

Inferential analysis for judging the efficiency and solvency in public and private sectors banks

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Abstract

The present study of the research entitled Inferential analysis for judging the efficiency and solvency in public and private sectors banks. The study was based on secondary data from records, reports and profile of the banks. The validity of any research is based on the systematic method of data collection analysis. The Ratio analysis is the process of identifying the financial soundness and cost effectiveness of the banks by establishing relationship between the items of solvency and efficiency. The present study has thrown major concentration in ratio analysis, from the 5years solvency and efficiency. An objective of the study includes the interest income, net interest income, Non-interest income, Interest expanded, Operating expenses, Credit Deposit Ratio, Investment deposit ratio, cash deposit ratio, Total debt to owners fund and overall financial performance of the banks. The study is an attempt to portray some objective conclusions on the diverse aspects of solvency and efficiency of selected banks in India. The two private (HDFC and ICICI) and two public sector bank (SBI and Union bank) in India are selected for the study.

Keywords: solvency, efficiency, interest expanded, operating expenses, ratio analysis

Introduction

Public Sector Banks: Public sector banks dominate commercial banking of India. The Government of India entered commercial banking when it took over the Imperial Bank of India in 1955 and converted it into the State Bank of India on 1 July 1955. Presently the State Bank of India has seven subsidiary banks. These banks are collectively known as the State Bank Group. It is notable to disserve that the State Bank of India at no stage was wholly owned by the Government of India. In July 1969, the Government of India took an important step of nationalizing 14 large banks. Public Sector Banks (PSBs) are banks where a majority stake (i.e. more than 50%) is held by a government. The shares of these banks are listed on stock exchanges. There are a total of 27 PSBs in India [21 nationalized banks + 6 State bank group (SBI + 5 associates)].

Private Sector banks: For over two decades, after the nationalization of 14 larger banks in 1969, no banks were allowed to be set up in the private sector. In the pre-reforms period, there were only 24 banks in the private sector. The Narasimham Committee, in its first report, recommended the freedom of entry into the financial system. The banks which have been setup in the 1990s taking into consideration the guidelines of the Narasimham Committee are referred to as new private sector banks. Today, there are 21 private sector banks in the banking sector 14 old private sector banks and 7 new private sector banks.

India has about 88 commercial banks including 31 private banks, 27 public sector banks, and 38 foreign banks and in total, 53,000 bank branches in the nation.

Objective of the study

- To determine the overall quantum of solvency and efficiency maintained by the selected public and private banks in India and to compare the solvency and efficiency of all the banks.
- To work out the relative position (rank method) of the

sample banks in order of solvency and efficiency maintained by them.

- To compare the financial performance of private and public sector banks.
- To offer findings and suggestions to enhance the financial performance of selected private and public banks.
- To highlight the Financial Growth of Private bank(HDFC and ICICI) and Public bank(SBI and Union bank)

Review of Literature

Bodla *et al.* (2006) attempted to study the “Performance of SBI and ICICI Bank through Camel Model for the Period 2004-05”. They found that ICICI Bank has outperformed SBI in terms earning quality, the ratio of operating profit to average working funds, Net Profit to Average assets, and so on. The same is true regarding assets quality, earning quality, and management quality ratios. The liquidity position of both the banks is sound and does not differ significantly.

Bhayani *et al.* (2007) in their paper entitled “Role of Transaction Cost in the Financial Performance of Co-operative Banks” have attempted to investigate how the proportion of transformation cost is higher than that of transaction cost in the banks under study. Transaction cost plays an important role in the profitability of banks. Therefore, if the management of co-operative banks tries to reduce the transaction cost, it will improve their banks’ profitability.

Roma Mitra, Shankar Ravi (2008), A stable and efficient banking sector is an essential precondition to increase the economic level of a country. This paper tries to model and evaluate the efficiency of 50 Indian banks. The Inefficiency can be analyzed and quantified for every evaluated unit. The aim of this paper is to estimate and compare efficiency of the banking sector in India. The analysis is supposed to verify or reject the hypothesis whether the banking sector fulfils its intermediation function sufficiently to compete with the global players. The results are insightful to the financial policy

planner as it identifies priority areas for different banks, which can improve the performance. This paper evaluates the performance of Banking Sectors in India.

B.Satish Kumar (2008), in his article on an evaluation of the financial performance of Indian private sector banks wrote Private sector banks play an important role in development of Indian economy. After liberalization the banking industry underwent major changes. The economic reforms totally have changed the banking sector. RBI permitted new banks to be started in the private sector as per the recommendation of Narashiman committee. The Indian banking industry was dominated by public sector banks. But now the situations have changed new generation banks with used of technology and professional management has gained a reasonable position in the banking industry.

Junxun Dai *et al.*, (2009) has presented a comparative analysis of matched sample, univariate and multivariate methods by using variety of empirical methods. Further author take a sample case study in which author focus on corporate governance character of 437 banks with an appropriate proxy. Author explains the two measures of banks' prior performance, a q-ratio and return on assets (ROA). q is the ratio of the market value to the replacement cost of a firm's asset, if q is interpreted as the ratio of the bank's value as an ongoing concern to its liquidation value, $q = (\text{total assets market value of equity book value of equity}) / (\text{total assets market value of investment securities and book value of investment securities})$. Government banks agree to merger systematically benefits, targets, shareholders and outside investors. Author fined a greater frequency of outside block holders in the banks that become target, for large non-investors, shareholders who encourage banks to act in shareholders' best interest.

Verma *et al.* (2011) in their paper entitled "Performance of Scheduled commercial banks in India: An application of DEA" analyze the efficiency of 88 SCBs with the data set ranging from the year 1998-99 to 2007-08. The results indicate that the public sector and foreign banks needed to take steps to reduce the expenses and improve the output at the given input level because they had failed to acquire full efficiency score in six and five years respectively, out of the ten years under study.

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

Needs and Scope of the study

Profits are very essential for the survival of every business unit and not only the survival but the long term growth of the business is also determined by the profits. The study endeavors to utilize techniques to explore the possibilities of reduction in different aspects of the private and public bank, thereby maximizing their efficiency, as this aspect has not received due attention in previous research work. Purpose of the present study is to evaluate the financial performance of the banks. Scope of the study is based on the Financial Statements for the accounting years 2011-12 to 2015-2016. This covers only few four banks two from private sector Bank and another two are from public sector Bank. This study is based on the available information supplied by the respective Banks. This study is

based on ratio analysis.

Research Sample Design

The current study has been carried out by taking a sample of private (HDFC and ICICI) and public sector bank (SBI and Union bank) in India. The banks are selected on the bases on their high profit margin. The relevant data have been mainly gathered from the annual reports of the selected banks. The other sources of information are trade journals, newspaper and other published Information. The study covers a period of 5 years, from 2011-12 to 2015-16.

Research Methodology

Banking sector in India is considered one of the fastest growing financial institutions in the world. Using purposive sample, two private and two public sector banks were selected as the sample for bank. The sample selected banks were considered one of the successful units in the banking sector. The technique of ratio analysis has also been used to draw inferences regarding the efficiency and solvency position of the banks understudy, efficiency ratios viz; interest income, net interest income, Non-interest income, Interest expanded, Operating expenses, and solvency ratios viz; Credit Deposit Ratio, Investment deposit ratio, cash deposit ratio, Total debt to owners fund have been calculated to evaluate the financial strength of the banks. Descriptive Research Design is used for the study and it is essentially a fact-finding approach. It aims to explain the characteristics of an individual or group characteristics and to determine the frequency with the same things occurs.

Hypotheses Testing

Hypotheses testing enable a decision maker to draw inferences more precisely. Testing of hypotheses is an essential part of the study for comparative analysis because it enables the researchers to confidently examine the accuracy of their results. Several hypotheses testing have been formulated and tested statistically to draw conclusions on the efficiency and solvency position of the selected banks. The following Hypotheses have been set and tested in the present study.

H₀: There is no significant difference between the diverse efficiency aspects of the selected private and public banks

H₁: There is a significant difference between the diverse efficiency aspects of the selected private and public banks.

H₀: There is no significant difference between the diverse Solvency aspects of the selected private and public banks

H₁: There is a significant difference between the diverse Solvency aspects of the selected private and public banks.

Empirical Study

A proper balance between the two contradictory requirements, that is efficiency and solvency, is required for efficient financial management. The Importance of adequate solvency in the sense of the ability of the banks to meet short term obligations when they become due for payment can hardly be overstressed. In fact, efficiency is a prerequisite for the very survival of a bank. Turnover Ratios highlight the different aspect of financial statement to satisfy the requirements of different parties interested in the business. It also indicates the effectiveness with which different assets are vitalized in a business. Efficiency Ratio indicates the sound financial position of a concern to carry on its business smoothly and meet its all obligations.

Table 1: Overall Calculation of Mean Efficiency of Selected Private and Public Banks

Company	Interest income	Net interest income	Non-interest income	Interest expanded	Operating expenses
HDFC	9.16 (H)	4.16 (H)	1.73	5.00	2.6 (H)
ICICI	7.8 (L)	2.85	1.88 (H)	4.94 (L)	1.71
SBI	8.04	2.97	1.16	5.07	1.95
Union bank	8.62	2.44 (L)	0.92 (L)	6.19 (H)	1.57 (L)

Note: [H] Refers to the highest ratio and [L] refers to the lowest ratio.

Sources: Calculated from the Annual Reports of all the Selected banks, from 2011-12 to 2015-2016 year.

It is also clear from Table 1 that Interest income in HDFC (9.16) was highest followed by ICICI (7.8), SBI (8.04), Union bank (8.62).

It is also clear from Table 1 that Net- Interest income in HDFC (4.16) was highest followed by ICICI (2.85), SBI (2.97), Union bank (2.44). Net interest income is the difference between the revenue that is generated from banks assets and the expenses associated with paying out its liabilities.

It is also clear from Table 1 that Non-Interest income in ICICI (1.88) was highest followed by HDFC (1.73), SBI (1.16), Union bank (0.92). Non –interest income is bank and creditor income derived primarily from fees including deposits and

transaction fees, insufficient funds fees, annual fees, monthly fees services charges in activity fees check and deposits slip fees and so on.

It is also clear from Table 1 that Interest expanded in UNION (6.19) was highest followed by ICICI (4.94), SBI (5.07), HDFC (5.00).

It is also clear from Table 1 that operating expenses in HDFC (2.6) was highest followed by ICICI (1.71), SBI (1.95), Union bank (1.57). The total operating expenses is the sum total of cost of goods sold, office and administrative expenses and selling and distribution expenses. In other words, this ratio indicates a firm's ability to cover total operating expenses.

Table 2: Overall Calculation of Mean Solvency of Selected Private and Public Banks

Company	Credit Deposit Ratio	Investment deposit ratio	cash deposit ratio	Total debt to owners fund
HDFC	80.90	35.76	6.50	7.93
ICICI	101.49 (H)	54.81 (H)	7.19 (H)	4.50 (L)
SBI	84.43	29.71	6.50	12.13
Union bank	78.53 (L)	29.42 (L)	5.35 (L)	17.15 (H)

Note: [H] Refers to the highest ratio and [L] refers to the lowest ratio.

Sources: Calculated from the Annual Reports of all the Selected banks, from 2011-12 to 2015-2016 year.

It is also clear from Table 2 that Credit Deposit Ratio in ICICI (101.49) was highest followed by HDFC (80.90), SBI (84.43), Union bank (78.53).

It is also clear from Table 2 that Investment deposit ratio in ICICI (54.81) was highest followed by HDFC (35.76), SBI (29.71), Union bank (29.42).

It is also clear from Table 2 that cash deposit ratio in ICICI (7.19) was highest followed by HDFC (6.50), SBI (6.50), Union bank (5.35).

It is also clear from Table 2 that Total debt to owners fund in UNION (17.15) was highest followed by HDFC (7.93), SBI (12.13), ICICI (4.50).

Ranking of Selected banks

In the paper an attempt has been made to evaluate the financial position of the selected private and public banks. For this purpose, ranks have been provided on the basis of mean efficiency and solvency in descending order. Then, all the ranks given to each banks are added and final ranks have been worked out on the basis of total ranks indicating the relative efficiency and solvency of the selected banks. It is evident from Table 3 that HDFC occupies the first position, followed by SBI (2nd Rank), ICICI (3rd Rank) and Union bank (4th Rank) maintaining their position during the period under reference.

Table 3: Overall ranking of selected banks on the basis of the Calculated mean ratios.

Banks	Interest income	Net interest income	Non-interest income	Interest expanded	Operating expenses	Credit Deposit	Investment	Cash	Total debt to owners fund	Total	Rank
HDFC	1	1	2	3	1	3	2	2	3	18	1
ICICI	4	3	1	4	3	1	1	1	4	22	3
SBI	3	2	3	2	2	2	3	1	2	20	2
UNION	2	4	4	1	4	4	4	3	1	27	4

Analysis and Findings

On the basis of study of financial performance, based on the parameters like interest income, net interest income, Non-interest income, Interest expanded, Operating expenses, Credit Deposit Ratio, Investment deposit ratio, cash deposit ratio and Total debt to owners fund. It can be concluded very safely that the study of last five years i.e. from 2012 to 2016 HDFC Bank has performed much better than ICICI,SBI,UNION and we conclude that the HDFC bank have much better growth prospects as compared to other banks.

Conclusion and Suggestions

Interest income, Net-interest income and operating expenses of HDFC were highest, among ICICI, SBI and Union bank followed by during the period of study. ICICI bank performed well than other banks in non-interest income, credit deposit, investment deposit and cash deposit. In the public banks the SBI and UNION banks only performed well in cash and interest expanded during the study period. The HDFC bank performs well in net interest income which means the difference between the revenue that is generated from banks

assets and the expenses associated with paying out its liabilities. The ICICI bank performs well in non –interest income which means the bank and creditor income derived primarily from fees including deposits and transaction fees, insufficient funds fees, annual fees, monthly fees services charges inactivity fees check and deposits slip fees and so on while again the HDFC bank is good in total operating expenses which means the total of cost of goods sold, office and administrative expenses and selling and distribution expenses. The overall performance of ICICI bank is good than other banks in solvency which included the parameters of Credit Deposit Ratio, Investment deposit ratio, cash deposit ratio, Total debt to owners fund during the study period. The public banks (SBI, UNION) needs more improvement in these areas to increases there efficiency. Hence, the overall performance of HDFC bank is good on comparing the other banks including all the parameters during the whole study period.

Limitation of the Study

- This study is based on secondary data taken from various websites of selected banks and as such its findings depends entirely on the accuracy of such data.
- The present study is based on data taken from the annual reports of the company and all the conclusions and suggestions are given from the statistical analysis of various ratios calculated.
- The study is carried out for a period of 5 years to derive conclusions about the performance of the banks as a whole. But this number of years is not enough for a thorough understanding of banks activity and their reactions to the changes of the economy.
- There are different methods to measure the efficiency and solvency of banks in this connection views of experts differ from one-another.
- The present study is largely based on ratio analysis; such analysis has its own limitations, which also applies to the study.
- The scope of this study is confined to the banking sector only.

References

1. Pai VS. Trends in the Indian Banking Industry: Analyses of Inter-Regional Trends in Deposits and Credits. The ICFAI Journal of Management Research. 2006; 5(1):65-72.
2. Richa Verma *et al.* Performance of Scheduled commercial banks in India: An application of DEA Decision-Indian Institute of Management, Calcutta. 2011; 28(1):05-76.
3. Chaudhary K, Sharma M. Performance of Indian public sector banks and private sector banks a comparative study, International Journal of Innovation, Management and Technology. 2011; 2(3):249-255.
4. Agarwal NK. Management of Working Capital, Sterling Publishers (P) Ltd., New Delhi. 1983.
5. Elhance DN. Fundamentals of Statistics, 30th Revised Edition, Kitab Mahal, Allah bad. 1992.
6. Fisher Donald E, Jordan Ronald J. Security Analysis and Portfolio Management, 6th Edition, Prentice Hall of India (P) Ltd., New Delhi. 2003.
7. George Pinches E. Element of Financial Management, 3rd Edition, Harper Collins Publishers, New York. 1990.
8. Guthman HG, Dougall HE. Corporate Financial Policy, Prentice Hall, New York. 1995, 61.
9. Gupta SP. Statistical Methods, Sultan Chand & Sons, New Delhi. 2008, 1019.
10. Profitability of Indian banks – a comparative study of SBI and HDFC - Vivek Kumar and Dr. Major Singh.
11. A Comparison of the Performance of Commercial Banks: DEA Evidence for India - Ram Pratap Sinha. 2013.
12. Financial Performance of Banks in India---Harish Kumar Singla. 2008.
13. Hampton John J. Financial Decision Making, 4th Edition, Prentice Hall of India (P) Ltd., New Delhi. 2003.
14. Horngren CT, Sundem GL, Elliott JA. Introduction to Financial Accounting, Pearson Education Pte. Ltd., Singapore. 2002.
15. John Finnerty D. Corporate Financial Analysis, McGraw-Hill, Inc, USA. 1986, 21-29.
16. Keown Arthur J, Martin John D, Petty William J, Scott Jr. David F. Financial Management – Principles and Applications, Prentice Hall of India (P) Ltd., New Delhi. 2003.
17. Kaur K. Size, Growth and Profitability of Firms, Gyan Publication House, New Delhi. 2007.
18. Khan MY, Jain PK. Management Accounting: Text, Problems and Cases, Tata McGraw-Hill Publishing Company Limited. 2007, 6.2-6.3.
19. Levin Richard I, Rubin David S. Statistics for Management, Prentice- Hall of India (P) Ltd., New Delhi. 1995, 738.
20. McMeanmin Jim. Financial Management – An Introduction, Oxford University Press, New Delhi. 2000.
21. Mishra Ram Kumar. Problems of Working Capital: With Special Reference to Selected Public Undertakings in India, Somaiya Publications (P) Ltd., Mumbai. 1975.
22. Pandey IM. Financial Management, Vikas Publishing House (P) Ltd., New Delhi. 2007.
23. Prashar SP. Liquidity Management: Principles and Practices of Managing Cash Flow, Vision Book (P) Ltd, New Delhi. 1996, 910.
24. Rao Prabhakara JV, Subbarayudu V. Management Accounting, Himalaya Publishing House. 2000, 382.
25. Ravi Kishore M. Financial Management, 2nd Edition, Taxman Allied Services (P) Ltd., New Delhi, India. 2001.
26. Richard Levin I, David Rubin S. Statistics for Management, Prentice-Hall of India (P) Ltd., New Delhi. 1995, 738.
27. Sadhu AN, Singh Amrajit. Research Methodology in Social Sciences, Himalaya Publishing House, Mumbai. 1996, 263.
28. Sancheti DC, Kapoor VK. Statistics: Theory, Methods and Applications, Sultan Chand & Sons. 2007.
29. Spiller EA. Financial Accounting, p. 644, Richard D Irwin, Homewood, Ill. 1977.
30. Van Horne J. Financial Management and Policy, Pearson Education Pte. Ltd., Singapore. 2002.
31. Varshney Satish Chandra. Trade Credit and Company Liquidity, The Management Account. 2001; 36(10):738-756.

32. Vinayakam N, Sinha IB. Management Accounting: Tools and Techniques, Himalaya Publishing House. 2002, 290.
33. William Trochim MK. The Research Methods Knowledge Base. 2006. available at www.socialresearchmethods.net/kb/order.php.
34. Website-
35. www.sbi.com
36. www.icicibank.com
37. www.hdfc.com
38. www.unionbank.com