a multi-parameters index that captures information on various aspects of NPA management of the banks in one single digit lying between 0 and 1, where 0 denotes the worst NPA management while 1 the best. The study selects 30 Indian banks consisting of 26 from public sector banks and 4 from private sector banks in India, operating in 2010-11, 2011-12 and 2012-13. Banks having the amount of gross non-performing assets of 5 digit figure in Million during 2012-13 are selected as the sample banks. The study revealed that estimated index score values clearly rank the Indian Banks in the area of NPA management. Magnitude of index score measures the extent of robustness of banks relative to other banks towards credit risk management efficiency. In other words, higher the index score the more robust it is.

Madan Mohan Jana and Kumar Thakur (2015) provided an overview of non-performing assets management and banking performance – an empirical analysis. The study revealed that the level of nonperforming assets of different nationalized banks and relation between different banks in the level of nonperforming assets. It is found that level of Non-performing asset both gross non-standard assets and net non-standard assets are upward rising and is on an average in upward trend of all the nationalized banks but the growth rate is heterogeneous and different. The ANOVA test shows that there is a significant difference between gross NPA and net NPA of nationalized banks; this depicts and conveys their efficiency in the management of NPAs.

Amrit Patel (2015) has analysed bank credit to agriculture – problems of recovery and non-performing assets. The study revealed that rural development agencies and government departments put pressure on banks to sanction loans. These loans suffer from weaknesses like lack of proper planning, lack of requisite
manpower to implement schemes properly and monitor the benefits from implementation. Monitoring studies required: In order to contain and efficiently manage NPAs in agriculture, data on NPAs for individual banks operating within a district must be collected and analysed each year to assess comparative performance among banks. Each bank’s controlling office in each State must undertake similar studies. Data on NPAs must be incorporated district-wise & bank-wise in the annual state focus document prepared by NABARD for discussion in the SLBC meeting with a view to reducing the NPAs under any circumstances. Union and State Governments should create enabling environment and Each bank should focus on its farmer-friendly lending procedure, system & methods; human resources development & training policy and concentrate on financial literacy & credit counselling of farmers.

P. Chattopadhyay (2015)\textsuperscript{50} analysed social banking: finding the route to entrepreneurial frustration – NPA. The study revealed that the major burden of responsibility comes on the small and medium scale entrepreneurs seeking to take benefit of the scheme of social banking that had the laudable banking habits to every nook and corner of the country. The banker-customer relationship under the scheme of social banking which is at present unduly formal and the typical problems faced by the loanees are generally unknown, despite the so-called ‘know your customer’ programmes. Granting that no ill-will infects the desired banker-customer relationship, a pervading atmosphere of suspicion in the bank branches comes in between the bank officials and customers in knowing and judging the reasons behind delay in paying the instalments in time. The huge all-pervasive play with banks funds be these in the form of social banking or industrial loans, the money blocked with some customers create many a stumbling block for banks especially for lending to other small customers and also for funding medium and large industries.
G.L. Puntambekar and Bharatkumar Meher (2016)\textsuperscript{51} studied NPA management in Indian banks with special reference to curative management strategies. The study revealed that banking sector plays a pivotal role in the development of a country. It can be said that there is direct relationship between the development of banks and the development of economy in a country. But the present scenario of banking sector seems so absurd due to uncontrollable situation over the rising NPA’s. Even though the various causes responsible for such NPAs and Net NPAs were 48,399 crores and 16,904 crores respectively which increases to 1,64,462 crores and 90,000 crores respectively in the year 2013. Banking sector of India has decided to introduce many strategies to control and recover these NPAs. These strategies have been classified into two categories. In the first category the strategies which have been implemented to recover the NPAs, hence these strategies are called as curative management strategies. In the other category, strategies are implemented to take prevention before the loan amount becomes NPA.

Ela Sen (2016)\textsuperscript{52} has analysed Role of ARCs in NPA management. The study revealed that recovery of NPAs is a special technique requiring expertise knowledge and consumes much time and effort. ARC with their sound financial base and skilled resource pool could provide a good solution. Sale of NPL to ARC would help the banks to clean their balance sheet, improve their market value, lower cost of fund and to focus on their core business. However survival of the business depends on its ability to resolve the loans in a meaningful way and recycle the fund entrapped in it. It is necessary that ARC not merely play the role of an agent to bail out the banks by deferring losses but becomes truly involved in the business on risk and return basis. Simultaneously it is essential to built up a proper legal infrastructure in the country paving the way for bankruptcy, foreclosure law. Also excessive political interference often creates obstacles in
smooth recovery. ARCs has the potential to push forth necessary changes and it is expected that they will use it.

Ram Jass Yadav (2016)\textsuperscript{53} made an attempt to analyse Stressed assets in Indian banking – causes and measures. The study revealed that there was a turn down in the growth of profits of banks, credit off-take slowed down and interest rates soften. The asset quality also weakened more detectably for public sector banks. Profitability declined on account of higher provisioning on banks’ delinquent loans and lacklustre credit growth and increase in their losses coupled with companies/projects are under stress. As a consequence the Indian banking system has been augmented stress in loan portfolio.

**Studies related to other aspects of banking**

Goutam Bhowmik (2014)\textsuperscript{54} made a study on adoption of Basel III accord: Impact on the Indian banking system. The study found that the safety and soundness of Indian banking is an important prerequisite for its sustainable growth. The former largely depend upon the maintenance of adequate capital to cover up the inherent risk, proper matching of assets and liabilities and adequate control over excessive leverage. Basel III addresses all these issues with an aim to improve the ability to absorb shocks arising from financial and economic stress. But safety and soundness has always been associated with costs. Naturally, the adoption of Basel III will going to adversely affect some crucial variables like profitability, growth and existing business model of Indian banks. But RBI is of the opinion that the negative impact of adoption of Basel III is a short term phenomena and benefits of a stronger and sustainable banking in the long run will not only offset the negatives but promote growth and development. But RBI should be more proactive in devising appropriate and credible policies for effective mitigation of the challenges emanating from the adoption of Basel III.
R P Gore (2014)\textsuperscript{55} has analysed transparency in Indian banks – considering information on bank websites. The study revealed that a sound and well-managed bank should, in theory, benefit when it provides comprehensive, accurate, relevant and timely information on its financial condition and performance, and ability to manage and control risks. Such a bank should be able to access capital markets more efficiently than similar institutions that do not provide adequate disclosures. A transparent bank should be able to access capital markets more efficiently than similar institutions that do not provide adequate disclosures. A transparent bank should be able to access capital markets more efficiently than similar institutions that do not provide adequate disclosures. Can we have a cadre of senior bank managers for nationalised banks, i.e. a pool of managers above say Dy. GM level to be pooled and used for senior positions at all the nationalised banks. This will have two benefits. Managers would get accustomed to systems and procedures of different banks, would get equipped for directorial assignments. The differences in banks culture, systems and procedures may after some time would get ironed out as better systems would prevail.

Pooja (2014)\textsuperscript{56} attempted to analyze why banks should go for forensic accounting – needs and applicability. The study revealed that the impacts of frauds on banks in monetary transactions are more significant as their operations involve transaction of funds. Side by side, frauds can have a potentially weakening effect on self-assurance in the banking system and may damage the stability of the economy. They can bring down banks; undermine the Reserve Bank of India’s decisions, etc. The increase in amount involved is largely attributable to the few large value advances and technology related frauds that have come to light in recent years which pose a significant challenge to all stakeholders in the banking industry. Banks are facing a gradually difficult
scenario with increased scams fraudulent incidents and thereby directly affecting outcome and increased cost of compliance. With increased regulatory inspections, banks are under pressure to execute best practices. In such a situation, forensic accounting and auditing is therefore not an option but the need of the hour.

Santhanam Murali and Veena Bhat (2014)\(^{57}\) have analysed anatomy of bank frauds – preventive measures. The study found that technology has helped us to do banking without going to the branch, not having restrictions about working hours, holidays, etc. However, on the negative side of it, this has resulted in a new type of frauds called Cyber Frauds – using technology to commit frauds in customers' accounts. The amount involved in Bank Frauds so far is to the tune of Rs.29,910 crores. Of these, Rs.16,690 crores (56%) pertain to frauds of Rs.1 crore and above. Technology Frauds during the four year period 2009-10 to 2012-13 accounted for Rs.357 crores. The trend in technology frauds is bound to increase due to daily innovations in the Banking using technology. We are sure, knowledge of various risks associated with banking and the preventive measures suggested above would benefit every stakeholder and in particular the account holder who faces lot of difficulties in getting back the money which has been wrongly debited to his account.

Vikas Madhukar and Rima Bajaj (2014)\(^{58}\) made an analysis of Cash Transaction Reporting (CTR) by banks with reference to money laundering in India. It has been found that statistically there is a significant difference between the expected number of CTR reporting from public, private and foreign banks as compared to their actual observed reporting. Therefore, it can be concluded that Indian Foreign banks avoid filing of suspicious transactions reports CTR in order to please their customers and avoid attrition on customers. They fear that their customer might get lost if they are actively reporting incidences. Another
interesting finding of this paper is that Indian Private sector is actively complying with the law and submitting more reports than expected to safely conclude that they are avoiding bias of current assets shows fluctuating trend during the period under study.

J D Sharma (2014)\textsuperscript{59} made a critical comment on new bank licenses. The study revealed that the rationale quoted by RBI behind granting new bank licenses quoted by RBI is significant progress made in improving the quality of risk management processes by the banks. The veracity of the assessment by RBI in this regard is suspect as the rising NPAs are a reflection of inadequacy of risk management processes. The thought of RBI to weaken the Public Sector character of the banks in India is fraught with risk of choking the flow of funds to the desired sectors as the banks in private sector operate purely on commercial consideration and not on the consideration of societal good. RBI would therefore do better by not introducing continuous on-tap bank licensing window in the interest of a sound banking system in the country. The resilience shown by Indian banks in the wake of global financial crisis (2008) needs to be preserved and further strengthened through stringent regulatory infrastructure.

J D Sharma (2014)\textsuperscript{60} has analysed Nayak committee recommendations for public sector banks. The study revealed that PSBs have their due share of credit in economic growth and prosperity of the country. Such public institutions have an important role at competitive market place in the business of banking too. It is suggested that RBI and government would do well by not destroying the public sector character of the nationalised banks and reject the recommendations of Nayak Committee which seek to serve the unholy interest of the champions of private sector. PSBs need to be preserved, protected and promoted in the face of such attacks of vested interests.
P. Siva Rama Prasad (2015)\textsuperscript{61} studied specialisation in banking payment banks. The study revealed that The Reserve bank of India's latest initiative of introducing ‘Payment Banks’ finds resonance with Economist Adam Smith’s Theory of employing division of labour to exponentially increase productivity. The new business model adopted will create a revolutionary trend in the Indian banking industry and will accelerate government’s mission of improving financial literacy and achieving Total Financial Inclusion (TFI), both vital for a country’s economic development. Payment banks will offer the advantages of currency circulation, a narrow banking model, 100% safety, high spread, one segment one product reach and low cost of operations. Three main risks in the banking industry are credit risk, market risk, and operational risk - banks have to provide capital adequacy norms i.e., a minimum of 9% to cover these risks. As payment banks will not sanction any credit or loans to the public, credit risk for these banks is zero. The overall risk profile for payment banks is very less when compared to the conventional banking system in India. Hence, the CRAR or CAR for payment banks is less and they need not bother about the implementation of Basel III accord in full before 31st March, 2019. Due to the limited services offered by the payment banks, Innovation and strategic thinking in increasing the market share of low cost deposits is possible and it will create further challenges to commercial banks in the coming days.

J.D. Sharma (2015)\textsuperscript{62} has analysed computation of base rate in banks. The study found that RBI made an announcement in its annual policy statement for the year 2009-10 about constituting a working group on Bench-mark Prime Lending Rate (BPLR) for reviewing the present system of BPLR. The recommendations of the working group and the suggestions/comments of the public brought to the fore the system of base rate that replaced BPLR with effect from 1st July 2010. The Base Rate (BR) included cost of deposits/funds, negative
carry on CRR & SLR, unallocable overhead costs and average return on net worth. The guidelines issued by the RBI at the time of implementation of BR with effect from July 1, 2010 shall continue to be in force. Those guidelines provided that BR shall include all those elements of lending rates that are common across all categories of borrowers. The bench-mark chosen by the bank to arrive at the base rate for a specific tenor may be disclosed transparently. The banks are free to determine their actual lending rates on loans and advances with reference to the BR and by including such other customer specific charges as are considered appropriate. RBI expects that new methodology of computing BR would also help the banks in the medium term goal of pricing their floating rate loans linked to an external bench-mark. The bench-marking agency viz., Financial Bench Mark India Pvt. Ltd. (FBIL), shall publish various indices of market interest rates and banks will be encouraged to price their deposits and advances with reference to the external bench-marks published by FBIL.

Goutam Bhowmik (2015) studied introduction of payment bank in India: Prospects and challenges. The study revealed that The RBI guidelines on PBs are aimed at setting up institution that will help in achieving the broad objectives of financial inclusion. They will provide the rural and unbanked population access to wealth creation and remittance services through technology driven low cost transaction model. It will also offer an opportunity for NBFCs which already have operations in rural areas to convert into small bank to access low cost deposit to meet their funding requirement. It is needless to say that there is a strong business case for payment banks in India because a sizeable portion of the country’s population remains outside the ambit of formal banking. Potential licensees would hope to capitalize on the synergies the payments bank business is likely to have with their existing businesses (exploiting already existing distribution network, providing a wider suite of services to customers, enhancing
customer stickiness and brand recall, etc.). But the business is unlikely to be profitable on a standalone basis in the medium-term; profitability would kick in once business volumes gain traction. Given the challenges before the PB, it will not be an easy roadmap for the upcoming payment banks.

Goutam Bhowmik (2015) analysed a critical review of ‘Indradhanush’ plan to revamp PSBs in India. He made a humble attempt to critically introspect the various elements of the ‘Indradhanush’ plan with a view to highlight the additional measures needed to make the plan successful. The study revealed that the plan has introduced several positive steps to curb Government interference, promoting efficiency through objective performance measurement, etc. The steps under the plan are promising but they can only be fruitful when the ‘No Government Interference’ policy will be implemented in letter and spirit. The plan falls short in respect of some confidence building measures as rightly identified by CRISIL rating agency. There must be more vigorous measures to deal with the challenge of NPAs. This could be done by creating a ‘Bad Bank’ or more legal enforcement right to the banks. Government can also give a strong signal of its determination to change the game through a disproportionately higher upfront capital infusion, and, addressing emerging human resources challenges at the mid-to-senior level in public sector banks.

SAFA conference on ‘impact of Basel accords on banking & financial sector’ (2015). The conference detailed about the Basel I, II and III and also the financial regulators creating a lot of restrictions as well as tackling the credit risk, liquidity provisions, statutory liquidity ratios, about J.P Morgan developing the risk matrix, Basel Accords etc. It is a comprehensive set of reform measures that strengthen bank’s transparency and disclosures. He asserted that risk is on an increasing trend and to minimize the risk, Basel III have been structured to further strengthen the system as banks in the developed economies were under-
capitalized, over-leveraged and has a greater reliance on short-term funding. Further it stated the challenges faced by the banks on the implementation of the Basel norms, about NPAs about CASA etc. sharing his practical experiences.

Manas Ranjan Das (2015) has analysed new paradigms in banking; the case of Indian banking sector. The study focuses on public sector banks (PSBs), not on other segments of the scheduled commercial banking sector such as private sector banks, foreign banks, regional rural banks (RRBs) and local area banks. Analysis revealed that the basic confidence is gradually being built as the incidence of zero balance accounts is gradually reducing (from 76.4 per cent as on 18.9.2014 to 52.3 per cent as on 17.6.2015). That means people are transacting in their accounts and/or by seeing their fellow beings open accounts, other people are also getting motivated to open accounts, with initial deposits too. Therefore, ‘continuous transaction’ is the key to watch. The analysis concluded that the new paradigm would require the government to shoulder a good deal of leadership and responsibility. Secondly, the government has to somewhat loosen the strings of its purse. Finally, the government should consider giving appropriate awards, if not Padma awards, for PSBs as institutions or their Chairmen.

G. Padmanabhan (2015) analysed emerging challenges and evolving issues in banks. The study concludes that these are interesting times for the economy as well as for the Indian Banking industry. The challenges that India, as one of the fastest growing economies in the world presents are enormous, multidimensional and far-reaching. In such a scenario, every one of us will have to inquisitive, agile, thorough and customer centric if we need to strategise and win.

Vineet Aggarwal (2016) has analysed Forensic audit – strengthening the banking system. The analyses revealed that one of the tools available with the banks to deal with NPAs and frauds is Forensic audit. Banks have started to use this tool quite frequently nowadays. Most of the time forensic audit is used in post
fraud situations i.e. reactive tool. But sometime it is being used as preventive tool in the form of monitoring of vast data, testing such data on various parameters through computer assisted tools and taking preventive action. In any forensic audit assignment gathering data and information is most difficult task. Major hindrance in conducting forensic audit is collection of required data or information. Since most of the data in any bank is maintained on computers and servers, knowledge of computer forensics has become important for a good forensic auditor. Forensic audit reports does not contain opinion of the forensic auditor, it is always based on facts and documentary evidence that can be scrutinized in courts. Since such report can be submitted in court and be a basis for a court case, it should be precise, conclusive and must be error free.

Anit Mitra (2016) analyzed interest rate cut & loan from PSBs. Interest rate here is referring to the lending rate of the banks and others FII to commerce and trade. Now, in India lending rate of banks (Public Sector Banks or PSBs) is mainly depend on monetary policy of RBI. On other hand monetary policy depend on the conditions of economy, situation of world economy, and inflation rate. In recent past RBI has reduce the repo rate in few occasion and refuse to do the same in some time instead of request from all concern of economy. Cut in interest rate and investment boost will mainly depend on bank’s lending policy. Central Statistics Office (CSO) data show physical savings of households have registered a decline in 2013-14 and 2014-15, which is also corroborated by the slump in real estate, and fall in gold imports. And that makes for the cause for surprise. The study concluded that reduction of rate of interest can improve the supply of funds to industries and will give the impetus to growth is not correct in present scenario.

S. Murali and S. Chitra (2016) studied banker & the Companies Act 2013. They revealed that Banks deal with various types of clients while opening
deposit accounts and lending advances. One of the main types of customer is ‘Company’ form of business organisation. Knowledge of the provisions of Companies Act, 2013 and Rules there under, is a pre requisite for any official working in the Bank. The new Act has brought about drastic changes when compared with erstwhile Companies Act, 1956. The study concluded that Companies Act, 2013 has made lot of changes in the provisions governing companies in all aspects. A banker must be conversant with as many provisions as possible. However, knowledge of the provisions regarding creation, modification and satisfaction of charges on the assets charged as security for the loans is a necessity. There have been many changes in this regard in the new act.

Jean-Paul Laurent, Michael Sestier and Stephane Thomas (2016)71 analysed trading book and credit risk: How fundamental is the Basel review? They revealed within the new Basel regulatory framework for market risks, non-securitization credit positions in the trading book are subject to a separate default risk charge (formally incremental default risk charge). Banks using the internal model approach are required to use a two-factor model and a 99.9% VaR capital charge. This model prescription is intended to reduce risk-weighted asset variability, a known feature of internal models, and improve their comparability among financial institutions. They analyzed the theoretical foundations and relevance of these proposals. They investigate the practical implications of the two-factor and correlation calibration constraints through numerical applications. They introduce the Hoeffding decomposition of the aggregate unconditional loss to provide a systematic-idiosyncratic representation. In particular, they examine the impacts of a J -factor correlation structure on risk measures and risk factor contributions for long-only and long-short credit-sensitive portfolios.
Keyra Primus (2016)\textsuperscript{72} studied excess reserves, monetary policy and financial volatility. He examines the real and financial effects of reserves in a Dynamic Stochastic General Equilibrium (DSGE) model with monopoly banking and credit market imperfections. The framework explicitly accounts for the fact that commercial banks hold excess reserves and they incur costs in holding these assets. The model also accounts for imperfect substitutability between bank funding sources and it shows that this feature is an important channel through which reserve requirement shocks can affect real variables. Numerical experiments show that an increase in reserve requirements creates a countercyclical effect for real economic activity. The results also indicate that the combination of an augmented Taylor rule which responds to excess reserves and a countercyclical reserve requirement rule is optimal to mitigate macroeconomic and financial volatility associated with liquidity shocks.

Saleena A.S. and Dileep A.S. (2016)\textsuperscript{73} analysed service quality in commercial banks: an analysis. The study on the role of service quality of commercial banks throws light on the relevance of providing better customer service for sustainable growth. The usage of banking services varies depending on the type of customers. The study points out that all services offered are useful to customers and banks should be keen in providing globally updated services as a part of better service quality. With respect to providing information about various products and services, email followed by bank websites is the best source of communication. With the advent of technology, mobile banking found to be one of the best modes of complaint registration regarding banking services. Along with poor employee response, delay in operations and poor communication was the major impediments faced by customers. Banks have to reduce the
difficulties faced by their customers so as to capture and retain loyal customers.

Arathy and Vijayachandran Pillai (2016)\textsuperscript{74} studied the effect of employee empowerment on organisational commitment of bank employees. The study revealed that empowerment is a competent approach which plays a crucial role in the dominance of a learning culture provides the power of skill; knowledge and experience-orient thinking. It let people, individually and in groups, to utilize their talents and knowledge to make decisions that influence their job activities. It is an instrument that leads to participatory management, give power to transmit authorities and responsibilities to teams and individuals to perk up the performance and optimization of work force task. The result of study states that respondents perceived higher level of empowerment and organisational commitment. It was also found that there exist positive and significant relationship between employee empowerment and organisational commitment. The two dimensions of employee empowerment like reward and decision making have significant impact on organisational commitment. It could be concluded that employee empowerment influence the variation in organisational commitment, as increase in empowerment increases the organisational commitment of bank employees.

S. Murali (2016)\textsuperscript{75} analysed Disruptive innovation Indian banking industry. The study captures major disruptive changes in the banking industry by classifying them into changes in the banking system, changes in the deposits and advances area and the payment and settlement systems. Banks have now become ‘one stop solutions for the financial services’. Under one roof, the customer can get banking, insurance, mutual fund services. Under core banking solution (CBS), a customer is no more a ‘Branch Customer’ – he is a ‘Customer
of the BANK’. He can operate his account from any branch. Mobile banking and
digital innovations are going to be the disruptors of the Indian banks in the next
four years. The future of the banking would change from ‘Customer of a Bank’ to
‘Customer of the Banking System’. Like mobile number portability, the customer’s
account number with a bank could be used for transacting or availing services
from any other bank. The number of banks and branches would come down
dramatically. The type of services rendered inside a physical branch would change
from the routine to the advisory nature. Many of the private sector banks are
already in the advanced stage of preparation in this area. It is the public sector
banks which have to cover a lot of ground, without further delay, if they have to
retain their identity and grow in the business.

Conclusion

Since banks have a long history of evolution in Indian financial system,
there were several studies on various operational aspects of banking. As the
researcher wanted to have an insight into the analysis of various functions of
banks, a number of articles, thesis reports, journals, RBI reports and related books
have been referred to by the researcher. The foregone snapshots and brief write-
ups of this chapter have given useful information about the functions and
performance of the banks. The comprehensive description of the literature on
banks further provides the various approaches employed by the authors and
researchers. The collective information has helped the researcher to identify the
research gap and has initiated to proceed with the latest analytical tools. Thus the
analysis of the fund management of SBI and its associate banks under three major
parameters, namely, sources of funds, deployment of funds and financial
performance, have been taken in order to examine and find out the leads and
lapses in the management of SBI and its associate banks.
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