PERFORMANCE EVALUATION OF SELECTED BANKING COMPANIES IN INDIA: A STUDY

SYNOPSIS

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SYNOPSIS

The banking sector plays a magnificent role in an economy for the smooth as well as efficient functioning of the different activities of the society. Finance is like blood to every form of activities. Finance is at the core of socio-economic growth trajectory of a society. The principal objective of Indian planning had been the attainment of growth with social justice and equity. Finance which acts as a catalytic agent, is a great necessity. To meet this growing need of finance, the demand for strengthening the banking system on sound footing gathered momentum during the early period of independence in India. Banking system occupies an important place in a nation’s economy and is indispensable in a modern society. The overwhelming role of finance in the economic development of a country is well recognized and forms the core of the money market in economy.

Generally, banks collect money from those who have spare money or who are saving it out of their income and lend this money out to those who require it. This mechanism of providing finance is highly valuable and a bare necessary in any community. But the role of commercial banks is not only confined to savings and its transmission to those who are in a position to invest it in a profitable enterprise; but also an instrument of credit creation. The role of bank has been transformed as prime mover of economic change, particularly in developing countries. It is necessarily more complex in view of dynamic contribution expected from time to time in the challenging task of optimum economic growth. A distinguishing feature of Indian banking industry comprises a wide range of functions. The financial sector plays a major role in mobilization and allocation of financial savings from the net savers to the borrowers. The banks are the most important segment of the financial sector. The structure of the banking industry affects its performance and efficiency which in turn affects the banks’ ability to collect savings and channelize them into productive investment. The effective role of intermediation performed by banks adds gain to the real sector of the economy.

Over decades the commercial banks have played a vital role in giving direction to economic development process by catering the financial requirement of trade and industry in the country. By encouraging thrift among the people, commercial banks have fastened the process of capital formation. Banks draw the community savings into the organized sector which can then be allotted among the different economic activities according to the priorities laid down by planning authorities in the country. Banks also exercise influence on the level of
economic activities through the creation of credit. Through their lending policies they divert the economic activity as per the needs of the country.

In view of this, the role of commercial banks in underdeveloped countries and planned economies like India becomes pertinent. Though levels of income in India are very low, yet there are pockets, where savings could accrue. But they do not find appropriate avenues for its employment, of which the commercial banks are a significant organ helping in the capital formation as a basic necessity for growth. As admitted by the lending bankers, ‘banking is the kingpin of the chariot of economic process. As such its role in expending economy of a country like ours can neither be underestimated nor overlooked. The success of our giant five year plan is dependent, among other things on the smooth and satisfactory performance of the role by banking industry of our country.’

Government regulation, in most of the countries shielded the banks from the forces of competition. India is no exception to this. With the nationalization of the most of the major commercial banks in 1969, restrictions on entry and expansion of private and foreign banks were gradually increased. The Reserve Bank of India also began enforcing uniform interest rates, spreads and service changes among the nationalized banks.

The lack of competition either among public banks or between the public and private banks gradually eroded the spirit of competition from the banking sector. In addition, the labour policies of the public sector where employees’ salaries and promotions are not linked to their job performance has also led to a steady decline in the efficiency, quality of customer services and work culture in the banks.

Innovation is the most essential tool for economic progress of an economy. Innovation is the function of the entrepreneur and it requires fund for implementation. The entrepreneur often cannot bring about these innovations for lack of available finance. In such a situation, banks may come forward and pay special attention in financing business of innovation by providing cheap and adequate credit.

Since 1992-93, the structure of the Indian banking system has undergone several changes in terms of scope, opportunities and operational buoyancy etc. The commercial banks have been facing much competition in the intermediation process from term lending institutions, non-banking intermediaries, chit funds and the capital market. To compete with them efficiently, the commercial banks have been permitted to undertake new activities like investment banking, securities trading, insurance business etc, on a selective basis at par with the competitors. Besides, new banking services like ATM and internet banking have been emerged due to the advancement of computers and information technology.
The success of economic growth of a country mainly depends on the effective performance of banks. Indian capital market is highly dependent on the growth and prosperity of banking sectors. Therefore, it is high time to evaluate the financial performance of Indian banking companies. In this backdrop, the present study seeks to examine the trends in the financial performances of 20 top banking companies, major players in the Indian money market, during the period 2001-02 to 2010-11. All the banking companies have been selected on the basis of their total income and balance sheet size.

The selected banking companies are:

**A. Public Sector Bank (PSBs)**
1. State Bank of India (SBI)
2. Punjab National Bank (PNB)
3. Bank of Baroda (BOB)
4. Bank of India (BOI)
5. Canara Bank (CB)
6. Union Bank of India (UBI)
7. Central Bank of India (CBI)
8. Syndicate Bank (SB)
10. UCO Bank (UCO)

**B. Private Sector Bank (Pvt.SBs)**
1. ICICI Bank Ltd. (ICICI)
2. HDFC Bank (HDFC)
3. Axis Bank Ltd. (AXIS)
4. Federal Bank Ltd. (Federal)
5. Jammu and Kashmir Bank (J&K)
6. Indusind Bank Ltd. (Indusind)
7. ING Vysya Bank (ING Vys)
8. Karnataka Bank (K.Bnk)
9. South Indian Bank (SIB)
10. Karur Vysya Bank (K.Vys)

This study is to give a focus on the evaluation of comparative financial performance of the banking institutions in the selected public and private sector banks in India during the period 2001-02 to 2010-11. The role of banks in promoting the economic and social welfare for the betterment and advancement of the life of the community is well recognized. This study has the following specific objectives:

1. To make a comparative analysis of the financial performance of selected public and private sector banks in India during the period covered in the study based on mobilization of deposits from the public which is an important function of every commercial bank. Performance of a bank to a greater extent depends on the quantum of deposits as it is the important source of funds. Performance of the selected banks in respect of deposit mobilization both in absolute and in relative terms will be examined in the study.

2. To evaluate the financial performance based on the deployment of funds in the form of granting loans and advances or investment which is another
important function of any banking business. So, the study will also examine
the performance of the selected banks in the field of loans and advances and
investment position during the period under study.

3. Credit management has become the major challenge for the banking system.
Mounting NPAs are adversely affecting the profitability, liquidity and
solvency position of a bank. Present study will examine the comparative
efficiency of the selected public sector and private sector banks relating to
management of NPAs and also relating to recovery of loans and advances
during the study period.

4. To make an estimate of the selected public and private sector banks in regard
to their contribution into the society based on the advances to the priority
sectors and wage bills payment to the employees.

5. Based on few selected relevant ratios another objective of the study is to
examine the performance of the banks in respect of productive efficiency,
efficiency in managing cost items and earnings and profitability efficiency,
though in the old ideology of Indian banking, profitability was not considered
here as a prime objective. Due to tough competition between private sector
and public sector banks along with the counterparts of foreign banks,
profitability has got utmost importance for the survival and growth of any
banking business. The study will examine this issue.

6. To find out the overall strengths and weaknesses of the selected private and
public sector banks in terms of their financial performance through the
technique of ratio analysis and other statistical tools.

7. Capital adequacy, asset quality, management, earning capacity and liquidity
are the important parameters of performance of any banking sector. CAMEL
evaluates five key components (Capital, Asset, Management, Earning and
Liquidity) to judge the overall efficiency of operations. The present study
seeks to evaluate the overall performance through CAMEL ratings of the
banks under study.

8. To suggest measures to improve the performance of public and private sector
banks.

An attempt has been made in this study to examine the comparative performance of
selected public and private sector banks in India during the period of 2001-02 to 2010-11.
The financial performance has been evaluated under different parameters- deposit
mobilization, loans and advances, investment, NPA, priority sector advances, cost control efficiency, productivity efficiency, earnings and profitability efficiency. For this purpose ten leading Indian banks from each of the public and private sector banks have been taken into consideration. The present chapter seeks to make a summary of the findings of the study and the conclusion from the findings. The chapter also points out the suggestions for further study.

Chapter 1 has described the significance or relevance of the study, objectives of the study, data source, research methodology, limitations and assumptions of the study, plan or structure of the research study. The main objective of the study is to evaluate the financial performance of the selected public sector banks and private sector banks during the study period from 2001-02 to 2010-11. This study is based on top ten selected PSBs and top ten selected Pvt.SBs in India and all these banking companies have been selected on the basis of their total income and balance sheet size.

Chapter 2 represents the survey of existing literatures on the comparative financial performances of the banking companies. Existing literatures survey is subdivided into foreign study and Indian study according to the years of study.

Chapter 3 highlights the history of banking in India and the brief profiles of the selected public and private sector banks. In this chapter brief history of banking in India prior to 1969, nationalization of Indian banks and their progress after nationalization, reasons for nationalization of banks, criticism against nationalization of banks, banking sector reforms in India and growth of new private sector banks, brief history and background of selected PSBs and Pvt.SBs in India have been discussed.

**Performance of the Selected Public Sector Banks (PSBs):**

Chapter 4 has examined the financial performance of the selected public sector banks and the performance of the selected PSBs has been judged on the basis of mobilization of deposits, granting loans and advances, investment of funds, efficiency of NPA management, social responsibility performance, cost control efficiency, productivity efficiency, earnings and profitability efficiency.

**Analysis of Deposits**

In case of mobilization of total deposits during the study period, performance of UCO Bank is found quite satisfactory followed by SB, OBC, UBI and BOI. On the other hand BOB, PNB, CB, CBI and SBI could not make significant progress in increasing relative growth rate in deposits. In absolute term the total deposit in the last year of the study period...
of SBI is quite significant followed by PNB, BOB, BOI, CB and UBI. A satisfactory performance is noticed in absolute term of the total deposits in case of CBI, SB, UCO Bank and OBC. BOB, CB and OBC have reached in the absolute quantum of total deposits during the study period by about 5 times. However, rest of the selected PSBs increased the absolute quantum of total deposits during the study by about less than 5 times. It is observed from the analysis that performance of all the ten selected PSBs was satisfactory in case of mobilizing of total deposits. It is also observed that estimated trend rate of growth of total deposits over the time period for all banks advocates in favor of bank’s efficiency in this regard. Overall growth in absolute quantum and trend growth rate of selected PSBs taken together showed notable performance in the year 2008-09 of the study period. It is also important to mention here that all the PSBs under study show a fluctuating trend of increase in deposit mobilisation. All the banks should take careful attention in this matter in order to achieve stable growth of total deposits in future.

**Analysis of Loans and Advances**

For analyzing the growth of loans and advances both in absolute and relative terms, an attempt has been taken to analyse individually all the banks selected for the present study. After individual analysis, the performance of selected public sector banks taken together has also been discussed. The observed results indicate that in absolute term, amount of total loans and advances for all banks have increased during the study period. Return on loans and advances ratios also strongly support it. Highest mean score (10.340) of this ratio is observed in the year 2002 and lowest mean score (7.871) of this ratio is observed in the year 2005. Ultimate mean value of mean score of this ratio is calculated at 8.981. SB occupies the highest rank in this regard followed by UCO Bank, CBI and so on. Non-recovery of loans and advances leads to NPA formation and highlights the inefficiency of banks in debt management.

**Analysis of Investments**

The findings of the study relating to investment of the selected banks indicate that performance of all banks is quite satisfactory in terms of increasing absolute quantum of total investments as well as in respect of its growth rate. Investment deposit ratios also strongly support it. Highest rank in this regard is jointly occupied by SBI and CBI. Highest mean score (47.260) of IDR is observed in the year 2004 and lowest mean score (28.849) is found in the last year of the study period, i.e. in the year 2011. Ultimate mean value of mean score of IDR is calculated at 36.781. It is generally believed that yielding capacity of investment in
different approved securities is less as compared to loans and advances. It is also true that deployment of funds in terms of loans and advances is beneficial for banks only if banks can recover loans and advances timely. Otherwise high levels of NPAs adversely affect profitability, liquidity and solvency of a bank. In this situation it is safe and justified for public sector banks to invest their funds in different approved securities.

Analysis of NPAs

For analyzing the asset quality of the selected banks both gross NPAs and net NPAs (both in absolute term and in relative term) have been considered. The findings indicate that none of the selected banks shows efficient performance in the matter of managing its loan assets. Among them performance of OBC is satisfactory followed by CB, SB, PNB and BOB in some years improved their performance in this matter. Highest average NPA index (5.834) is observed in the beginning year of the study period, i.e. in the year 2002 and lowest NPA index (1.110) is observed in the year 2009 and ultimate mean score of average NPA index is calculated as 2.722. As the NPAs arises from the non-recovery of interest and principal on loan assets, by analyzing NPAs it can be said whether the recovery performance of the banks are satisfactory or not. But in the present era of tough competition with the private and foreign banks it is ardently needed for the public sector banks to take appropriate strategies to minimize their NPAs and utilize assets more efficiently. Several steps can be taken to minimize the NPAs, like compromising with the borrowers, legal steps, rating of loan assets, constitution of Assets Reconstruction Committee etc. But it can be said that no single policy or step can reduce the NPA levels because all these banks operate their banking business in the society under some government regulations. Economic background, cultural and some other environmental factors are different in different regions of this country which require special attention for providing finance on social considerations. So to minimize the NPAs, Banks should frame strategies keeping in mind all these factors.

Analysis of Cost Minimizing Efficiency, Productivity Efficiency and Earnings and Profitability Efficiency

For measuring the cost minimizing efficiency four relevant ratios have been considered and analysis has been made on the basis of selected cost efficiency ratios over the study period. It is observed from the study that the performance of the selected PSBs in managing cost items was satisfactory for the last half of the study period as compared to the first half of the study. Lowest average cost efficiency index (2.207) is observed in the year 2010 and highest average cost efficiency index (4.873) is found in the year 2006. Ultimate
mean score of the average CEI is calculated at 3.197. Another important factor is that the existence of a very high degree of inconsistency associated with the management of cost which is evident by the CV values of the selected cost items clearly point out the need for adopting sound policies by the banks.

In order to examine the productivity efficiency of the selected banks, three important ratios have been considered and analyzed. After individual analysis, the performance of selected public sector banks taken together has also been discussed. It has been observed from the study that a steady growth of productivity is found through average productivity index during the study period. Lowest average productivity index (66.399) is observed in the beginning year, i.e. in the year 2002 and highest average productivity index (363.024) is found in the last year of the study, i.e. 2011. Ultimate mean score of the average PI is calculated at 175.699. The existence of high degree of consistency in the performance of productivity management of selected PSBs as a whole clearly evident that stable management policies have been adopted by the banks to increase the productivity in this competitive environment.

For measuring earnings and profitability efficiency four widely used measures of profitability ratios have been considered. It has been observed that the banks could not maintain a steady growth of profit over the years, though the quantum of profit was not negligible. In respect of earnings and profitability indices highest EPI (6.266) is observed in the year 2002 and lowest EPI (4.758) is found in the year 2010. As a whole in terms of profitability the selected PSBs perform better in the first half of the study period as compared to the last half of the study period. The ultimate mean of earnings and profitability index is calculated at 5.256.

All the ratios taken together under cost efficiency, productivity efficiency and profitability efficiency a comprehensive rank analysis has been made and accordingly final highest rank is occupied by UBI, followed by OBC, SBI, CB, BOB & BOI, SB, PNB, UCO Bank and CBI.

**Analysis of Social Responsibility Performance**

For measuring social responsibility of the banks two important ratios have been used, namely, priority sector advances as a percentage of total advances and ratio of wage bills as a percentage of total income. To measure the social responsibility of the selected PSBs as a whole, Social Responsibility Index (SRI) has been computed based on the combination of year-wise average value of priority sector advances ratio and wage bill to
total income ratio. This is the most important aspect to analyze the performance of the selected banking companies on the basis of their direct and indirect contribution to the society for socio-economic growth. Highest contribution to the society is observed in case of PNB and CBI (jointly) followed by SB, UCO Bank, UBI and so on. Highest average social responsibility index (27.150) is observed in the year 2005 and lowest average SRI (20.575) is found in the year 2009. As a whole in terms of social responsibility the selected PSBs perform better in the first half of the study period as compared to the second half of the study period. The ultimate mean of social responsibility index is calculated at 23.822.

Performance of the Selected Private Sector Banks (Pvt.SBs):

In Chapter 5 the performance of selected private sector banks under study has been judged using the same financial indicators as we have been used in case of public sector banks in Chapter 4. The findings of the study are summarized below:

Analysis of Deposits

It has been observed from the analysis that the quantum of total deposits in absolute term increased significantly over the study period for all the selected private sector banks except ICICI Bank under the study period. In terms of relative growth of total deposits, the performance of AXIS Bank was found to be satisfactory followed by HDFC Bank, ICICI Bank, K.Vys Bank, SIB, Federal Bank, Indusind Bank, ING Vys Bank, K.Bnk and J&K Bank. Overall growth in absolute quantum and trend rate of growth of selected Pvt.SBs taken together, notable performance is found in the year 2005-06 of the study period. Analysis of percentage increase of total deposits over the previous year reveals fluctuating trend for almost all the banks. This needs due care especially in this tough competitive environment. The observed growth rate of the total deposits for Indusind, ING Vys Bank, K.Bnk and J&K Bank was not up to the mark. If they can maintain the growth rates in future this will lead them to highly satisfactory position in the Indian banking sector in terms of resource base.

Analysis of Loans and Advances

The analysis of total loans and advances of the selected Pvt.SBs both in absolute and relative terms indicates that AXIS Bank, HDFC Bank, Federal Bank, K.Vys Bank and SIB performed well during the study period. But in case of rest of the selected private sector banks the performance was not up to the mark. Increase in absolute quantum of total loans and advances do not necessarily mean satisfactory level of performance because of the existence of NPAs. So the performance of the banks can be better understood from the analysis of loan assets quality of the banks.
Analysis of Investments

From the analysis of quantum of total investments and percentage increase/ (decrease) over the previous year it is observed that AXIS Bank performed better followed by HDFC Bank, IndusInd Bank, K.Vys Bank, ICICI Bank and Federal Bank. On the other hand ING Vys Bank, SIB, K.Bnk and J&K Bank could not improve their performance significantly in terms of growth of total investment. Overall exponential growth rate and investment-deposit ratio computed for each bank also strongly support it.

Analysis of NPAs

From the analysis of gross and net NPAs in both absolute and in relative terms and different selected NPA ratios some improvement is noticed for all the banks during the study period. Among the selected banks, satisfactory performance is noticed in the matter of managing loan assets in case of HDFC Bank, AXIS Bank and J&K Bank. ING Vys Bank, K.Vys Bank and ICICI Bank showed average performance in this matter and poor performance is found in cases of IndusInd Bank, Federal Bank, SIB and K.Bnk. Since all the private sector banks are operating in a tough competitive environment, poor recovery of loans and investment of loans would greatly affect the financial stability. To attain the international standard of NPAs, all the banks should take effective strategy to reduce the level of NPAs after taking into consideration the environmental and economic factors of different regions of this country.

Analysis of Cost Minimizing Efficiency, Productivity Efficiency and Earnings and Profitability Efficiency

For measuring the cost minimizing efficiency four relevant ratios have been considered and analysis has been made on the basis of selected cost efficiency ratios over the study period. It is observed from the study that the performance of the selected Pvt.SBs in managing cost items was satisfactory for the first half of the study period as compared to the last half of the study. Lowest average cost efficiency index (2.607) is observed in the year 2005 and highest average cost efficiency index (3.976) is found in the year 2009. Ultimate mean score of the average CEI is calculated at 3.187. It is observed from the study that average performance of all the selected Pvt.SBs was satisfactory but more specifically ICICI Bank, AXIS Bank and HDFC Bank performed well throughout the study period. On the other hand performance of the rest of the selected banks was not up to the mark in this regard. Another important factor is that the existence of a very high degree of inconsistency
associated with the management of cost which is evident by the CV values of the selected cost items clearly point out the need for adopting sound policies by the banks.

In case of productivity as measured by the selected productivity ratios, the findings of the study indicate that on an average all the banks selected for this purpose performed well over the study periods. After individual analysis, the performance of selected public sector banks taken together has also been discussed. It has been observed from the study that almost a steady growth of productivity is found through average productivity index during the study period. Lowest average productivity index (171.685) is observed in the beginning year, i.e. in the year 2002 and highest average productivity index (292.224) is found in the last year of the study, i.e. in the year 2011. Ultimate mean score of the average PI is calculated at 224.576. The performance of ICICI Bank, AXIS Bank and Federal Bank performed well throughout the study period in terms of high productivity efficiency as compared to rest of the selected Pvt.SBs. The existence of high degree of consistency in the performance of productivity management of selected Pvt.SBs as a whole clearly evident that stable management policies have been adopted by the banks to increase the productivity in this competitive environment and in most of the years the selected banks were efficient in the matter of utilising its resources.

For measuring earnings and profitability efficiency four widely used measures of profitability ratios have been considered. It has been observed that the banks could maintain relatively a steady growth of profit as compared to the selected PSBs as a whole over the years. In respect of earnings and profitability indices highest EPI (6.093) is observed in the year 2002 and lowest EPI (4.852) is found in the year 2005. As a whole in terms of profitability the selected Pvt.SBs perform better in the last half of the study period as compared to the first half of the study period. The ultimate mean of earnings and profitability index is calculated at 5.383. Among the selected Pvt.SBs, HDFC Bank, Federal Bank and K.Bnk performed better as compared to rest of the selected Pvt.SBs in terms of overall profitability. But no definite trend is observed for all, which is very necessary in the days of tough competitive environment.

All the ratios taken together under cost efficiency, productivity efficiency and profitability efficiency a comprehensive rank analysis has been made and accordingly final highest rank is occupied by AXIS Bank, Federal Bank and K.Vys Bank (jointly), followed by HDFC Bank, J&K Bank, ICICI Bank, K.Bnk, Indusind Bank, SIB and ING Vys Bank.
From the observation it can be concluded that in comparison to the overall earnings and profitability efficiency between selected PSBs as a whole and selected Pvt.SBs as a whole, the performance of PvtSBs are better.

Considering the overall productivity efficiency between selected PSBs as a whole and selected Pvt.SBs as a whole, the performance of PvtSBs are found better as compared to selected PSBs as a whole.

In terms of overall cost minimizing efficiency between selected PSBs as a whole and selected Pvt.SBs as a whole, the performance of PvtSBs are found marginally better as compared to selected PSBs as a whole.

**Analysis of Social Responsibility Performance**

For measuring social responsibility of the banks two important ratios have been used, namely, priority sector advances as a percentage of total advances and ratio of wage bills as a percentage of total income. To measure the social responsibility of the selected Pvt.SBs as a whole, Social Responsibility Index (SRI) has been computed based on the combination of year-wise average value of priority sector advances ratio and wage bill to total income ratio. This is the most important aspect to analyze the performance of the selected banking companies on the basis of their direct and indirect contribution to the society for socio-economic growth. Highest contribution to the society is observed in case of ING Vys Bank followed by Federal Bank, K.Bnk, SIB and K.Vys Bank (jointly), J&K Bank, AXIS Bank, HDFC Bank and Indusind Bank (jointly) and ICICI Bank. Highest average social responsibility index (21.996) is observed in the year 2011 and lowest average SRI (15.547) is found in the year 2002. As a whole in terms of social responsibility the selected Pvt.SBs perform better in the second half of the study period as compared to the first half of the study period. The ultimate mean of social responsibility index is calculated at 19.868.

In comparison to the overall contribution to the society between the selected PSBs as a whole and the selected Pvt.SBs as a whole, the poor performance is observed in case of PvtSBs as compared to selected PSBs as a whole. This is the main cause of higher NPA levels in public sector banks as compared to the private sector banks.

**Comparative Analysis using Statistical Tools:**

Chapter 6 examines the comparative performance of selected public sector and private sector banks using statistical tools. Firstly analysis has been made to find out the degree of association or relationship between the average values of earnings and profitability efficiency indices (i.e. EPI) and other selected average efficiency measures (i.e. CEI, PI,
NPAI and SRI) of the different selected public and private sector banks individually and as a whole during the study period from 2001-02 to 2010-11, for which correlation analysis has been applied taking into account their magnitudes by Pearson’s simple correlation coefficient, for ranking of their magnitudes by Spearman’s rank correlation coefficient and for highlighting the nature of their associated changes Kendall’s correlation coefficients. In order to examine whether the computed values of correlation coefficients between the earnings and profitability indices and other efficiency parameter indices are statistically significant or not, t-test has been used. Tables clearly highlight pictures of EPI, CEI, PI, NPAI and SRI of selected PSBs and Pvt.SBs under study over the period from 2001-02 to 2010-11 and also shows the bank wise average performance in terms of the different indices so computed. Highest performance in terms of profitability is observed in case of OBC and K.Vys Bank under PSBs and Pvt.SBs respectively as they occupy the highest average EPI during the study period. If we compare the overall performance in terms of EPI is concerned, then it can be said that selected PvtSBs as a whole are the better performers as they have the highest ultimate average EPI as compared to that of the selected PSBs as a whole. Best performance in terms of cost minimizing efficiency is concerned is observed in case of OBC and ICICI Bank under PSBs and Pvt.SBs respectively as they occupy the lowest average CEI of the study period. If we compare the overall performance in terms of CEI is concerned, then it can be said that selected PvtSBs as a whole are the better performers as they have the lowest ultimate average CEI as compared to that of the selected PSBs as a whole. Highest performance in terms of productivity efficiency is concerned table clearly shows that OBC under PSBs and Indusind Bank under Pvt.SBs occupy the best position as they have the highest average PI during the study period. If we compare the overall performance in terms of PI is concerned, then it can be said that selected PvtSBs as a whole are the better performers as they have the highest ultimate average PI as compared to that of the selected PSBs as a whole. Satisfactory performance is observed in terms of controlling NPAs of the bank from the table that lowest average NPA is found in case of CB under PSBs and in case of HDFC Bank under Pvt.SBs. If we compare the overall performance in terms of NPAI is concerned, then it can be said that selected PvtSBs as a whole are the better performers as they have the lowest ultimate average NPAI as compared to that of the selected PSBs as a whole. Highest social responsibility performance is found in case of PNB under PSBs and ING Vys Bank under Pvt.SBs as they have the highest average SRI during the study period. If we compare the overall performance in terms of SRI is concerned, then it can be said that selected PSBs
as a whole are the better performers as they have the highest ultimate average SRI as compared to that of the selected Pvt.SBs as a whole.

Statistical analysis shows the correlation coefficients between the efficiency measure of earnings and profitability (EPI) and the measures of other efficiency indicators (PI, CEI, NPAI and SRI) indicating their nature of relationship or their nature of association of the ten selected public sector banks (PSBs) and ten selected private sector banks (Pvt.SBs) in India during the study period 2001-02 to 2010-11.

The analysis clearly suggests that in the cases of all the selected PSBs in India, the efficiency of earnings and profitability (EPI) is not at all influenced by the efficiency of productive management (PI) during the study period, rather in few cases the productivity efficiency of management made highly negative influence on the profitability efficiency of the selected PSBs during the period under study. It is also observed that except ICICI Bank, all of the selected Pvt.SBs are least influenced by the management of productivity in order to increase the capacity of earnings and profitability during the period under study while in case of Indusind bank, the influence of productivity management (PI) on the overall profitability has not been so satisfactory despite having positive Pearson correlation coefficient (i.e. 0.007) during the study period.

The analysis also reveals that there exists a considerable impact of the cost control management (CEI) to influence the earnings and profitability (EPI) efficiency made by the selected nine PSBs (other than CB) during the study period while in case of CB, there exists a very low degree and negative association between EPI and CEI. The study also concluded that in the case of HDFC Bank, Federal Bank, J&K Bank and K.Bnk; there exists a highly significant and favorable influence of the cost control management (CEI) on the earnings and profitability while AXIS Bank and ING Vys Bank are least influenced by the management of cost control in order to increase the capacity of profitability. The table also reveals that the management of cost control in case of ICICI Bank, Indusind Bank, SIB and K.Vys Bank did not have influence on the earnings & profitability during the period under study.

The correlation coefficient values between the EPI and NPAI as shown in the analysis suggest that the most of the selected PSBs in India under study have achieved higher efficiency in profitability at the cost of increasing NPAs. It is thus revealed that the PSBs in India under study have significantly failed to achieve efficiency in NPA management. Among the selected PSBs, CBI, SB and UCO Bank are found least efficient in managing NPAs since they possess the highest positive values of correlation coefficients between EPI and NPAI during the study period. The study also suggests that most of the selected Pvt.SBs
are found capable of managing NPA and are competent in this respect despite having positive correlation. In comparison to the performance of NPA by PSBs, the Pvt.SBs are found more able to manage NPA while increasing their earning efficiency.

It can be said from the analysis that there exists a moderate impact of social responsibility efficiency (SRI) on the earnings and profitability (EPI) efficiency made by the selected nine PSBs (other than CBI) during the study period. The positive correlations existing between EPI and SRI suggest that the PSBs as a whole during the study period have been moderately influenced to perform their social obligation at par with the increase of their earning efficiency. This is really a good sign and a matter of great achievement in the social sphere. But the result also highlights that the selected Pvt.SBs have not showing their tendency to serve the society and have been busy to earn profits disregarding the social responsibility performance. The Pvt.SBs do not maintain social obligations as a part of their normal course of business operation as compared to that of the PSBs in India.

The analysis show the degree of association or relationship between the measure of earnings and profitability (EPI) and other efficiency parameters (PI, CEI, NPAI and SRI) of the selected PSBs as a whole and selected Pvt.SBs as a whole respectively during the study period 2001-02 to 2011-11 in India. The study concludes that the degree of association between the profitability measures and other efficiency measures (i.e. productivity, cost control, non-performing assets and social responsibility measures) of the selected PSBs in India as a whole has not been so satisfactory despite having positive correlation as compared to that of the selected Pvt.SBs in India as a whole during the study period.

In the analysis, an attempt has been made to judge the joint influence of the selected measures relating to productivity, cost control, NPA and social responsibility on earnings and profitability of the selected PSBs and Pvt.SBs as a whole, of the selected ten public sector banks and ten private sector banks in India under study, also to test whether the multiple correlation coefficient (R) is statistically significant or not, F test has been used. In addition to this, to judge the effectiveness or the reliability of this relationship the multiple coefficient of determination (denoted by $R^2$) has been used and it is defined as the ratio of explained variation to the total variation of the dependent variable (EPI). From the analysis it may be stated that the contribution made by the four indicators of efficiency measures for improving the earnings and profitability of the selected PSBs as a whole in India is 97.6% during the study period and in case of selected Pvt.SBs in India as a whole it was 86%. Thus it may be concluded that as a whole selected PSBs are the better performer as compared to that of the selected Pvt.SBs in India as a whole during the study period.
The analysis of the study highlights an overview of the analysis of multiple correlation between earnings and profitability and other efficiency measures of the ten selected PSBs and ten selected Pvt.SBs in India showing the multiple correlation coefficients of EPI on PI, CEI, NPAI & SRI for the study period from 2001-02 to 2010-11. The multiple coefficient of determination \( (R^2) \) of the ten selected PSBs and ten selected Pvt.SBs in India are also shown in the analysis.

Out of 10 positive coefficients of multiple correlation of the ten selected banking companies under PSBs, 7 coefficients (in case of SBI, BOB, BOI, UBI, CBI, SB and UCO Bank) are found to be statistically significant at 1% level and 2 coefficients (in case of PNB and CB) are found to be statistically significant at 5% level which implies that joint influence of the management of productivity, cost control, NPA and social responsibility on the overall earnings and profitability is highly commendable in the cases of these 7 PSBs (SBI, BOB, BOI, UBI, CBI, SB and UCO Bank) while in case of 2 PSBs (PNB and CB), there exists a moderate impact and in case of rest 1 of PSBs (OBC), there exists an unfavorable impact of the different efficiency measures on the overall earnings and profitability during the study period.

The joint influence of the management of productivity, cost control, NPA and social responsibility on the overall earnings and profitability is notable in the cases of 7 Pvt.SBs out of 10 Pvt.SBs during the study period while in cases of Indusind Bank, SIB and K.Vys Bank, the multiple correlation coefficients are found to be statistically insignificant. The study also reveals that in case of HDFC Bank, 97.2% of the variation in the measurement of earnings and profitability (EPI) is explained jointly by the variation in the management of productivity (PI), management of cost control (CEI), management of NPA (NPAI) and the management of social responsibility (SRI) during the study period while in case of Indusind Bank, the variation in the EPI due to variation of the management efficiency of other selected measures is 63.7%.

In order to assess the joint influence of four selected efficiency measures on overall earnings and profitability of the ten selected PSBs and ten selected Pvt.SBs as a whole in India under study, multiple regression analysis has been applied that shown in the analysis. While fitting the regression equation, EPI has been taken as the dependent variable and PI, CEI, NPAI and SRI have been considered as the independent variables. The multiple regression equation which has been fitted in this study is: 

\[
EPI = b_0 + b_1.PI + b_2.CEI + b_3.NPAI + b_4.SRI
\]

where \( b_0 \) is the constant, \( b_1, b_2, b_3 \) and \( b_4 \) are the respective partial regression coefficients. In order to examine whether the partial regression coefficients are
statistically significant or not, t test has been used. The study reveals (from the analysis) that in one case out of 2 partial regression coefficients of PI is found to be positive and also statically significant under selected Pvt.SBs as a whole in India during the study period. This table also shows that all of 2 positive coefficients of CEI are found to be statistically insignificant. On the other hand it is clear from the table that out of 2 positive partial regression coefficients of NPAI 1 coefficient is found to be positive and statistically significant at 1% level under PSBs and another coefficient of NPAI under Pvt.SBs is found to be positive and statistically insignificant. Out of 2 negative partial coefficients of SRI, 1 coefficient under PSBs is found to be statistically significant at 5% level and rest 1 coefficient under Pvt.SBs is found to be statistically insignificant.

From the analysis it is seen that the partial regression coefficients of PI are positive in 7 cases out of 20 cases and in the remaining 13 cases, the coefficients are negative of which in 2 cases (i.e. SB under PSBs and HDFC Bank under Pvt.SBs), the coefficients are found to be statistically significant. Of the 7 positive coefficients, in 1 case (i.e. ICICI Bank under Pvt.SBs), the highly positive effects of productivity management on overall profitability is found to be statistically significant.

It is also observed from the analysis that in 16 cases out of 20 cases, partial regression coefficients of CEI are found to be positive of which in 5 cases (i.e. SBI and BOB under PSBs and HDFC Bank, Federal Bank and K.Bnk under Pvt.SBs), the coefficients are found statistically significant. In the remaining 4 cases the coefficients are found to be negative and statistically insignificant.

The analysis also shows that out of 20 partial regression coefficients of NPAI, in 15 cases, the coefficients are observed positive of which in 5 cases (i.e. SBI, PNB, UBI, CBI and UCO Bank under PSBs), the coefficients are found statistically significant. While in the remaining 5 cases, the coefficients are found negative and statistically insignificant.

The study reveals from the analysis that out of 20 partial regression coefficients of SRI are found to be positive and insignificant in 6 cases. However in the remaining 14 cases, the coefficients are found to be negative of which in 6 cases (i.e. BOI, CB, UBI and SB under PSBs and HDFC Bank and AXIS Bank under Pvt.SBs), the coefficients are found statistically significant.

An attempt has been taken to find out the degree of association between SRI and NPAI of the selected PSBs and selected Pvt.SBs as a whole in the analysis under different methods. The results of the analysis reveal that there is a positive association between the social responsibility performance and increase in NPAs so far as the selected PSBs in India
are concerned. It corroborates the fact that the selected PSBs in India have to face much of NPAs in consideration of their social responsibility performance. From social viewpoint it is to be highly admired though the same is not favourable to bank management as it significantly affects the overall financial performance of the banks. It is also to be noted that so as the social responsibility performance and NPAs forming are concerned, the selected PSBs in India have made commendable performance in comparison to that of the Pvt.SBs in India under study if viewed through the lens of the society.

The measurement of correlation coefficients between SRI & NPAI of the ten selected PSBs and ten selected Pvt.SBs in India during the study period from 2001-02 to 2010-11 have been shown in the analysis. The study suggests that in most of the cases of selected PSBs in India, the social responsibility and NPA level of the banks are positively associated. That means higher the social responsibility higher is the NPA level and vice-versa. In some cases i.e. in cases of OBC and UCO Bank, contribution to the society as social responsibility highly influences the NPA level of the bank. On the other hand NPA level is moderately influenced by SRI in some cases, i.e. in cases of PNB, UBI, CBI and SB. Only in two cases i.e. in cases of SBI and CB negative association is observed between SRI and NPAI. This indicates that more contribution to the society boost up the NPA level or adversely affects the NPA level. This result also indicates that NPA management of the selected PSBs in India shows poor performance to reduce the NPA level and at the same time it shows their higher contribution to the society as a matter of their social responsibility performance.

The study suggests that in most of the cases of selected Pvt.SBs social responsibility index (SRI) are formed adversely or negatively associated with NPA level. The results of the analysis highlights that the selected Pvt.SBs in India did not have performance towards social responsibility performance and there is no relationship between the increase of NPAs and social responsibility performance. It thus suggests that the in the case of selected Pvt.SBs, NPAs have increased in the normal course of banking business during the study period. The selected Pvt.SBs in India under study are found reluctant to social responsibility performance and have given much preference to control the level of NPAs.

It can be concluded that as a whole the selected PSBs in India have shown their greater interests towards social responsibility performance and contributed significantly for the overall socio-economic development of the country by providing loans and advances to different priority sectors including liberal advances to rural and urban areas disregarding the emergence of NPAs. It is very crucial and highly significant for the country like India where
the vast majority of the population lives in rural and urban areas and they require financial help from banks for their sustenance. The PSBs in India have come formed to help the common people and business entities to go ahead with financial supports. Whereas it is observed that the selected Pvt.SBs banks have been busy with banking operations with strict approach not to increase NPAs and accordingly they have shown their much reluctance to social responsibility performance.

To study whether the two selected samples (selected PSBs and selected Pvt.SBs) have come from the identical populations (or that the two populations have the same mean) or not, analysis of rank sum tests i.e. Wilcoxon-Mann-Whitney or U-test has been applied. After analyzing from the tables, it can be concluded that the two samples i.e. selected PSBs and Pvt.SBs in India have come from the population with the same mean during the period under study 2001-02 to 2010-11 and it is significant at 10% level.

It can be concluded from the analysis that in most of the cases the selected private sector banking companies are better performers than the banks under public sector group because there is a close and significant association or relationship between profitability and different aspect of management efficiency under private sector banking group than public sector banking companies during the period under study.

**Comparative Analysis using CAMEL Model:**

Chapter 7 examines the comparative performance of selected PSBs and Pvt.SBs using CAMEL Model. In order to examine the overall efficiency of selected public sector and private sector banks using CAMEL technique, first appropriate ratios for parameters over the years have been computed and then ranked them on the basis of simple average over the study period for each parameter. Then the composite score of each bank for each parameter has been computed by taking an average of the individual ranks achieved by the banks for each ratio in a single parameter and final rank has been prepared.

**Capital Adequacy:** Capital adequacy analysis reflects the overall financial conditions of the banks and also the ability of the management to meet the need for additional capital. For analyzing capital adequacy four important ratios have been computed and analysed.

In overall capital adequacy, the CB (under PSBs) is given the 1st rank position, followed by SB (under PSBs), SIB and K.Vys (jointly) under Pvt.SBs, Federal, PNB, BOI and UCO Bank (jointly) under PSBs, SBI and UBI (jointly) under PSBs, Indusind Bank, BOB, CBI, OBC, J&K Bank and ING Vys Bank (jointly) under Pvt.SBs, ICICI Bank, K.Bnk, HDFC Bank and AXIS Bank.
From the analysis it is observed that out of four measures of capital adequacy, selected PSBs as a whole performed better in three measures as compared to that of the selected Pvt.SBs during the study period (selected PSBs performed better in three parameters of Capital Adequacy Analysis viz. Debt-Equity Ratio, Advances to Assets Ratio and Govt. Securities to Total Investment Ratio than the private sector banks under study).

**Asset Quality:** Asset quality is another important parameter to assess the financial performance of selected PSBs and Pvt.SBs under study. The quality of assets is very important to gauge the strength of any banking company. In this study the quality of assets has been examined with the help three important ratios.

It has been observed from the analysis that new private sector banks occupied first three positions in case of asset quality. HDFC Bank ranked 1st position followed by AXIS Bank (2nd) and J&K Bank (3rd). Among the PSBs, OBC occupied 4th position, followed by PNB (5th), both BOB and SB (jointly 6th position). BOI under PSBs occupied last position (20th rank) in asset quality.

It is evident from the study that none of the banks selected for this study showed consistently good performance in all the three measures of asset quality except new private sector banks, specifically HDFC Bank and AXIS Bank showed very remarkable performance in respect of quality of assets. For other selected banks, the performance was not up to the mark.

It is evident from the other measures of asset quality also that new private sector banks are more cautious about the quality of their assets than the other banks selected for this study. Indeed, the public sector banks operated their banking service in a regulated environment prior to banking sector reforms. At that time much more important was given by them to the economic well-being of weaker section, agricultural sectors etc. It is generally said that advances to priority sector was one of the important causes of overdue. In the deregulated environment the banks tried to reduce the overdue and made notable improvement. But still the quantum of NPAs (both in absolute and relative terms) is significantly higher than that of new private sector banks and as per international standard.

**Management Efficiency:** Management is most important ingredient that ensures the sound functioning of banks. With increased competition in the Indian banking sector, efficiency and effectiveness have become the rule as banks constantly strive to improve the productivity of their employees. In order to satisfy customers, banks maintained extended working hours, flexible time schedules, outsourcing marketing etc. Another significant development has been made in the operation of banks by using technology. Internet banking is a common
phenomenon in Indian banks. Banks are now moving from traditional banking to universal banking. In this changing scenario the task of management is very challenging. For measuring the efficiency and effectiveness of the selected banks important three ratios have been used for analysis.

The findings of the study indicate that private sector banks occupied top five positions under management efficiency measures. ICICI Bank occupied 1st position followed by Indusind (2nd position), HDFC Bank (3rd position), K.vys Bank (4th position) and AXIS Bank (5th position). Management performance of CBI under PSBs is found to be poor among the selected banking companies and occupied the last position.

From the analysis, it is evident that in all the three measures of management efficiency the selected Pvt.SBs specifically new private sector banks perform better as compared to that of the selected PSBs as a whole during the study period.

**Earnings Capacity:** Earning capacity is another important parameter for judging the operational performance of a bank. Total income of a bank is divided into two parts- income from core activities (i.e. income from lending operations) and income generated by non-core activities like investments, treasury operations, corporate advisory services etc. To measure the earning capacity of the selected PSBs and Pvt.SBs important four widely used ratios have been computed and analyzed.

In earning quality HDFC Bank ranked 1st position followed by both PNB and BOB (jointly 2nd position), both CBI and ICICI Bank (3rd position). On the other hand both ING Vys Bank and K.Bnk under Pvt.SBs jointly occupied last position. The result shows that no definite conclusion can be drawn regarding earning quality and a mixed result is observed. But it is clearly found that out of the four measures of earning capacity, selected PSBs performed better in three measures as compared to that of the selected Pvt.SBs. So, it can be said that most of the selected PSBs maintain better performance on overall measures of earning capacity as compared to that of the selected Pvt.SBs during the study period.

**Liquidity:** Liquidity refers to the existence of assets in cash or near cash form. It indicates the ability of the banks to discharge their liabilities as and when they mature. Alternatively, it is the ability of the banks to convert non-cash assets into cash as and when needed. Lending and borrowing of money are the main activities of a bank. Public deposit their money in banks for two reasons – safety and interest income. Thus, repayment of deposits along with timely payment of interest is of crucial importance for a bank. For this bank should always maintain sufficient liquidity. For examining liquidity position of the selected banks, three widely used ratios have been considered and analyzed.
It has been observed from the analysis that BOB occupied 1\textsuperscript{st} rank position followed by OBC and SIB (jointly 2\textsuperscript{nd} position) and UBI under PSBs has occupied last position in liquidity. From the analysis it is clearly observed that out of the three measures of liquidity, selected Pvt.SBs perform better in two measures of liquidity as compared to the selected PSBs. So, it can be said that as a whole selected Pvt.SBs maintain better performance on overall liquidity measures as compared to that of the selected PSBs as a whole during the study period.

**Overall Rank:** From overall rank analysis under CAMEL Model it is thus observed that out of first four rank positions three positions have been occupied by the private sector banks (HDFC Bank, AXIS Bank and ICICI Bank) under study. Another one top rank position is occupied by BOB under public sector group. The rest rank positions are jointly shared by the both groups of banks under study. So this can be highlighted that barring the three private sector banks and one public sector bank, all other banks of the two groups under study have performed more or less same during the study period so far CAMEL model analysis is concerned.

**Conclusion:**
In an attempt to evaluate comparative financial performance of twenty leading Indian commercial banks, ten each from public sector and private sector, the present study has employed different parameters of study. Performance of each bank has been analysed in details in terms of deposit mobilisation, loans and advances, investment position, non-performing assets, social responsibility efficiency, cost minimising efficiency, productivity efficiency, earnings and profitability efficiency. Lastly, comparative performance has been done using different relevant statistical tools and also by using CAMEL Rating Method.

Major operational changes have come in the banking sector after the financial sector reforms. Some new banks have entered into this sector with some innovative thinking to cope up with the competitive environment. These new private sector banks are more technology savvy and more concerned about the changing needs of customers. Public sector banks and old private sector banks were in the banking service under controlled economy for a long period of time. The success of any firm including banks depends on internal strength and how it adjusts with the external changes. Practically it is very difficult to keep pace with the changing environment without having the exposure to the latest technological developments in bank functioning.
In the present study we have examined the performance of the selected banks for the period 2001-02 to 2010-11. It has been observed from the study that new private sector banks performed well as compared to selected public sector banks and old private sector banks from the bankers’ point of view but from the social point of view public sector banks are found the better performers as compared to others.

The study also reveals that there is a phenomenal development in both the selected public and private sector banks during the study period. There are some factors responsible for the decrease in profits in banks especially private sector banks due to their sheer dependence on interest income, escalating operating cost, growing incidence of financial disintermediation, emphasis on social goals, rapid branch expansion particularly in the unbanked and under-banked areas.

In this highly competitive global environment it is imperative for the banks to show outstanding performance in various parameters. In conclusion it can be said that though there is a magnificent development in both Public and Private sector banks in India after the banking sector reforms yet the public sector banks are still lagging behind. It may be advised that the PSBs in India should be more efficient in their overall asset management policy, employee performance, cost control and should have more customer-friendly banking operations to keep pace with the challenging performance of the private sector banks in India as well as to compete with the global players.

The RBI and the Central Government of India have undertaken several reform measures to make the Indian banks competitively strong and economically viable. It has been also observed from the present study that the performance of all the selected banks improved in the later part of the study period. It can be said that Indian banks are gradually strengthening their financial performance despite working in a very tough competitive environment. For accelerating the pace of socio-economic growth process, Indian Banking Industry should come forward wholeheartedly to offer extensive financial help to different small sector and unorganised sectors of the economy specially in the remote and the hinterlands of India where still after the 65th years of independence, a vast majority of the people do not have the opportunity to manage a square meal for their livelihood for want of requisite finance and other help. As a part of their social responsibility performance, the banks in general should be more active, straight forward in their approach to provide finance in a hassle-free manner to reach the highly needy person or entity to survive and grow keeping in view the financial as well as social inclusion mission of the country. Social development in its truest sense will not be achieved unless the drive for socio-economic
development touches all and everyone in the society. For the coming days to be more prosperous and self-reliant, the role of the banking sector is of great significance.

However, for the sake of profound study of banking performance in India further research may be undertaken on a more specific way. In commensurate with the needs and aspirations of the society, all banks whether in public sector and private sector should come forward with a strategic role to serve the society so as to alleviate poverty and inequality of income distribution as far as possible by providing loans and advances to different sectors with special emphasis on priority and weaker sectors to help develop India as the leading nation of the world.