

Chapter – 3

Chapter – 3 Review of Literature

There are numerous studies has been done by many researchers in both national and International journals regarding the financial performance of Indian Banks in pre and post liberalization era. Some of the profound literature that might be carried down in this studies which provided a glimpse of work by them this can also offer a perception of studies in this thesis.

3.1 International studies on financial Performance of Banks

(Koehn, 1980) (Kim, 1988) showed that an increase in the required equity to total asset ratio by regulators might induce an increase or decrease in the portfolio risk under taken by a bank. In a a pair of studies, (Furlong, 1989) (Furlong F and Keeley, 1990) argued that the frame work used in prior studies took the expected cost of deposits as a constant that is dependent of the bank's capital position or risk.

(Varde, 1988) In his conference study made a distinction between effectiveness, efficiency and productivity. He has divided the efficiency of banks in 4 types i.e. (a) man power efficiency (b) Operational Efficiency (c) commercial efficiency (d) efficiency of ancillary business. Performance under every category measured at a time, and measure of performance can be considered as productiveness.

According to (Karacadag, 2000) the new accord implies a shift way from the stipulation of prescriptive capital adequacy based on quality and character of bank assets, competence of its management and the stability of the operating environment (process oriented capital regulation). This assumes importance in the light of (Greenspan, 1998) observation that a bank with a nominally high capital ratio of 12 percent normally would be characterized as “well capitalized” given the Basel minimum CAR of 10 percent yet, a 12percent ratio may be inadequate for the bank's operating environment and risk profile, which may warrant a capital ratio of 15 or 20 percent in the economic sense.

(Scholtens, 2000) Stated that, “competition, growth and performance in the Banking Industry” investigated the overall performance of the banking Industry in the global context used a sample of 100 international banks over the period 1981-97.

(Nagarajan N. , 2003) attempted to draw broad contours of a viable sequencing approach that is based totally at the Indian level in, and indicates strengthening the prevailing entities before opening the world to competition. Additionally, strengthening finance in particular capital, and adjustments in coverage, approaches, enhanced disclosure, and erection of stringent entry-limitations, a new supervision approach and the adoption of the fine global practices are measures needed.

(Erista, 2010) , in this paper he has analysed the parameters of CAR, KAP (earning assets), NIM(Net interest margin), ROA(return on assets), LDR(loan-to-deposit) and sensitivity to market risk level of profitability. He has taken twenty private banks as private which are operating in Indonesia. To know the significant level of hypothesis he has applied F test and T test. The study concludes that only ROA significantly influences the profitability level where as remaining parameters there is no significant.

(Meera, 2010) assessed the bank failure resolution mechanism to research the powers given by the nations to their regulators to carry out resolution of failed banks among 148 countries during 2003. She used 12 variables for correlation and regression analysis. Her analysis revealed that the nations which had faced systemic disaster were greater at risk of providing liquidation powers to their regulators. These countries had a tendency to defend their regulators through immunity, rather than any legal action. Systemic crisis did no longer influence the regulators’ powers for the restructuring of the banks.

3.2 Indian Studies on financial Performance of Banks

(Mishra M.N, 1992) analysed the profitability of scheduled commercial banks in India taking into account the interest and non-interest, interest expenditure man power expensed and other expenses. He concluded that the growing pre-emption of funds in the forms of SLR, CRR faster increase of expenses as compared to the income, advances and total investment than interest income and few more factors have contributed to the declining profitability of commercial banks.

(Subramanian, 1994) Has described and made a comparison between the efficiency of 6 public sector banks 4 private sector and 3 foreign banks for 1 year i.e. 1996-1997. Efficiency is measured in aspect of total business and salary expenditure per employee. It has concluded that for the main reason for inefficiency is not only higher per employee but also business per employee also. Bank of Baroda (BOB) is in top position in terms of operating profit per employee, from the private sector banks Indusind bank next Citi bank is in next followed position with regard to operating profit per employee.

(Ketkar, 1996) In his study he clearly analysed the efficiency of banks with the help of Data Envelopment Analysis (DEA) during the period from 1990 to 1995. As data is unavailable he has analysed only 39 banks. The author has made five important observations i.e. in the first observation in case of technical efficiency only 31 percent is only proved its efficiency where as remaining it remains constant. Second observation is that foreign banks had placed top position in terms of efficiency. Third is that during the period between 1990 and 1995 private banks has reduced its performance. In regard to pure technical efficiency measure the factor size has responded positively where as number of braches resulted negatively. Fifth observation is that location as most of the foreign banks are operating in metropolitan cities so it is performing well compared to Indian Banks. Finally the author has made a suggested that Indian Banks need to enhance its performance by upgrading technology, enhancing skills and by adopting some merging.

(Verma, 1996) Investigated the profitability of commercial banks and finded out that in terms of profitability it is in decreasing stage since 1969 and it is showing a performing efficiently than foreign Banks.

(A Bhattacharya, 1997) analyses the efficiency of commercial banks and the author has concluded that the public sector Banks are started decreasing its efficiency after 1987 and there is no much effect in Private sector Banks where as in foreign Banks there is a slight increment.

(Abiman, 1997) Estimated technical, allocate and scale efficiency of scheduled commercial Banks for various pre reforms years: 1970, 1978, 1984, 1999 and 1996 . The study considered the net income and interest income of banks as two. The inputs used in the calculation of various efficiency measure as lab our and loan able funds i.e. deposits plus borrowing. He computed the efficiency measure in respect of public sector banks, which indicated that SBI have improved its overall efficiency during the period of study. Nationalised banks have registered a gradual decline, which is more pronounced after 1990. This has been so due to poor performance of some of the nationalized banks such as the Indian Bank, The United Bank of India, The Andhra Bank and The Punjab and Sind Bank. He further came to conclusion that the inefficiency was technical in nature and is an indicator under utilization or wastage of resources

(Das S. P., 1997) The author has analysed the performance between Public, private and foreign Banks for the period 1994-95. The author has made a conclusion that public sector Banks are working efficiently compared to private and foreign banks.

(Thomas, 1997)in a PhD thesis entitled “Performance Effectiveness of Nationalized Bank – A case study of syndicate Bank” the author has analyzed growth and development of Banking Industry and also progress of syndicate Bank with respect to capital adequacy, assets quality, profitability, social Banking and growth, productivity, customer service and made a comparative analysis between syndicate bank and other nationalized commercial Banks. The study covers of 10 years data i.e. from 1984 to 1993-94. The study has made an attempt to analyse the performance of syndicated and other nationalized commercial banks with the help of Economic Managerial Efficiency Evaluation Model (EMEE) Model developed by researcher. The major findings of this study are in terms of capital adequacy and assets quality syndicate Bank is in 5th position, in terms of profitability syndicate Bank is in 15th position, with regard to social Banking 14th position, with regard to growth tendency syndicate bank stood up in 8th position, in terms of productivity 7th position and in relation to customer service syndicate Bank has occupied 15th position comparing to other nationalized commercial Banks. And also he finded out that nationalized resulted a low health performance in comparing to syndicate Bank.

(Ajit, 1998) The author has made a brief comparison between public and private sector Banks for the year 1991-92 to 1996-97 with the help of parameters such as profitability ratio, Interest spread, capital Adequacy ratio and net NPA. It has been concluded that private sector Banks are performing better than public sector Banks. Private sector banks have higher ROA and lower spread ratio.

(Bahumik, 1998) Studied the presence of bank competition from foreign bank is very small compared to the established presence of public sector banks.

Further (Sarkar j, 1998) analysed the performance in terms of financial ratios of efficiency and profitability and concluded that private banks are not unambiguously superior to public banks.

(Sarkar & Subrata, 1998) Take into account the overall performance problem. The belief being that the private sector Banks are advanced to public sector. The researcher has suggested that in the absence of a best functioning capital market there might not be a good size difference in overall performance of private and public sector within the Indian Banking Industry. They have got counseled that advent suitable institutions prior to pursuing privatization in a growing country.

(Verma S. B., 1999) analysed the factors for the profitability determination of public sector banks with the adoption of multiple regression technique for the year 1971-1995 and the parameters used to measure the performance are profit to income, return on deposits, operating earnings to total assets, net profit to working funds. They determined that profitability of banks relies upon each on exogenous, i.e. policy determined variables which includes reserve requirement, directed credit packages, and on endogenous variables which includes composition of deposits, established order costs, spread and burden, and so on.

(Prasanta, 2000) in a PhD thesis entitled "performance of public sector Banks – A case study of state Bank of Hyderabad" analysed the performance of public sector with special reference to state Bank of Hyderabad from the year 1980 to 1993-94, which is more than a decade. He has described about the growth and progress of Indian

commercial banks, evaluated the changes in deposits, different parameters of profitability, and also investigated the trends in asset structure, analysed the customer satisfaction and also made a comparison between SBH with other nationalized commercial Banks. He has analyses with statistical tools like Ratios, Percentages, compound Annual growth rate, and averages are calculated to make a comparative analysis in between them. The author has finded out that since nationalization the progress of Banking in India is improved a lot. Among the three types of deposits fixed deposits is continuously growing during the period. With the comparison of SBH performance with respect of resource mobilization resulted that the average growth of deposits of SBH is higher than other banks. It has been concluded that are positively responded towards different statements related to counter services offered by SBH.

(shankar, 2000) Examined the efficiency of the Indian PSBs in two phases during 1992-95 . In the first phase they considered ratios such as deposit to establishment expenses, advances to establishment expenses deposits to staff expenses and advances to staff expenses. Banks were plotted on two – dimensional graphs. The inputs considered for such purpose were interest expenditure, establishment expenditure and non-establishment expenditure. Simultaneously outputs considered were deposits, advances, investments, non- interest income, interest spread and total income. The results obtained indicate that the performance of PSBs has improved over the period of study with two exceptions.

(SBI Research, 2000), in its empirical study it has evaluated the financial performance of 27 public sector banks for one year i.e., 1999-2000. To measure the financial Performance the bank has selected 4 parameters I.e., Business performance, efficiency susceptibility and labour productivity. The sample size of the study is 27 public sector banks and it has been divided into 4 groups namely SBI and its Associates (7), 19nationalised commercial banks, 8 state bank groups,. In the study it has reported that the banks should be concerned about NPA ad capital adequacy.

(Srivastava, 2000) Burdened on accelerating the pace of the technique of computerization of Bank Branches to enhance the profitability, operating efficiency, service quality and diverse the earning Base

(sai., 2000) Examined that productiveness and profitability of 5 huge banks accelerated at some point of time on the post-reforms period based on choosing the components, however on account of performance, the overall performance of pinnacle 5banks may be very dismissal as inefficiency has accelerated at some point of the observed period. He advised that if the government sells its shares in the profit making banks, it'd be capable of bail out the weak banks.

(Singh S. , 2001) made a try in his Ph.D thesis titled “An appraisal of banking sector reforms in India” in Guru Jambeshwar University, Haryana, to get admission to the impact of the reforms at the operational performance and efficiency of the nationalized Banks in India. Ratio analysis has been adopted to assess the performance of Indian commercial banks. The examiner discovered that total earnings as a percent of operating finance and/ or over all assets and unfold as percentage of general income/ operating fund/ general advances. Total advances have advances with the reform duration in opposition to the pre-reform period in maximum of the banks. Over all profits, interest earned, other profits, spread, total cost etc are comparatively constant in the reform period. The hypothesis that the profitability role has stepped forward in reform period can be generic till some extent. It turned into found that in the PSBs the size of NPAs has also been reduced to some extent and high – quality of service has advanced in reform duration.

(Ganeshan, 2001) In his paper studied the effectiveness of tracking system profit centre's, standards for comparison and control information. The study proves that working fund as the base for the reason of evaluating profitability at the branch stage it is insufficient and its related to total business.

(Parasuraman, 2001)Had made attempt to measure the performance of major banks in India in the year 1998-99 under the criterion of EVA. The study found that ranking of banks under return on Assets assumes close resemblance to the ranking under EVA,

where as the ranking under other criteria like total income, interest (as percentage of total) spread, and net profits do not match with the ranking under EVA. (P. s. , 1999) Studied scale and scope economics estimated from a stochastic cost frontier and found that there are substantial economies of scale and scope in Indian Banking at the branch level. (Koeva, 2003) Examined a variety of financial indicators of banks and concluded that ownership has a significant effect on some of the performance indicators and deregulation has led to lower intermediations cost and profitability. (Bhaumik, 2004) Studied performance in terms of return on assets of all banks and conclude that by 2000, competition had helped public banks to reduce the gap in performance that existed between them and private banks.

(B.N.Anantha, 2001) drawn a comparison evaluation performance of particular Banks for 1996-2000 ended up that the proportion in assets share has been decreasing in public and foreign Banks where as private sector Banks are increasing. The various elements which are affecting the relative share, profitability and spread has been decreasing where as costs were rising up even though non-performing assets of public sector Banks are decreasing remaining all other banks are growing. From the overall analysis it has been finded out that the performance of banks in few components is not aggregate.

(Wahab, 2001) In this study the author has highlighted that the fundamental troubles wants to be considered for future development. He concluded that reforms have produced favorable forty two outcomes on performance of commercial Banks in general but nevertheless there are a few distortions like priority sector advances, low profitability and many others. That wishes to be reformed once more.

(Souza, 2002) The author has analysed the performance of Indian and foreign banks for during this period from 1991 to 2000 i.e. its almost 10 year's data. The financial performance was calculated by applying ratio analysis technique by the consideration of parameters i.e. Spread ratio, working fund ratio, turnover ratio or employee's ratio. Incase of spread working fund ratio the performance of commercial banks had decreased during the 1990, and it stated that public sector banks are behind this inefficiency where as private sector and foreign banks has arisen up. With respect to turn over/ employee

ratio private sector banks and foreign has improved its efficiency. At last it has been proved that public sector banks profitability has increased compared to private and foreign banks.

(Das A. , 2002) analysed the level of threat and productiveness of public sector banks and found interrelationship of the truth that productivity, capital base and risk taking to at the same time decided and bolstered.

(Edirisuriya, 2002) In a paper investigated and find out the minute differences in the performance of public and private sector banks. As there is no total factor productivity (TFP) in public sector Banks this change has been taken place. The modest boom in public sector banks suggests that there is a slow reaction to deregulation. As a result it has been concluded that public sector Banks are overcoming the private sector because private sector Banks are facing a difficulty to change market and consumer perception.

(Janki, 2002) In his study evaluated how technology is influencing the employee's productivity. In fact public sector Banks are need to enhance the operating efficiency and customer services. The study has been concluded that in order to enhance the efficiency of banks it need to achieve their goals.

(Kumar, 2002) In a book "Banking Reforms in Lead Bank Scheme" analysed the lead bank scheme in the vision of banking sector reforms. The author has stated that the main reasons for the low profitability in public sector banks are high level of net NPAs. More number of un- remunerative branches, less number of deposits, over staffing, and outdated methods of operations. He has opined that the total banking sector in India should be revolutionalised to adopt the changing dimensions of the satellite. He also suggested that backwards areas has to e given lot of funds for investments in the in the main concern sector and large number of people should bring together for credit extensions that there will be least hassle cost.

(Mobeen, 2002) in his paper various managerial skills to be possessed by the managers at different levels in public sectors Banks is the method of Katz Model of management

skills and quality, Gold smith and Boone's five key commitment model (commitment to the customer, organization, to self, to people, to the task)

(Mukherjee Avinandan, 2002) discussed the linkage between performance benchmarking and strategic homogeneity of Indian commercial banks. It has adopted a method of benchmarking performance of Indian banks taken from their annual reports which outlined performance how a bank is ready to make use of its resources to produce business transactions and measure it with the aid of ratio, which is known as the performance. The author has found out that public sector Banks are out perform than other sector Banks in this hastily evolving and liberalizing sector

(Murthy, 2002) stated, 'era' development has created a segment among the banks, that e techno saved and those that aren't. Nearly these kinds of, the gold, distinguish with new private sector Banks and old private sector banks hold to thrive. Here is an evaluation of the old private sector banks that have visible a decade of evaluation and now it and at a crucial level of their evolutions.

(Nageshwar, 2002), drawn a statement that "out of six distress zone Banks diagnosed through Verma committee, Vijaya bank, Indian overseas Bank and Union Bank of India are in public sector at present Indian overseas bank are still in destructive coverage ratio and the remaining Banks are in stable position.

(Radha, 2002): in a Ph.D in her thesis analysed the importance of deposits and borrowings, branch expansion, advances and investments, capital adequacy, Credit deposit ratio from 1989-90 to 1998-99. Data has been analysed with the help of percentages and growth rates. In this thesis it has been concluded that private sector banks are performing better than public sector banks.

(Bharathi, 2003) In his empirical study made a comparison among private sector banks for 1996-97 to 2000-01. Efficiency has been measured by considering the four parameters i.e., financial, operational, Productivity and Profitability. The results concluded that over all Banks' performance is satisfactory but HDFC Bank is in top position followed by ICICI Bank.

(ICRA, 2003) in a paper entitled “comparative study on Indian Banking” has attempted to analyse the fast changing environment, the Indian Bank’s Association (IBA) has commissioned ICRA Advisory services to perform a observe to benchmark the strengths and weaknesses of Indian Banks towards those of selected foreign banks. The parameters which have been used for bench marking, Risk weighted capital, Income recognition norms, asset classification norms, provisioning norms which come under structural parameters.

(Sarkar K. S., 2003) estimated efficiency of public and private banks using a stochastic cost frontier with data from 1986 to 2000. They found that cost inefficiency has declined over time, but the rate of decline slowed down after the reforms. They also found that private banks are more efficient than PSBs but there is no significant difference in the impact of deregulation on the two banks group. However, this study did not study foreign and new private banks. Moreover it did not estimate the profit efficiency. Neither did it inspect the role of size in determining efficiency. The only other relevant study is by (Shanmugam, 2004)estimated various product efficiency measure for Indian Banks. Banking being a multi-product industry, it is difficult to specify a unique production frontier. In the absence of proper knowledge of the production technology of banks it may be better to estimate cost and profit efficiencies, which rely on estimated cost and profit function of banks

(Mohan, 2003) has made an opinion regarding the transformation in Banking in the India Banking that if Indian banks are to compete globally, the time is opportune for them to institute sound and sturdy risk management practices.

(MohanTT, 2003) has made a comparison between public, private and foreign banks with the help of both physical quantities of both inputs and outputs for the period 1999-2000. The author has concluded in the study that public sector banks are working efficiently than private sector banks differently from foreign banks.

(Singh R. , 2003) in a paper entitled “Profitability management in Banks under deregulate environment, IBA bulletin, No. 25 has evaluated profitability of banks beneath the deregulated environment with the support of some financial components of major bank groups i.e., public sector banks, old private sector banks, new private sector banks and foreign banks. Profitability has got reduced in the deregulated environment. He suggested that banking sector should be competitive in the deregulated environment and banks should make it a source as non-interest Income.

(Trehan Ruchi, 2003) analysed the efficiency of Indian Banks and its relationship with profitability and the author has made a conclusion that SBI group are performing efficiently than other nationalized Banks and in between there is a significant difference in between them.

(Venugopal, 2003) said that the future of Nationalised Banks hikes on their capacity to build up quality assets in an increasingly more aggressive market place whilst keeping capital adequacy and prudential norms. Consolidation, to enhance managerial efficiency and opposition to convert customer service are the important thing factors in an effort to impact nationalized banks.

financial express (2004) evaluated the financial performance of public sector banks, private sector banks and foreign banks for the two years i.e., 2002 and 2003 to identify the strength and soundness of banks, growth, profitability, efficiency and credit quality. Based on the current scenario among public sector banks state bank of Patiala and Andhra banks is on the top position, among private sector banks Jammu and Kashmir is on the top position followed by karur Vysya bank. In the new private sector banks ICICI followed by HDFC bank, and in foreign bank standard Chatered bank is on the top position followed by Citi Bank.

(Das Abiman, 2005) *et al* examined the output oriented technical efficiency, cost efficiency, revenue maximization efficiency and profit efficiency of different group of Indian banks. For the period of study 1997 – 2003 he considered four inputs viz. borrowed funds, number of employees, fixed assets and equity. They concluded that the Banks in India are still not much differentiated in terms of input or output technical

efficiency or cost efficiency. There is wide range of variation in terms of revenue and profit efficiencies.

(Chakrabarti & Chavala, 2005) In his study in order to measure the efficiency of Banks the author has adopted DEA analysis for the period 1990-2002. He has been found out that private sector banks are performing efficiently than public sector Banks and the foreign banks are inefficient.

(Kumar P. S., 2005) in their study have analysed performance in terms of efficiency in banking system by adopting production approach (assuming labour, borrowing and deposit as input and loans, investment and other income as output) and intermediation approach. With regard to borrowing by SBI and its group has the highest relative efficiency followed by nationalized banks and foreign banks. The average input use efficiency of borrowing is the lowest in case of private sector banks. Same trend is noted in the terms of efficiency during reform period of the public sector banks is much better than private sector banks PSBs are inefficient is based on a piecemeal analysis in the form of simple, static, partially isolated ratios. The urgent need of time is to adopt system wide analysis to explore the intricacies of the complex system that has grown over year.

(Verma R. A., 2005) analyses performance of public sector banks by considering the four components i.e., financial, operational, profitability and productivity. By considering all the parameters public sector Banks is found that performance is satisfactory

(Reddy, 2005) referred that the turnover in the private sector Banks referred that the turnover in the public sector banks at the time of 1990s. it has been found that the establishment expenses have been decreased in the private and foreign Banks because of those banks were able to incorporate their wages and salaries fee made the similarity between public sector Banks where private and foreign banks are spending extra on technology up gradation. In aspect of profit, public sector banks are performing efficiently in deposits where as foreign and private sector banks are efficient in value added services

(sathey, 2005) the author has analysed the impact on privatization, Performance and efficiency on Indian banks for the period 1998-2002 and it has been concluded that private sector banks are performing efficiently than public sector Banks and the private sector banks are involving merging policy.

(Singla A. &, 2005) examined the comparative performance of canara Bank and Indian Bank. The study has concluded that the canara bank has a better efficiency in terms of growth of deposits, advances and average working funds where as canara bank is most efficient in terms of productivity.

(Joy, 2005) in his study he has done the assessment of the performance of Private sector commercial Banks , to find out the customer delight with the services provided by Kerala region the evaluation has been done for 10 years. From the available information all the elements selected were found that Favoring the public sector banks, Private sector and foreign banks. However on the basis of relevant information the performance of public sector Banks was found to be not satisfied. The newly upgraded banks are robust in respect of growth tendency. The study has made a conclusion that foreign banks are performing well compared to to other sector Banks. Public sector Banks are efficient in growth, productivity and profitability. In respect of other services public sector Banks are lower efficient compared to foreign Banks.

(Debasiah, 2006) measured the relative performance of Indian banks over the period 1997-2004 by using output-oriented data envelopment analysis model. For the study purpose, the banking sector in India has segregated on the basis of bank assets size, ownership status and years of operation. The study revealed that Foreign Owned Banks were more efficient than Public Sector Banks and Private Sector Banks. It was found during the study period that at local level Large sized banks and at global level Small sized banks were found to be more efficient than Medium sized banks. The study supported the conclusion that new private sector banks were more efficient than the old private sector banks because old private sector banks were often overburdened with old debts.

(Jain, 2006) In this article the author has analysed the importance of Ratios as a technique to evaluate the performance of Banks. The author advised for calculation of deposits, borrowings, cost of funds and operating expenses to average working funds. The ratios undertaken for comparison is Productivity, NPA ratio, efficiency, Ratios on shares.

(Maji, 2006) examined the productivity and profitability of the banks in India, selecting five banks each from the public and private sector banks. The Banks have been selected on the basis of quantum of deposit mobilization. The data covered the time period from 1996-97 to 2003-04. The study revealed the productivity index of greater than 1 has been found for all the selected banks except few banks. In case of achieving the target level of profitability State Bank of India and Punjab National Bank were found to be more successful and the performance of Jammu & Kashmir Bank, Canara Bank and Bank of India was found to be poor. The authors pointed out that in their opinion Interest Spread has been an important influencing role in determining the profitability of Banks. The authors suggested that Bank of India and Jammu & Kashmir Bank should take necessary steps to utilize their available resources for enhancing their profitability.

(R.P.Sinha, 2006) had compared the performance of commercial banks in the period of reforms with respect to lending in a cost minimization framework using Data Envelopment Analysis (DEA) a non-parametric method. They found that the mean cost efficiency of commercial banks significantly declined in 2002-2003. They also observed that private commercial banks exhibited higher mean cost efficiency than public sector commercial banks. The public sector commercial banks lagged behind the private sector banks both in respect of technical and allocative efficiency according to them this may be due to lending aversion behaviors of public sector banks in the current regulatory business environment that penalize the commercial banks heavily for low asset quality and provide little facility for the recovery of dues from the defaulting borrowers.

(saji, 2006) analysed the changes in the financial performance of banks in India for 2001 to 2004 the author has found out that the policies that they adopted is guiding towards competition between the banks by sanctioning greater autonomy in selecting the devices

to mobilize sources and install them to make sure about optimal returns, but the exchange within in the micro and macro surroundings of the commercial banks has no longer yielded much profits. At last it has been concluded that the foreign Banks are performing better than Public and Private sector Banks.

(Brinda & and Dubey, 2007) the author has analysed the performance of public sector banks they had a take decision that higher deregulation and financial sector reforms has gained a further impulse, public sector Banks are able to meet the challenges. RBI has suggested to open up the sector for foreign players. Different variables have been considered for the study.

(Aruna, 2007) concluded that the aggressive is increased productiveness and profitability. Indian Banks in particular the public sector banks and old private sector Banks are lagging a long way at the back of their competitors in phrases of each productiveness and profitability excluding the state Bank of India and its associates. Other public sector banks and old private sector Banks are needed to move for their transformation application for growth in their productiveness and profitability. They endorse a 3 factor programming reduce over staffing, forge strategic alliance with the rural banks to start a rural branches and enhanced use of upgrading technology for improved services and products for the same.

(kapoor, 2007) the author has examined the profitability analysis of Indian Public sector Banks for the years 2001-2005. The results have been concluded that the profitability of public sector Banks has been increasing. It has been finded out that oriental bank of commerce and United Bank of India has been performing better than other nationalized Bank and among SBI associates SBH and SBP are performing better.

(Mitra, 2007) the article has brought up with a outstanding modifications in the Banking sector, it has revealed the importance of financial liberalization lies in the three types of controls, revealed the importance of financial liberalization stays with the three types of measures. Firstly, to open up a country to the free flow of International finance; secondly to remove controls and restrictions on the functioning of domestic banks for proper integration as individuals with in the global financial market; and thirdly to offer

autonomy from the authorities to crucial financial institutions so that its supervisory and regulatory function vis-à-vis the banking sector is disassociated from the political manner. Profitability, provision, ROA, net NPA as percentage to net advances and business per employee.

(S.Dhingra, 2007) in this study the author examined private sector Banks are performing efficiently as they had upgraded the technology in aspect of the productivity improved their profitability compared to public sector Banks.

(Zhao, 2007) referred to that, after an initial adjustment section, the Indian banking industry experienced sub stained productivity increase, motive force mainly through technological development.

(M.Sreeramulu, 2008) examined that the performance foreign and new private sector banks are performing better than public and old private sector banks. It has been finded out that the parameters selected resulted a declining trend during the period

(Sankar, 2008) in his article concluded that Indian private Banks are performing efficiently than public sector banks and finded out that old and new Private Banks are having higher productivity compared to other public and foreign banks.

(Singla H. , 2008) in his empirical study on a paper titled “Financial Performance of Banks in India” analysed that how financial management played an important role in the banking tendency. The main focus of this paper is to investigate the profitability position of the opted 16 banks for the period of 2001-06. The study has finded out that the profitability is stable during the study. Strong capital adequacy and balance sheet makes the bank to stay in a better place to compete with and attract the economic constancy over a period of time.

(Amitabh, 2009) the author has made a conclusion that public sector banks are playing a prominent role and its free from competition in aspect of their branch network and the large customer base but the up gradation of technology makes the public sector Banks more efficient but where as new private sector Banks have adopted technology proper from their inception in which public sector banks and old private banks had been sluggish

in maintaining tempo with changing era, that is reason affecting their profitability and productiveness.

(Ghosh, 2009) determined that Indian Banks are getting sharply differentiated in terms of revenue efficiency and earnings performance. This would imply that even inside a surroundings situation to restrict on enter or output mixes and its expenses, a firm can enhance its profitability extensively by way of adopting the exceptional practices discovered with in the sector.

(Tiwari, 2009) In their observance revealed the elements which are influencing the efficiency of Indian banks. They find that the maximum influencing issue with in the case of Public sector banks is associated with per branch and operations and the sub-factors are operating income in line with department, and price of deposits observed by means of the factors influencing final profits with return on capital and credit -deposit ratio as sub-elements. Efficiency component influencing ultimate earnings with return on capital were the most influencing factors in case of foreign banks.

(Bhandari, 2010) in a paper entitled “Total factor productivity growth and its Decomposition : An assessment of the Indian Banking sector in the true Liberalisation Era” he has cautioned that public sector banks are on and average, higher adjusting themselves to the converting surroundings and enhancing their overall performance relative to their counter parts under private and foreign ownership.

(Gulati, 2010) concluded that the extent of aggressive practices and technology within the Indian Banking sector all through the post reform years served as a catalyst to improve cost performance and to carry convergence across public sector banks in phrases of their performance degrees. Within the light of empirical findings, the destiny reforms in the banking sector should be directed towards strengthening competitive and market oriented policies.

(Shobana, 2010) in her paper examined on the operational efficiency of public sector banks in India the usage of a non-parametric model, which measures the efficiency as a ratio of output index to an index of input used. The findings reveal that, out of 27 public

sector banks in India, only 9 banks had executed excessive level of efficiency in its operations, with Oriental Bank of Commerce at the top.

(Reetu, 2010) analyses the financial performance of nationalized banks in India and estimated the growth index value of various parameters through overall profitability index. The study has been conducted for the period 2002-03 to 2006-07 where as the sample size is 19 public sector banks. Ratio analysis technique was adopted in order to determine the efficiency. They found that four banks are efficient, five achieved good performance, four attained fair performance, and six had very poor performance.

(Prasad, 2011) analyzed the profitability of four major banks in India, i.e., State Bank of India, Punjab National Bank, ICICI Bank and HDFC Bank for the period 2005-06 to 2009-10. Statistical tools like arithmetic mean, one-way ANOVA, HSD Test have been employed for the purpose of study. The profitability of these banks have been evaluated by using various parameters like Operating Profit Margin, Gross Profit Margin, Net Profit Margin, Earning per Share, Return on Equity, Return on Assets, Price Earnings Ratio and Dividend Payout Ratio. The study revealed that State Bank of India performed better in terms of earning per share and dividend payout ratio, while Punjab National Bank performed better in terms of operating profit margin and return on equity. The study found that HDFC Bank outperformed in terms of gross profit margin, net profit margin, return on assets and price earnings ratio. The study evidenced that ICICI Bank paid highest portion of earning as dividends to shareholders. Analysis ranked HDFC Bank on the top position followed by Punjab National Bank, State Bank of India and ICICI.

(sarangi, 2011) analyzed the performance of seven public sector and private sector banks for the year 2009-10. They used three groups of ratios i.e., operating performance ratios, financial ratios, and efficiency ratios. In all eleven ratios were used. They found that Axis Bank is in the top position followed by ICICI Bank, BOI, PNB, SBI, IDBI, and HDFC, in that order.

(Uppal, 2011) Concluded that even though most of the banks have succeeded to deliver down their non-performing assets and expenses, but nonetheless they are dealing with deterioration in their profitability. Maximum of the public sector banks in spite of the highest share in belongings, rural branches, priority sector advances and investments of all scheduled commercial Banks, nevertheless must face competition in phrases of recent challenges from new private sector Banks and foreign Banks as their fees is the very best at the side of continuous deterioration in profit and spread. Consequently there's a want to make a few realistic techniques for the public sector Banks and old private sector Banks to make them as much competitive as new private sector banks.

(Bhutani, 2013) it have analysed the performance of both public and private sector by taken into consideration some selected parameters which mainly involves in the productivity. Selection of banking sector was done on bank assets size. The public sector banks are not much profitable compared to other sector Banks. It means that efficiency and profitability are interrelated. The main way to built up the performance indicators is Return on assets, Return on Equity and Net Interest Margin.

(Arulmathi, 2013) in their paper made a comparison between giant public sector bank i.e. State bank of India and in Private sector bank i.e., ICICI Bank has been chosen for the comparison. The main parameters which they had considered for comparison are deposits, Investments, net profit and total assets. . Based on the study it has been concluded that SBI is performing better than ICICI Bank.

(Mr.Gajera Alpesh, 2014) The author has evaluated the performance of Private and Public sector banks with the consideration of four components of ratios. Presently all Banks are going through the phase of recruitment to most important reasons. Firstly retirement of existing employees of private Bank and 2d is expansion Pressure for newly set up bank to provide properly set up community to clients. so in this section it's emerge as necessity for any banks to understand the worker's of their own as well as employees efficiency of competitor Banks and Banking region.

(Nilesh P.Movalia, 2014): the author taken five public and private sector banks as samples adopted convenience sampling for the analysis and interpretation used ANOVA with the help of SPSS for 2007-08 to 2011-12 by taking six parameters i.e. profitability ratio, debt-equity ratio, price earnings ratio, earning per share, non-performing asset, liquidity ratios. The study has made a conclusion that public sector banks are performing well in terms of profitability, debt-equity ratio, earning per share, where as private sector banks are efficient in price-earnings ratio.

(Latha, 2014) In this study the author has analyses and compared the performance of SBI and ICICI Bank for the period 2008-09 to 2013-14. The main p parameters which have been taken for measuring the performance are return on equity; cash deposit ratio and credit deposit ratio. The study has been made a conclusion that SBI is performing better than ICICI in terms of loan and Deposits.

(Mr.Alpesh Gajera, 2015) in this article the author has analysed the performance of SBI and its associates, old and new private sector Banks for 2001-02 to 2012-13 to find out whether there is a significant difference or not the author has analysed with the help of Anova test with capital adequacy as a dependent variable. It has been concluded that there is a significant difference four sector Banks new private sector banks are performing better than other Banks.

(Dr.M.S.V.Prasad, 2015) in their paper analysed the performance of selected public and private sector banks by taken into consideration 13 parameters in order to determine the efficiency of the selected Banks. It has been concluded that the selected public sector Banks are performing better than private sector banks and the authors has found out that the customers has more faith on public sector banks compared to private sector Banks.

(Alamelu and chidambaram) in a paper made a comparative analysis between public and private sector Banks to identify profitability between them. It has been resulted that private sector Banks got huge profits and high growth rate. The main reason for the performance of private sector banks are technology up gradation, launching the new products, better customer service etc.

3.3 International studies relating to CAMELS Model:

(Baral, 2005) made a brief analysis that CAMEL appraisal belief has become a concise and basal apparatus for examiners and regulators. This appraisal archetype ensures a bank's healthy conditions by reviewing altered aspects of a bank on the basis of different sources of information such as financial statement, allotment sources, macro-economic data, budget and cash flow.

(B.Nimalthasan, 2008) have compared financial performance of Bangladeshi private commercial Bank, foreign bank and government banks with CAMEL Model. The researcher has studied total 48 banks with 6562 branches across the Bangladesh and concludes that foreign commercial banks and private commercial banks have maintained very high profitability due to higher interest rate on advances as compared to government owned development financial institutions. According to CAMEL rating system, only three banks are in the category of very strong banks and 31 banks were in the category of satisfactory. The overall performance of government owned banks or financial institutions are unsatisfactory. Researcher concluded that significant changes in the operations of government owned development financial institutions are needed with an intention to put government owned organization in right position in terms of profitability, liquidity and solvency.

(Alphonsius, 2009)), in his paper CAMEL based derived w-score function for banks performance evaluation: an urgent necessity' has made an endeavor to infer a basic CAMEL – based capacity that can be utilized by bank controllers and administrations to visualize, monitor, determine and proper emerging issues at short motive on daily, weekly, monthly or annual basis before e they become out of bonds or intolerable. The bank regulators and those in domain area unit implored to check the efficaciousness (CLEAM) to derive function and certify its application with in the banking system

(Kolade, Sunday, & Adesina, 2012)'' in this paper an empirical study has been done on Nigerian banks for five years i.e. 2006-2010 using CAMEL model. Ranking has been done for each parameter. The results concluded that GTB ranked as top position. Diamond bank, Zenith bank and first bank are ranked second, third and forth

respectively. Unity bank and WEMA bank are not so successful based on overall CAMEL parameters.

(Frederick, 2012) made an empirical study on commercial banks of Kenya for 2006-2010. A causal research design has been used in order to determine the relationship between CAMEL indicators and financial performance of banks of Kenya. Correlation and regression has been done to analyse the data. The study has made a conclusion that there is a great impact between CAMEL parameters and financial performance. It has showed that in CAMEL model except for earnings parameter remaining other parameters has shown a weak relationship in between them i.e. return on equity (ROE) has a good relationship with financial performance. At last the paper has concluded that CAMEL model can be used to determine the credit risk management.

(Rehana, Kouser, & Saba, 2012) The objective of this study is to make a comparative analysis between pure Islamic and conventional banks with the support of CAMEL model for 2006-2010. The result has been concluded that Islamic banks has better capital adequacy and better asset quality when it is compared to Islamic branches of conventional banks and conventional banks. However Islamic banks have better management competency when compared to conventional banks. Islamic branches of conventional banks in earnings are more when compared with Islamic banks and conventional banks. At last Islamic banks are still at growing stage.

(Jha & Hui, 2012) The purpose of this paper is to make a comparison between public, private and foreign of Nepal so 18 banks have been taken into consideration using CAMEL model. The results depicts that public sector banks are less efficient than their counter part are; private banks are performing similar to foreign banks.

(Valentina, Erista, & Ika, 2012) In this paper he has analysed the parameters of CAR, KAP (earning assets), NIM (Net interest margin), ROA (return on assets), LDR (loan-to-deposit) and sensitivity to market risk level of profitability. He has taken twenty private banks as private which are operating in Indonesia. To know the significant level of hypothesis he has applied F test and T test. The study concludes that only ROA

significantly influences the profitability level where as remaining parameters there is no significant.

(Roman, camelia, & sargu, 2013)in this paper the author has analysed 15 romanian commercial banks for 2004 to 2011. The data has been collected from the bureau of Van Dijk Bankscope database. They have adopted the CAMEL model analysed each parameter of banks gave group ranking. So it has made a conclusion that the biggest bank Banca Comerciala Romana has been ranked as top most bank in the respect of management efficiency, earnings and profitability but it has not resulted the best in case of liquidity.interns of asset quality Piraeus bank has been in bottom with respect to three indicators. Banca Romaneasca, MKB Romexterra, Banca Comerciala Carpatica, OTP Bank Romania and procredit Bank are weak interns of management quality. Interns of earnings MKB Romexterra and OTP Bank Romania has been evidenced as weal performer

(venkatesh & Suresh, 2013) the purpose of this paper is to make a comparative assessment of 4 major conventional banks in Bahrain gave ranking using CAMEL model. In terms of capital Adequacy NBB was in top position, BMI is in second place, BBK and AUB is in third place. In terms of asset quality NBB is in top most position and then remaining banks has taken place. In terms of management efficiency BBK is in top place and BMI is in last place. In terms of earnings quality BBK is in first place, BMI is in fourth place. In case of liquidity NBB is in top place and then BBK where as BMI is in bottom place. From the overall ranking NBB is in top most position, BBK second place, AUB third and BMI is in fourth place.

(Valahzagharda & Jabbarib, 2013) ” in this paper an analysis had been made between CAMELS model and risk by taking a sample of Iranian banks for 2006-2011. The hypothesis of liquidity on risk taking analysis has been rejected remaining hypothesis has been accepted

(Soltani, Esmaili, Poor, & Karami, 2013) In this study the author has made an attempt to analyse the financial performance of public and private sector banks and gave some suggestions to improve their performance. So a sample of banks has taken i.e. melli and

Agiculture as public and Persian and Pasargadae as private banks. To test their statistical significance kolmogorov-smirnov test has been used. So it has been concluded that null hypothesis has been rejected under five parameters of CAMEL model where as considering each parameter null-hypothesis has been accepted in terms of management, earning and liquidity. Private Banks has to improve their performance Indore to make significant.

(Hosen & Muhari, 2013) The magnitude of expertise micro-banking market makes many banks and other financial institutions to make gain in the segment of small and micro-banking as a market place for rural banks (BPR), particularly sharia rural banks (BPRS). Therefore, the effective BPRS is required to survive and amid the competition. In this paper parametric stochastic frontier approach (SFA) with the help of asset quality analysed the affectivity stages of 59 BPRS in the interval of 2nd Quarterune 2011- 4th December 2012. Bank efficiency might be built-in with the performance of banks which is adopted which has been adopted from central bank (BI) criteria namely (CAMEL). It has been concluded that that there are giant differences between the efficiency measured via SFA and the performance of CAMEL measured with the aid of ratio, which means that present o CAMEL model don't show the extent of affectivity of BPRS. In addition it is also shown that BPRS is much less efficient than Sharia banks (BUS)

(Rozzani & Rahman, 2013) investigated the financial performance of both Islamic and conventional banks in Malaysia using CAMEL model for 2008 to 2011. The author wants to differentiate between Islamic and conventional banks and with the CAMELS rating he made a conclusion that both banks are similar in the asset quality and short term funding in the liquidity component. This analysis made the investors where to invest their money.

(Momeni, Gholam, & Jamali, 2014)" the purpose of this study is to compare the performance of tejrat and mellat bank using CAMEL Model for the 2008-2011 by developing 5hypothesis. In view that the objective, this be trained is useful and its sort is descriptive-correlation. Furthermore, combinational regression ways are used to evaluate hypothesis. The conclusion shows that there is not any enormous difference in capital adequacy, asset quality, management quality, earnings and liquidity between tejarat and

mellat bank. At last it has made a conclusion that there is no proof to support the hypothesis.

(Ifeach & Ngalawa, 2014) the author has adopted CAMEL model for four biggest banks in south Africa for 1994-2011. He made a study that in terms of asset quality, management quality and liquidity has a positive effect in banking performance where as capital adequacy has negative impact with ROA while with ROE it has positive impact. Finally it has made a conclusion that banking performance is positive impact on interest rates and negative impact on unemployment factors.

(Elmehdi & FERROUHI, 2014) has analysed the financial performance of morocco financial institutions for 2001-2011. He has analysed all the CAMEL parameter and gave ranking for the banks he has taken debt equity ratio for the analysation of capital adequacy ratio, loan loss provisions to total loans for assets quality ratio, return on equity for management quality ratio, return on assets to earnings and deposits on total assets ratio for liquidity. He made a conclusion that credit du maroc (CDM). Is the best bank among all other banks which he has taken.

(G.Bistriceanu, 2014) the main objective of this paper is to analyse the 28 European countries banks using CAMEL model for 2009 – 2013. Finally it has made a conclusion that 8 banks are in poor performance, 9 banks are in modest category remaining 9 banks are in excellent category.

(Jasmina & popovska, 2014)” the author has emphasized the need of paying distinctive concentration to the financial system stability, in particular to the stability of banking system. In Macedonia, the results of the crisis has been felt during 2008-09, and the national bank of the republic of Macedonia (NBRM) has immediately under taken several measures as to develop the banking sector stability. In this paper, an easy index of monetary stability of the Macedonian banking sector is developed, with a view to competently mirror the consequences of the obstacles in 2008-09. The index is founded on the primary monetary steadiness determined by CAMELS, making use of selective based method essential for most consultant fiscal indicators. Even though the developed index offers a excellent overview of the stress periods of the banking sectors in

Macedonia (2008-2009 crises), in order to make a financial stability assessment of the financial method other fundamental variables should also be incorporated. The index has few barriers, such because of short-term series (quarterly released through NBRM) and the financial parameters which can be most likely founded on accounting and historical values. The index has constructive and is well reflective on the situation of the banking sector however it must be used in blend with other indicators, with focal point on the qualitative evaluation in order to make correct conclusions.

(A, Porawouw, S.S.Pangemanan, & P.A.Mekel, 2014) The purpose of this study is to make an analysis of earnings ability n public banks listed on Indonesia stock exchange. The author has used causal-comparative study and multiple linear regressions. The main parameters of this study are capital adequacy ratio (CAR), asset quality (AQ), operating expense to operating income (OEOI) and loan-to-deposit ratio (LDR) did an analysis for 15 banking companies. The results conclude that there is a significance of partially and fully for CAR, OEOI, LDR on the basis of profitability.

(Hashim, 2015)” the purpose of this study is to analyses the Malaysian banks performance using CAMEL model for 2008 to 2012. Malaysian banks have to make a control on interest expenses so that it can improve their management competency. It has to continuously keep on check about the profitability of banks so that it can mitigate the risk of non-performing loan. Banks should also develop employee productivity by controlling personnel expenses and operating profit.

3.4 Indian Studies relating to CAMELS Model:

(Rao & Kantha, 1998) has framed a ranking order based on CAMEL Model for 19 nationalised banks and developed 21 ratios. A Separate analysis has made and a ranking has been given for each ratio. It made a conclusion that corporation bank was in the top most position and then next oriental bank of commerce while Indian bank has occupied bottom position among all nationalized banks.

(B.S. & Verma, 2006) The author has discussed on how to analyse the performance of banks in their article named as evaluation of performance of banks through CAMEL model for SBI and ICICI bank. The study has been done for 2000-01 to 2004-05. They

made a conclusion that SBI is in the good position in respect of capital adequacy conversely ICICI is at good position in respect of assets quality, earnings quality and management quality. The liquidity position of both the banks were on par and does not differ

(Gupta & Varma, 2008) In this article the authors has analysed and compared the financial performance of private sector banks using CAMEL Model for 2003 to 2007. For all the five parameters of CAMEL model ranking has been done and then overall ranking has been done. In respect of capital Adequacy yes bank is on top position where as bank of Rajasthan is in bottom place. In respect of Management efficiency ICICI bank is in top position and south Indian bank is in bottom, position. In terms of earning quality Karur vysya bank is in top place and yes bank is in bottom but with the group ranking of CAMEL model Karur Vysya bank is in top place, and then city union bank, Kotak Mahindra bank followed the other and Bank of Rajasthan is in bottom place.

(B.S.Bodla & Verma, 2009) In their paper entitled earnings quality of scheduled commercial banks operating in India made a segment wise analysis in banking and applied multi variant analysis technique on the basis of CAMEL Model for the years 1991-92 to 2005-06. The study made a conclusion that foreign banks are efficient when compared to other sectors but the limitation is that foreign banks are inefficient in net profit to average assets ratio.

(Nihir & Das, 2009) In their paper entitled A CAMEL analysis of the Indian Banking Industry made a comparison between public sector banks with private/foreign banks. The data has been extracted from the annual reports of respective banks for the five years. Over all CAMEL rating the study found that private/ foreign banks are most efficient than public sector banks but in terms of management quality and earnings quality needed to be concentrate more

(R.Jagdish & Raiyani, 2010) The purpose of this paper is to examine the financial performance of pre and post merger banks using CAMEL model so data has been interpreted with the help of t-test. The sample of BOB, PNB, OBC, HDFC, ICICI and CBOP has been taken for the analysis. With overall performance BOB is developed well

inspects of profitability, asset quality, liquidity and solvency. PNB is all right in respect of spread ratio, asset quality, discharging of obligations, profitability and management efficiency. OBC has developed after the merger through its liquidity, solvency, profitability, asset quality and management quality. At last we can make a conclusion that private sector banks are ruled over public sector banks in profitability and liquidity where as with capital Adequacy and NPA's the result has been changed. So it has been observed that private sector merged banks are performing well as compared to public sector merged banks.

(Kaur, Harsh, & Vineet, 2010) Has done a analysis between public, private and foreign banks in India through CAMEL Model for 2000-01 to 2006-07. The author has made a conclusion that among public sector banks Andhra bank and state bank of Patiala has occupied the top most position where as in private sector Jammu and Kashmir and then HDFC bank and in foreign banks Antwerp bank is best performing bank.

(Reddy & K.V.N.Prasad, 2011) analyzed the profitability of four major banks in India, i.e., State Bank of India, Punjab National Bank, ICICI Bank and HDFC Bank for the period 2005-06 to 2009-10. Statistical tools like arithmetic mean, one-way ANOVA, Turkey HSD Test have been employed for the purpose of study. The profitability of these banks have been evaluated by using various parameters like Operating Profit Margin, Gross Profit Margin, Net Profit Margin, Earning per Share, Return on Equity, Return on Assets, Price Earnings Ratio and Dividend Payout Ratio. The study revealed that State Bank of India performed better in terms of earning per share and dividend payout ratio, while Punjab National Bank performed better in terms of operating profit margin and return on equity. The study found that HDFC Bank outperformed in terms of gross profit margin, net profit margin, return on assets and price earnings ratio. The study evidenced that ICICI Bank paid highest portion of earning as dividends to shareholders. Analysis ranked HDFC Bank on the top position followed by Punjab National Bank, State Bank of India and ICICI Bank.

(Goyal, Satish, & P, 2011) He has taken samples as HDFC, SBI, ICICI, Axis and IDBI' and made an in-depth analysis of the banks through CAMEL Model. The main parameters of the study are CAR, GNPA, NPA, ROA, EPS, Net profit margin, credit deposit ratio and cash deposit Ratio. He has concluded that HDFC is best in capital adequacy ratio, ROA and cash deposit ratio where as SBI is top at earning per share and Axis bank in net profit margin, GNP and NNPA.

(Prasad, K.V.N., & Ravinder, 2011) done a empirical study using CAMEL model between Andhra pragathi Grameena bank(APGB) and saphthagiri Grameena bank (SGB) for 2006-2010. The data has been analysed by using statistical method i.e. arithmetic mean, t-test using SPSS 19. The results concluded that APGB is performing better SGB while protecting the interest of creditors. SGB is excellent in asset quality management. APGB is performing better than SGB in case of total advances to total deposits where as SGB is excellent in profit per employee. APGB is performed better than SGB in respect of earnings Quality. Over all APGB performed well when compared to SGB.

(K.V.N.Prasad, Reddy, & Dr.A.A.Chari, 2011) the purpose of this paper is to evaluate the performance of public sector banks using CAMEL model for 2006 to 2010. State bank of Bikaner and Jaipur is in top position in respect of capital Adequacy. BOB is in peak level in respect of assets quality and liquidity. Punjab & Sind bank is at first place in respect of management efficiency. Indian bank is at first place in terms of earnings quality. Over all if we consider Andhra bank is on top position and then BOB is in its next place where as SBI is in 20th place as it is the biggest public sector. Central Bank of India is on the bottom position with 26th Rank following UCO, BOM, and united bank of India and Vijaya bank.

(S.Siva & P.Nagarajan, 2011) has tested the pertinence of CAMEL norms and its consequential impact on the achievement of SBI groups. The author begins that CAMEL scanning helps banks to diagnose its banking bloom and alert the bank to yield antitoxin accomplish for its sustainability

(Kumar A. , 2012)The purpose of this paper is to evaluate the performance of SBI and its associates through CAMEL model for 1996-97 to 2009-10. Based on the each parameter

of CAMEL model SBI has performed well in terms of earning quality and liquidity ratios where as with asset quality both SBI and its associated need to improvement

.(K.V.N.Prasad & Dr.D.Maheswara, 2012) In this article the author has made a comparison between nationalized banks and SBI group through CAMEL Model for 2006-2010. In the CAMEL model based on five parameters twenty variables has been taken into considerations. The data analysis has been done by using arithmetic mean and t-test using SPSS 19. The results depicted that there is no significant difference between performance of SBI and nationalized banks.

(K.V.N.Prasad & G.Ravinder, 2012)“. The study covers the period 2005-06 to 2009-10. Based on the averages of each component parameter ranking has been given and then overall ranking has been giver in order to determine the performance of a bank. The results concluded that Canara bank is occupied a prominent place with respect to capital adequacy. Andhra bank and bank of Baroda were at top in respect to asset quality. In management efficiency concerned Indian bank has occupied the first position. In terms of liquidity bank of Baroda has occupied prominent place and with the overall ranking Andhra bank is on the top position and then bank of Baroda, Punjab and Sind bank, Indian bank were on the list where as central bank of India is on the bottom position.

(Md.Anwarul, Kabir, & Dey, 2012) In his study a comparative analysis has been done by taking two private banks i.e. IFIC and EXIM bank using CAMEL rating for 2004-2007. The results depicted that in respect of capital adequacy IFIC bank is performing well than EXIM bank but with regard to return on equity and net worth protection IFIC performance is getting deprived. EXIM bank is well efficient in management quality and earnings quality. At last with liquidity IFIC bank is performing well.

(S.K.Mishra, 2012)” the purpose of this paper is to identify the performance of public and private sector banks so twelve banks has been taken into consideration for eleven years i.e.2000-2011. Ranking has been done for each parameter and then overall ranking has been given order to know which banks are stood at top and bottom position using CAMEL Model. The results depicted that private sector banks are on the top position

where as union bank and SBI are on the back seat which shows low economic growth while making comparison.

(K.Sriharsha & Reddy, 2012) analyses relative performance of banks in India using CAMEL approach. It is found that public sector banks have appreciably improved indicating positive impact of the reforms in liberalizing interest rates, rationalizing directed credit and Investments and increasing competition.

(S.M.Tariq & Zafar, 2012) The main objective of this paper is to analyse ten Indian commercial banks for 2005-06 to 2009-10 using CAMEL model. The data has been collected from various magazines and from annual reports. It has been resulted that all the banks are standard efficient in maintaining capital Adequacy ratio Canara Bank has recorded top place and IDBI is in bottom place. In case of debt to equity ratio Canara bank is in top place and ICICI is in bottom place. In respect to Asset quality ICICI has performed well when compared to other banks. In case of earnings quality Canara bank where as with management efficiency both ICICI and IDBI are in top place as usual ICICI bank is top incase of liquidity.

(Mishra & P.K.Aspar, 2013) Analyses state bank groups with the help of CAMEL model for the period of 2009 to 2011. The research is descriptive and analytical in nature. Went financial ratios have been taken to analyse the performance and then average is calculated for three years. One-way ANOVA has been used to know whether there is any statistical significance. Kolmogorov-smirnov and Shapiro-wilk test were assesses to know the normality distribution. The study has made a conclusion that in respect to capital adequacy SBBJ and SBP were occupied first place where as SBI is in last place because of inadequate performance of SBI in debt-equity, advances to asses and government securities to total investment ratios and this was due to inefficient performance of SBI in net NPA's to total assets ratio. In respect o management efficiency component resulted that SBT is at first place and least place was by SBBJ. This was due to inefficient performance of SBBJ in total advances to total deposits, profit per employee and business per employee. In respect to liquidity SBI is on the first place.

(J.Nilesh & Lakhtaria, 2013) Made an empirical study on three public sector banks i.e. bank of Baroda (BOB), state bank of India (SBI), Punjab national Bank (PNB) for 2010-2012 using camel model. Ranking has been given for each parameter and then overall ranking has been done as per CAMEL. From the overall ranking it has been concluded that BOB is on top position and then PNB is in second place were as SBI has occupied third place in terms of performance.

(Aspal & Malhotra, 2013) They had analysed the financial performance of public sector banks for 2007-11 using CAMEL model. The study is descriptive and analytical in nature. Except SBI group remaining public sector has taken for the purpose of analysis. For the purpose of interpretation of data arithmetic mean, F test, one way Anova has been used to know the statistical significance. Separate ranking has been given for each parameter and then overall ranking has been to know which bank is at top position. The results concluded that bank of Baroda (BOB) was in top position in the areas of liquidity and asset quality and next to Andhra bank is also in the same position because of its strong holding in capital adequacy, asset quality and management efficiency with 6.15 where as Bank of India is at least position because of its management inefficiency, lack of asset quality and earnings quality. It has recommended that united bank of India has to improve its management efficiency, assets and earnings in the same way bank of maharashtra have to maintain its liquidity and also management efficiency.

(K.Srinivas & L.Saroja, 2013)) compared and analyzed the Financial Performance of HDFC and ICICI Bank. For the purpose of analysis of comparative financial performance of the selected banks using CAMELS model with t test for 2003 to 2012. The result showed that there is no significance difference between the ICICI and HDFC bank's financial performance but the ICICI bank performance is slightly less compared with HDFC.

(Singh, Chaudary, & Mohina, 2013) In the present an analysis has been made for management efficiency of selected private sector banks in India namely ICICI, HDFC, Axis, Indusind bank using CAMEL model for 2000-01 to 2010-11. The entire data is

collected from annual reports of respective and it is secondary in nature. One-way Anova model has been adopted to make a conclusion. The results shows that ere is no enormous difference in the ratio of total advances to total deposits in the selected banks therefore null hypothesis are accepted. On other side business per employee and profit per employee is having a significant difference so null hypothesis is rejected.

(Aspal P. K., 2014) made an analytical research using CAMEL model for 2007-2012 of 13 private sector banks. In order to assess the health of a bank RBI has suggested two models i.e. CACS (Capital Adequacy, Asset quality, compliance systems and controls) and CAMELS (Capital adequacy. Asset quality, management, earning, liquidity, systems and controls) so to determine the performance of these banks CAMELS model has been adopted. Among thirteen banks six banks are operating efficiently i.e Tamilnadu Mercantile Bank (TMB) is in top position and next to federal bank while catholic Syrian bank, ING vysya bank and Dhana lakshmi bank were not performing well.

(Gupta, 2014) In the present study an empirical analysis has been conducted on the public sector banks for 2009-2013 using CAMEL Model . The entire data is extracted based on annual reports of respective banks, various magazine and it is secondary in nature. CAMEL model parameters were ranked individually and then group ranking has been done. The main statistical tools used are kolmogrov- smirnov test for checking the normality in distribution and for interpretation as f-test, one-way Anova has been used. The outcome of ANOVA test highlighted the significant values of F test is not up to 0.05. It means there is a statistically significant difference between the mean values of CAMEL ratios and thus, the null hypothesis is rejected. It connotes that there is a massive change in performance of public sector banks assessed with the aid of CAMEL model.

(Tripathi, Meghani, & mahajan, 2014) the purpose of this study is to make financial performance analysis of Axis and Kotak Mahindra Bank Ltd for 10 years i.e. 2004-2013 using CAMEL Model. The present study is conducted analyse the consistency of the profitability of the Axis and Kotak Mahindra. The study has made a conclusion that credit deposit ratio is maximum of Kotak Mahindra bank that shows its efficiency of the bank. The ratio of earning per share is highest for Axis bank i.e. 50.28, the ratio of return

on assets is minimum for Axis bank. The CAMEL'S analysis and t-test concludes that there is no significant difference between the Axis and Kotak Mahindra bank's financial performance but the Kotak Mahindra bank efficiency is slightly much less when compared with axis bank.

(Biswas, 2014) the present study focuses on the analysis of the efficiency of the two public sector banks i.e. Andhra bank and bank of Maharashtra with CAMEL Model. Andhra Pradesh and Maharashtra are among the high five most populace states in India, also, there are the 2 states, which have high incidence of farmer suicides because of the lack of ability to repay the loan. With this reason these states with their respective public sector banks are considered to do the comparative study. The present study adopts an analytical and descriptive research design. Two sample public banks have been extracted for a period of 2011-2013 has been collected from annual reports of respective banks. Twenty variables have been selected for the present study in terms of CAMEL model. The results concluded that Andhra bank is better in terms of management efficiency and earning quality where as bank of Maharashtra is better in terms of assets quality and liquidity. But both te banks are on par in terms of capital adequacy ratio.

(Sharma, 2014) The purpose of this paper is to make an analysis between public and private sector banks using CAMEL Model. The study is mainly on primary hypothesis that public sector banks are efficient than private sector banks. Sample size of the study is sixteen public and sixteen private sector banks are covered under this study. The study is for 6 years i.e. 2007-08 to 2012-13. F test has been used to test the hypothesis and Mann-Whitney test is done to find out the difference in ranks between public and private sector banks. Thus, it made a conclusion that public sector banks are performing better than private sector banks.

(Dr.P.Karthikeyan & B.Shangari, 2014)" they had shown the financial performance of each banks and compared the financial results from the years 2009 to 2013 by applying CAMEL Model. They have selected have six private sector banks i.e. ICICI, HDFC, Axis, Kotak, Indusind and yes bank. This paper analyses the overall fiscal efficiency of leading private sector banks in India by means of application of CAMEL Model. Apart

from that he also attempts to evaluate the performance of those banks with a support of statistical techniques i.e. ratio analysis, descriptive statistics, correlation, analysis of variance, composite ranking method and corresponding analysis. the results concluded that HDFC bank is more efficient than other banks and common man has to get awareness about it.

(Movalia & Vekariya, 2014) taken five public and private sector banks as samples adopted convenience sampling for the analysis and interpretation used ANOVA with the help of SPSS for 2007-08 to 2011-12 by taking six parameters i.e. profitability ratio, debt-equity ratio, price earning ratio, earning per share, non-performing asset, liquidity ratios. The study has made a conclusion that public sector banks are performing well in terms of profitability, debt-equity ratio, earning per share, where as private sector banks are efficient in price-earnings ratio.

(Kumar, Sharma, & Roopali, 2014)” they had analysed the performance of public and private sector banks through CAMEL model for 2007-08 to 2012-13. They had ranked each parameter to know the performance and then overall ranking has been given to know which bank is at top and bottom position. The results concluded that kotak Mahindra bank is on top position in terms of capital adequacy, SBI is in top in terms of NPA, and PNB is in top position in terms of managing the efficiency, where as in earnings SBI and PNB are on top, Kotak Mahindra and ICICI are most efficient in terms of liquidity. Overall SBI is on the top position followed by PNB and HDFC

(Sukhla, 2015) The purpose of this paper is to analyse the financial performance of public and private sector banks using CAMEL model for 2010 to 2013. So three public sector banks i.e. Bank of Baroda (BOB), IDBI, PNB and private sector banks as Axis bank, ICICI, and HDFC are considered. The study has made a conclusion that among all banks HDFC is in top [position in terms of performance next ICICI and BOB.

(Dr T Rajasekar, 2015)” the dimension and assessment of profitability, productiveness, efficiency and effectiveness of the commercial banks has grown to be the need of the hour this competitive world. The basic idea behind this measurement is to judge the overall health and financial soundness of the banks. Different approaches and models

have been employed by various researchers to measure the financial soundness of the banks of which the CAMEL rating system has been employed by most of the scholars and hence this system has gained popularity. An attempt has been made in this paper to analyse the financial soundness of the new private sector banks in India by using CAMEL Model. The required data were collected for a period of eight years, that is, from 2005-06 to 2012-13. The reason for the selection of 2005-06 as the base year is due to the fact that the yes bank was established only in 2005. The descriptive statistics like percentage analysis, averages, mean, standard deviation and ranking technique have been used to analyse the data and arrive at meaningful conclusion. The results show that Kotak Mahindra bank is at the top position under the capital adequacy parameter, while the Development credit bank (DCB) is at the bottom. Under the asset quality parameter, the yes bank holds the top rank while the DCB holds the lowest rank. Under the management efficiency parameter, top rank is achieved by Axis bank and the lowest rank by DCB. In terms of earning quality parameter the ICICI bank is on the top, while the DCB at bottom. Under the liquidity parameter, the Kotak Mahindra bank stands on the top position and ICICI bank is on the lowest position. It is important to note that Axis bank with overall composite ranking average of 2.5 closely followed by the Axis bank with the overall composite ranking of 3.1. The DCB holds the bottom rank with overall composite ranking average of 6.4.

(Hari krshna, 2015)” they have adopted the CAMEL Model and t-test measures which measures the performance of bank from each of the important parameter like capital adequacy, asset quality, management quality, earnings ability, liquidity and sensitivity ratios for the study period of 2010-2014. The study has made a conclusion that out of 14 ratios used in the CAMEL model the average figures of bank of Baroda is the best for(6 ratios) followed by Punjab national bank (5 ratios). Finally they made a conclusion that there is no significant difference between BOB and PNB, BOB is the best bank among their selection.

(Kavitha, 2015) Made a study for the purpose of profitability analysis, for comparing capital adequacy they have selected two private sector banks by applying CAMEL analysis technique for the years 2009-2013. In that particular data they have applied t-test to measure the performance efficiency, they made a conclusion that net profit margin and return on assets have acceptance of null hypothesis, as there is no significant difference between two banks, and for capital adequacy ratio, return on net worth, return on long term fund has been rejected the null hypothesis as there is a significant difference between the two banks.

(Surendra G. Patel, 2015) The author has analysed the financial performance with CAMEL model and also find that the non-performing assets management by the Punjab national bank for 2008-09 to 2012-13. The study concluded that bank's non-performing assets became three times higher in the span of three years. However the efficiency of the bank in terms of business per employee has been raised significantly in span of three years but profit per employee remains the same. Over the time period of time bank has concentrated on the banking business only which results in the reduction in the non-interest income constantly. In recent years liquidity is key areas of the concern for management for day-today operations.

3.5 Studies Relating to EAGLES Model:

(Nagarajan, 2003)“EAGLE Assessment of Rural Banks in the Philippines”, the aim of this study is to assess the rural banks in Philippines using EAGLE Model. Micro enterprise access to banking services (MABS) was implemented by the rural bankers association of the Philippines. The objectives for MABS are to establish a rating system that can be effectively used as a monitoring tool for MABS on a frequent basis and build up an information database to help construct performance standards, and to provide a management tool for the rural banks.

(Balachandher KG, 2015):. The main objective of this paper is to develop a quantitative technique the usage of Operations Research (OR) strategies to discover ability merger partners that could optimize the key performance parameters in the EAGLES framework. To this extent, the transportation algorithm is used to produce a viable preliminary

selection of merger partners that could then be subjected to more rigorous qualitative issues before making the final decision

(Kothari & Doshi, 2012) in this report the author has analysed the Performance of Private sector Banks using EAGLES model for the year 2008 to 2011. He has analysed each bank separately by using EAGLES Model.

Conclusion:

A vast literature has-been collected for the financial performance of Banks of various model both national and world wide.. It gave the author a brief analysis of financial performance of banks and the tools applied to determine the financial performance which the author has over come the problem by applying various models to determine financial Performance of Banks.