Chapter 5

Summary and Conclusion
Efficiency and profitability of the banking sector in India have assumed primal importance due to intense competition, greater customer demands and changing banking sector reforms. Profitability indicates earning capacity and managerial competency of the banks. It also portrays the work culture and operating efficiency of the banks. The efficiency of banks leads to improved profitability, more fund intermediation, low rates, better service for customers, more safety and soundness. The main goal of banks today is to maintain stability and make sure they are impervious to external shocks while at the same time being internally sound and sensible. Hence, it is important to assess the efficiency and profitability of various bank groups in India.

Based on the above mentioned issues, the present study on “EFFICIENCY, PROFITABILITY AND FINANCIAL SOUNDNESS OF SCHEDULED COMMERCIAL BANKS IN INDIA – APPLICATION OF CRAMEL AND BANKOMETER MODELS” is carried out with the following objectives:

- To assess the financial performance of Indian Scheduled Commercial Banks with respect to Capital adequacy (C), Resource deployed (R), Asset quality (A), Management efficiency (M), Earnings quality (E) and Liquidity (L).
- To examine the determinants of profitability of Scheduled Commercial Banks in India.
- To evaluate the financial soundness of the Scheduled Commercial Banks with the application of Bankometer model and
- To analyse the growth and progress of Scheduled Commercial Banks based on selected variables.

The following hypotheses were tested:

- There is no significant relationship between non-interest income and profitability for different groups of commercial banks.
- There is no significant relationship between credit and profitability for different groups of commercial banks.
There is no significant relationship between Non-performing assets and profitability for different groups of commercial banks.

There is no significant difference in the financial soundness of different groups of commercial banks.

A total of 67 scheduled commercial banks consist of 6 banks under SBI Group, 20 banks under Nationalised banks group, 13 banks under Old private sector banks group, 5 banks under New private sector banks group and 23 banks under Foreign banks group had been selected for the study. The researcher selected banks based on the criteria that the banks should have maintained its identity and reported its accounts without any gap for the ten consecutive financial years from 2002-03 to 2011-12.

The study is purely based on the secondary data. The data for the study has been collected from the RBI Bulletins, Reports on Trend and Progress of Banking in India, Schedule of Commercial Banks in India, Report on Currency and Finance, Statistical Tables relating to Banks in India which were published by the Statistical Department of RBI. The collected data had been analysed with the help of suitable statistical tools namely, ratio analysis, summary statistics, indexed ratios, correlation analysis, step-wise regression analysis, path analysis, factor analysis and compound growth rate and trend analysis.

5.1 FINDINGS OF THE STUDY

The summary of the major findings that emerged from the analysis are given in the following heads:

i) Financial Performance of Scheduled Commercial Banks in India

ii) Overall financial performance based on indexed ratios

iii) Determinants of efficiency and profitability of Scheduled Commercial Banks in India

iv) Financial soundness of Scheduled Commercial Banks in India – Application of Bankometer Model

v) Growth and Progress of Scheduled Commercial Banks in India.
i)  **FINANCIAL PERFORMANCE OF SCHEDULED COMMERCIAL BANKS IN INDIA**

CRAMEL model has been employed for assessing the efficiency and profitability of banks. The model consists of six sets of ratios under, viz., a) Capital Adequacy b) Resource Deployed c) Asset Quality d) Management Efficiency e) Earnings Quality and f) Liquidity ratios.

a) **Capital Adequacy Ratios**

- **Advances to Assets** – SBI Group shows a maximum of 56.57 per cent and Foreign banks group shows a minimum of 38.69 per cent.

- **Government Securities to Assets** – SBI Groups scored a highest mean value of 27.74 per cent and Foreign banks group scored a lowest mean value of 22.05 per cent.

- **Government Securities to Investment** – SBI Group revealed a maximum mean value of 90.03 per cent and New private sector banks group witnessed a minimum of 70.90 per cent.

- **Capital Adequacy Ratio** – Foreign banks group marked a highest mean value of 35.83 per cent and Nationalised banks group marked a lowest mean value of 12.70 per cent.

- **Debt-Equity Ratio** – Foreign banks group maintained a minimum mean value of 405.16 per cent whereas SBI Group witnessed a maximum of 1746.34 per cent.

In terms of capital adequacy ratios, SBI Group and Foreign banks group shows better position than the other banks group.

b) **Resource Deployed Ratios**

- **Investment to Assets** – New private sector banks group stood at the top position with 32.22 per cent and Foreign banks group stood at the bottom with 28.93 per cent.
• **Other assets to Assets** – Foreign banks group revealed the maximum mean value 9.73 per cent and Old private sector banks group has the minimum of 2.81 per cent.

• **Credit -Deposit ratio** – Foreign banks group marked the highest mean value of 117.65 per cent and Old private sector banks group has the lowest mean value of 63.83 per cent.

• **Fixed Assets to Assets** – New private sector banks group showed a maximum average position of 1.58 per cent and SBI Group showed a minimum of 0.50 per cent.

• **Investment- Deposit ratio** – Foreign banks group witnessed a highest mean value of 77.80 per cent and Old private sector banks group recorded a lowest value of 35.74 per cent.

The above ratios clearly revealed that in terms of resource deployed the New private sector banks group and Foreign banks groups shows better position than the other banks group.

**c) Asset Quality Ratios**

• **Return on Advances** – Old private sector banks group secured a maximum mean value of 10.64 per cent and Foreign banks group secured a minimum value of 8.83 per cent.

• **Return on Investment** – Nationalised Banks marked a maximum mean value of 7.84 per cent and New private sector banks group witnessed a minimum value of 6.98 per cent.

• **Non-Performing loans to Loans** – SBI Group maintained a minimum mean value of 1.39 per cent and Foreign banks group showed a highest value of 5.43 per cent.

• **Priority Sector Advances to Advances** – SBI Group scored a highest mean value of 35.84 per cent and New private sector banks group scored a lowest mean value of 29.70 per cent.
• **Interest Income to Assets** – Old private sector banks group marked a maximum value of 8.54 per cent and Foreign banks group marked a minimum value of 6.34 per cent.

The above ratios clearly indicate that the SBI Group and Old private sector banks group shows better position in terms of Assets Quality.

d) **Management Efficiency Ratios**

• **Profit per employee** – Foreign banks group witnessed a maximum value of 25.68 lakhs whereas Old private sector banks group witnessed a minimum of 3.53 lakhs.

• **Business per employee** – Foreign banks group showed a maximum value of 1318.13 lakhs while Old private sector banks group showed a minimum value of 489.76 lakhs.

• **Intermediation cost to Total assets** – Nationalised banks group maintained a minimum mean value of 1.92 per cent and Foreign banks group has a maximum mean value of 2.82 per cent.

• **Business per branch** – Foreign banks group marked a maximum value of 75062.70 lakhs whereas Old private sector banks group marked a minimum value of 5588.20 lakhs.

• **Return on net worth** – SBI Group showed a maximum mean value of 19 per cent and Foreign banks group showed a minimum mean value of 8.18 per cent.

Foreign banks group and Nationalised banks group obtained a better position in terms of Asset Quality.

e) **Earnings Quality Ratios**

• **Net Interest Income to Total assets** – Foreign banks groups showed a maximum mean value of 3.4 per cent and New Private Sector Banks Groups showed a minimum mean value of 2.68 per cent.

• **Ratio of Burden to total assets** – Foreign banks group maintained a minimum mean value of -0.35 per cent and Old private sector banks Group had a maximum mean value of 0.82 per cent.
- **Operating profit to Total Assets** – Foreign banks groups marked a maximum value of 3.69 per cent and Nationalised banks group with a minimum mean value of 2.07 per cent.

- **Return on assets** – Foreign banks group secured a maximum value of 1.86 per cent and New private sector banks group had a minimum mean value of 0.92 per cent.

- **Interest income to Total income** – Old private sector banks group had a maximum mean value of 86.95 per cent and Foreign banks group had a minimum value of 30.02 per cent.

- **Non - Interest income to Total assets** – Foreign banks group witnessed a maximum value of 3.16 per cent and Nationalised banks group marked a minimum mean value of 1.21 per cent.

  Old private sector banks group and Foreign banks group show better results in terms of Earnings Quality ratios.

  f) **Liquidity Ratios**

  - **Deposits to Total assets** – Old private sector banks group had a maximum mean value of 86.03 per cent and Foreign banks group had a minimum mean value of 47.67 per cent.

  - **Liquid assets to Total assets** – Foreign banks group showed a maximum mean value of 21.65 per cent and SBI Group showed a minimum mean value of 8.14 per cent.

  - **Liquid assets to Demand deposits** – Foreign banks group marked a maximum mean value of 458.45 per cent and New private sector banks group marked a minimum mean value of 94.16 per cent.

  - **Liquid assets to Total deposits** – Foreign banks group obtained a top position with 52.02 per cent whereas SBI Group obtained 10.02 per cent only.

  - **Provisions and Contingencies to Total assets** – Foreign banks group had a maximum mean value of 1.84 per cent and Old private sector banks group had a minimum mean value of 1.07 per cent.
• **Cash-Deposit ratio** – Foreign banks group ranks high with a maximum mean value of 9.43 per cent and Old private sector banks group ranks low with a mean value of 6.94 per cent.

**Foreign banks group, Old private sector banks group and New private sector banks group are showing better results in terms of liquidity.**

**ii) OVERALL FINANCIAL PERFORMANCE BASED ON INDEXED RATIOS**

• With respect to the efficiency and profitability index of five bank groups, the average of the index of 32 parameters reveals that among **SBI Group**, 21.88 per cent achieved excellent performance, 15.63 per cent witnessed good performance, 53.13 per cent showed fair performance and 9.38 per cent showed poor performance level.

• In **Nationalised banks group**, 12.5 per cent of banks achieved excellent performance, 25 per cent witnessed good performance, 53.13 per cent demonstrated fair performance and 9.38 per cent showed poor performance.

• Among **Old private sector banks group** category, 15.63 per cent achieved excellent performance, 21.88 per cent showed good performance, 53.13 per cent witnessed fair performance and 9.38 per cent falls under poor performance level.

• In the **New private sector banks group** category, 9.38 per cent showed excellent performance, 28.13 per cent had good performance, 46.88 per cent demonstrated fair performance and 15.63 per cent falls under poor performance level.

• Contrary to the above four bank groups, among the **Foreign banks group**, 56.25 per cent witnessed excellent performance, 9.38 per cent achieved good performance, 6.25 per cent showed fair performance and 28.13 per cent under poor performance level.

**iii) DETERMINANTS OF EFFICIENCY AND PROFITABILITY OF SCHEDULED COMMERCIAL BANKS IN INDIA**

Apart from analyzing the financial performance of banks, the study also attempts to analyse the various selected variables, which are expected to have influence over the
profitability of banks. For this purpose, the following techniques of multivariate approach have been adopted.

a) Correlation Analysis

b) Step-wise Multiple Regression Analysis

c) Path Analysis

d) Factor Analysis

a) Correlation Analysis

To measure the factors influencing the bank profitability, the correlation coefficient matrices were used for the selected variables with the dependent variable (Return on assets).

- SBI Group - $C_2$ (Government Securities to Assets), $R_1$ (Investment to Total Assets), $R_2$ (Other Assets to Total Assets), $R_5$ (Investment Deposit Ratio), $A_2$ (Return on Investment), $M_5$ (Return on Net worth), $E_3$ (Operating Profit to Total Assets), $E_6$ (Non-Interest Income to Total Assets) and $L_5$ (Provisions and Contingencies to Total Assets) have significant positive correlation with profitability of the bank.

- Nationalised banks group - $M_5$ (Return on Net worth), $E_3$ (Operating Profit to Total Assets) and $E_6$ (Non-Interest Income to Total Assets) have significant positive correlation with bank profitability.

- Old private sector banks group - $A_1$ (Return on Advances), $A_5$ (Interest Income to Total Assets), $M_5$ (Return on Net worth), $E_3$ (Operating Profit to Total Assets) and $E_6$ (Non-Interest Income to Total Assets) have significant positive correlation with bank profitability.

- New private sector banks group - $M_1$ (Profit per Employee), $M_5$ (Return on Net worth) and $E_3$ (Operating Profit to Total Assets) have significant positive correlation with profitability of the bank.

- Foreign banks group - $C_3$ (Government Securities to Investment), $A_1$ (Return on Advances), $M_1$ (Profit per Employee), $M_2$ (Business per Employee), $M_3$ (Intermediation Cost Ratio), $M_4$ (Business per Branch), $E_3$ (Operating...
Profit to Total Assets and $E_6$ (Non-Interest Income to Total Assets) have significant positive correlation with bank profitability.

b) **Step-wise Multiple Regression**

The results of stepwise multiple regression analysis of selected groups for the period 2002-03 to 2011-12 and the order of the variables significantly contributing to profitability are presented as follows:

- **SBI Group** - Return on Net worth ($M_5$) 84.50 per cent, Debt -Equity ratio ($C_6$) 8.40 per cent and Liquid Assets to Demand Deposits ($L_3$) 4.40 per cent.
- **Nationalised banks group** - Return on Net worth ($M_5$) 86 per cent.
- **Old private sector banks group** - Return on Net worth ($M_5$) 85.30 per cent, Other Assets to Total Assets ($R_2$) 13.10 per cent, Return on Advances ($A_1$) 0.90 per cent, Priority Sector Advances to Advances ($A_4$) 0.40 per cent and Liquid Assets to Total Deposits ($L_4$) 0.30 per cent.
- **New private sector banks group** - Profit per Employee ($M_1$) 82.60 per cent, Fixed Assets to Total Assets ($R_4$) 12 per cent and Liquid Assets to Demand Deposits ($L_3$) 4.20 per cent.
- **Foreign banks group** - Operating Profit to Total Assets ($E_3$) 77.10 per cent, Provisions and Contingencies to Total Assets ($L_3$) 13.60 per cent and Capital Adequacy ($C_4$) 4.90 per cent.

c) **Path Analysis**

The path analysis of the selected bank groups regarding the direct and indirect effects of independent variables along with the ratio of return on assets is as follows:

- **SBI Group** shows that the following independent variables have a significant impact on return on assets; $A_2$ (Return on Investment), $M_5$ (Return on Net worth) and $E_6$ (Non-interest income to Total assets).
- **In Nationalised banks group**, $M_5$ (Return on Net worth) and $E_6$ (Interest income to Total income) have a significant impact on return on assets.
• In **Old Private Sector Banks**, the independent variables $A_1$ (Return on Advances) and $M_5$ (Return on Net worth) are important contributing variables to return on assets.

• In **New private sector banks group** the following independent variables have significant impact with the ratio of return on assets; $M_1$ (Profit per Employee), $M_5$ (Return on Net worth) and $E_3$ (Operating profits to Total assets).

• In **Foreign banks group** the independent variables, $A_2$ (Return on Investment), $M_5$ (Return on Net worth) and $E_6$ (Non-Interest income to Total assets) are important contributing variables to return on assets.

**d) Factor Analysis**

Using the CRAMEL ratios, factor analysis is performed to condense, simplify the ratios and to extract a few factors that contribute towards profitability. The results are presented below:

• The factor loading of **SBI Group** over the period of study shows that five derived factors could collectively explain as much as 94.59 per cent variation in the variables associated with return on assets.

• From the Factor analysis of **Nationalised banks group**, it is known that five distinct factors emerge, which could collectively explain 94.39 per cent variation in the variables associated with return on assets.

• **Old private sector banks group** points to four resultant factors which explain 93.35 per cent variations in the variables associated with return on assets.

• The factor loading of **New private sector banks group** reveals that six derived factors could collectively explain as much as 98.21 per cent variations in the variables associated with return on assets.

• Regarding the factor loading of **Foreign banks group**, it can be observed that six derived factors could collectively explain as much as 94.62 per cent variations in the variables associated with return on assets.

**iv) FINANCIAL SOUNDNESS OF SCHEDULED COMMERCIAL BANKS IN INDIA – APPLICATION OF BANKOMETER MODEL**

Bankometer model is applied to assess the financial soundness of selected bank groups.
• **Capital Adequacy ratio** - Foreign banks group witnessed a sound capital base with a highest mean of 35.83 per cent.

• **Capital to Assets** - Foreign banks group has the Capital to Assets ratio above the prescribed minimum limit of 4 per cent.

• **Equity to Assets** - All the five bank groups have the Equity to Assets ratio more than the prescribed limit of 2 per cent.

• **Non-performing Loans to Loans** – SBI group (1.39 per cent) controlled their NPAs to a greater extent than other bank groups.

• **Cost to Income Ratio** – None of the banks maintained the cost to income ratio below the prescribed limit of 40 per cent.

• **Loans to Assets** - The average of this ratio is higher in SBI Group (56.57 per cent) and it shows the better profitability position than other bank groups.

• **Solvency score** - All the five bank groups have sound financial position, having solvency score more than 70 per cent.

v) **GROWTH AND PROGRESS OF SCHEDULED COMMERCIAL BANKS**

The growth pattern of the bank has been analysed by adopting the following techniques:

a) **Compound Annual Growth Rate (CAGR) and**

b) **Linear Trend Method**

a) **Compound Annual Growth Rate Analysis**

The summarized results based on Compound Growth Rate Analysis are as follows:

• **Advances**: The highest CAGR was witnessed by New private sector banks group (26.40 per cent) and the lowest was marked by Foreign banks group (18.65 per cent).

• **Deposits**: The maximum CAGR was achieved by New private sector banks group (25.51 per cent) while the minimum was witnessed by SBI Group (15.89%).
- **Borrowings**: The minimum CAGR in borrowings was registered by Foreign banks group (20.10 per cent) while Nationalised banks group (43.32 per cent) had the maximum CAGR.

- **Interest Income**: The highest CAGR was recorded by New private sector banks group (22.84 per cent) and least was registered by SBI Group (15.58 per cent).

- **Total Income**: The highest CAGR was witnessed by New private sector banks group (21.79 per cent) and the lowest was marked by SBI Group (14.84 per cent).

- **Net worth**: The highest CAGR in net worth was achieved by New private sector banks group (29.87 per cent) and SBI group showed a lowest CAGR of 19.29 per cent.

- **Total Assets**: New private sector banks group marked the highest CAGR of 23.73 per cent, while SBI Group showed a lowest CAGR of 15.84 per cent.

- **Liquid Assets**: The highest CAGR was achieved by New private sector banks (20.14 per cent) group while, the SBI Group showed lowest value of 7.33 per cent.

- **Fixed Assets**: Nationalised banks group witnessed a highest CAGR of 16.47 per cent while, New private sector banks group showed a least value of 7.76 per cent.

- **Provisions and Contingencies**: New private sector banks group showed a maximum CAGR of 30.83 per cent and Old private sector banks group witnessed a lowest value of 12.36 per cent.

- **Investment**: New private sector banks group marked a highest CAGR of 22.20 per cent and SBI Group showed a lowest CAGR of 7.73 per cent.

- **Net Profit**: New private sector banks group recorded a maximum net profit of 27.26 per cent while a minimum net profit of 15.42 per cent was registered by SBI Group.

b) **Linear Trend Analysis**
The forecasted trend movement in the year 2016-17 is calculated for the selected variables of five bank groups and the results were portrayed below:

The SBI Group secured the second place for advances, deposits, interest income, total income, total assets, liquid assets, provisions and contingencies and investments, the third place for borrowings, net worth, fixed assets and net profit.

The Nationalised banks group secured the first place for all the 12 variables namely advances, deposits, borrowings, interest income, total income, net worth, total assets, liquid assets, fixed assets, provisions and contingencies, investments and net profit.

The Old private sector banks group secured the fourth place for advances, deposits and fifth place for term deposits, branches and the fifth place for borrowings, interest income, total income, net worth, total assets, liquid assets, fixed assets, provisions and contingencies, investments and net profit.

The New private sector banks group secured the second place for borrowings, net worth, fixed assets and net profit and third place for advances, deposits, interest income, total income, total assets, liquid assets, provisions and contingencies and investment.

The Foreign banks group secured the fourth place for borrowings, interest income, total income, net worth, total assets, liquid assets, fixed assets, provisions and contingencies, investments and net profit and fifth place for advances and deposits.

The result of the trend analysis shows that the Nationalised banks group secured first position for all the 12 variables because of lower value of existing variables at the beginning of the study period and thereafter the spurt in the growth of the variables in the following years than the growth of the remaining four groups.

5.2 CONCLUSION

The development of the banking sector and its stability is essential for the overall development of the economy. The stability of the banking sector is determined on the basis of its performance and quality of assets. In this study, the performance of the banks is measured in terms of profitability and efficiency. The results of the study reveal that the financial performance of Foreign Banks are far ahead than their counterparts and it suggests the other bank groups to take some corrective measures to improve their profitability. Bankometer results reveal that all the banks selected under this study are
financially sound. The multivariate analysis of the profitability undertaken in this study, discloses the relationship among the earnings and expense factors on the profitability of the banks, which enriches the scope of the study.

5.3 SUGGESTIONS

On the basis of the research findings, the following suggestions are offered to improve the profitability and efficiency of scheduled commercial banks in India.

- SBI, Nationalised and Old private sector banks group shall concentrate on increasing the non-interest income. To bring improvement in income generation, it should look towards diversifying into a wide range of financial services like merchant banking, consultancy services, marketing service, leasing, factoring, portfolio management and mutual funds, etc., which open up the newer areas into which banks can earn handsome income.

- New private sector banks and Foreign banks have captured a large customer base through their fast and efficient working style, new attractive schemes, advanced technologies and better customer service. Public sector banks shall also require to use latest technology to serve the customers efficiently.

- Banks shall increase their profitability by improving the spread and reducing the burden. The spread can be improved by avoiding high cost inter-bank deposits and high cost market borrowings. Banks shall curtail their non-interest expenses by scientific recruitment, promotion and placement policies, improving the quality of expenditure decisions and by budgeting and cost control methods and thereby shall enhance profitability.

- To improve the financial soundness of banks it is essential to control costs of operations. The cost to income generation shall be kept at minimum possible levels. The banks shall take efforts to reduce the operating expenses by means of improving the efficiency of the non viable branches by utilizing some expert services like professional management, private management and the like.

- Banks will have to formulate suitable human resource development strategies in the new competitive environment. Quality of manpower employed in the banks is a deciding factor for profit and growth in the future.
Banks shall have to make profits by their respective edge on the service excellence, as technology will be the same for all banks. ‘Total Quality Management’ concept shall be effectively used for enhancing the level of productivity in the banks.

- The asset quality of banks is one of the most important indicators of their financial health. It also reflects the efficiency of banks’ credit risk management and the recovery environment. The new accretion to NPAs has been much faster than the reduction in existing NPAs due to lower levels of upgradation and recoveries. Therefore, Banks shall avoid NPAs by following the proper policy for credit appraisal, supervision and follow-up of advances, improving asset quality and effective internal control system. Reduction in NPAs is necessary to improve profitability.

- Banks shall be fully vigilant about the quality of their loan assets and various steps need to be taken to reduce the NPAs. Banks should follow the proper policy for appraisal, supervision and follow-up of advances to avoid NPAs. However, risks attached to lending can’t be completely eliminated. If certain advances are converted into NPAs, it is necessary to take corrective steps to reduce them. Reduction in NPAs is necessary to improve profitability.

**5.4 SCOPE FOR FURTHER RESEARCH**

i) Comparative study of these bank groups with respect to some other parameters and model can be done.

ii) In-depth study for profitability analysis of banks at branch level can be undertaken.

iii) A study on the profitability behavior of all individual banks in urban, semi-urban and rural areas could be done.

iv) Research can be done on mergers and amalgamations of banks and its impact on profitability of banks.