Measuring organizational performance has been an important area and it has undergone continuous development and modification. Since the inception of the concept, management experts as well as academicians have been trying to develop advanced methods of measuring it. On account of its growing importance, the subject has intrigued many scholars, economic theorists, financial analysts and many others to probe into the various facets of performance measurement systems.

A number of studies have been conducted in India and abroad to study the various aspects of performance measurement in the banking sector. These studies have been reviewed critically with a view to understand the objectives of these studies, research methodology, research findings, etc. and to identify the gap that exists in the literature in this area. These studies have been placed in a chronological order and category-wise.

2.1 STUDIES RELATED TO BUSINESS PERFORMANCE OF INDIAN BANKS

Vashisht (1987), in his doctoral work titled, “Performance Appraisal of Commercial Banks in India”, evaluated the performance of public sector banks with regard to six indicators, viz. branch expansion, deposit, credit, priority sector advances, DRI advances, and net profit over the period 1971-83. The researcher has used composite weighted growth index to rank the banks as excellent, good, fair and poor. In order to improve the performance, he has suggested developing marketing strategies for deposit mobilisation, profit planning and SWOT analysis.

Singh (1990), in his research study titled, “Productivity in Indian Banking Industry”, discussed the trends and changes in the productivity with particular attention on employee and branch productivity in the Indian banking industry. The researcher used seventeen indicators to analyze productivity trends. Banking being service industry, greater attention has been paid to employee productivity. He has
made cross-sectional and inter-temporal analysis on the basis of these indicators and these have been divided into three categories:

- Per employee indicators (Labour productivity)
- Per branch indicators (Branch productivity)
- Financial ratios measuring productivity.

The study period (1969-85) was divided into four sub periods. In addition to the comparison of growth rates of various indicators, assessment of relative positions performance has been made on the basis of average T-scores and ranking based on it.

**Amandeep (1991)**, in her thesis titled, “Profits and Profitability of Indian Nationalised Banks” opined that the banks have become an instrument to meet effectively the needs of the development of the economy to effect the total socio-economic transformation. It has adversely affected the profitability of the bank operations. According to the researcher, the profitability of a bank is determined and affected mainly by two factors: spread and burden. The other factors determining bank’s profitability are credit policy, priority sector lending, massive geographical expansion, increasing establishment expenses, low non-fund income, deposit composition etc. She has chosen 11 factors affecting a bank’s profitability to identify the most significant variable affecting its profitability.

The study recommended the banks to focus their attention on the management of spread, burden, establishment expenses, non-fund income and deposit composition. The banks need to adequately charge for various non-fund services (like merchant banking, consultancy, and factoring services) with proper cost benefit analysis, to have maximum profitability.

**Saleem (1995)** studied the strategic reforms of banking sector and revealed that Indian financial system is characterized by predominance of public sector units and high degree of regulations, motivated mainly by socio-economic considerations. As a result of liberalization, the existing institutional arrangement of banking system has become deficient in various ways. The major issues related to international competitiveness consist of financial soundness, operational efficiency, viability and profitability. The main rationale behind the banking sector reforms was to improve the operational and allocation efficiency of the system. According to the researcher, the remedial measures are required to mitigate the indigenous factors, which affect the
performance of banking sector adversely. Last but not the least, political interference should be reduced to have better productivity and profitability.

Krishna (1996), in his article titled, “Profitability Analysis: An Overview”, has defined the profitability analysis in detail. According to the researcher, it is a rate expressing profit as a percentage of total aspects or sales or any other variable to represent assets or sales. What should be used in the numerator and the denominator to compute the profit rate depends upon the objective for which it is being measured.

Prasanta (1997), in his doctoral dissertation titled, “Performance of Public Sector Commercial Banks: A Case Study of State Bank of Hyderabad”, has evaluated the performance of SBH by selecting certain parameters like deposit mobilisation, analysis of advances, credit deposit ratios, interest spreads, employee productivity, customer services, profit as a percentage of working funds etc. One major conclusion drawn by the researcher is that the profits of SBH showed an increasing trend, indicating a more than a proportionate increase in spread, than in burden. It has been brought out that there is a gradual increase in the percentage of profit on the working funds over the study period. According to the study, there is decline in operating costs, responsiveness of the SBH during the study period which is a clear symptom of cost effectiveness/ productivity which has resulted in a profit though many banks were in red during the years 1992-93 and 1993-94 due to introduction of banking sector reforms.

Ramamurthy (1998), in his technical paper on the profitability and productivity in Indian banking stated that the banking structure and profitability structure of the banking system across the country have a bearing on the profitability of the banks. When banks are considered as groups in terms of big, medium and small, bigger banks have greater scope for economies of scale. The author opined that one of the main determinants of banks’ profitability is the network of branches, frequently termed as franchise strength. The researcher concluded that Indian banks have-

- Higher interest spreads than banks abroad;
- Higher operating costs than banks abroad; and
- Higher risk provision level.
as far as the impact of liberalization is concerned, the author stated that productivity as measured in terms of per employee business for the banking system as a whole went up from Rs. 45.33 crore to Rs. 73.40 crore during the post-reform period of 1992-96.

Kewaljeet (1999) in his article, “Profitability Performance of Nationalised Banks: Some Issues”, made an attempt to analyze the profitability performance of State Bank of Patiala keeping in mind the changing economic reward. According to the author, percentage in growth in gross income after the reform process started in 1991-92 decreased from a growth of 201.92 per cent during 1985-86 to 1989-90 to a growth of 74.80 per cent during 1990-91 to 1994-95 (the period of liberalization). As a result of liberalization, there is continuous decline in the profits of commercial banks.

Malhotra (1999) in her study, “Banking Sector Reforms: Experience of PSBs”, has analyzed the performance of PSBs as a result of banking sector reforms. The study is divided into two parts. In the first part, a brief review of banking reforms has been made. The major reforms being deregulation of lending/deposit rates, deregulation of entry, revamping of branch licensing policy, measures to improve the financial health, measures to improve the operating efficiency and reserve pre-emption.

In the second part, the researcher has discussed the impact of banking sector reforms on PSBs, after dividing the reform period of 1992-98 into two phases. Phase-I pertains to the period 1992-93 to 1995-96, and Phase-II to the period thereafter. The profitability of the banks became negative from 0.28 per cent in 1991-92 to -0.99 per cent in 1992-93 and further 1.15 per cent in 1993-94. The situation started improving in 1994-95 but the negative trend continued again in 1995-96 (-0.07 per cent), however, the profitability has improved during 1996-97 and 1997-98. The study brought that there has been a positive effect of reforms on the profitability performance of the banks.

Bisht et al. (2002) studied the impact of liberalization on the Indian banking sector. They established the fact that the present banking structure is the outcome of a process of expansion, re-organization and consolidation which have been going on for many years and passed through three important phases—Pre-nationalisation, Post-nationalisation and Post-liberalisation. With the advent of internet, one can distinctly perceive the arrival of fourth phase which led to mass structural changes in banking by
replacing brick and mortar branches with the electronic delivery channels to provide more options to the customers. Traditional banking has become a thing of the past; and technology has changed the rule of the game.

**Bhinde et al. (2002)**, in their paper, took the critical overview of on-going banking sector reforms. They found that traditional face of banking undergone a change from one of the more inter-mediator to that of provider of quick and cost effective and efficient services. Indian banking sector is currently facing challenges of consolidation, re-capitalization, implementation of prudential norms, legal framework, corporate governance, Basel-II norms.

Reforms process cannot be entirely painless. Along with achievements there are pitfalls as well. So, regulators have to strike a balance between the two. There is constant challenge for the authorities, in identifying newer risks, achieving harmful incentives and strengthening the banking sector to keep pace with changes in environment and technology.

The study carried out by **CRISIL (2002)** concluded that lower operating expenses improved the profitability of banks, contrary to the popular perception that only trading profits helped the banking sector shore up their bottom lines. The reduction in operating expenses became possible through large scale VRS implemented by PSBs. As this reduction in operating expenses seems sustainable, a brighter future for the banking sector in India is expected. The study concluded that the banking sector is now reaping the benefits of rationalization of employee costs, and undertaking various other cost-reduction initiatives. The study pointed out that banks ability to repeat and sustain such initiatives would be a deciding factor in improving the productivity and profitability of the banks.

**Ram Mohan (2002)** evaluated the performance of public sector banks (PSBs) since deregulation in both absolute and relative terms and also highlighted the reason underlying the improved performance of PSBs. The author mentioned that the banking system has neither collapsed nor there has been any banking crisis. One important point that advocates the improved performance of PSBs is the improvement in declining spreads of PSBs.

The author measured performance of PSBs during the period 1991-92 to 1999-00 on the basis of key performance indicators like interest spread, intermediation cost,
non-performing assets, provision and contingencies and net profits as percentage to total assets. But in the relative performance he makes a comparison between public sector banks, private sector and foreign banks from 1994-95 to 1999-00. In this category he also made comparison of the performance of PSBs and old private sector banks during the same period.

The author concluded that partly due to regulatory norms, the government-owned banks have had minimal exposure to risky assets such as real estate and stock market. Another reason for survival of banks in the deregulation era was that the government wisely stayed away from the move towards full-blown capital convertibility. In his article, the author also talked of recapitalisation requirement of PSBs. Not the least, government ownership facilitates recapitalisation of banks at outset of reforms and this has arguably precipitated costlier bailouts down the road. Further, it was explained that the government had no choice but to infuse funds in the banking sector, the fiscal situation notwithstanding, thanks to mandatory Basel norms for banks.

Pathak (2003), while comparing the financial performance of private sector banks since 1994-95, explained that the private sector banks have delivered a new banking experience. Looking to the growing popularity of services provided by them, their public sector counterparts have started emulating them. He studied the performance of these banks in terms of financial parameters like deposits, advances, profits, return on assets and productivity.

In this paper, the author made an attempt to have an insight into the financial operation of these institutions. A sample of 5 banks has been taken for financial analysis. Financial track record of all these banks was evaluated, and their financial performance was compared. The working of all the constituents was satisfactory but the HDFC Bank emerged as a top performer among them followed closely by the ICICI Bank.

Kalita (2004), in his article titled, “Post-1991 Banking Sector Reforms in India: Policies and Impact” stated that the banking sector reforms in India were started as a follow up measure of the economic liberalization and financial sector reforms in the country. The banking sector being the life line of the economy was treated with utmost importance in the financial sector reforms. The reforms were aimed at to make the Indian banking industry more competitive, versatile, efficient and productive, to
follow international accounting standards and to free from the government's control. The reforms in the banking industry started in the early 1990s have been continued till now. Firstly, in his paper the author highlighted the major reform measures and policies regarding the banking industry formulated by the Government of India and the Central Bank of India (i.e. Reserve Bank of India) during the last fifteen years. Secondly, the author studied the major impact of those reforms upon the banking industry. But at the same time, the reforms have failed to bring up a banking system which is at par with the international level and still the Indian banking sector is mainly controlled by the government as public sector banks being the leader in all the spheres of the banking network in the country.

The author concluded that the banking sector in India has provided a mixed response to the reforms initiated by RBI and the Government of India since 1991. The Indian banking system is growing in a robust manner. The sector has responded positively in the field of enhancing the role of market forces, measures of prudential regulations of accounting, income recognition, provisioning and exposure, introduction of CAMELS supervisory rating system, reduction of NPAs and regarding the upgradation of technology. The financial sector reforms have brought the Indian financial system closer to the global standards. But it can be stated without any hesitation that Indian banking sector has still a long way to go to catch up with their counterparts.

Ram Mohan and Ray (2004), in their article titled, “Comparing Performance of Public and Private Sector Banks: A Revenue Maximisation Efficiency Approach” made a comparison of performance among three categories of banks - public, private and foreign banks - using physical quantities of input and outputs and comparing the revenue maximization efficiency of banks during 1992-00. The findings of the study showed that public sector banks performed significantly better than the private sector banks but in no way different from foreign banks.

In this study, a comparison of public, private and foreign banks in India has been made using data envelopment analysis (DEA). In DEA, physical quantities of inputs and outputs are used. Therefore measures of efficiency based on output-input quantities may be more suitable.

In the Indian context, the approach of using deposits and loans as output have been appropriate in the nationalised era when maximising these was indeed the
objective of a bank. But the main business of the banks is to maximise their profits. Interest expense and operating expense are treated as input when amount to maximising revenue. Finally they concluded that the superior performance of PSBs is to be described higher technical efficiency rather than higher allocative efficiency.

Bansal (2005), in his research work, attempted to find out the impact of liberalization on productivity and profitability of public sector banks in India. The researcher evaluated the productivity and profitability of 27 PSBs in the post-liberalization period, i.e., from 1991-02. The productivity of all the PSBs has been measured on the basis of employee productivity (labour productivity), branch productivity and overall productivity. The researcher ranked different banks from all the three levels of productivity. While measuring productivity he used parameters like Deposit, Advances, Business, Total Income, Total Expenditure, Burden, Spread and Net Profit. The study brought out that from the overall productivity angle, BOB, BOI, SBI, COB, OBC have been the top rankers, whereas the ranking of SBBJ, SB, AIIB, SBM and UCB was far from satisfactory. As far as SBI group is concerned, SBI remained the leader followed by SBOP in almost every year of study.

While measuring profitability of all the PSBs, the trend analysis results showed that net profits in absolute terms have increased for majority of the PSBs but profitability has witnessed a decline. But a few banks have improved their profitability over the period of study. The main reason for the declining trend in profitability is due to increased competition which has been resulting in a narrowing spread. While measuring profitability, the researcher used various ratios like interest income, interest expended, spread, non-interest income, non-interest expenditure, burden and net profits to working funds ratios. The researcher also used ratios like interest income to total income ratios, interest expanded to total expenditure ratio and staff expenditure to operating expenditure ratio.

Business India (2006) arranged a panel discussion to judge the best bank in the Indian banking sector on the basis of certain selected variables. For the purpose of the panel discussion, Business India looked closely at 24 banks. While the other banks (out of the universe 88 banks) were still eligible to be selected by the panel. This 24-banks universe was essentially short listed by the Business India. The selection was based on consideration, such as size and visibility the panelist pick the 24 contenders from each of the three categories of banks – the PSU, private and foreign banks. The
profile of the banks that caught the attention include banks which were clearly leaders in selected areas. The panelists selected a few broad parameters to evaluate the contenders in the first round to produce a short list. Such parameters included financial and operational performance, quality of management, the creation of a platform for growth, value creations and how the stockholders have reacted to the same. In Round-I, thirteen banks were short listed; and during Round-II, six banks were selected; and finally in Round-III, two banks, i.e., HDFC Bank and ICICI Bank competed with each other.

The methodology used by the panelists was CRAMEL Model based on different ratios computed under each measure like Capital adequacy, Resources deployed, Assets quality, Management efficiency, Earning quality and Liquidity.

Finally, ICICI Bank was selected Business India’s Best Bank for 2006. On current form, it is only a matter of time before the ICICI group emerged the country’s biggest financial powerhouse. In several of the business line, it has built significant market shares, be it home loan or vehicle loan or insurance. Within five years of turning into full- fledged bank, it has shown the world that India can build world class institutions.

Jain (2006), in his article titled, “Ratio Analysis: An Effective Tool for Performance Analysis in Banks” discussed various ratios relating to profitability of the banks. The author classified the various ratios under three categories, viz. Costing Ratio, Returns / Yield Ratio and Spread Ratios. Such ratios can be used to understand a bank’s financial condition, its operation and attractiveness as an investment. He explained that such ratio analysis can be used to make an inter-branch comparison for investigating the strengths and weaknesses of individual bank’s and to enable them to take strategic decisions and initiate necessary corrective actions.

Under costing ratio, the author advocated for computation of average cost of deposits, average cost of borrowings, average cost of interest bearing liabilities, average cost of funds and operating expenses to average working funds. Similarly under yield/return category, he computed ratios like yield on advances, yield on investment, average return on interest earnings, average return on funds and non-interest income to average working funds and total income. Under spread category, he sub-categorized the ratios like interest spread, net interest margin and burden ratios. The author discussed the significance of ratio analysis as a tool for evaluating the
performance of different banks / bank branches. Apart from profitability ratios, the author mentioned the following categories of ratios for undertaking comparative performance of banks, viz. Productivity Ratios, NPA Ratio, Efficiency Ratio, Ratios on Shares (Shareholders front).

Leeladhar (2006), in his paper titled, “Indian Banking - The Challenges Ahead” revealed that in the recent years, there has been a considerable widening and deepening of the Indian financial system, of which banking is a significant component. The growing role of the financial sector in the allocation of resources has significant potential advantages for the efficiency with which our economy functions. Given the significance of the Indian banking system, one cannot afford to underplay the importance of a strong and resilient banking system.

The enhanced role of the banking sector in Indian economy, the increasing levels of deregulation and the increasing levels of competition have placed numerous demands on banks. Operating in this demanding environment has exposed banks to various challenges like customer service, branch banking, competition, technology, Basel-II implementations, improving risk management systems, implementation of new accounting standards, transparency and disclosures, supervision of financial conglomerates, know your customer (KYC) guidelines and corporate governance.

The author concluded that it is crucial for the banking industry to meet the increasingly complex savings and financial needs of the economy by offering a wider and flexible range of financial products tailored for all types of customers. With the increasing levels of globalization of the Indian banking industry, evolution of universal banks and bundling of financial services, competition in the banking industry will intensify further. Strong capital positions and balance-sheets place banks in a better position to deal with and absorb the economic shocks. Banks need to supplement this with sophisticated and robust risk management practices and the resolve to face competition without diluting the operating standards.

Mohan (2006) in his paper titled “Reforms Productivity and Efficiency in Banking: The Indian Experience” observed that the objective of reforms in general is to accelerate the growth momentum of the economy, defined in terms of per capita income. Not surprisingly, therefore, performance of the banking sector has repercussions across the length and breadth of the economy. Financial intermediation is essential to the promotion of both extensive and intensive growth. Thus
development of the financial system is essential to the generation of higher productivity and economic growth.

The author highlighted how does productivity in banking influence the rest of the economy. Recent research has provided robust evidence supporting the view that financial developments contribute economic growth. A basic indicator of financial development is the contribution of finance related activities to GDP and the process of financial deepening. The author believed that financial deepening is easier to measure; analyzing productivity and efficiency changes in banking is more complex and needs to be viewed in relation to the changing contours of the banking industry in India.

The transformation of the banking sector in India to be viewed in the light of overall economic reforms process along with the rapid changes that have been taking place in the globalized environment within which banks operate. The author also compared the banks of major Asian countries in terms of spread (net interest margin), intermediation cost (operating expense), non-interest income and net profit from 1996 to 2004.

The author concluded that over the reform period more and more banks have begun to get listed on the stock exchange, which in its wake has led to greater market discipline as well as governance aspect. The pattern of efficiency and technological change witnessed in Indian banking can be viewed as consistent with expectations in an industry undergoing rapid change in response to the forces of deregulation. As deregulation gathers momentum, commercial banks would need to devise imagination ways of augmenting their incomes and more importantly their fee-income so as to raise efficiency and productivity levels. In relation to change of economic environment (market prospects), a few pioneering banks might adjust quickly to seize the emerging opportunities, while others respond cautiously.

Gopal and Dev (2006), in their research paper, empirically analysed the productivity and profitability of selected public and private sector banks in India. They evaluated the effect of globalization and liberalization on the productivity and profitability of Indian banks during the period 1996-97 to 2003-04. The author observed that emergence of new private sector banks as well as entry of new foreign banks in this era has thrown tremendous challenges in the form of tough competition among the Indian banks. The spirit of competition and emphasis on profitability are also forcing the PSBs towards greater profit orientation.
For the purpose of their study, they selected five large banks each on the basis of highest quantum of deposit mobilization from both the public and private sectors during the period under study. It was found that the process of globalization and liberalization has exerted its huge influence on the Indian banking sector. The ongoing reforms in the banking sector, with a thrust on transparency and efficiency have forced the Indian banking sector to adopt suitable strategies which focus on productivity and sustainability. The study reveals that except few cases, the productivity index is found to be greater than one in the selected banks. As far as the matter of achieving the target profitability is concerned, SBI and PNB were most successful followed by HDFC Bank and ICICI Bank but the performance of J& K Bank, Canara Bank and Bank of India was poor in terms of achievements. Interest spread emerged as the only strong factor influencing the profitability. A high degree of positive association between productivity and profitability during the study period speaks about the efficiency of the banks in utilizing their resources.

Ramudu and Rao (2006), while making a fundamental analysis of Indian banking industry, revealed that ever since the Indian economy opened its doors to MNCs, the Indian banking sector has been witnessing bizarre changes in terms of new products and services and shift competition as well. The sort of IPOs that have been taking place in banking sector are amazing. In the light of these recent developments, a careful analysis of the profitability of Indian banking sector is inevitable.

The researchers have selected three major banks in India, viz. SBI, ICICI, and HDFC. While analyzing profitability of these banks they used different variables of profitability like OPM, NPM, ROE, EPS, PEB, DPS and DPR. They analysed the data for a period of 5 years from 2001 to 2005. For making analysis of data and interpreting the results, they used different statistical tools like Arithmetic Mean, Compounded Annual Growth Rate (CAGR) and one way analysis of variance (ANOVA).

The study aims at examining the economic sustainability of SBI, ICICI and HDFC. The study concluded that SBI performed better in terms of Earning per Share and Pay out Ratio, and its CAGR in most of the parameters was also higher than ICICI and HDFC. On the other hand, HDFC performed better in terms of OPM, NOM, ROE and PER. As far as the pay-out-ratio was concerned, ICICI paid the highest portion of its earnings despite the fact that its earning capacity was not better than that of other
two banks. The CAGR in all the parameters of SBI was more than that of ICICI and HDFC.

**Rathod and Kulkarni (2006)** studied the emerging trends in banking sector with special reference to ING Vyasya Bank. They divided their study on banking in India into three phases, viz. pre-nationalisation era (1948-68), post-nationalisation era (1969-91) and LPG era (1991 onwards) characterized by high–tech banking, core banking, e-banking, internet banking, RTGS, product innovation, enhanced customer services, implementation of Basel-I and II, consolidation and universalisation, adoption of risk management technique and marketing concept.

They highlighted that the globalization has posed numerous challenges to the Indian banking system. Globalization has opportunities accompanied by threats (challenges) also. The global challenges in banking include enhancement of customer services, innovation in technology, improvements in risk management system and diversifying products. The banks in India should prepare themselves to face these challenges so that they become more competitive and to act as global players.

The author undertook the case study of various products offered and other financial services of ING Vyasya Bank in the changing financial needs of the customers. They concluded that the Indian banking has changed rapidly in the LPG era. It is facing challenges in the changing scenario by offering various products to the customers. Trends in banking have benefited the customers as well as the banks also. In the post-reform era, banks are competing among themselves to satisfy customer needs and want to prove their efficiency. The performance trends in Indian banking show that many banks are competent enough to meet the global challenges.

**Saikrishna (2006),** in his article titled, “Commercial Banks in India: Challenges Ahead” analysed the opportunities and challenges that banks in India faced in the present scenario. The author revealed that globalization and privatization has increased competition in the banking sector. Banks need to equip themselves sufficiently to operate in such a competitive environment.

In order to face the competition and attract more customers, banks have to maintain the international standards; they have to render high quality services to their customers and implement new technology. The biggest challenge for the banking sector lies in reaching out to rural masses through shared technological platforms and
bring down the cost of services. In order to face various challenges posed by the competitive world, banks have to concentrate on the new technology, customer relations, retail banking, competition, mergers and acquisitions (M &A) and Basel-II norms.

While concluding, the author believed that in the coming years, the Indian banking system would grow not only in size but also in complexity. With the increasing effect of globalization, liberalization, privatization and now reforms of the Indian banking sector, competition will intensify further. The commercial banks in India need to handle these problems and challenges successfully to keep growing and strengthen the Indian banking system as well as the Indian economy. The financial strength of banks is the first stage of defence against financial risks. Banks should always maintain good operating standards, risk management system and a sound capital structure, in order to absorb the future financial shocks. Efficient delivery of information pertaining to the customer needs and preferences will hold the key to the success.

Arora and Kaur (2006) made an attempt to review the performance of banking sector in India during the post-reforms period. Banking sector being an integral part of Indian financial system has undergone dramatic changes reflecting the ongoing economic and financial sector reforms. The main objective of these reforms has been to strengthen the banking system amongst international best practices and standards, which will have lasting effect on the entire fabric of Indian financial system. These financial sector reforms have stimulated greater competition convergence and consolidation in Indian banking sector.

For the purpose of analysis, banks have been broadly categorized into four categories, i.e., private sector, foreign banks, nationalized banks, and SBI and its associates. They made a comparative appraisal of banks on the basis of seven key performance measures such as returns on assets (ROA), capital asset, risk weighted ratio, NPA to net advances, business per employee, net profitability ratio, NPA level and off-balance-sheet operations of commercial banks for a time period of 9 years, i.e., 1996-2005.

The researchers deliberated the latest trends and developments in the banking sector. The analysis reveals that there is phenomenal development in the banking sector particularly in PSBs. Their performance is comparable with banks in other
sectors, yet they are lagging behind in thrust areas, such as asset quality, business per employee, capital adequacy requirements and profitability. The study concluded with some suggestions for improvement in performance of PSB like operating cost, rationalization of staff cost, HRD, NPA reduction, deployment of funds in quality assets, technology upgradation, risk management techniques, market-driven approach, instance relationship management and credit delivery mechanism etc. With India getting increasingly integrated with the global financial world, the Indian banking sector has still a long way to go to catch up and compete with their counterparts in the west.

Tondon (2006), in his article, studied the impact of globalization on Indian banking. The management of financial sector has been oriented towards gradual balancing between efficiency and stability and the changing shares of public and private ownership. The development of financial market has been by and large healthy. The author highlighted the challenges in the banking sector and the roadmap ahead. The banking sector in India is getting redefined - it is faced with challenges and opportunities, especially beyond 2009 when they would be fully exposed to competition. The major challenges to which Indian banking sector are bracing themselves to be ready through adoption of newer technology, strengthening their capital base to become Basel-II compliant, reducing their NPA, bringing down operating costs, enhancing corporate governance, undertaking organization restructuring, and sharpening their customer-centric initiatives. Consolidation of Indian banks through mergers and acquisitions (M&A) route to effectively compete with large global banks may not be far off. The author revealed that implementation of Basel-II norms is posing new challenges and impaired assets continue to be a major area of concern. Banks are under increasing pressure to improve their profitability to meet the high operating costs and to shore up the capital.

The author also made comparisons of Indian banking system with China and rest of the world. He compared the Bank of China with their Indian counterpart and rest of the world in terms of Size, Return on Assets and Non-Performing Assets (NPAs). The author believed that the structure of Indian banking system is expected to undergo a transformation, led by consolidation, convergence and technology. Indian banking sector is moving from large number of small banks to small number of large
banks and committed toward enhancing banking competence and efficiency and getting integrated with global banking.

Finally, the author concluded that the growing international influence offers Indian banks three-fold benefit: the opportunity to service the cross border needs of Indian companies, serving the multinational for their local banking needs and create its footprints globally. Notwithstanding intense competition, the expansionary phase of the economy is expected to provide ample opportunities for the growth of the banking industry. The growth trajectory, adherence to global best practices and risk management norms are likely to catapult the Indian banks into the global map, making them a force to reckon with. The journey is going to be long and arduous and success lies in focus flexibility and efficient execution.

Bharathi (2007), in his article titled, “Indian Bank: Banking on Growth” revealed that as the banking sector is on the threshold of exponential growth, consolidation, reforms and compliance remain the dominant factors for the Indian banks boardroom agenda. He mentioned that India is the second fastest growing economy in the world, Truly so a robust banking system would be instrumental for enhancing the levels of activities of the economy. The author highlighted that due to liberalization, improving economic conditions, changing consumer demographics and growing market opportunities, the Indian banking sector is growing at a steady pace and has been currently ranked among the most preferred banking destination in the world. This sector has emerged as a key facilitator for sustaining the growth momentum of the Indian economy. According to The analyst 500 ranking based on net sales, SBI topped the league chart by maintaining the 6th position from the previous year. India’s top private sector bank, ICICI, has moved up three places from 12th to 9th position. Besides this, PNB and CANARA Bank have climbed by one position each and occupied the 24th and 27th position respectively.

The author highlighted that the banks are gearing up for number of challenges confronting the IBS to extend financial services to all sections of the society like financial inclusion, Capital Adequacy (Basel-I and Basel- II) Standard requirements, to effectively compete with foreign banks and Consolidation movement to achieve global competitiveness.

Shyamala (2007) in her inaugural address at 18th Annual National Conference on Forex Association of India on April 6, 2007 at Bangkok on the special features of
financial sector reforms in India said that reforms were introduced as a part of structural adjustment and have had a profound impact on the functioning of the financial institutions, especially banks. The principal objective of financial sector reforms was to improve the allocative efficiency of resources, ensure financial stability and maintain confidence in the financial system by enhancing its soundness and efficiency. At the same time, reforms were also undertaken in various segments of financial market, to enable the financial sector to perform its intermediation role in an efficient manner. With a view to making the reform measures mutually reinforcing, the reform process was carried forward through analysis and recommendation by various committees/working groups and extensive consultations with experts and market participants.

She also highlighted the impact of reforms in the banking sector. Various measures initiated over the last decade and a half have significantly strengthened the commercial banking sector in terms of profitability, asset quality and capital position. The recent initiatives like supervision of financial conglomerates, new capital instrument, and procyclical prudential provisioning, credit information companies and financial inclusion have been taken under the umbrella of reforms. She also put forth the future work programme on Draft guidelines on Accounting Aspects, Derivatives, Stress testing, Basel-II, Mortgage Guarantee companies and FSAP to undertake self-assessment.

Brinda and Dubey (2007) made an econometric analysis on the performance of public sector banks in India. They studied the performance of PSBs vis-à-vis other bank groups, i.e., private sector banks and foreign banks present in India. They tested the performance of different bank groups on different profitability and efficiency parameters and through econometric model. In their paper, they tested the hypothesis that government ownership per se makes public enterprises inefficient.

For evaluating a bank’s performance, they have used the two profitability measures, i.e., return on assets (ROA) and operating profit ratio (OPR). Two banks with identical OPR can differ in terms of ROA; one, to difference in the risk of their loan portfolio; and two, efficiency measures used in their analysis are net interest margin (NIM) and operating expense Ratio (OER). They applied the statistical techniques like ordinary least square method and bounded influence to analyse the data. They concluded that private sector banks and foreign banks are not found to be
superior to the PSBs in any of the performance indicators, namely, ROA, OPR and OER given the present regulation environment. They also found that PSBs scored well against benchmarks as well as against other bank groups in India in the area of profitability (ROA), Non-Performing Loans (gross) (NPL) and operating costs as a proportion of total Assets, Capital adequacy requirement, etc.

The above observations support the econometric findings of their study that PSBs are not inherently less efficient than private sector banks and foreign banks, given the regulatory environment. While the boom in the economy has helped greater operational flexibility, and improved corporate governance has contributed to improved performance. Going forward with the given performance of PSBs they are confident that with greater deregulation and financial sector reforms gaining further momentum, PSBs can meet the challenges of 2009, when RBI proposes to open up the sector in a bigger way to foreign players.

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

The author mentioned that the financial sector reforms have stimulated higher competition, convergence and consolidation in Indian banking industry. In order to ensure further greater accountability and market discipline; Narasimham Committee-II (1998) recommended second-generation reforms to which our banking industry responded positively. The author measured the performance of the banking sector in the post-reform period on the basis of profitability and provision, return on assets, net NPA as a percentage to net advances and business per employee. For this, he broadly categorized the banking sector into Indian Private Sector Banks, Nationalised Banks, and SBI & its associates.

The author concluded that the financial sector reforms have brought tremendous changes in the banking sector of our country. The changed financial
scenario has provided our banks with ample opportunities to expand globally through self-expansion, strategic alliance, etc. The financial sector reforms have brought Indian financial system closer to global standards, but Indian banking sector has still a long way to go to catch up with their counterparts.

Nair (2007) emphasized that the transformation during the last decade in the Indian banking industry has made it stronger, cleaner, efficient, disciplined and responsive and lot more competitive. The Indian banking industry may now compare itself reasonably well with rest of the Asia in areas like growth, profitability and low rate of NPAs. Few banks have even gone ahead with innovations, growth and value creation. The banking sector which had failed to respond to the changing global market conditions is a big hurdle in the development of financial sector of that country/nation. In India, banking sector has been a significant driver of GDP growth and any failure in this sector adversely affected the speed of growth engine of the country.

While comparing the Indian banking industry with their counterpart in China, the author viewed that the banking penetration in India is still less than other markets. Deposits in India represent only 60 per cent of its GDP as compared to 142 per cent for China. Similarly, financial depth, a measure of the country’s financial stock with its GDP is just 160 per cent compared to 330 per cent of China. But with the booming economy and swelling middle class, the retail banking has been growing exponentially over the last five years. But a successful banking industry will have to first meet and address several challenges to gear up it for facing global banking competition. Some areas like financial inclusion, risk management, Basel-II norms and entry of foreign players having eye on Indian market and world class infrastructure will require immediate and utmost attention by the IBS (particularly PSBs).

Another area which requires attention of industry is HR. Generating and disseminating information and knowledge to the employees across the bank branches can dramatically improve their performance especially customer services, knowledge of strategies and decision-making. A suitable knowledge management framework with appropriate online educational initiatives can update and equip the employees across the bank-extremely cost-effective too. This should help the banks to reap rich dividends on return on relationship by transforming them as a financial advisor, a trustworthy friend, philosopher and guide to the customers.
Rao (2007), in his article titled, “Reforms in Indian Banking Sector: Evaluation Study of the Performance of Commercial Banks” found that the nationalisation process achieved the widening of the banking industry in India. By the beginning 1990, the social banking goals set for the banking industry made most of the PSBs unprofitable. The resultant ‘Financial repression’ led to the declining in productivity and efficiency, and erosion of profitability of the banking sector in general. The researcher revealed that financial sector reforms were initiated in the country in 1992 with a view to improving the efficiency in the process of intermediation, enhancing the effectiveness in the conduct of monetary policy and creating conducive environment for the integration of domestic financial sector with the global financial system.

In his study, the researcher studied the procedure adopted for Performance Evaluation by ICRA Ltd., commissioned by the IBA in 2002 with certain modifications. He used various indicators for measuring the performance of Indian commercial banks. The study covered a period from 1992-93 to 2002-03.

On the basis of analysis and major findings of the study, the researcher made number of observations like the response of the banks to the reforms has been impressive; the reforms have not only enhanced the opportunities for the banks but at the same time threw challenges as well; as a result of entry of new generation private sectors banks, the competitive pressures are constantly on the increase; there is a shift of focus from process-based management to risk-based management; the interest rate spread has exhibited a decline over the years; the level of NPA of public sector banks remained high, but a noteworthy development has been their significant reduction in relation to net advances in the recent years; the expectations of consumers have been growing; the non-interest income of both public and private sector banks exhibited an increase during the period under study and the financial health of banks improved due to prescribed prudential norms. Almost all banks improved their Capital Adequacy and Asset Quality during the period of study.

Ram Mohan (2007) in his paper emphasized that the entire banking landscape has been transformed in a little over a decade of reforms. Reforms were intended to usher in greater efficiency and stability in Indian banking. There is always a trade-off between efficiency and stability in banking. But critics of reforms said that they have not found right trade-off. That is because of reluctance among policy-maker, specially
the RBI, to disturb the ownership character of Indian banks substantially. The characteristics of state ownership not only come in way of greater efficiency and stability but also result in greater financial deepening.

The researcher selected various parameters like net income spread, intermediation cost/total assets, net profit / total assets, cost /income ratio and NPA to total assets and capital adequacy for the period from 1992-2006. He also explored the various factors underlying the improvement in performance. He concluded that there are certain pre-conceived notions as to what deregulation in banking is all about. It means freeing up price and volume control on banks, but for many, it also means privatization of state-owned banks and free entry of foreign banks. It is contended that second must complement the first to achieve the goals of improved efficiency, stability and financial deepening. Consolidation is also seen as an important requisite of improvement in efficiency. One lesson that emerged from Indian experiences with the bank reforms is that there is virtue in organization diversity. The system gains when there is diversity in ownership - public, private and foreign.

Sekhar (2007) in his article, “Trends in Growth and Development: Nationalised Banks in India”, explained that Indian banking registered tremendous growth in post-nationalization era. Since the beginning of 1991, there has been a sea change in the rule, organization, scope and activity level of Indian financial sector. The Indian banking industry has witnessed a rapid growth after economic reforms from regulated to deregulated market economy and defined a new role for banks. The winds of change gained momentum in the last few years such as globalization and opening up of financial services under World Trade Organisation (WTO). It is expected that the banking sector will undergo mergers and acquisitions, globalization of operations, development of new technology and universalisation.

The author studied the trend in growth and development of nationalized banks in India, covering both pre-reform and post-reform periods. A comparative analysis of various bank groups with respect to different variables like aggregate deposit and credit of scheduled commercial banks, priority sector lending, credit deposit ratio, cash deposit ratio, interest income, interest expanded, and operating expenses as a percentage of total assets has been made. He also considered measures like capital adequacy ratio and gross NPAs and net NPAs of scheduled commercial banks as a percentage of total assets. The study brought out that there has been increase in the
number of scheduled commercial banks in the post-nationalization period but gradually their number has declined and this has been due to mergers and acquisitions taking place in the banking system.

It is expected that in future a few mega banks will emerge and segment-wise banking function will take place. The mega bank will have a national character and will make plethora of financial services available to their customers. The author concluded that share of interest income has been more than other income and total income across the bank groups has also increased. The share of deposits and credit in GDP over a period of time has witnessed a significant increase for the scheduled commercial banks. The Indian banking in future will become technology based banking.

Chandra and Srivastava (2008), in their paper titled, “Scenario 2009: Are Indian Banks Ready?” stated that the Indian banking industry has now entered a new phase wherein challenges both within the banking sector and from the economy have to be catered. The year 2009 will unfold many challenges for the banking sector and the real competitive era will begin with the entry of foreign banks. They revealed that Indian banking industry has already opened up through unveiling of the road map of the RBI on presence of foreign banks in India. It has two phases for implementation, viz. Phase-I (March 2005 to March 2009); and Phase-II (April 2009 and onwards).

So, the process of strengthening Indian banks as a part of its preparedness for the year 2009 is gaining momentum. There is much strength of foreign banks like high level of technology, skilled manpower, excellent customer service, new business operating models, risk management practices and global best practices. On the other hand, there are many advantages to the Indian banks like large network, high penetration in rural and semi-urban areas, large experienced manpower, built up infrastructure, adaptability to changing scenario of the reformist phase.

The ability of PSBs in facing the new era of competition could be debatable. But they suggested solution to the challenges which include: shaping of the banks (M&A), formulation of strategies to take advantages of their penetration in rural sector (financial inclusion), consolidation, development of human resources in the transformation era, managing foreign exchange risk (full capital convertibility), reduction of cost of service, corporate governance, risk on to innovative product, development of global level technology (data warehousing and data processing), credit rating framework and credit bureaus.
The authors further revealed that Indian banks can transform their challenges into opportunities for managing change by initiating several measures like adoption of global best practices, technology upgradation through core banking solution (CBS), skill development to the new generating banking techniques and augmentation of capital to meet the requirements of new credit growth. The Indian banks are all set to meet the challenges as they are already well structured in their expertise and experience gained in fulfilment of post-reform requirements. There should not be any doubt why Indian banks cannot meet the real challenges.

Gupta and Verma (2008) studied the changing paradigm in Indian banking and revealed that banking sector has been serving the crucial needs of society even after undergoing various changes. With the passage of time, the wonderful resilience and adaptability of the banking sector to the changing needs of society seem to have reached the threshold of the revolutionary era. ‘Anywhere and anytime banking’ ‘Tele-banking’, ‘Internet Banking’, ‘Web Banking,’ E-Banking’, ‘E-Commerce’, ‘E-business’ are all innovative offerings to their customers.

Now, the prime objective is to portray a road that leads to the banking sector. The authors said that there are six principal drivers leading to paradigm shift in Indian banking: Technology, Global competition, Customers (population), Policies (politics), Governance, and Economic conditions. Under each driver, there are many driving forces that lead to paradigm shift in Indian banking industry.

Finally, they concluded that Indian banking industry is recognized as one of the important pillars of the economy. The recently released draft approach paper of 11th Five-Year Plan observed that it would be efficiency of the banking sector in mobilization of savings and allocation of investment that would play crucial role in determining the future growth of the country.

Singla (2008), in his research paper titled “Financial Performance of Bank in India”, examined how financial management plays a crucial role in the growth of banking. During 2005-06, bank credits witnessed a strong expansion and a steady growth in deposits was also observed. Currently, banking in India is considered as fairly mature in terms of supply, product range and reach. In terms of quality of supply, assets and capital adequacy, Indian banks are considered to have strong and transparent position. As Indian economy is constantly growing especially the service sector, the demand for banking services is also expected to be stronger. Indian banking
stands at a threshold of a mega change in the next 3-5 years. Many new situations are predicted to emerge.

The study is conducted by examining the profitability of the selected sixteen banks (BANKEX-based) for the period of six years (2000-01 to 2006-07). For this purpose, the researcher computed various (Nine) ratios, which throw light on the various dimensions of the business. The study revealed that the profitability position was reasonable during the period of study when compared with previous years. Return on investment (ROI) proved that the overall profitability and the position of the selected banks were sustained at a moderate rate. With respect to debt-equity position, it was evident that the banks were maintaining 1:1 ratio, though at one point of time it was quite high. Interest coverage ratio was continuously increasing. Capital adequacy ratio was constant over a period of time. It was also observed that return on net worth had a negative correlation with debt-equity ratio. Interest income to working funds also had a negative association with interest coverage ratio and NPA to Net advances was negatively correlated with interest coverage ratio.

Finally, the researcher predicted that with the increasing level of globalization of Indian banking industry and the evolution of universal banks, competition in the banking industry would intensify further. Though the potential and ability exist, Indian banks have to be faster now to sustain the growth. On the basis of this study, it can be concluded that financial position of banks is reasonable. Debt-Equity ratio is maintaining an adequate level throughout and NPA also witnessed a decline. The ROI remains at a very low position, which is a worrying factor. The banking sector system, which is going through major reforms is one of the emerging sector and will grow at a sustained rate over a period of time.

Rajput (2008), in her paper, highlighted the impact of liberalization measures on the performance of Indian banking sector. The author listed various liberalization measures like reduction in pre-emption funds through reduction of CRR and SLR, introduction of prudential provisioning and capital adequacy norms, phasing out the directed credit programmes, deregulation of interest rates, imparting transparency, infusion of competition, introduction of universal banking and emphasis on corporate governance. She highlighted various performance indicators of different bank groups like growth of banking in terms of assets to GDP, share in total assets, interest income, non-interest income, expenditure and total income as a percentage of total assets,
capital adequacy ratios and NPAs as a percentage of total assets. She also stated the impact of liberalization measures on the institutional features of Indian banks like reserve requirements (SLR and CRR), interest rate structure, and priority sector lending. The author revealed that presently all the SCBs have to comply with 40 per cent target for priority sector lending whereas it is 32 per cent in the case of foreign banks. Finally, the author concluded that the Indian banking system is growing in a robust manner and complies with international standard of prudential regulations. Competitive gains are also reflected in industry in terms of higher efficiency and technological innovations. India is opening up for the entry of foreign banks. Last but not the least, the author listed future challenges for Indian banks like globalization - a challenge as well as opportunity, Basel-II implementation, application of advanced technology and financial inclusion.

Vijayaraghavan (2008), in his paper titled, “Indian Banking Then…..and…… Now” revealed that the Indian banking industry has undergone a sea change over the last 150 years. Banks in India have a chequered history. Nationalisation of banks led to emergence of the PSBs during late 1960s. The 1990s saw the banking industry embracing technology in a massive way due to entry of private and foreign banks. The author stated that technology has made a tremendous impact on the banking industry and brought about many changes. Virtual e-banking and ‘anywhere and anytime banking’ are the order of the day. In the wake of greater financial deregulation and global financial integration, Indian banks face several challenges. The major challenges are: financial inclusion, wealth management, implementation of Basel-II norms, deregulation of Indian banking sector in 2009, consolidation/ mergers and acquisitions, customer relationship management (CRM), cyber security and hectic competition.

To meet these challenges effectively, the banks have to be optimistic in their approach. The author has summarised the present day banking in Three ‘T’: Transformation, Technology and Transparency. The areas where present day banking has already entered like implementation of internationally followed prudential accounting norms, scope of disclosure and transparency in accordance with international practice, core principles of effective banking supervision of Basel Committee and US GAAP……..(Generally accepted accounting principles). The road map for adoption of Basel-II is ready for travelling. Moreover, Indian banks are
slowly but surely moving towards universalisation (Consolidation/Merger and Acquisition). Another area where Indian banking industry is in the process transformation is online banking and Net Banking. The results are very positive in this direction. Last but not the least, the new Mantra of Indian banking is customer service.

Finally, the author highlighted that we live in a world of change. Let us think of change not as problem presenting but as challenges offering. The future is full of challenges. Banks which have the ability to respond to these changes very fast and be proactive, can alone to stay in the race ahead. There is nothing truer than this.

2.2 STUDIES RELATED TO CAMEL FRAMEWORK

Rao and Datta (1998) made an attempt to derive rating based on CAMEL. In their study, based on these five groups (C-A-M-E-L), 21 parameters in all were developed. After deriving separate rating for each parameter, a combined rating was derived for all nationalised banks (19) for the year 1998. The study found that Corporation Bank has the best rating followed by Oriental Bank of Commerce, Bank of Baroda, Dena Bank, Punjab National Bank, etc. And the worst rating was found to be of Indian Bank preceded by UCO Bank, United Bank of India, Syndicate Bank and Vijaya Bank.

Prasuna (2004) analysed the performance of Indian banks by adopting the CAMEL Model. The performance of 65 banks was studied for the period 2003-04. The author concluded that the competition was tough and consumers benefited from it. Better services quality, innovative products, better bargains are all greeting the Indian customers. The coming fiscal will prove to be a transition phase of Indian banks, as they will have to align their strategic focus to increasing interest rates.

Veni (2004) studied the capital adequacy requirement of banks and the measures adopted by them to strengthen their capital ratios. The author highlighted that the rating agencies give prominence to Capital Adequacy Ratios of banks while rating the bank’s certificate of deposits, fixed deposits and bonds. They normally adopt CAMEL Model for rating banks. Thus, Capital Adequate is considered as the key element of bank rating.

Satish et al. (2005) adopted CAMEL model to assess the performance of Indian banks. The authors analyzed the performance of 55 banks for the year 2004-05,
using CAMEL Model. They concluded that the Indian banking system looks sound and Information Technology will help the banking system grow in strength while going into future. Banks’ initial public offers (IPOs) will be hitting the market to increase their capital and gearing up for the Basel-II norms.

Bodla and Verma (2006), in their paper, made an attempt to examine and compare the performance of two largest banks of India - SBI, a public sector bank; and ICICI a private sector bank - through CAMEL Model. The present supervision system in banking sector is a substantial improvement over the earlier system in terms of speed, coverage and focus and also the tool employed. Two supervisory rating models based on CAMEL (Capital Adequacy, Assets Quality, Management, Earning, Liquidity, Systems and Controls) and CACS (Capital Adequacy, Assets Quality, Compliance, Systems and Controls) factors for ranking the Indian and foreign banks have been operating. These models have been worked out on the recommendation of Padamanabhan Working Group (1995). These ratings would enable the RBI (Control Bank) to identify the banks whose conditions warrant special supervision attention.

The paper aims to describe the CAMEL Model of rating / ranking banking institutions so as to catch up the comparative performance of various banks. CAMEL is basically a ratio-based model for evaluating the performance of banks. Various ratios are computed under each parameter of CAMEL Model so as to compute the overall ranking of the banks.

While ranking of SBI and ICICI according to average of CAMEL Model ratios for the period 2000 to 2005, the study has brought many interactive results of both the banks. Both SBI and ICICI are performing excellently since beginning of the 21st century. However, in respect to some of parameter of performance, SBI has outperformed ICICI bank. These are: G. Securities to Total Investments, Spread to Total Assets, Interest Income to Total Income, Liquid Assets to Total Assets, G. Securities to Total Assets, etc. In contrast, ICICI has done better than SBI with regard to Advances to Assets, Total Advances to Deposits, Business per Employee, Profit per Employee, Non-interest Income to Total Income, Liquid Asset to total Deposits etc. The study concluded that on the whole, ICICI bank has performed better than SBI.

Satish and Bharathi (2006) revealed that the Indian banking system has come a long way since independence going through different phases of nationalization and liberalization and is now preparing itself for the very critical phase, i.e.,
Globalization. The liberalization phase brought out the best in the industry inducing competition among banks. During this period, banks were re-structured, shed the flab of over-employment, embraced technology, ventured into new business and re-branded themselves to cater over-demanding customers. In a nutshell, banks across the board have improved their profits while reducing their operational costs. Having reached a comfortable position, Indian banking is cautiously preparing itself to take the next big leap.

Given this background and the development of the banking sector, it is interesting to see how the banks have performed in financial year 2005-06. The researchers undertook a study of the banking sector based on their annual results for the year 2005-06 using CAMEL model. The study covered 59 banks consisted of 25 public sector banks (including the SBI and its associates), 14 private sector banks (old and new) and 20 foreign banks.

Under CAMEL model, the researchers analysed the performance of the above 59 banks by ranking these banks on the basis of capital adequacy, asset quality, management, earning quality and liquidity. Subsequently, they computed composite average ranking of the public, private banks and foreign banks. For the performance snapshot, they made use of additional indicators like total income, interest income, profit after tax, operating profit, deposits, advances and total assets.

They believed that the coming year will see more and more banks re-structuring, re-organizing as well as re-branding themselves to face tough competition. This could also increase the much awaited pace of consolidation in the industry. Though India has many banks, none of them has reached the global scale and are nowhere comparable to global banking giants. They suggested that ongoing developments in the Indian economy should scale up quality global banks both in size and in quality of service.

Sisodiya et al. (2007) adopted CAMEL model to assess the performance of Indian banks. The authors analysed 67 banks for the year 2006-07. On the basis of composite ranking of all the selected banks, they selected 10 CAMEL topper banks under public sector, private sector and foreign banks category.

They concluded that with the buoyancy in the overall economy led by robust corporate performance, the banking sector reported sterling performance. A host of
positives characterised the banking sector in the country during 2006-07. The banking sector’s performance is seen as the replica of economic activities of the nation as the healthy banking system acts as the bedrock of solid economic and industrial growth of a nation. As India celebrates its 60th independence anniversary and an amazing ascendance as one of the fastest growing economies in the world (second only to China), one sector which had played a vital role in propping up its economy is undoubtedly the banking sector. To assess the performance and assign the rank, the globally renowned model, CAMEL was used. The acronym ‘CAMEL’ refers to five components of a bank’s condition that is assessed: Capital Adequacy, Assets Quality, Management, Earnings and Liquidity.

Sisodiya et al. (2008), in their article titled, “Indian Banking Industry: Sustaining the Growth Momentum” revealed that the banking sector in India has once again come out with another fiscal of robust performances. This is commendable given the fact that the banking environment has suddenly become quite challenging after the US subprime crisis which resulted in an unprecedented global liquidity crunch. The fiscal also confirmed the end of the era of benign interest rates as the country’s apex bank embarked on a belt-tightening spree and with a series of tougher measures. This has nevertheless posed significant challenges to the banks to maintain the growth momentum of the last few years.

The authors ranked banks on the basis of the famous CAMEL (Capital Adequacy, Assets Quality, Management, Earning and Liquidity) rating. They analysed 68 banks for the year 2007-08. On the basis of ranking of each measure of CAMEL Model, they selected five banks under Capital Adequacy winner (PSU banks), Assets Quality winner (Private sector banks), Management Efficiency winner (PSU banks), Earning Quality winner (Private sector banks) and Liquidity winner (PSU banks).

Sisodiya and Pemmaraju (2009), in their article said that the Indian banking has shown remarkable resilience even amidst the worst ever financial catastrophe that hit the global economy about a year ago and caused the collapse of several financial giants. Now, with the effects of the carnage in the global banking sector subsiding and financial numbers being out, all eyes are on the performance of domestic banking sector. While it would not be correct to expect a repetition of the solid performances that banks delivered in the past 3-4 fiscal years, their performances for the fiscal just gone by are not disappointed either.
They have ranked the banks on the basis of CAMEL rating. Banks have been classified into three categories based on their ownership group, viz. public sector banks (PSBs), private sector banks and foreign banks. They analysed 66 banks for the year 2008-09. The ranking threw several surprises. The top ranked bank among public sector banks is the Bank of Baroda, which has undergone a significant facelift in the recent years. It is followed by Punjab National Bank and Bank of India which too have shown lot of aggression in recent times. The result in case of private sector banks are also unexpected, City Union Bank, ahead of many high profile names. Yes Bank, a late entrant retained its last year ranking of No. 2 among the private sector banks. Among the foreign banks, Bank of Ceylon replaced last year’s winner Shinhan Bank, jumping 15 ranks to emerge as the No. 1 bank this year, while the latter drops to the second rank.

2.3 STUDIES RELATED TO PERFORMANCE MEASUREMENT SYSTEMS–BALANCED SCORECARD

Kaplan and Norton (1992), in their paper, “The Balanced Scorecard: Measures that Drive Performance” revealed that what you measure is what you get. They realized that no single measure can provide a clear performance target and focused attention on critical areas of the business. Managers want a balanced presentation of both financial and non-financial measures. During their year long research project with 12 companies at the leading edge of the performance measurement, they devised a ‘Balanced Scorecard’ – a set of measures that give top managers a fast but comprehensive view of the business. The BSC includes financial measures that tell the results of actions already taken and it complements the financial measures with operational measures on customer satisfaction, internal processes and the organizations innovation and growth activities - non-financial measures that are the drivers of future financial performance.

The BSC allows managers to look at the business from four important perspectives. The BSC links performance measures. It provides answers to four basic questions:

- How do customers see us? (Customer perspective)
- What must we excel at? (Internal perspective)
Review of Literature

- Can we continue to improve and create value? (Innovation and learning perspective)
- How do we look to shareholders? (Financial perspective)

The BSC like a dial in an airplane cockpit, gives the managers complex information at a glance. The scorecard tracks the key elements of a company’s strategy - from continuous improvement and partnerships to teamwork and global scale.

Ashton (1998) examined National Westminster Bank (Nat West Bank) and its use of BSC to, among other things, improve quality, service and speed and help change the corporate culture from its traditional command and control structure to a culture based upon “Empowerment and coaching”. Nat west deemed the effort successful in aligning performance measurement to the bank’s long term strategic goals. Enhancing the bank’s ability to better manage the business and its resources, and in establishing a performance measurement system that was consistent and understood by employees at all levels. BSC helps to overcome the traditional bias in banking toward financial reporting by introducing a system that can take a long-term view and takes account of factors such as learning and innovation.

McCunn (1998) reported strong support among managers at a leading UK retail bank using the balanced scorecard to improve management of its branch network. Managers applauded the effectiveness of the scorecard in communicating the banks business model despite their admission that they have yet to find most appropriate precise mix of measures to include in this scorecard. The scorecard’s focus on staff attitude and capability, adherence to the processes and policies, customer satisfaction and results made the banks business model and priorities clear and easy to understand for the branch staff. However, despite this evidence suggesting that the BSC provides for an effective way for organizations to develop a multidimensional view of performance measurement, the balanced scorecard approach is not without its shortcomings.

Norreklit (2000), in his research article titled, “The Balance on the Balanced Scorecard: A Critical Analysis of Some of its Assumptions”, first examined the extent to which there is cause and effect relationship among the four areas of measurement suggested (the financial, customer, internal-business processes and learning & growth perspectives). The paper then examined whether the Balanced Scorecard can link
strategy to operational metrics which managers can understand and influence. Finally, the author suggested some improvements to the Balanced Scorecard.

Kaplan and Norton (2001) found similar results at AT & T Canada, Inc. (then known as United Communication, Inc.) where a new CEO was able to bring the company back from the brink of bankruptcy through a concerted focus on process improvements and a new strategic direction, underpinned by a BSC strategic management system. In the mid-90s, prior to introduction of the BSC, the company had suffered losses, was on the verge of defaulting on its debt obligations and ranked near the bottom in surveys of employee satisfaction. By 1998, the company was generating positive cash flow even as long-distance phone charges continued to drop rapidly, the customer base had more than doubled, revenue per employee had jumped more than 35% in three years, and the company ranked in the top 10% in a 1998 survey of employee satisfaction at 500 North American companies. The turnaround set the stage for AT & T Canada’s 1999 $7 billion merger with Metro Net Communications Corporation.

Malina and Selto (2001), in their empirical study, made an attempt to find the effectiveness of the Balanced Scorecard (BSC) as a management control and strategy communication device. They first reviewed management control and communication literatures that identify attributes of effective control and communication of strategy, and then offered a model of control and communication applicable to the BSC. The study then analyses the empirical interviews and archival data to model the use and assess the control and communication effectiveness of the BSC. The study includes data from multiple divisions of a large, international manufacturing company. The study accumulates evidence regarding the challenges of designing and implementing the BSC faced by even a large, well-funded company. These findings may be generalisable to other companies adopting or considering adopt the BSC. The results also indicate disagreement and tension between top and middle level management regarding the appropriateness of specific aspect of BSC as a communication, control and evaluation mechanism.

Dennis Campbell et al. and (2002), in their paper titled, “Using the Balanced Scorecard as a Control System for Monitoring and Revising Corporate Strategy” illustrated how a company can use its performance measurement system to (i) evaluate its operating strategy, (ii) identify potential problems with its strategy, and (iii) devise
plans to mitigate these problems. Kaplan and Norton (1992) defined strategy as a set of hypotheses linking non-financial measures to future value through a series of cause and effect relationships. Using the data from a convenience store chain, they demonstrated how performance measures and the link between the measures can be used to identify the potential problems with the firm’s operating strategy. Furthermore, they explored whether the performance measurement system can highlight the causes of these problems and identify possible solutions. The preliminary tests indicated no significant direct relationship between non-financial measures of strategy implementation and the firm’s financial performance. A detailed analysis revealed that financial performance is associated with the interaction of measures of strategy implementation and employee skills. Financial performance also directly related to employee skills and store location proxies. They found that firm strategy positively (negatively) impacts financial performance in stores with high (low) employee skill levels. Thus, a poor link between strategy and capabilities primarily caused the ineffectiveness of the strategy. These findings highlight the importance of conditioning the formulation and implementation of a firm’s strategy on its core competencies. More importantly, they demonstrate that performance measurement system can be used to monitor, analyze and revise a firm’s strategy.

Gumbus et al. (2002) showcases Philips Electronics Ltd, as an organization utilizing the BSC to improve its overall performance and become a $1 billion US Company. Philips Electronics used the BSC as a tool to align its strategies and to gain the commitment and participation of management and employees in achieving organizations objectives. Employees have helped to create measures that are meaningful to customers and to business creating a common base, the BSC also helped to create a worldwide communication system and supported the organizations cultural change to a learning organization.

Anand (2004), in his paper titled, “Achieving Breakthrough Performance Using the Balanced Scorecard”, revealed that the balanced scorecard will benefit the organization in more than one way. First and foremost, it will make vision and mission of the organization operational. It is a framework that converts an organisation’s vision, mission and strategy into comprehensive set of performance and action measures that provide the basis for strategic measurement and management system. The implementation of the balanced scorecard is an innovative way to create strategic
awareness in the organisations. As a strategic management / implementing tool, it is hard to believe that more than 90 percent of effectively formulated strategies do not successfully implemented?

A “Fortune” cover story on the success of strategy implementation concluded that about 70 per cent of the cases, the real problem is not bad strategy but bad execution. In the Asian region, the failure rate of the best strategies is between 70 to 90 per cent. The author said in their joint survey with CFO magazine on how many people understand their company’s strategy, provided alarming figures. While 60-70 per cent of the top management understood their strategy, when it came to middle management, the figure dropped to about 40 per cent and further to less than 10 per cent for line employees. These figures were for the US/EU companies, so imagine about companies operating in Asia.

The author stated the problem is not that the organization can’t formulate strategy rather the issue is that of implementing strategy, which is time consuming, riddled with vested interests, ambiguity, even lack of acceptance of strategic plan? The researcher has identified that there are typically four barriers to strategy implementation, viz. vision barrier, people barrier, operational barrier and management barrier. The BSC framework successfully addressed these problems.

The author illustrates how to build a balanced scorecard based on objectives, measures, target and initiatives under each perspective, i.e., financial, customer, internal process and learning and growth.

There are three steps in building a BSC:

- Build a strategy map.
- Create a BSC.
- Use or implement the BSC.

The author also laid down criteria for good balanced scorecard which include cause and effect relationship, linked to financial performance drivers and measures that create organization to change behavior or its process.

Gupta et al. (2004), in their article titled, “Balanced Scorecard – An Emerging International Performance Measure”, revealed that measuring organizational performance has been an important area and it has undergone continuous development
and modification. Since the inception of the concept, management experts as well as academicians have been trying to develop advanced methods of measuring it.

Traditional financial ratios have worked as important tools of measuring organisational performance in the bygone years. It has, however, been felt that the leading indicators of business performance cannot be found in financial data alone. Managers have been trying to change their organisation’s performance measurement system to track non-financial measures in the process. They laid down several criteria of performance measures. They highlighted different approaches to measuring organizational performance which are recognised as Traditional financial ratios, Market capitalisation, Economic value added (EVA), The European Foundation of Quality Management (EFQM) and recent attention has shifted to a new measure – the Balanced Scorecard. They explained BSC in details and steps involved in developing it. The authors explained various objectives behind the application of BSC. They documented the experience of the balanced scorecard implementation at the international and country level and mentioned various objections and challenges in the implementation of BSC. They categorised these challenges into three phases - namely, ability to implement phase, design phase and implementation phase. In the end they concluded that keeping in view the utilities of balanced scorecard, it is more of necessity than luxury for organisations. It is certain that the BSC will act as a measure against corporate failures in the future. It is therefore makes sense to believe that the balanced scorecard is fast emerging as an international performance measure. It is also certain that improvements and modifications will be made academicians and experts in the field to eliminate its drawbacks.

Kochhar and Anand (2004), while participating in the seminar on “Balanced Scorecard in Indian banks”, organised by IBA – cedar consulting, Ms Chanda Kochhar, Executive Director, ICICI Bank gave her key-note presentation. The presenter highlighted the various challenges faced by banking industry and role of the scorecard. The presenter said BSC will help the organisation in operationalised strategy, aligning employee’s goals to that of organisation, ensuring a focus across multiple perspectives and enabling flexibility. She also highlighted how BSC has benefitted the ICICI Bank like rapid growth, strategic consistency despite scale and diversity and systematic and objective performance evaluation.
Mr. Sanjeev Anand, Global Balanced Scorecard practice head, Cedar Consulting also through his presentation highlighted the various issues facing the banking industry like improving service quality by focusing on the client to improve profitability, profitable customers need to be identified and offered differentiated product and services, customer retention and utilization rates of products and services. Mr. Anand also enlisted various barriers to strategy implementation. The presenter also listed various key drivers for scorecard implementation. Existence of strategic planning process, clarity between scorecard and EVA / TQM / Six Sigma, Alignment of individual and enterprise performance, communicating scorecard and BSC should be first step in strategic implementation process are some of the key drivers for the successful implementation of BSC in a bank.

**Tapanya (2004),** in his research study titled, “Examining the factors which influence Performance Measurement and Management in the Thai Banking Industry: An Application of Balanced Scorecard framework”, examines various performance measurement systems based on financial and non-financial measures. He highlighted the role of performance measures (Financial and Non-financial) in an organisation. He said that in the present environment, there is a need for multiple measures of performance for measuring and managing the performance. In the context of multiple measure of performance, he explained the Balanced Scorecard framework in details including its application and limitations. He also highlighted various factors shaping the choice of performance measures and talked of the contingency theory. He listed the factors which affect the choice of performance measures include: General external factor, Competitive market factor and company/institution factor which can be further classified into external and internal. These situational factors have a significant relationship with choice of performance measures within an organisation.

For the purpose of study, the researchers used Miles and Snow Typology of Generic Strategies. As per the typology, he classified Thai Banks into four categories, i.e., Prospectors, Analysers, Defenders and Reactors. He concluded that institutional forces –that is Mimetic, Coercive and Normative forces can also play a significant role in the type of performance measures utilized irrespective of strategic orientation. He divided his research into qualitative research and quantitative research study. In the end, he concluded his study by comparison of survey results with the strategy typology.
Pandey (2005), in his article titled, “Balanced Scorecard: Myth and Reality” highlighted the reason for the use of the BSC by the organisation and requisites for successful implementation of BSC. In his findings the author summarised that the BSC is the system of combining financial and non-financial measures of performance in one single scorecard. The author argued that performance improvement process is a critical component of the strategic planning process. It is a convenient mechanism to communicate strategy and strategic objectives to all the levels of management. The proponents of the BSC assume that it aligns with strategy leading to better communication and motivation which causes better performance. The author stated this assumption could be the single most important reason for the popularity of BSC. In his paper, the author suggested the way to build a Balanced Scorecard in a bank’. The author also illustrated the case of Philips Electronics Balanced Scorecard and Tata Steel’s strategy for business and the BSC. The author revealed that the major initiatives by Tata for quality and cost saving included value engineering followed by Quality Circles (QC), ISO 9000, Benchmarking, ISO 14000, QS 9000 and Six Sigma.

Anand et al. (2005), in their research study, “Balanced Scorecard in Indian Companies” identified the extent of the usage of the BSC by corporate India and the findings of the study based on the sample size of 53 companies showed that BSC adoption rate is 45.28 per cent in corporate India as compared with the U.S. adoption rate of 43.90 per cent. The study also explored whether Indian firms use all the four perspectives. The finding of the study showed that the financial perspective has been found to be most important perspective followed by customers perspective, shareholders perspective, internal business perspective, and learning and growth perspective. The study showed that the difficulty in assigning ‘weightage’ to the different perspectives and in ‘establishing cause and effect relationship among these perspective’ have been found to be the most crucial issues in the implementation of BSC in the corporate India. Lastly, the study concluded that the most companies claimed that the implementation of BSC has led to cost reduction opportunities which, in turn has resulted in improvement in bottom line.

Bhat (2006) emphasized on the Balanced Scorecard as a tool of strategic management more on the financial aspect. The BSC was relevant to both manufacturing and service sector companies and similarly to both small and large organizations. The author also highlighted in her paper that U.S. Army with one
million people and printing press in Sydney with hardly ten employees, were both practitioner of the BSC. The author revealed that several companies in India were implementing BSC, whereas TATA MOTORS Commercial vehicle division and Tata Limited, the retailing arm of Tata Group have already entered the BSC hall of fame, which had only about seventy emphasizing companies all over the world.

Batra (2006) in her article mentioned that in the present era of liberalization, globalization and privatization, the business environments, financial markets, financial instruments and products have changed drastically. With the passage of time, new inventions, innovations, improvements and systems emerge that overcome the drawbacks of old systems. The structural changes and emerging trends associated with the new open regime, have rendered the traditional performance measures like ROI, residual income, EVA etc. which concentrate only on financial performance (ignoring the non-financial aspect) ineffective.

The drawbacks associated with such traditional measures have led to the emergence of new innovative tool of performance measurement and management - The Balanced Scorecard (BSC). The BSC framework was developed by Robert S. Kaplan and David Norton as an integrated performance measurement and management system (PMS) for translating (turning) strategy into action, taking into accounting both financial and non-financial performance measures.

The paper aims at gaining an insight into the concept of Balanced Scorecard (BSC), pinpointing its superiority over other traditional performance measures like ROI, Residual Income, Trends/ Ratios Analysis, EVA etc. The BSC methodology popularly involves measuring performance from four perspectives: Financial, Customer, Internal business processes and learning and growth (innovation) and understanding linkages between the different indicators. The BSC framework as a new performance management tool has been applied successfully only in very few companies and that too mostly outside India. The author shared in her article the experiences of few Indian companies like Philips Electronics and Tata Motor CVBU (commercial vehicle business unit). Finally the author concluded that a number of companies globally and especially in USA have implemented the BSC while only a few in India have implemented so far. Many big business houses, like TATA’s, Philips, Infosys, Godrej and GE etc. have implemented the BSC very successfully and have taken motivation from them to implement it. However still many Indian
companies need to be convinced with the idea of BSC implementation. They need to clearly understand and deploy the BSC as a part of their strategic planning processes for improved performance to survive in the era of globalization.

Chakraborty (2007), in his article titled, “Balanced Scorecard – ‘A Comprehensive Guide to Performance Evaluation” described the Balanced Scorecard as a management system. It is a mirror, which shows how an organization’s mission and vision can be decomposed into strategic components that are actionable, specific and measurable. About 54 per cent of the MNCs in the world were working on BSC in some form or other.

Liberalization and globalization have changed the entire philosophy of management of business. Businesses have become more uncertain and flow of goods and services has changed the rule of the game altogether. The whole corporate world is passing through a revolutionary phase with emerging new capabilities, improved ways and means and exploitation of creative and innovative ideas to achieve satisfaction, stability and success. Standards are improving and products and services are being delivered with new outlook. Each action of corporate tries to touch a higher level of performance, be it a question of value addition, cost reduction or other dimensions of achieving excellence.

To achieve ever changing and ever increasing targets, corporate are focusing their attention towards Total Quality Management (TQM), Activity Based Cost Management (ABCM), Target Costing, Process Re-engineering, Economies of scale and scope and other value creating activities. These efforts for excellence require the support of new and improved tools and techniques of measurement of performance so that proper and true assessment and evaluation is possible. The conventional indicators and measurement tools like ratio analysis, budgetary control and standard costing, economic value added (EVA), marked value added (MVA), earning per share (EPS), etc. put stress on one or other areas of performance but fail to focus on all the parameters with the equal emphasis. Some measures confine with postmortem analysis of past performance.

The author highlighted the need for comprehensive performance measure; with equal importance and coverage to all the limbs of performance along with proper mechanism for integration of all such areas to produce and more balanced and focused results that could make good the deficiencies of conventional measurement techniques.
The author advocated the use of Balanced Scorecard technique. The benefits of Balanced Scorecard (BSC) technique of measurement of performance can be fully reaped if it is introduced as an information system with feedback of financial and non-financial measures at all levels in the organization. The success of this system depends largely as to how far a correlation between non-financial measures and financial measures could be established within the system to serve the cause and effect relationship. The author concluded that the BSC is not a management control system but itself a management system.

Johnson (2007) highlighted various performance measurement systems in his paper. The author said that from the beginning, it is important to understand why measuring an organisation's performance is both necessary and vital. An organisation operating without a performance measurement system (PMS) like an aeroplane flying without a compass, a Formula one race car driver guiding his car blindfolded or a chief executive officer (CEO) operating without a strategic plan. The purpose of measuring performance is not only to know how a business is performing but also to enable it to perform better. The ultimate aim of implementing a performance measurement system (PMS) is to improve the performance of an organisation so that it may better serve its customers, employees, owners and other stakeholders.

A performance measurement system (PMS) enables an organization to plan, measure, and control its performance according to a pre-defined strategy. The author mentioned major performance measurement systems in use today in the order of global adoption and include Balanced Scorecard (BSC), Activity based costing and Management, Economic Value Added (EVA), Quality Management, Customer Value Analysis/Customer Relationship Management and Performance Prism. The researcher explained all the systems in detail and highlighted the benefits a firm/organisation can obtain from properly implementing the BSC. The author said successful firms use ABC in combination with the balanced scorecard to drive the achievement of a firm’s strategy and competitive advantage. Since EVA is a single metric, it is complementary to the balanced scorecard and can be included in a balanced scorecard framework as a financial perspective measure. About the Performance Prism, the author viewed, it as an example of a “Customized” balanced scorecard framework. Various studies have been conducted from time to time on the banking industry at the national and international level to study the various aspects of banking industry. All the studies
reviewed with regard to Indian banking sector have been conducted to study the impact of financial sector reforms on the performance of Indian banking industry. Mainly, all the studies which the researchers reviewed relates to the impact of liberalization, globalization and privatization on the performance of banks. Such studies highlighted the effect of banking sector reforms on the profitability, productivity and performance of Indian banking sector. Many of these studies relate to comparison of the performance of the commercial banks between the pre-liberalisation and post-reforms period. All these studies highlight that there is a positive impact of various reforms particularly banking sector reforms on the financial performance of the banks as shown by their results. Moreover, majority of the studies relating to the performance of the banks in the post-liberalisation period were based on financial measures like profitability measures (ROI, ROE, ROA, ROAWF etc.), productivity measures (business and profit per branch and per employee) and CAMEL framework (a ratio based model). Few studies highlighted various challenges ahead for the banking sector in the competitive and globalised era.

Certain studies have been conducted on the Balanced Scorecard as a contemporary performance measurement system based on financial and non-financial measures. Few studies have been conducted for measuring the performance of the organization based on financial and non-financial measures of performance particularly with reference to banking sector.

On the whole, a large number of studies have been conducted on the banking sector and few have been conducted on performance measurement systems. None of the study has been conducted on Performance Measurement Systems in the Indian banking industry focusing on the emphasis on financial and non-financial measures. So, there is a research gap on this front. In the present study, an attempt has been made to study the Performance Measurement Systems in the Indian banking sector based on both financial and non-financial measures for measuring and managing the performance of the banks particularly in the era of highly competitive and globalised economic environment.
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