Journal of Nonlinear Analysis and Optimization Vol. 15, Issue. 2 : 2024 ISSN :**1906-9685**



FINANCIAL PERFORMANCE OF BANKS IN INDIA

Dr. P. MOHAN MCom, MPhil PGDBA PHD Vasavi Jnana Peetah Evening College, Vijay Nagar, Bengaluru... 40

Abstract

The purpose of this study is to assess the performance of a subset of Indian private sector banks. Examining these particular banks' profitability performance is another goal. Method, Approach, and Design: A sample of eight private banks was chosen for the investigation. The study utilized many statistical tools to evaluate the performance of banks, including the One-Way ANOVA test, descriptive statistics, and the Minimum and Maximum Net Profit Ratio. The study's timeframe spans from 2011-12 to 2022-2023, and all of its data sources are secondary. Conclusions: The study's findings indicate that the chosen banks' net profits differ significantly from one another. HDFC Bank's financial performance is consistently strong because of the substantial profit it makes and the appropriate management style that is used. The findings show that Yes Bank's financial situation is getting worse due to problems with governance, misrepresentations made to clients, insincere investors, a lack of a market-led recovery, liquidity outflows, and non-disclosure policies. In the market, Axis Bank and ICICI Bank are gradually losing share. Practical Implications: The majority of banks currently have a higher percentage of non-performing assets. Many banks undergo liquation and merger/acquisition as a result of this circumstance. In order to provide statistical analysis that would be helpful to investors and bank management teams, this study looks at the current state of a few Indian private sector banks.

Keywords: Axis bank, ICICI bank, banks in India

I. INTRODUCTION

Due to their role in managing the nation's finances, including credit and cash, banks are essential to the Indian economy. The primary role of banks is to take deposits from the general public and provide credit to people who require more funds for both short- and longterm needs. Though many banks are merging and going bankrupt these days, the Indian financial industry has come a long way from a fully controlled environment to a deregulated market economy. In India, the RBI is the highest authority on banking regulation. On April 1st, 1935, the RBI Act, 1934 formed it. Today those who have no education or minimal literacy are keen to know the financial performance of the banks in which they deposit or make an invest. Earlier financial analysis was done through only by going through the records and files but now we use tools or techniques to make analysis. Some of them are Ratio Analysis, Comparative statement analysis, Time series analysis, Common size analysis.

The selection of these tools is mere choice of the user as well as interpretation of the same depends on the need and intelligence of the user.

II. LITERATURE REVIEW

1. Biswal, B. P. & Gopalkrishnan, R. (2014) [2]. Here the author examines the factors and their effect on profitability in banks which is estimated by Net Interest Margin. By using secondary data, the study classifies banks operating in India under high Credit Deposit ratio and low Credit Deposit ratio.

2. Chandran, D., & Francis, P. (2014) [4]. Here the authors in their study have made an attempt to analyse the relationship between inflation rate and prime lending rate in India. Comparison of inflation with prime lending rates of SBI and ICICI Bank with the help of tools like correlation, regression, and ANOVA. The results showed that the lending and inflation rates are negatively correlated.

3. D. Padma and V. Arulmathi (2013) [5] The purpose of the study was to examine the solvency and efficiency of SBI and ICICI banks. The study's conclusions show that both banks are operating efficiently and upholding the necessary standards. Additional research published in the SBI Philos Multi-Disciplinary Journal, ISSN 2456-9828 e-Journal, April 2018, Page 3, reveals notable discrepancies between SBI and ICICI Bank's performance with regard to deposits, advances, investments, net profit, and total assets.

4. Jaiswal, A., Jain, C (2016) [7] To study the financial performance between SBI and ICICI banks, the author has not only compared financial performance through ratio analysis but also found the market position of the both banks.

5. Malhotra, N. (2015) [9]. Here the author has explained the financial soundness of the three banks SBI, ICICI and Standard Bank. The data used is secondary for the study. The study results in terming that growth of assets is more in ICICI bank. The SBI shows growth in advances and deposits

whereas standard charted bank efficiently controls expenditure as well income compared to the other banks. The study suggests that SBI has to improve its financial position to match with these two banks.

6. Prakash P., Sundararajan, S. (2016) [13] The research is quantitative and analytical, combining both technical and fundamental analysis. In this case, the study is conducted using the Ratio analysis, Beta study (β), Relative Strength Index (RSI), and Rate of Change (ROC). The research is based on secondary data.

7. Singh, A. K. (2015) [17]. The author has conducted study in analysis of profitability position of private bank in India like AXIS, ICICI, Karur Vysa bank (KVB), Yes Bank, and highlight the overall profitability of bank (i.e.) Interest spread, Net profit margin, return on long term fund, return on net worth & Return on assets, Adjusted cash margin.

8. Singh, J. P., Seth, M. (2017) [19] The author has taken CAMEL approach to compare the Capital Adequacy with public and private sector banks. He has selected only one parameter from Capital Adequacy, Asset Quality, Management Quality, Earning Quality and Liquidity.

III. RESEARCH GAP

Though there is much studies on this sector, the researchers have not focused on comparison of Banks in terms of total assets and Market Capitalization. There is no research on the study of mean differences performance among the selected private sector banks.

Objective of the study

1. To analyse and compare of financial performance of ICICI Bank and other selected Banks in India.

2. To find the variance of mean of selected private sector Banks.

Hypothesis of the Study

H01: There is no significant difference between net profit margin among different selected private sector banks in India.

H02: There is no significant difference between Return on net worth among different selected private sector banks in India.

H03: There is no significant different between Return on assets among different selected private sector banks in India.

H04: There is no significant different between interest spread among different Private sector Banks in India.

H05: There is no significant difference between credit deposit Ratio among different Private sector Banks in India.

IV. METHODOLOGY

The study's chosen research design is both descriptive and experimental. The information gathered is predicated on secondary data. Information is gathered from websites of the banks used for the study, books, magazines, theses, and financial statements released between 2016 and 2022 as well as from the Reserve Bank of India. Financial and statistical methods are utilized to examine and interpret the data gathered in order to determine the ICICI bank's financial performance in relation to a subset of private sector banks. Ratio analysis is one of the financial tools utilized in the study. The chosen ratios for this study are as follows. Interest rate differential, net profit margin, net worth return, and ratio of total assets turnover Return on Investment Liquid assets to demand deposit, credit deposit ratio, and cash deposit ratio. He Statistical tools used for the study are Mean, Standard deviation, Coefficient of variance and ANOVA.

V. DATA ANALYSIS

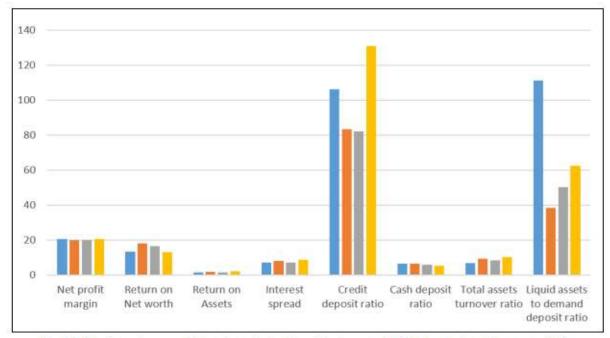
RATIO ANALYSIS

 Table 1: Financial performance of Private Sector Bank with special reference to ICICI Bank

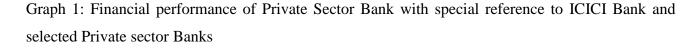
 and selected Private sector Banks

Banks	Net profit margin	Return on Net worth	Return on Assets	Interest spread	Credit deposit ratio	Cash deposit ratio	Total assets turnover ratio	Liquid assets to demand deposit ratio
ICICI	20.66	13.3	1.51	7.04	106.2	6.6	6.88	111.12
HDFC	19.95	18.02	1.88	8.08	83.25	6.52	9.25	38.25
Axis	19.95	16.55	1.6	7.19	82.15	5.95	8.25	50,25
Kotak Mahindra	20.45	13.19	2.05	8.79	130.85	5.25	10.25	62.25

Source: Annual report of ICICI, HDFC, Axis and Kotak Mahindra



Graph 1: Financial performance of Private Sector Bank with special reference to ICICI Bank and selected Private sector Banks



INTERPRETATION

In the table we can find that the average net profit margin of ICICI bank is more than the other private banks, followed by Kotak Mahindra Bank, Axis and HDFC bank respectively. The average return on net worth of HDFC bank is the highest compare to other banks followed by Axis Bank, ICICI Bank and Kotak Mahindra Bank respectively. From the table No-01. it's clear that Kotak Mahindra bank has highest average return on assets compared to other banks, followed by HDFC bank, Axis Bank and ICICI bank respectively. It indicates the weak position of the ICICI bank in return on total assets. It is clear that Kotak Mahindra Bank has got highest average interest spread compared to other banks, followed by HDFC Bank, ICICI Bank and Axis Bank respectively. It indicates the weakness of ICICI bank in total interest income and expenses to average working fund. Kotak Mahindra Bank has the average highest Credit deposit ratio compared to other banks, followed by ICICI bank, HDFC Bank and Axis Bank respectively. Though ICICI bank is second in line for Credit deposit ratio, it still shows that ICICI bank is able to generate more loans for the deposit received as compared to HDFC and AXIS banks. ICICI Bank has highest Cash deposit ratio compared to other banks, followed by HDFC Bank, Axis Bank and Kotak Mahindra Bank respectively. It indicates that ICICI Bank has more deposit compared to other banks. Kotak Mahindra Bank has highest total assets turnover ratio compared to other banks, followed by HDFC

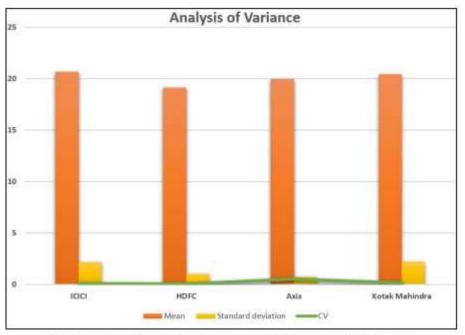
bank, Axis Bank and ICICI Bank respectively. It shows that ICICI bank is less efficient in generating revenue from their assets. The ICICI Bank has highest Liquid assets demand deposit ratio compared to Kotak Mahindra Bank, Axis Bank and HDFC Bank respectively. It shows that ICICI bank has the highest ability to meet immediately and short-term deposit by cash or online banking or ATM. But in another side the high percentage will reflect that the bank did not mobilize the cash effectively in shortterm investment.

VI. ANALYSIS OF VARIANCE

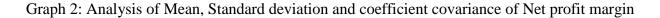
Table 2: Analysis of Mean, Standard deviation and coefficient covariance of Net profit margin

Particular's	ICICI	HDFC	Axis	Kotak Mahindra
Mean	20.66	19.15	19.98	20.45
Standard deviation	2,17	1.05	0.76	2.25
CV	0.115	0.054	0.54	0.185

Source: Annual report of ICICI, HDFC, Axis and Kotak Mahindra



Graph 2: Analysis of Mean, Standard deviation and coefficient covariance of Net profit margin



Interpretation

From the table, it has been evident that ICICI has the highest mean value of net profit margin (20.66) compare to other banks. Kotak Mahindra bank has the highest standard deviation of net profit margin (2.25) as well as co efficient of variance (0.115) compared with other banks, followed by ICICI

Bank, HDFC Bank and Axis Bank respectively. ICICI Bank has highest Mean value (20.66) with moderate standard deviation (2.17) and co-efficient of variance (0.115) on Net Profit Margin

Hypothesis Testing Analysis of ANOVA

H01: There is no significant difference between Net profit margin among selected private sector banks in India.

Table 3: There is no significant difference between Net profit margin among selected private sector banks in India

Source of variance	Sum of Square	Degree of freedom	Mean square	F (Calculated value)	Table value at 5% level of significance
Between group	1.827	3	0697	Sec. 5	0883
Within group	44.43	16	2.776	0218	
Total	46.26	19			

Interpretation: As per the Table No-03 the calculated value of F (0.218) is less than the table value (0.883). We accept Null Hypothesis and conclude that, there is no significant difference between net profit margin among ICICI, HDFC, AXIS and KOTAK Mahindra private sector banks in India.

H02: There is no significant difference between Return on net worth among different selected private sector banks in India.

Table 4: There is no significant difference between Return on net worth among different selected private sector banks in India

Source of variance	Sum of Square	Degree of freedom	Mean square	F (Calculated value)	Table value at 5% level of significance
Between group	88.865	3	20.717	a contract and	170.047
Within group	30.761	16	29.617 1.945	15.452	000
Total	119.657	19			

Interpretation: As per the Table No-04, the calculated value of F test (15.452) is more than the tabulated value, hence reject null hypothesis and conclude that there is a significant difference between Return on net worth among ICICI, HDFC, AXIS and KOTAK Mahindra private sector banks in India.

H03: There is no significant difference between Return on assets among selected private sector banks in India.

Table 5: There is no significant difference between Return on assets among selected private sector banks in India

Source of variance	Sum of Square	Degree of freedom	Mean square	F (Calculated value)	Table value at 5% level of significance
Between group	0.958	3	221	8	S 0.04
Within group	0.327	16	.321 0.0211	15.712	000
Total	1.29	19			

Interpretation As per the table, the calculated value of F test (15.712) is more than the tabulated value, hence reject null hypothesis and conclude that there is a significant difference between Return on Return on assets among ICICI, HDFC, AXIS and KOTAK Mahindra private sector banks in India.

VII. SUMMARY AND FINDINGS

7.1 Ratio Analysis

The average net profit margin of ICICI bank is more than the other private banks, followed by Kotak Mahindra Bank, Axis and HDFC bank respectively. The average return on net worth of HDFC bank is the highest compare to other banks followed by Axis Bank, ICICI Bank and Kotak Mahindra Bank respectively. The Kotak Mahindra bank has highest average return on assets compared to other banks, followed by HDFC bank, Axis Bank and ICICI bank respectively. It indicates the weak position of the ICICI bank in return on total assets. The Kotak Mahindra Bank has got highest average interest spread compared to other banks, followed by HDFC Bank, ICICI Bank and Axis Bank respectively. It indicates the weakness of ICICI bank in total interest income and expenses to average working fund. Kotak Mahindra Bank has the average highest Credit deposit ratio compared to other banks, followed by ICICI bank, HDFC Bank and Axis Bank respectively. Though ICICI bank is second in line for Credit deposit ratio, it still shows that ICICI bank is able to generate more loans for the deposit received as compared to HDFC and AXIS banks. ICICI Bank has highest Cash deposit ratio compared to other banks, followed by HDFC Bank, Axis Bank and Kotak Mahindra Bank respectively. It indicates that ICICI Bank has more deposit compared to other banks. Kotak Mahindra Bank has highest total assets turnover ratio compared to other banks, followed by HDFC bank, Axis Bank and ICICI Bank respectively. It shows that ICICI bank is less efficient in generating revenue from their assets. The ICICI Bank has highest Liquid assets demand deposit ratio compared to Kotak Mahindra Bank, Axis Bank and HDFC Bank respectively. It shows that ICICI bank has the highest ability to meet immediately and short-term deposit by cash or online banking or ATM. But in another side the high percentage will reflect that the bank did not mobilize the cash effectively in shortterm investment.

7.2 Analysis of Variances

The ICICI has the highest mean value of net profit margin (20.65) compare to other banks. Kotak Mahindra bank has the highest standard deviation of net profit margin (2.210) as well as co efficient of variance (0.108) compared with other banks, followed by ICICI Bank, HDFC Bank and Axis Bank respectively. ICICI Bank has highest Mean value (20.65) with moderate standard deviation (2.147) and co-efficient of variance (0.104) on Net Profit Margin. The Axis Bank has highest Mean value of returns on net worth compare to other banks. The Standard Deviation and Coefficient variance of Kotak Mahindra Bank of Return on Net worth is higher than other banks. ICICI Bank has moderate Mean Value (13.294) which is lesser than HDFC and AXIS Banks, moderate Standard deviation (1.446) and co-efficient variance (10.877) lesser than Kotak Mahindra bank followed by AXIS and HDFC Bank respectively on Return on Net worth. The return on assets of Axis Bank has highest mean value (2.092) of Return on assets compare to the other banks. The Standard deviation of Kotak Mahindra bank (0.197) of Return on assets is highest compare to ICICI bank, followed by HDFC and Axis Banks. ICICI Bank has the lowest mean value (1.5), moderate standard deviation (0.173) and highest coefficient variance (11.556) compared to other banks on Return on assets. The Kotak Mahindra Bank has the highest interest spread (8.788) compare to other banks The Axis Bank has highest standard deviation (0.650) and co efficient of variance (9.016) of interests spread compare to other banks, followed by Kotak Mahindra Bank, HDFC Bank and ICICI Bank respectively. The ICICI Bank has moderate Mean value (7.304) with lowest standard deviation (0.322) and Co efficient Variance (4.413) compare to other banks on Interests spread. The Kotak Mahindra Bank has highest Mean value (130.434), Standard deviation (13.951) and Co-efficient of variance (10.696) of Credit deposit compare to other banks. ICICI Bank has the moderate mean value (106.818), Standard deviation (4.288) and Co efficient of variance (4.014) compare to other banks on credit deposit The ICICI bank has the highest mean value (6.678) of cash to deposit compared to other banks. The standard deviation of the Kotak Mahindra bank (0.658) is the highest compared to others and has the highest coefficient of variance (12.251) of cash to deposit. ICICI Bank has highest mean value (6.678), Moderate Standard deviation (0.638) and lower co efficient of variance (9.559) on cash deposit The Kotak Mahindra bank has the highest mean value (20.36), highest standard deviation and Co efficient of variance (4.151) of total assets ratio. ICICI bank has the lowest mean value (6.87), standard deviation of Asset turnover ratio of the ICICI bank (0.14) with the coefficient of variance (2.037846) when compared to other banks The ICICI Bank (111.136) has the highest mean value, Standard deviation (1.290) and co efficient of variance (1.160) of liquid assets to demand deposit compare to the other banks.

7.3. Hypothesis Testing

There is no significant difference between net profit margin among ICICI, HDFC, AXIS and KOTAK Mahindra private sector banks in India, since the calculated value of F is less than the table value. We accept Null Hypothesis. The other hypothesis (H02 to H08) there is a significant difference between Return on net worth, return on assets, Interests spread, credit deposit ratio, cash deposit ratio, Asset turnover ratio and liquid assets to demand deposit among ICICI, HDFC, AXIS and KOTAK Mahindra private sector banks in India, Since the calculated values are higher than the table value. Hence, we reject the null hypothesis (H02 to H08) and accept the alternate hypothesis. This clearly indicates that there are positive differences in comparison of ICICI Bank and selected private banks.

VIII. CONCLUSION

With various techniques applied in finding the financial performance of the ICICI Bank, HDFC Bank, AXIS Bank and Kotak Mahindra Bank, we find that ICICI bank has got the highest net profit margin, Cash deposit ratio and liquid assets demand ratio with the positive differences in terms of the variances and ANOVA testing for Hypothesis. Overall ICICI bank has got satisfactory financial position irrespective of having moderate and lowest ratios in terms of return on net worth, return on assets, interest spread and assets turnover ratio. In order to achieve best financial position in all factors, it must make efforts to increase its current assets and maintain a safety margin which will provide better liquidity position. Reduce the dependence on external equities for meeting capital requirements by focusing on internal equities and other sources of internal financing. Introduce schemes for public that provides higher rate of interest and shorter maturity period. In order to bring confidence and build their image, banks need to provide finance to more projects. The banks should simplify the procedure of advances for quick disbursement.

Reference

1. Balasubramaniam CS. Non-performing assets and profitability of commercial banks in India: assessment and emerging issues. Natl Mon Ref J Res Commerce Manage. 2012 June;(1):41-52.

2. Biswal BP, Gopalakrishna R. CD Ratio and Bank Profitability: An Empirical Study. Int J Financial Manage; c2014, 4(2).

3. Chandani A, Mehta M, Chandrasekaran KB. A Working Paper on the Impact of Gender of Leader on the Financial Performance of the Bank: A Case of ICICI Bank. Procedia Economics Finance. 2014;11:459-471. 4. Chandran D, Francis P. Inflation Versus Prime Lending Rates: An Empirical Analysis. Indian J Finance. 2014;8(2):5-14.

5. Padma D, Arulmathi V. Financial Performance of State Bank of India and ICICI Bank – A Comparative Study. Int. J Customer Relat; c2013. p. 18-24.

6. Gupta S. An empirical study of financial performance of ICICI bank a comparative analysis. IITM J Bus Stud; c2014, 1(1).

7. Jaiswal A, Jain C. A Comparative Study of Financial Performance of SBI and ICICI Banks in India. Int J Scientific Res Comput Sci Eng. 2016;4(3):1-6.

8. Kumar J, Selvan TR. Capital Adequacy Determinants and Profitability of Selected Indian Commercial Banks. GJRA - global journal for research analysis. 2014;3(11):57-58.

9. Malhotra N. Standard Chartered Bank, ICICI and SBIA Comparative Analysis in Post Reforms Scenario. EXCEL Int J Multidiscip Manage Stud. 2015;5(10):15-20.

10. Malik S. Study of Indian Banking Industry. IRACST Int J Commerce Bus Manage. 2016;5(4):103-109.

11. Nagarajan G, Ali AA, Sathyanarayana N. Financial Performance Analysis of State Bank of India and ICICI Bank in India: A Comparative Study. Int J Manage Res Rev. 2013;3(10):3649.

12. Sharma P. Financial Performance of ICICI Bank and SBI bank: A Comparative Analysis. Int J Res Aspects Eng Manage. 2014;1(1):20-24.

13. Prakash P, Sundararajan S. An Analytical Research on Fundamental and Technical Analysis of ICICI Bank Stocks in India. Asian J Res Soc Sci Humanities. 2016;6(9):895-907.

14. Prasad KVN, Ravinder G. Performance Evaluation of Banks: A Comparative Study on SBI, PNB, ICICI and HDFC. Adv Manag. 2011;4(2):43-53.

15. Sharma R, Goswami A, Kumar P. Private sector Banks in India: An assessment of financial performance. Midas Touch Indian J Multidiscip Res. 2014;2:1-3.

16. Shukla SS. Analyzing Financial Strength of Public and Private Sector Banks: A CAMEL Approach. Pac Bus Rev Int; c2015, 7(8).

17. Singh AK. An Analysis of Profitability Position of Private Banks in India. Int J Sci Res Publ. 2015;5(5):1-11.

18. Singh A, Tandon P. A study of financial performance: A comparative analysis of SBI and ICICI Bank. Int J Marketing, Financial Serv Manage Res. 2012;1(11):56-71.

19. Singh JP, Seth M. An Inclusive Study on Capital Adequacy performance of Selected Public Sector and Private Sector Banks in India. Int J Multifaceted Multiling Stud; c2017, 3(10).

20. Srinivasan P, Saminathan YP. A Camel Model Analysis of Public, Private and Foreign Sector Banks in India. Pac Bus Rev Int; c2016, 8(9)