6.1 INTRODUCTION

In the present study we have made an attempt to measure and analyze the efficiency of public sector banks and private sector banks. We have compared the financial performance of 46 banks by collecting data covering a period of seven years from 2006-07 to 2012-13. Lack of empirical studies, particularly on the efficiency analysis after global financial crisis motivate for the present study. Hence, the study is different from earlier studies and expected to make significant contribution in the banking sector. In the present study, we have used both the conventional and advance approaches to analysis the efficiency of banks.

In conventional approach, CAMEL method is used to analyze the financial performance of public and private sector banks. Here, CAMEL stands for capital adequacy, assets quality, management efficiency, earning capacity and liquidity. To measure the capital adequacy, Capital Adequacy Ratio (CAR) is used while Net NPA to Net advance ratio is adopted to analyze asset quality of various bank. Similarly, business per employee and profit per Employee ratios are used to find management efficiency. While earning capacity is measured with the help of return on Assets and spread as percentage of Assets. Credit Deposit Ratio is used to evaluate liquidity.

In advance approach, Data Envelopment Analysis (DEA) is used to measure bank level efficiency. Technical efficiency under constant return to scale, Technical Efficiency under Variable Return to Scale and Scale Efficiency are measured with the help of Data Envelopment Analysis. Output Oriented Model is used to evaluate banks efficiency taking two inputs (Interest Expenses and Operating Expenses) and two outputs (Interest Income and Other Income.). We have also made an effort to find out potential improvement for the inefficient banks and draw some policy implication on the basis of finding.
This chapter gives a summary of major findings, conclusions and offers suggestions for the improvement of financial performance of banks.

6.2 Major finding on the basis of CAMEL Approach

- On the basis of CAR, on average, Kotak Mahindra Bank has top rank followed by Federal Bank and ICICI Bank, on the other hand, Catholic Syrian Bank and Dhanalakshmi Bank have lowest CAR among all banks under study. This shows that old private sector banks are taking high risk as compare to new private sector banks. It is further observed that growth rate in CAR of ICICI Bank, Axis Bank and Yes Bank has highest among all banks while, Ratanakar Bank, Allahabad Bank and Indian Overseas Bank have registered negative growth rate. Bank group wise analysis also revealed that growth rate of new private sector bank is far better than other bank groups. SBI and associates have registered negative growth rate when compared to new private sector bank, old private sector banks and Nationalized Banks.

- When the growth rate of Net NPA to Net advances is considered, Ing Vyasya Bank Ltd., Ratanakar Bank LTd. and Yes Bank are at the top while Andhara Bank, State Bank of Hyderabad and Indian Bank are in the bottom. The growth rate of all public sector banks except bank of Maharashtra and Dena Bank are positive. This shows that public sector banks are not managing their non performing assets more efficiently as compared to new private sector banks. The average value of this indicator is lowest in private sector banks compare to public sector and other groups. The quality of assets of new private sector banks is much stronger than other bank groups under present study. Stability in NPA varies from group to group and from year to year as indicated by coefficient of variation.
When viewed from the efficiency at employees level, it is found that average business per employee of Yes Bank is highest followed by Axis Bank and IDBI. On the other hand, United Bank of India, Central Bank of India and Bank of Maharashtra have got bottom three positions. On the basis of growth rate in Business per Employee, it is found that Dena Bank, Bank of Baroda and Yes Bank secured top ranks while Indian Overseas Bank, ICICI Bank and Indusind Bank have occupied the lower positions. It is also found that average business per employee of private sector banks is higher than public sector banks. But on the other hand, growth rate in business per employee of public sector banks is more than private sector banks.

On the basis of average profit per employee, IDBI Ltd bank has registered top position followed by Corporation Bank and Oriental Banks of Commerce among all public sector banks. Similarly, Yes Bank, Axis Bank and ICICI Bank have also highest average profit per employee. The study found that growth rate of all banks are positive. This concludes that profit per employee has increased during the entire study period. When the growth rate of different banks are considered, Development Credit Bank, Ratnaker Bank and Dhanlakshmi Bank secured top three ranks where as Karnataka Bank, ICICI and HDFC Bank are obtained least three positions. Average profits per employee of public sector banks are much higher than private sector banks. The public sector and private sector banks have witnessed almost similar growth rate in profit per employee while Nationalized Banks have shown highest growth rate among all bank groups.

On the basis of Return on Assets, it is found that City Union Bank, Yes Bank and Karur Yyasya Bank are performing well while Development Credit Bank, Catholic Syrian Bank and Central Bank of India are not performing efficiently as compared to other banks. It is also found that growth rate of most public and old private sector banks are negative. It is
also found that average return on assets of new private sector banks is highest among all bank groups while SBI and associates have lowest return on assets among all banks groups. Public sector and its sub groups have shown negative growth rate in return on assets. The study shows that performance of private sector banks is much better than public sector banks.

- On the basis of average spread as percentage to assets, it is revealed that Kotak Mahindra Bank, HDFC Bank and Nainital Bank are top three banks while IDBI Bank, UCO Bank and Corporation Bank are three least efficient banks. IDBI Bank, Indusind Bank and ICICI Bank have highest growth rate while Punjab and Sind Bank, Vijaya Bank and Ratanakar Bank have posted lowest growth rate. When the growth rates of different banks are taken into consideration, most of banks have negative growth rate except new private sector banks. The study also conclude that private sector bank have higher spread as a percentage of assets than public sector banks. New private sector banks have much higher growth rate in spread as a percentage to assets among all bank groups. The growth rate of private sector bank is positive while public sector bank group has negative growth rate.

- Inter bank analysis with respect to credit deposit ratio found that IDBI Bank, Kotak Mahindra Bank and ICICI Bank occupied top three ranks while Nainital Bank, Jammu and Kashmir Bank and Karnataka Bank are in the bottom. This show that average credit ratio of new private sector banks is much higher than old private sector banks. Development Credit Bank, Indusind Bank have registered higher growth rate where as IDBI Bank Ltd., Jammu & Kashmir Bank Ltd and Yes Bank secured lower growth rate. The growth rate of SBI and associates is negative while all other groups have positive growth rate with regard to CD Ratio. New
private sector Bank have registered highest growth rate followed by nationalized banks and private sector Banks.

6.3 Major findings on the basis of Data Envelopment Analysis (DEA)

- The study found that in the year 2006-07, out of 53 banks, 11 banks are Technical Efficient under constant return to scale, 17 banks are Technical Efficient under variable return to scale and 13 banks are Scale Efficient. The Sangli Bank Ltd. is the most inefficient bank which scores only 71% under TE (VRS). The study also observed that 10 banks are operating under IRS, 13 banks are operating under CRS and 30 banks are operating under DRS. HDFC Bank Ltd has highest peer count i.e. 23, so HDFC Bank Ltd can be declared as Industry Leader. The inefficient banks should follow the HDFC Ltd to become 100% efficient.

- The study concluded that in the year 2007-08, out of 49 banks, 7 banks are Technical Efficient under constant return to scale, 6 banks are Technical Efficient under variable return to scale and 6 banks are Scale Efficient. Indusind Bank Ltd is the most inefficient bank which has scores only 70.90% under TE (VRS). The study also observed that no bank is operating under IRS, 6 banks are operating under CRS and 43 banks are operating under DRS. This shows that global financial crisis has also affected the efficiency of banks in India too as most of banks are operating at DRS. State Bank of India (SBI) and HDFC bank Ltd have highest peer count i.e. 41, so these two banks can be declared industry leader for the year 2007-08. All the other inefficient banks should follow SBI and HDFC bank to become 100% efficient.

- When the study for the year 2008-09 has considered, out of 49 banks, 15 banks are Technical Efficient under VRS. In above 15 efficient banks, 6 are public sector banks and 9 are private sector banks. The scale efficiency of 11 banks is 100% i.e. these banks are operating under constant return to
scale in the year 2008-09, 26 and 12 banks are operating under DRS and IRS respectively. The Lakshmi Vilas Bank Ltd is the most inefficient bank which scores only 79.70 % under TE (VRS). The Federal Bank Ltd has highest peer count i.e. 32, so this bank can be declared as Industry leader.

➢ The study found out of 49 banks, only 13 are 100% Technical Efficient under CRS, 17 banks are Technical Efficiency under VRS, 7 banks are Scale Efficient in the year 2009-10. The Bank of Rajasthan Ltd and The Catholic Syrian Bank Ltd are the most inefficient banks, whose efficiency score is 71.40%. The study also observed that these banks should follow the Federal Bank Ltd, Nainital Bank Ltd and Kotak Mahindra Bank Ltd to become 100% efficient. On the basis of peer count State Bank of Hyderabad can be declared as industry leader for the year 2009-10 because it has highest peer count i.e. 16.

➢ The study observed that in the year 2010-11, among public sector banks, Indian Bank, Oriental Bank of Commerce (OBC) and IDBI Ltd banks are 100% technical efficient and SE. In old private sector banks the Federal Banks Ltd, Nainital Bank Ltd and in new private sector bank Axis bank, HDFC, ICICI, and Yes Bank are 100% technical efficient both in CRS and VRS and scale efficient. The Dhanalakshmi Bank Ltd is the most inefficient bank having efficiency score only 73.80% followed by The Catholic Syrian bank Ltd. On the basis of peer count Indian Bank can be declared as industry leader for the year 2010-11 as there peer count is highest among all peer unit i.e. 21.

➢ The study found that in the year 2011-12, that most of the banks are operating at DRS (26 Banks out of 46 Banks). Eleven banks are operating under IRS while only nine banks are operating under CRS i.e. their scale efficiency is 100%. The Dahanalakshmi Bank Ltd is also again least efficient bank in this year with efficiency score 70.50% again followed by The Catholic Syrian Bank Ltd. On the basis of peer count Jammu &
Kashmir Bank Ltd can be declared as industry leader for the year 2011-12. The peer count of this bank is 25, which is highest among all efficient DMUs. The inefficient banks should follow the above bank to increase their efficiency.

- The study found that in the year 2012-13, out of 46 banks only six are technical efficient under CRS, 12 banks are Technical Efficient under variable return to scale. The Dhanalakshmi Banks Ltd and The Catholic Syrian Bank Ltd are again least efficient banks in the year 2012-13. These two banks are continuously at the bottom from last three years. Only nine banks are operating under CRS while 19 and 18 are operating under IRS and DRS respectively. The Jammu & Kashmir Bank Ltd. has highest peer count i.e. 33. So, on the basis of highest peer count the above bank can be declared as Industry leader for the year 2012-13. The inefficient bank should follow Jammu & Kashmir Bank Ltd to increase their efficiency.

- On the basis of average TE (CRS), HDFC bank 99.73 can be declared at the top followed by Nainital Bank (99.31), ICICI Bank (99.07) and Axis Bank (98.87). Among the top five banks, four banks are from new private sector banks. These banks are HDFC, ICICI, Axis and Yes Bank. Among 26 public sector banks, Corporation bank is at the top with 96.94% average technical efficiency.

- State Bank of India, HDFC bank and ICICI Bank has been given 1st Rank their average technical efficiency (VRS) are 100%. The study finds that one public sector (SBI) and two private sector bank (HDFC, ICICI Bank) are most efficient banks during entire study period. These banks are using their input and outputs most efficiently. This study shows that most of the efficient banks are private sector banks except SBI and PNB. Among public sector banks SBI is the most efficient Bank followed by PNB (98.74%), Corporation Bank (97.36%). The most inefficient banks are The
Dhanalakshmi Bank (77.36%) and The Catholic Syrian Bank (79.27%). These Banks are not using their resources efficiently.

- The study also found that average Scale efficiency of Kotak Mahindra Bank is highest followed by IDBI, The Federal Bank, HDFC. Among all public sector bank IDBI, Corporation Bank and State Bank of Mysore are most scale efficient. SBI is the most inefficient bank under scale efficiency while TE (VRS) of this bank was highest.

- When the mean values of Technical Efficiency under constant return to scale for seven years are observed, new private sector banks registered 95.04% TE (CRS) while old private sector banks posted only 87.07%. Among public sector banks, Nationalized banks (91.11 %) have more efficient that SBI and Associates (89.83%). Average TE (CRS) of public sector banks are slightly much better than private sector banks due to lowest efficiency of old private sector banks.

- Average TE (VRS) of new private sector banks are 95.58 % which is highest as most of the new public sector banks have highest TE (VRS). In case of TE (VRS), old private sector banks have much lower efficiency in comparison of other bank groups specially new private sector banks. A deep insight reveals that average TE (VRS) of all banks groups are lowest in the year 2007-08. This show that global financial crisis has inversely effected the efficiency of Indian banks.

- As compared to various bank groups, new private sector banks, on an average, continue to register higher scale efficiency in the period under study. The average scale efficiency of groups marginally differs from each other. An insight into the study reveals that average scale efficiency of private sector banks (98.54 %) is higher than public sector banks (97.7 %)
It is found SBI is 100% TE (VRS) every year among SBI and its Associates while PNB, IDBI, Corporation Bank, Canara Bank are 100% TE (VRS) under most of the years. (Appendix II)

Among new private sector banks, Axis Bank, ICICI Bank, HDFC Bank and Yes Bank are 100% TE (VRS). (Appendix II)

6.4 SUGGESTIONS

There is no doubt that after global financial crisis Indian Banking system has improved rapidly and helps in economic development of the country. However, on the basis of present study following suggestions may be considered to improve the health of commercial bank performance in terms of efficiency, profitability and over-all performance.

- Deposits and credits are main components of every bank. Most of the portion of income and expenditure are depends upon these components. Therefore, banks should given more importance to enhance deposits. Financial inclusion can be helpful to increase deposits and credits. Credit can also helpful to generate interest income and profits. But, Liquidity, solvency and profitability should not be ignored at the time of giving loans.

- Bank should try to reduce cost at the minimum possible level, but not at the cost of quality of service. Optimum use of technology, proper utilization of human resources can help the bank to cut down the cost.

- Banks should allot Unique Customer Identification Code for customers which will help to identify a customer, track the facilities availed of, monitor financial transactions in various accounts, improve risk profiling as soon as possible.

- Bank should work to increase other income, so that dependency on interest income can be reduced. Most of the operating expenses should be paid out
of other income. Bank should develop new product and services such as selling of insurance products, government securities etc. to accelerate other income. It is the need of the hour that public sector bank should given more attention to increase other income.

➢ Another area, which requires urgent attention, is improving employee’s productivity in public sector banks as their business per employee and profit per employee are low in comparison to private sector banks. It would be become impossible to survive without improving the efficiency of staffs.

➢ Bank should also work on the behavior of the staff, especially in public sector banks. An indifferent and well mannered staff can helpful to improve the quality of services. Proper training of staff regarding behavior, incentive for good behavior, code of conduct are some important strategies by which staff behavior can improve.

➢ To improve the quality of service, number of counter for deposit and withdraw should be increased specially in big branches. It will help to save the customer’s valuable time.

➢ Public sector banks should be given full autonomy in HRM related issues as it is given in private and foreign banks. This will help to face the global competition and increase their efficiency to provide better services to their customer.

➢ To fulfill the expectations of customer, to improve the profitability and efficiency, banks should adopt latest and cost-effective technology, because technology has emerged as a strategic tool in the operation of banks. Computerization, implementations of single window concept, online banking, anytime/ anywhere banking, Electronic fund Transfers (EFTs), Automated Teller Machines (ATMs) tele-banking are some
technological innovations which aim at providing the better customer service.

- High level of NPAs is the most crucial challenge faced by the Indian banking system. To tackle this problem, different options are available which would include:
  
  i) Reducing the existing NPAs and curbing their further build up
  
  ii) Exploring avenues of recovering NPAs such as Lok Adalats for recovering smaller loans.
  
  iii) Strengthening the provisions of the Debt Recovery Act for recovery dues of banks and FDIs.
  
  iv) Increasing the number of Debt Recovering Tribunals.

- Due to innovation in information technology, internet facility, tele-banking, mobile banking has increased the efficiency of banks. But at the same time these technological facilities have some drawbacks like online frauds, password hacking etc. Therefore, the banks should improve the quality of these services and pay more attention for the safety of customer’s money. It’s bank’s duty to aware the customers about these facilities and provide workshops, online study material etc. from time to time to how these facilities can be used carefully and safely.