CHAPTER – 2
REVIEW OF LITERATURE

It is the pre-requisite for any systematic study, to review all the available relevant literature in order to design the study in a meaningful way. It also helps in framing the research questions appropriately based on the available experiences in the study area.

In view of the importance of NPAs management in banks and in the process of reducing NPAs, large number of studies has been carried out by the researchers , on the concept, type, impact, reasons and measures for NPAs in banking industry. Several research studies have been made by academicians, research institutions, Government, working groups and committees appointed by RBI related to the commercial banks in general and also specific studies pertaining to individual. Several research studies have been made by academicians, research institutions, governments, working groups and committees appointed by RBI related to the commercial banks in general and also specific studies pertaining to individual banks focusing NPAs. Research students from various institutions and universities have also made significant contribution to this literary wealth. The available literature relating to NPAs is in the form of committee reports, text books, research publications, research reports and magazines. However, review of relevant research papers published since and a brief review of all other available committee reports, text books and research reports relevant to the study area have been presented chronologically under different categories.

2.1 COMMITTEE REPORTS

Tandon Committee Report (1975)[1] a study group headed by Shri Prakash Tandon, the chairman of Punjab National Bank, was constituted by the RBI in July 1974 with eminent personalities drawn from leading banks, financial institutions and a wide cross- section of the industries with a view to study the entire gamut of bank's finance for working capital and suggested ways for optimum utilization of bank credit. This was the first elaborate attempt by the central bank to organise the bank credit. The report of this group is widely known as Tandon Committee Report.

Pendharkar Group Report (1978)[2] recognised the need for classifying advances into different categories, to index the overall quality of the asset portfolio. This was the starting point for the introduction of the health coding system of bank loan portfolio by the Reserve Bank of India in 1985. This system provided information regarding the health of individual advances, the quality of credit portfolio and the extent of advances causing concern in relation to total advances. It was considered that such information would be of immense use to bank management for control purposes.

Chore Committee (1979)[3] This committee was established in 1979. It was especially constituted for the purpose of studying the sanctionable limits of the banker and the extent of the loan amount utilization of the borrower and also to provide alternate ways and means to afford credit facility to the industries to enhance the productive activities.

Narasimham Committee I (1991)[4] The first Narasimham Committee was appointed by Manmohan Singh as India's finance minister on 14th August 1991 and was known as the Narasimham Committee-I (1991). The purpose of this committee was to study all aspects relating to the structure, organisation, functions and procedures of the financial system and to recommend improvements in their efficiency and productivity. The committee submitted its report to the Finance Minister during November 1991 which was tabled in Parliament on 17th December, 1991.

Narasimham Committee II(1998)[5] The second one was appointed by Mr.P.Chidambaran as finance minister in December 1997 and was known as the Narasimham Committee-II (1998).It was tasked with the progress review of the implementation of the banking reforms since 1992 with the aim of further strengthening the financial institutions of India. It focussed mainly on issues like size of banks and capital adequacy ratio.

2.2. RESEARCH PUBLICATIONS

Saunders A, Strock E and Travlos N.G (1990)[6] conducted the study in the area of risk management of the banking industry. Authors analysed the relationship between the bank ownership structure and risk-taking of the banks. They found that banks owned by stockholders had incentives to take higher risk than managerially owned banks.

Shinde and Kaveri V.S (1992)[7] highlighted the outcome of the programmes conducted on "Management of Non-performing advances" by National Institute of Bank Management. The author suggested the necessity to identify early warning signals and rectifying it. Study identified various non-legal remedies that include compromise proposals, mergers and acquisition, write off of loans, etc. Recommendations made by Narsihmam committee were also discussed.

Sharma (2005)[8] made an attempt to study the problems of NPAs in Public Sector Banks and also its impact on the performance of these banks. Impact of NPAs on the profitability of the banks was analyzed by applying multiple regressions. Impact of NPA on productivity, represented by Business per Employee (BPE) and Operating Profit per Employee (OPE) and few other strategic banking variables like capital adequacy, credit deployment and deposit mobilization along with some macroeconomic variables were also examined with the help of simple regression model. The issues of auto correlation and multi co-linearity had been diagnosed with the help of Durbin Watson Statistics (DWS) and Variance Inflation Factor (VIF) respectively. The study suggested different preventive and curative measures to control NPAs in PSBs and urged that efficient legal framework, improvement in credit appraisal and monitoring skills of banks backed by strong political will can be enabled to tackle the burning issues.

Gunjan M. Sanjeev (2006)[9] discussed the efficiency of Indian Banking Sector in the post reform era. A non-parametric linear programming based technique called Data Envelopment Analysis is used in this study. Allocative efficiency is difficult to predict in a volatile environment. The author evaluated the relationship between the efficiency and the percentage of NPAs in Indian commercial Banks for the period of 1997-2001. Researcher sample included 27 public sector banks, 31 private sector banks and 42 foreign banks. Researcher identified that the efficiency of Indian Banks has increased over the study period and the impact of deregulation was found to be positive. Foreign banks have outperformed both private and public sector banks. Sonali bank and the IndusInd bank are highly efficient and no public sector banks fell in this category. The study concluded that there is an inverse relationship between efficiency and NPA of banks. The study recommended to enhance the loan appraisal system and corporate debt restructuring mechanism.

Gopalakrishnan (2006)[10] examined the impact of NPAs on various micro and macro-economic variables, with the help of simple regression analysis. The study observed that there is significant relation between NPAs and strategic variables. Simple regression models generated showed highly significant F test result in case of Net Profit and Interest Rate on Advances. A multiple regression model has also been used to explain impact of NPA along with a few other strategic banking variables on net profit of PSBs.

Bodla and Verma (2006) [11] examined the impact of banking variables including NPA on profitability in PSBs in India. The study has brought out that the explanatory power of some variables like, Spread, Net interest income, Provision and contingencies and Operating expenses are significantly high while others like Business per employee, Credit deposit ratio, NPAs as percentage of Net advances are found with low explanatory power. Durbin Watson Test (DWT) has been employed to examine the problem of auto-correlation. The study concludes that variables such as Provision and contingencies, Non-interest income, Spread and Operating expenses have significant relationship with net profit and therefore are major areas of concern in PSBs in India.

Odesanmi S and Wolfe S (2007)[12] investigated the impact of revenue diversification activities of the banks on banks insolvency. A panel set data of 322 listed banks of 22 countries was used for the period 1995-2006. They found that the revenue diversification activities relating to interest income and non-interest income generating activities reduced the insolvency risks of the banks.

Singla (2008)[13] empirically tested the financial performance in terms of profitability of sixteen selected banks for a period of five years (2000-01 to 2006-2007). With the help of statistical measures like correlation analysis and multiple regression analysis, the study examined the determinants of profitability of selected banks. During the study period, it was observed that the return on net worth had a negative correlation with the debt equity ratio. Interest income to working funds also had a negative association with Interest coverage ratio and the NPA to net advances was negatively correlated with Interest coverage ratio.

Ram Pratap Sinha (2008)[14] ranked Indian commercial banks by combining the ratio approach adopted by Reserve bank of India with the assurance region based measure of technical efficiency to find out a composite Data Envelopment analysis. This study emphasized on the importance of PCA in Indian banking sector supervision. Results revealed that technical efficiency scores of select private sector banks (0.997) are higher than the public sector (0.984) counterparts. Out of 28 commercial banks considered, only 6 commercial banks were found to be efficient that includes Corporation bank, Punjab & Sind bank, ING Vysya bank, Jammu& Kashmir bank, Karnataka bank and UTI bank. The study recommended the banks to introduce mandatory action points in conformity with the magnitude of the issues in strengthening the functions of banks.

Wei Li, Haibo Kuang, Chunyou wu (2008)[15] studied the banks in China during the Global financial crisis 2007-08 and proposed model for efficient and effective management of NPAs. The research put forward a model for Asset Management Company's non-performing asset disposal with Game theory analysis. Study explored the Nash equilibrium solution to the pricing model of AMCs auction. Also, the impact of actual value of NPAs, auction disposal costs and other relevant elements on auction price has been discussed by analysing the pricing mechanism of AMCs NPA auction. The study was carried out with the assumption that the AMC and the bidders do not understand each other's situation and the information is incomplete. The study provided a theoretical guide for AMC to auction the NPAs in practice.

Laeven L and Levine R (2009)[16] empirically analysed the banks insolvency risk in managing non-performing assets and concluded that banks in countries with stronger shareholder rights tend to take more risk, because the owners are in a stronger position and they have more ability to enforce their views on risk management.

Rahman A, Ibrahim M and Meera A K M (2009)[17] compared the lending structure and Insolvency Risk between Islamic and Conventional Banks. They found that the real estate lending was positively related to conventional banks risk exposure, while negatively related to Islamic banks risk exposure.

Sinha P, Taneja V S and Gothi V(2010)[18] evaluated the Riskiness of Indian banks and analysed the probability of book value insolvency risk of 15 Commercial banks for the period of 2006-2008 using Z Score model. They found that probability of book value insolvency risk had reduced during the period of study and concluded that the banks are efficient in managing the insolvency risk.

Yap V.C, Ong H.B, Chan K.T and Aug Y S (2010)[19] assessed the factors affecting the risk exposure of Malaysian banks for the period 2005-2009. They found that liquidity, interest rate, business operations and credit risk were the key factors that significantly contributed to banks risk exposure in Malaysia.

B S Bodha and Richa Verma Bajaj (2010)[20] discussed the economic reforms that have altered the anatomy of Indian banks. They identified that the private banks are greatly affected by the output variables than the input variables over the study period. HDFC bank was the top performer with an average productivity score of 414.56% followed by ICICI Bank. Centurion bank was found to be the most inefficient banks with the score 64.17%. The study concluded that the performance of private sector bank are acceptable and the authors recommended the inefficient banks to improve in the area of their advances, deposits and investments, and to reduce the level of net NPAs to net advance ratio.

Agnani (2010)[21] studied the relationship between NPAs and financial health of banks by analysing the impact of NPA on profitability of banks. Two public sector banks and three private sector banks have been identified for the study where structured questionnaires were used to find out the preference of the respondent. Spearman's Rank Correlation has been used for identification of best bank. It is inferred in the study that lower profitability or higher NPA taken in isolation do not reflect the investor's preference in deciding performance and future direction of success or failure of a bank in real and absolute term. The findings revealed that an investor gives higher weight to goodwill and customer service of individual bank than NPAs or profitability.

Thiagarajan, Ayyappan, Ramachandran and Sakthivadivel (2011)[22] evaluated the determinants of profitability in the public and private sector commercial banks in India. Correlation Analysis, Multiple Regression Analysis and Factor Analysis were used to estimate the contribution of select bank specific variables towards profitability. The correlation co efficient of the selected independent variables with the bank's profitability has been worked out in order to identify the most significant variable that has strong relationship with the dependent variable. The study also examined the impact of several independent variable on profitability for which multiple regression analysis has been undertaken. The study also used Factor Analysis to examine the value for the coefficient for regression when the variables are regressed upon the factors. In factor analysis the Varimax Rotation has been used. The study revealed that credit risk represented by NPA has a significant negative influence on the profitability on both private and public sector banks.

Nandy (2011)[23] observed the differential profit performance which has been attributed to various factors. The author identified these factors and examined whether they have any significant influence on profitability of commercial banks in India. For the purpose of the study a few variables, like Interest Income, Other Income, Interest Expenses, Operating Expenses, Net NPA and Spread are identified. With a database covering a period of 2004-07, the study employed Multiple Correlation and Multiple Regression Technique to examine the relation between above named variables with profitability. The study concluded that Interest Expenses was the only good predictor for profitability in a bank for the given dataset.

Yadav (2011)[24] examined the concept of NPA in PSBs, and analysed the impact of NPA on profitability, with other variables and efficiency and productivity. Simple linear regression model is used to analyse the impact on profitability represented by profit as a percentage of total assets and on productivity represented by business per employee and profit per employee of public sector banks. The study resulted that NPA has a negative impact on profitability and found to be statistically significant. The study examined the impact of NPA on strategic banking variables along with time variable in selected PSBs, with the help of simple as well as multiple regression analysis.

Dr. G.Parimalarani (2011)[25] analysed the performance of the commercial banks in the area of priority sector lending over the study period 1995-96 to 2009-10. Percentage analysis and growth rate of the banks were used to determine the financial performance of the selected banks. The results revealed that the priority sector advances were in increasing trend over the period of study. The advances are increased by 13.99 times for public sector banks, 35.63 times for private sector banks and 69.09 times for foreign banks. Levels of nonperforming assets were very high for priority sector advances followed by non-priority sector advances. But the share of priority sector advances to the total advances has declined considerably during the study period. The study concluded that 3 public sector banks, 2 private sector banks and 3 foreign banks had not achieved the overall priority sector target.

M. Reumers (2011)[26] analysed Corporate Governance practices and Bankruptcy risk of 308 banks in 44 countries for the period of three years from 2006-2008. Author found that stronger shareholders rights were negatively related to bankruptcy risk, while creditor's rights were positively related to bankruptcy risk. Also research identified that bank size was the most significant factor positively influencing the insolvency risk.

M. Subramanyam (2012)[27] attempted an exploratory study of testing as to how far the contagion effect of a prospective of fair value accounting in India would be visible on the bank loans and advances, assets portfolio in terms of changes in the ratio of NPA to total assets in the banks. Regression is used and the hypothesis tested is that whether the fair value accounting system causes the contagion of higher NPAs as claimed in the evidence elsewhere. This study revealed that asset sales by other firms exert a negative externality on firms that have decided not to sell their assets, the negative externality being a further fall in asset prices and largely reported unrealized losses by firms that have decided not to sell their assets. This study concluded that accounting system is procyclical and has the potential for increasing systematic risk in the banking system in particular and financial system in general.

Dr. T.Subramanyam (2012)[28] identified and assessed the risk in Indian commercial banks in context of Nonperforming assets using DEA Technique. The study is based on the assumption that NPA arises due to exogenous (output) and endogenous (input) factors. The author discusses about two approaches in this study - intermediation approach and production approach. The research accommodated NPAs, number of employees, fixed assets as input variables and deposits, loans and advances, investments, non-interest income as output variables for the period 2010-11. Samples included 63 Indian Commercial banks. One output and multi input stochastic frontier production functions were used to estimate output technical efficiency. The result revealed that public sector banks faced more exogenous risk as compared to private and foreign banks. Public and foreign banks were more efficient in risk control systems. Private sector banks faced more endogenous risk. Thus the author concluded that the foreign sector banks are more efficient in comparison with public and private sector banks.

Anshu bansal (2012)[29] evaluated the reasons for NPAs and identified the Preventive Measures for NPAs. The tools used are percentage and trend analysis. The study was conducted for the period of five years (2006-07 to 2010-11). The results revealed that there has been a continuous decrease in the time period considered to declare a loan as non-performing. The continuous decrease in the time period was to bring the Indian banking norms at par with international norms. This move will certainly reduce the NPAs and in turn improve the asset quality of the banks. The author suggested that banks should emphasize more on priority sector for reducing the quantum of NPAs.

Dr. Partap Singh (2012) [30] analysed the trends, Causes and Impact of NPAs. This paper comparitive analysis was made between advances and non-performing assets in public and private sector banks in the light of mounting competitive scenario in the banking sector. The study has been done with the help of various statistical tools. The study observed that, there is increase in advances over the period of the study. The findings revealed on the basis of analysis that there was significant improvement in the management of nonperforming assets of the banks in India.

Dr.N.K. Shukla and M.Mytraye (2013) [31] examined the loan profile pattern and cause of NPA in Nagpur region. Markov Transition Matrix and Loan Tracking have been used for the study. The study revealed that the State Bank of India in the region lacked the strong supporting legal and regulatory environment. The authors suggested that effective and regular follow-up of the end use of the funds sanctioned is required to ascertain any embezzlement or diversion of funds.

Fawad Ahmad and Taqadus Bashir (2013)[32] investigated the bank specific determinants of non-performing loans. The study used 6 years panel data (2006-2011) of 30 banks to test the validity of 10 banks specific hypotheses. The study relating the determinants of non-performing loans have used non-performing loans/ total advances as dependent variable. The study concluded that the banks should not do extensive lending in order to utilize its deposits, because it will lead to increased riskiness of the loan portfolio. The study suggested that the increased level of NPLs is not due to the cost inefficiency of the management and not because of the decrease spending on the credit allocation but due to the wrong forecasting and current bad performance of management.

Omid Mashadifarahani, Narges Rezavi, Loghman Hatami-Shirkouhi (2013) [33] examined the impact of bad loans on technical efficiency of banks in Iran. Data envelopment analysis and stochastic frontier analysis was used for bank efficiency. The inputs included three indicators: Number of Branches, Deposits, and Costs; and The outputs included three indicators: Income, Profit, and Loans. Results of the case study in governmental banks in Iran showed that bad loans have a negative impact on the technical efficiency of banks.

Gour Bandyopadhyay (2013) [34] examined the status of inter relationship existed among the set of relevant banking variables including NPA, and analysed the impact of NPAs on profitability and other strategic banking variables. The study used the simple correlation co-efficient, simple linear regressions and multiple regressions and found that the NPA had negative impact on profitability and statistically significant impact on few strategic banking variables in respect of two selected PSBs.

Alpesh Gajera, Dr. Vijay Pithadia (2013)[35] evaluated the operational performance of Indian Banking sector and discussed the importance of NPAs in determining the financial health of the banks. This study was carried on for sixteen years from 1996-97 to 2011-12. The author used ratio analysis and ANOVA to determine the results. Gross NPA to gross advance of public sector banks and old private sector banks is found to be higher than new private sector and foreign banks. Gross NPA to total assets of public sector banks and old private sector banks is higher than new private sector and foreign banks. Net NPA to net advance of public sector banks and old private sector banks is higher than new private sector and foreign banks. Net NPA to net assets of public sector banks and old private sector banks is higher than new private sector and foreign banks. The authors concluded the study by stating that over the period of 1996-97 to 2011-12, NPA was found to be decreasing, which proved to be a good sign for Indian banking sector.

Ranjan Aneja and Anita Makkar(2013) [36] addressed the issues relating to book value insolvency of 47 Indian commercial banks that includes 26 public sector and 21 private sector for the period 2006-07 to 2010-11. The study also analysed the factors that are influencing the book value insolvency of selected banks. Capital adequacy, non-performing loans, size of the banks, liquidity and net interest margin were used to identify the determining factors relating to bank insolvency risk. Z-statistic score value of each bank has been calculated. Results revealed that public sector banks were in better position than private sector banks over the study period except 2007-08. Probability of book value insolvency was found to be much lower in public sector banks.

Srinivas K T (2013) [37] studied the reasons for advances becoming NPA in the Indian Commercial banking Sector. The study used tables and graphs to interpret the NPA position. The study concluded that the banks can avoid sanctioning loans to the non-creditworthy borrowers by adopting certain measures. Banker can constantly monitor the borrower in order to ensure that the amount sanctioned is utilized properly for the purpose to which it has been sanctioned. The author recommended that the banker should get both the formal and informal reports about the goodwill of the customer. Study further suggested that reduction of NPAs in banking sector should be treated as national priority item to make the Indian Banking system more strong, vibrant and geared to meet the challenges of globalization.

Priyanka Mohnaniand Monal Deshmukh (2013)[38] assessed the comparative position of NPA in selected Public Sector Banks and Private sector banks. The researcher found that the major cause for the NPA is the improper selection of borrower's activities and inefficiency in management of borrower. The author suggested that the NPA management can be done by framing reasonably well documented loan policy and rule and separate "Recovery Department" with Special Recovery Office could be created.

B.Selvarajan & Dr. G. Vadivalagan(2013) [39] studied about the non-performing assets in Indian Bank, Tamil Nadu and compared with Public Sector Banks (PSBs). The study found that the incidence of NPAs was more in Priority sector advances. Therefore, Indian Bank has to restrict its advances to Priority Sector to the limit of 40% of total advances. Simultaneously, Indian Bank must take steps to improve recovery in Priority sector advances. Indian Bank must take all efforts to prevent fresh NPAs in Agricultural advances.

Asha Singh (2013)[40] examined the level of NPAs in the commercial banks. The study compared the Gross NPAs and the Net NPA of public and private sector banks. The results revealed that even after implementation of prudential norms in early nineties and serious concern raised by government about growing size of NPAs, public sector banks paid least attention to all these warnings, which subsequently lead to turning fresh loans of banks into non performing category.

Manish Kapoor (2014)[41] analysed the impacts of NPAs on the operations of the selected Banks and evaluated the financial ratios of the banks. The author used ratio analysis as a tool to evaluate the impact of NPAs. The findings revealed that the OBC Bank had high NPAs Ratio as compared to SBOP Bank. Study also indicated that increase in NPA was due to government recommended priority sectors. Further the author suggested that banks should emphasize upon credit appraisal and the credit should be backed up by securitization.

Sanjeev C Panandikar (2014)[42] proposed the metric efficiency ratings for Indian Commercial Banks on a (0, 1) scale using TOPSIS, a multiple criteria method and compared DEA approach with TOPSIS approach and explains how TOPSIS is better than DEA. The result revealed that efficiency rating is not stable over the years and it keeps on changing irrespective of the type of banks. Public and private sector banks are found to be more consistent than the foreign banks. Two important variables that contributed to the efficiency ratings are NPA and businesses per employee. The author concludes that there is no significant difference between the efficiency ratings in public, private and foreign banks since the banks have to lend loans to priority sectors at cheaper rates that yield low income and high NPAs. The findings suggested that the efficiency cannot be unidirectional and this can be considered as a scope for future research.

Dr. P.Amirtha Gowri, T.Renuka (2014)[43] analysed the impact of NPA of SIDBI in relation to its outstanding portfolio and also assessed its impact on efficiency. Asset quality of the bank determined the financial health of the firm. Simple linear regression model has been applied to examine the impact of Gross and Net NPAs on efficiency indicators. The results revealed that the performance of SIDBI in terms of Gross and Net NPA was found to be inconsistent to a larger extent. Also it is found that, the ratio had significant impact on Equity multiplier with the regression coefficient -0.3409 and -0.7217 with respect to Gross and Net NPA ratio. The author concluded that the effect of NPA on the efficiency indicators is less in SIDBI which shows that the bank manages NPA in a better way. The author further recommended SIDBI to take preventive measures since the ratio of Net NPA to Net Loan assets of SIDBI has been increasing consistently.

Mr.Krishna Prasad and Dr.G.V.Joshi (2014)[44] discussed the financial status of Indian public sector banks in context of NPA management. After nationalisation of 14 major banks in 1969, Public sector banks saw a major transformation and it came to a position where it cannot ignore socially backward sections of the people in India. The results revealed that Gross NPA and net NPA of scheduled commercial banks were decreasing for the period 1996-97 to 2006-07 and until 2010-11, it was stable but since after that there was a sharp rise in the NPA levels of banks. The author thus have analysed the factors that have contribute to this rise in NPAs and left a wide scope to identify measures that may help banks in overcoming the situation.

Dr. Sonia Narula and Monika Singla (2014)[45] assessed the non – performing assets of Punjab National Bank and its impact on profitability & to see the relation between total advances, Net Profits, GROSS & NET NPA. The study employed the various statistical tools like tables and coefficient of correlation. The researcher found that gross NPA & Net NPA of PNB are increasing every year. Results suggested that advances provided by banks need to be done with pre-sanctioning evaluation and post-disbursement control so that NPA can decrease. Proper selection of borrowers & follow ups are required to get timely payment.

Ashis Satpathy, Samir Ranjan Behera and Sabat Kumar Digal (2015)[46] analysed the issues related to NPAs of Indian banking sector. Authors empirically examined both the macroeconomic and microeconomic (bank-specific) factors responsible for the rising NPA levels in the Indian banking sector. The study used the three popular methods of panel data analysis - the constant coefficient model, the fixed effects model and the random effects model. The study concluded that fiscal deficit, growth in GDP of India and an increased balance of trade could help in reducing the NPA levels. The bank-specific factors also had significant impact on the bad asset levels of public sector banks.

Bhattacharyya *et* al.(1997)[47] measured technical efficiency of 70 commercial banks operating in India for the period 1986-91 using DEA. They used a two stage approach: in the first stage they calculated the radial technical efficiency scores using the DEA. In the second stage they used stochastic frontier analysis to attribute variations in the efficiency scores to three sources: temporal, ownership and noise component. The study took advances, investment and deposits as outputs while interest expense and operating expense were taken as the inputs. It was found that the public sector banks had much higher efficiency as compared to the private and foreign banks.

Saha and Ravisankar(2000)[48] examined the efficiency of the Indian public sector banks in two phases during the period 1992-95. In the first phase, they considered certain key ratios (like deposit to establishment expenses and advances to establishment expenses; and deposits to staff and advances to staff) to identify the better performing banks. In the second phase they estimated the efficiency of the sample commercial banks using the data envelopment analysis method. Four input variables were considered (interest expenditure, establishment expenditure, non-establishment expenditure) and six output variables (deposits, advances, investments, non-interest income, interest spread and total income) for their exercise. The results obtained showed that the performance of the public sector banks (with the exception of a few) had improved over the years of study.

Ram Mohan and Ray(2004)[49] compared performances of 58 public, private sector and foreign banks using a revenue maximization efficiency approach for the period 1992-2000. Loans, investments and other incomes were taken as bank outputs. Deposits and operating costs were taken as inputs. They argued that during the period, Indian banks did not have much freedom in trimming the costs especially the cost of labour. Under these circumstances, revenue maximization best describes the objective that the banks have been focusing during the period.

Kumbhakar and Sarkar(2005)[50] used the stochastic cost frontier analysis to examine the efficiency of the Indian banking system using panel data for the period 1986-2000. They used a translog specification of the cot frontier to estimate the efficiency of the individual banks. The data set related to 27 public sector banks and 23 private sector banks. The results indicated that Indian banks, on an average do exhibit the presence of cost inefficiency in their operations. However, there is a tendency for inefficiencies to decline over time. Further, they found that deregulation in the Indian banking sector resulted in an increase in the cost inefficiency of the Indian banks and a decline in the rate of inefficiency reduction.

Das *et* al.(2005)[51] examined the output oriented technical efficiency, cost efficiency, revenue maximization efficiency and profit efficiency of Indian(public, private and foreign) banks for the period 1997-2003. Four inputs were considered for their study – borrowed funds (deposits and other borrowings), number of employees, fixed assets and equity. Only those banks which had at least three branches during the entre study period were included in the study. The results show that the Indian banks are still not much differentiated if one considers input or output oriented technical efficiency or cost efficiency. However, they differ sharply if one considers revenue and profit efficiencies for performance evaluation.

Sinha (2006)[52] estimated the cost efficiency of Indian commercial banks using the DEA taking loan as the output indicator. Number of branches of the bank and borrowed capital were taken as two inputs. The results were for 1996-97, 1998-99, 2000-01 and

2002-03 respectively. The results of the cost minimizing DEA show that the mean cost efficiency of the sample commercial banks significantly declined in 2002-03, i.e., the banks have diverged from the best practice cost frontier. Further, in sample private sector commercial banks exhibited higher mean cost efficiency than in sample public sector commercial banks. The public sector commercial banks lagged behind the private sector commercial banks both in respect of technical efficiency and allocative efficiency. The result may be the outcome of lending aversion behaviour by the public sector commercial banks.

2.3. TEXT BOOKS

Toor N.S. (1997)[53] explained the concept of NPAs and management of NPAs from bankers' point of view and explains the strategy to be followed in handling borrowing accounts right from pre-sanction stage till recovery of the loan. The book is a practical guide for the practicing bankers and serves as a ready reckoner. However, this book does not contain any statistical data of NPAs.

Tannan M.L. (1998)[54] analysed the performance of Indian Scheduled banks with regard to NPA management and stated that interest income should not be recognised until it is realized. In respect of non-performing assets, interest is not to be recognised on accrual basis but it is to be treated as income only when actually received. The study concluded that on overdue bills interest should not be charged or taken as income unless realised.

Jhingan, M.L., (2000)[55] mentioned the various tenets of effective NPA Management and how it helps to improve bankers' management skills at the field level. Different dimensions of NPAs, effects of NPAs on profitability, return on assets, interest rates, image of banks, the principles of NPAs Management, the concept of NPAs and prudential norms, methods of prevention of NPAs – credit management and upgradation of NPAs are the aspects covered and it does not contain any statistical analysis of the data relating to NPAs in the banking sector.

Bidani S.N. (2001)[56] identified the reasons for high NPAs in Indian banks. The reasons for NPA accounts are categorised into (i) borrowers related (ii) bank related and (iii) general causes. RBI norms on asset classifications and various other recommendations relating to income recognition and provisioning was highlighted. Appraising system along with guidelines for recovery measures to eliminate NPA were also discussed.

Srivastava P.K. (2001)[57] mentioned that NPAs adversely affect lending activity of banks as non-recovery of loan installments as also interest on the loan portfolio negates the effectiveness of credit-dispensation process. Non-recovery of loans also hurt the profitability of banks. Besides, banks with high level of NPAs have to carry more owned funds by way of capital and create reserves and provisions and to provide cushion for the loan losses. NPAs, thus, make two pronged attack on the bottom lines of commercial banks; one, interest applied on such assets is not taken into account because such interest is to be taken into account only on its realization unlike interest on performing assets which is taken into account on accrual basis; two, banks have to make provision on NPAs from the income earned by them on performing assets.

Sundharam K.P.M. & Varshney P.N. (2003)[58] reported that the declining interest income was the result of high proportion of the total deposits – being impounded in SLR and CRR and earning relatively low rate of interest. Further, a high proportion of bank deposits had to be allocated to priority sectors under social banking and the rate of interest was relatively lower. Besides, banks were often forced to lend to dubious parties – in agriculture and industry – and much of these loans become doubtful debts – commonly known as non-priority assets (NPAs). The banks have long been suffering from the serious problem of over dues.

Jain Vibha (2007)[59] detailed on various aspects relating to NPAs and the methods of reducing NPAs in public sector banks for the period 1997-2003. Discussion was made on recovery measures and different types of risks pertaining to credit management and the solutions for resolving the problems of NPAs in South and Far East Asian Nations, initiatives and solutions taken in India.

Pai D.T. (2007)[60] concluded that Indian banking system has emerged stronger, sounder and more resilient and compares well with global range under all vital parameters. Author has also attempted a comparison between public and private sector banks in such areas as branch network in rural semi-urban, urban and metro-Politian areas, market share of business in deposits advances investment and assets advances to priority sectors, financial performance, capital and assets quality, ratio of operating profits/net profits to total assets, use of technology etc.

Rakesh Mohan (2009)[61] opined that, since the beginning of reforms a set of micro-prudential measures have been stipulated and aimed at imparting strength to the banking system as well as ensuring safety. With regard to prudential requirements, income recognition and asset classification (IRAC) norms have been strengthened to approach international best practice. Despite tightening norms, there has been considerable improvement in the asset quality of banks. Improvement in the credit appraisal process, upturn of the business cycle, new initiatives for resolution of Non-Performing Loans(NPLs) and greater provisioning and write off of NPLs enabled by greater profitability, have kept incremental NPLs low.

2.4. RESEARCH REPORTS

Uttama Durga Devi. A (1994)[62] assessed the financial performance of 16 major nationalized commercial banks, State Bank of India and its subsidiaries in terms of branch expansion, deposits, profitability and assistance rendered to the priority sectors. Researcher found that the NPAs of banks under study were rising considerably during the study period. The researcher recommended the banks to follow the proper policy for appraisal, supervision and follow ups of advances to reduce the level of NPAs.

Challa Satya Devi (1999)[63] studied the performance and challenges of the Co-operative Central Banks in the light of the West Godavari District. Study indicated the norms to treat non-performing assets with regard to agricultural loans. If interest has not been paid for past two season of harvest, it becomes non-performing asset. Interest on term loan beyond two quarters is overdue, is treated as non-performing asset. Whereas, in case of industry loans, loan become due only after gestation period is over and it should be classified as overdue only when there is default in repayment of principal on the due date.

Singh and Sultan (2001)[64] made an attempt to appraise the Banking Sector Reform in India that existed in late 1990s. Study assessed the impact of the reforms on the operational performance and efficiency of the Indian commercial banks. Results revealed that total income as a percentage of working funds and interest spread as a percentage of total income have improved in the post reform period. It was also found that in post-reform period, NPAs in public sector banks was reduced to some extent and quality of services has improved.

Raju D.N.M (2002)[65] evaluated the financial and operating performance of the State Bank of India with reference to Non-performing asset over the period 1991-92 to 2000-2001. Researcher analysed NPAs in five regions of Vijaywada district. Study concluded that the officers handling advances portfolio are not sound in analysis and interpretation of financial statements. Legal actions taken by the bank was found to be time consuming. The study recorded the views of the officers handling advances at various levels with regard to managing non-performing assets.

Radha T(2002)[66] studied the impact of banking sector reforms in Indian scheduled commercial banks for the period 1989-90 to 1998-99. Researcher reported that the Government guaranteed operations must be disclosed. Banks must avoid the practise of "ever greening" by making fresh advances to their troubled constituents dues. Study suggested the banks to take sensible actions to prevent re-emergence of new NPA through strict application of prudential norms and managerial improvement. Study further suggested that asset Reconstruction Fund is not needed which was envisaged by the CFS Report (Committee on Financial Sectors).

Boroli Jyotish (2003)[67] compared the commercial banks and co-operative banks in north Cachar hills district, Assam with respect to managing priority sector advances. Researcher explained the concept of financing the priority sector and found that commercial banks were found to have lions' share than co-operative banks. Commercial banks are efficient than the co-operative banks in managing the advances portfolio.

Lakshmi Swamy Amara (2006)[68] evaluate the policies and performance of Indian commercial banks in the post financial sector reforms period and suggested the strategies and solutions for the effective management of credit risk. Author stated that credit risk management as an important factor impairing the financial entities. Study found that after the introduction of Income Recognition and Asset Classification (IRAC) norms, non-performing assets had declined and the norms were found to be effective.

Lakshmana Rao K (2007)[69] observed the transformation of public sector banks after the introduction of banking reforms with reference to SARFAESI Act, 2002. Study resulted that the asset quality of the commercial banks as a whole improved remarkably in spite of economic slowdown. Both gross and net NPAs as a proportion of advances/assets have declined significantly over the study period.

Maduri U (2008)[70] analytically studied the NPAs in public sector banks in light of banking sector reforms. Study explained the various reforms introduced by RBI and its impact on the performance of public sector banks. Author opined that higher NPAs had led banks to heavy provisioning and reduced the return on assets and capital adequacy ratio. Further, banking sector reforms improved the performance of commercial banks by improving its operational efficiency.

2.5. MAGAZINES & NEWSPAPER

1. Performance of assets and people, Business Today, Dec 2009[71]

This article discusses the status of Andhra bank regarding NPA. In 2009, the total business of Andhra Bank had crossed Rs. 1 lakh crore and its status changed from a small bank to a mid-size one. The gross NPA as a percentage of gross balance is 0.83% where the banking industry average is 2.5%. In case if all its NPA were turned into bad debts, Andhra bank will have to write off only 17% of its gross which is a very good position among other banks says R.S.Reddy, Chairman and Managing director of Andhra Bank. Andhra bank expands its credit portfolio without compromising on assets quality. Andhra bank always provides loans against collateral securities and this could be one of the reasons for its lower NPA levels. Reddy adds that, it is easy to get collateral when the loan amount is lesser but it is difficult to match collateral with the loan when the loan amount is bigger.

Also Andhra bank examines borrowers past record, product capability, quality of top level management, corporate governance and strength of its balance sheet and cash flows before providing loans. In 2009, Andhra banks ranks No 2 in terms of quality of Assets where its total NPA growth rate is 0.50% , NPA coverage is 81.49% and net NPA/net advances is 0.18%.

2. Business Today, Bad loans in default mode- Nov 2011-Anand Adhikari[72]

Debt Restructuring Tribunals are pooled with cases. After global financial crisis in 2008-09, there are nearly 2000 cases filed under DRTs, totalling around Rs.4, 000 crore. But after a year (i.e.) in 2009-10, the cases were tripled to 6000, that worth Rs 10,000 crore. The rise in inflation and high interest rates paved the reasons for the families as well as companies to repay debts. After global crisis, the equated monthly instalments have increased by 15 percent. GTL Infra has a debt of Rs 10,338 crore. This company asked its creditors that include State Bank of India, ICICI bank, Standard Chartered Bank, Bank of India, Bank of Baroda and Axis bank a one year time period to restructure its debt. But the 2G scam and low demand have hurt the company’s capacity to repay the money it has borrowed. According to Standard Chartered Banks annual report for 2010-11, the net NPAs amounts to 0.64 percent of total advances to the agricultural sector, 0.46 percent for industry, 0.43 percent for personal loans and 0.34 percent for services. The quantum of loans is lower in the agricultural segment than in others, but the share of bad loans is higher.

In Kingfisher Airlines case, Vijay Malaya's Rs. 750 crore debts was converted into equity but unfortunately the value of the shares have eroded to Rs.220 crore that accounts to the loss of rs.530 crore. In a meeting between bankers and RBI officials in 2011, bankers warned that NPAs may rise sharply unless the central bank takes a pragmatic view on debt restructuring.

3.Looking forward looking back, Business today Dec 9, 2012[73]

Indian banks have seen tremendous growth in the period 2001-02 to 2010-11. India is one among the very few countries that have issued final guidelines for Basel III implementation in 2011. The entry of new private sector banks and foreign banks will have a significant impact in future. Banking initiatives like financial inclusion UID project will give banks an access to a large untapped customer base. Bank business and assets have grown while NPA have fallen sharply in the last decade which is a good indicator. Both gross and net NPA started declining consistently from 2001-02 to 2006-07 and were stable till 2010-11. Business per employee and profit per employee were shown a steady increase which is again a positive indicator.

This article suggests banks to identify new ways to serve potential customers. Banks need to understand the tech-savvy Gen Y customers and design products accordingly. Banks have to use data analytics tools to gain insights from their existing customers data to increase their business as well as to retain customer loyalty. Banks need to identify their core competency area and to specialize in that platform rather than trying to carry out all banking activities.

4.Credit Unworthy, Business Today, Mar 2013 [74]

This article focuses on the wilful defaulters. It starts by discussing a case where an Asset Reconstruction Company while reposing a defaulters flats, they found that tenants were a police inspector, a politician and a small time business man. They haven't opened the door and when the company decided to smash the door, they opened. They also tried to threaten the ARCIL team that they may commit suicide. When they were given 10 days' time to vacate, the immediate next day the tenants got stay for the possession in court. There were 10947 wilful defaulters in March 2008 and that have risen up to 23439 in March 2012. The volume of bounced cheques is equivalent to the volume of cheques issued every month in a city the size of Ahmadabad, Bangalore or Kolkata. Gross NPA in education loans are over seven percent of advances and has been increasing consistently. Mr. Thukral from CIBIL says that "the bureau is gradually helping to improve the credit culture, as more and more people are aware that a bad credit history can mean a trouble. If fresh loans won't go to bad borrowers, it naturally improves the culture". This article concludes by suggesting that the CIBIL score must become mandatory to assess individual's credit behaviour.

5. Backup fails the test, Business today, July 2014[75]

This article focuses on the corporate debt restructuring. It discusses about VFX case in US. VFX has won Oscar award for Life of Pi in February 24, 2013. But it has also filed for bankruptcy under Chapter 11 on February 11, 2013. Under this act, the debtor can remain as a controller of the business but has to restructure it under the watchful eyes of court. In India if the process fails, Debt Recovery Tribunals will try to recover the assets. Indian promoters are emotionally attached to the business, so they are not able to give their control. Also the entrepreneurs in India are more protected than in US. "The economic situation should improve because banks don't have the wherewithal to manage a growing numbers of stressed assets" says A Krishnakumar, Managing Director, State Bank of India. Both the lender and the borrower don't want to classify the asset as NPA and they try to postpone the issue. In 2014, RBI Governor Mr. Raghuram Rajan has warned the banks about postponement and he said "it is not paying today and it won't pay tomorrow". This article concludes by suggesting banks to look for warning signals and to secure before the issue prevails.

6. Gathering storm, Business Today, Mar 2014[76]

This article discusses the worst signals of state run banks that accounts for majority of bad loans in Indian banking industry. In 2013, UCO bank registered the worst asset quality and then it strengthened the risk management practices and credit monitoring systems. United Bank of India reported a net loss of Rs. 1683 crore in December 2013 compared with a net profit of Rs 361 crore in 2012. After global financial crisis in 2008, the companies that have borrowed heavily to expand their business during the boom years turned to be defaulters since the sharp economic slowdown and high interest rates. In March 5, 2013, the then finance minister Mr.P.Chidambaram reviewed the performance of state run banks and said he is not satisfied with the Asset Management Policies of banks. Researcher commented that controlling of bad loans was their biggest challenge. Deputy Governor K.C.Chakrabarthy in 2014 said that the state run banks lacked expertise in evaluating projects and loan appraisal systems. Raghuram Rajan, RBI Governor has announced several measures for early detection of stressed assets, greater discipline and monitoring by lenders either through co-ordination with others or through interest processes. The quality of the people is the major cause for bad loans. "The older the NPAs get, stickier they become, and worse they are for the balance sheet in terms of capital cost" says Kumar of PWC. This article concludes by stating that the issue of NPAs needs to be tackled at the level of prevention rather than searching for cure.

7. Business Today, Feb 2014, "No Exit- Tackling NPA is the biggest priority of banks. But it is not easy" by Anand Adhikari[77]

This article discusses the challenges that banks face while recovering their loans and advances. This article explains a case where a jeweller pledged gold bars and borrowed a loan in Oct 2000. He defaulted on loan repayment. Bank decided to sell gold to recover its money in 2010 and found that gold that he pledged were copper plated. Then bank lodged a criminal complaint against the jeweller. The jeweller also filed a lawsuit against bank saying that the bank had misplaced his gold. The case is pending for judgement. Almost 90 percent defaulters challenge the recovery proceedings in court says R.Rudhran, CEO of Asset Reconstruction Company of India Ltd. Restructuring is the first step that banks take when defaulters are unable to repay the obligations. IDBI is one of the few banks that are proactive in recovering debts. In 2013, the top management of IDBI asked the regional, zonal and branch managers to focus on the top 20 NPAs account in their jurisdiction and this initiative started showing good results says M.S.Raghavan, Chairman and Managing Director, IDBI.

Many banks are moving debt recovery tribunals and Lok Adalats under the SARFAESI Act to recover its assets, which has been introduced by RBI in 2002. There is a mismatch in the valuation of assets by banks and Asset Reconstruction Company and this is due to the poor appraisal of loans by banks says Rudhran of ARCIL. After 2008-09, the NPA level is raising consistently which is a bad sign and RBI Governor emphasises on the need for better banking practices. Rising NPA levels is not only reducing the banks profit but it also hampers the bank's ability to offer loans to those who could actually use the money for profitable purposes.

2.6. RESEARCH GAP & OPPORTUNITY

This study will fill the gap in the literature by focusing on the comparative analysis of NPAs in all public and private sector banks that existed during the study period. Existing literature shows that, most of the studies considered limited units in their study but the researcher has studied all public and private sector banks to widen the scope of the study. While in this analysis, the researcher has made sectoral analysis of the sampled units, which gives clear idea related to the capacity of banks for managing NPAs.

It is also identified that there are many studies that measure the book value insolvency of banks but not many attempts have been made to identify the factors that affects the book value insolvency of the public and private sector banks. This research fills the gap.

Further, in most of the studies carried out, the research work is limited to calculation of various NPA ratios and identifying the impact on profitability, which does not provide the clear picture of the banks' performance in respect to NPAs. Also, not many studies were carried out to study the impact of economic indicators on banks' performance with regards to NPA management. Thus, there exists a literature gap in this area. Researcher tries to fill this gap and has made an attempt to investigate the procyclical behaviour of Indian public and private sector banks and analysed the link between banks' riskiness to the general economic conditions.

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CHAPTER - 3

RESEARCH METHODOLOGY

Research Methodology is the theoretical and systematic investigation into the body of principles and methods related to a branch of knowledge**.** The research methodology adopted in the selected topic is as follows:

3.1. STATEMENT OF THE PROBLEM

Indian banking sector, having completed two decades of reforms era, still are exposed to bad loans of high proportions, which is a matter of great concern for the industry in general with its regulators in particular. Existence of large amount of distressed assets in the balance sheet of a bank not only deprives interest income but also exposes the institutions to high rate of provisions. This reduces the income generated by other performing assets and thus adversely affects banks profitability. Increase in NPA leads to adverse comments by investors, auditors and inspectors. Also, it affects the macro economic variables that include GDP, inflation, etc. In India, the magnitude of the problem of bad debts was first realized only in early 1990's, subsequently followed by the recommendations made by Narasimham committee (1991, 1998) and Verma committee (1999), some steps have been taken to solve the problem of NPAs. Though concern regarding the reduction of NPAs in the balance sheets of the banks continues to be expressed from every corner, there has hardly been any systematic evaluation of the best way to tackle the problem. There seems to be no harmony in the proper policies to be followed by banks in resolving this problem. There is also a consistency in the application of NPA norms, ever since these have been recognized.

Many researches have been conducted so far on the management of NPAs. However, the main focus was laid only on identifying causes of NPAs and extending recommendations in the form of some measures to be taken at micro level, that too specific to some individual banks. Therefore, there is every need to conduct a study on management of NPAs of scheduled commercial banks in both public and private sectors.