



A Comparative Analysis of Pre and Post Merger Operational Performance of Select Indian Banks

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ABSTRACT

This paper attempts to analyze the financial growth of merged banks in India. Merged form major part of total banking system in India so there is a need to evaluate the performance of these banks. The study is based upon secondary data covering the period from 2012-2025. The study is selected 7 commercial merged banks in India. For analyzing the Factor analysis Ratio of Price Earnings Ratio (X1), Ratio of Market Price to Book Value Per Share (X2), Market Price to Cash EPS (X3), Market Capital to Share Capital (X4), EV / EBIDT (X5), Non Performing Asset to Net Advance (X6), Business Per Employee (X7), Profit Per Employee (X8), Return on Asset (X9), Return on Equity (X10), and Capital Adequacy Ratio (X11) calculated. It is concluded the factor analysis of various variables have shown variations from bank to bank. In this analytical research paper, an Attempt has been made to evaluate the effectiveness of mergers and acquisitions of the selected merged banks on the basis of selected variables prior and after mergers and acquisitions.

Introduction

Merger and Acquisitions in the service sector have brought a new style of doing business. The process of Merger and Acquisitions is considered essential to penetrate the market both domestic and foreign, to create new opportunities, build a strong marketing to be front end service provider for increased customer comfort which collectively shows the efficiency of productivity holds the key for competition advantage and survival for the banking firms. This also ensures better utilization of available resources. This analysis is also much useful to the stakeholders of the bank. So, in the present study the efficiency and productivity of the merged banks is analyzed with the help of the ratios.

The Reserve Bank of India (RBI) is actively moving in the direction of implementing the top methods in global banking. As part of this effort, the banking system's digital securities will be strengthened, strength will be increased, and standards will be shaped. A notable flood of cutting-edge technologies has been introduced into the vibrant banking industry today to provide better client service and experiences. In 1991, the government opened its doors to foreign banks, allowing them to set up shops and provide a wide range of financial services in the nation. This marked a pivotal moment for India's banking industry. This change not only opened up new possibilities but also created brand-new difficulties that the banking sector had to successfully overcome.

In the changing scenario, every business including service institutions like banks strive hard for survival in this growing era of core competence. Due to intense completion among the banks, every bank is doing something better than others to capture the business. It is necessary for any business firms to analyze its financial health. In this regard, it is necessary to analyze the financial health of merged banks to establish its financial health in the form of profitability, liquidity, solvency etc. This analysis provides a clear picture of the financial soundness of a firm and a road map outlining the directions the business is heading to. So an attempt has been made in this present chapter to have an insight into the examination of financial health of merged banks in India selected for the study.

Review of Literature

Kanchan, & Chowdary, R. (2023) attempted to analyze the financial performance of listed small finance banks in India using CAMEL model. The study covered four such banks for a five-year period, FY2018-2022.

Singh, Y., & Milan, R. (2023) conducted a detailed study on the financial performance of public sector banks employing CAMEL model and going beyond the common composite ratings. The study covered a longer period of 11 years, FY2009-2019 and 26 banks and tools like Generalized Method of Moments (GMM) and Canonical Correlation Analysis (CCA) are also considered for the study. The authors made a bold statement that banking sector reforms were insignificantly related to the performance of banks under study.

Tarsem Lal & Arjun Gupta (2023) attempted to measure the impact of the six CAMELS parameters on the performance of Indian commercial banks as reckoned by RoA and RoE. The researchers did an elaborate study, with panel ordinal least square regression and the work was confined to four public sector and four private sector banks covering fiscal years 2016-202.

Kantharaju, G. et al. (2024) in a longitudinal study on performance of select banks using CAMELS model limited to two each from public sector and private sector banks covered a longer period of ten years, FY2012–FY2021. The hypothesis testing indicated that there was no difference between the performance of public sector and private sector banks during the staid period of study.

Objectives

To analyze and compare the operational performance Ratio of Price Earnings Ratio (X1) , Ratio of Market Price to Book Value Per Share (X2), Market Price to Cash EPS (X3), Market Capital to Share Capital (X4), EV / EBIDT (X5), Non Performing Asset to Net Advance (X6), Business Per Employee (X7) , Profit Per Employee (X8), Return on Asset (X9), Return on Equity (X10), and Capital Adequacy Ratio (X11) of pre and post merged banks.

Hypothesis

There is no significant difference between pre merger and post merger Ratio of Price Earnings Ratio (X1) , Ratio of Market Price to Book Value Per Share (X2), Market Price to Cash EPS (X3), Market Capital to Share Capital (X4), EV / EBIDT (X5), Non Performing Asset to Net Advance (X6), Business Per Employee (X7) , Profit Per Employee (X8), Return on Asset (X9), Return on Equity (X10), and Capital Adequacy Ratio (X11)

Methodology

The study is analytical in nature, and it is based on secondary data. The information has been collected from the official directory and data base of Centre for Monitoring Indian Economy (CMIE) namely PROWESS. The published annual reports of the selected banks related websites, magazines and journals on finance have also been used as data source. The scope of the study is limited to the analysis of Interest income to to working fund (x1), Ratio of interest expenses to working fund (x2) and Ratio of Spread to Working fund (x3) merged banks cover the period of 10 years as five years before the date of merger and five years after the date of merger. The data has been analyzed using Mean, Standard Deviation, Coefficient of Variation, Compound Annual Growth rate and Paired t-test.

SAMPLE BANKS

Table 1

SI No	Name of the Transferor Bank	Name of the Transferee Bank	Date of Merger	Public / Private and Foreign Banks
1	Bank of Baroda	Dena Bank Vijaya Bank	1 st April, 2019	Public Bank
2	Canara Bank	Syndicate Bank	1 st April, 2020	Public Bank
3	Indian Bank	Allahabad Bank	1 st April, 2020	Public Bank
4	Punjab National Bank	Oriental Bank of Commerce United Bank of India	1 st April, 2020	Public Bank
5	State Bank of India	State Bank of Bikaner & Jaipur State Bank of Hyderabad State Bank of Mysore State Bank of Patiala State Bank of Travancore Bharatiya Mahila Bank	1 st April, 2017	Public Bank
6	Union Bank of India	Andhra Bank Corporation Bank	1 st April, 2020	Public Bank

Operational Ratios

In the present study the, efficiency and productivity of the merged banks is analyzed with the help of the following ratios. This section explains operational performances of the merged banks with the help of 11 ratios are used. They are given below:

- 1) Ratio of Price Earnings Ratio (X1)
- 2) Ratio of Market Price to Book Value Per Share (X2)
- 3) Market Price to Cash EPS (X3)
- 4) Market Capital to Share Capital (X4)
- 5) EV / EBIDT (X5),
- 6) Non Performing Asset to Net Advance (X6)
- 7) Business per Employee (X7)
- 8) Profit per Employee (X8)
- 9) Return on Asset (X9)
- 10) Return on Equity (X10)
- 11) and Capital Adequacy Ratio (X11)

Factor Analysis

Factor analysis is a multivariate statistical technique used to condense and simplify the set of large number of variables to smaller number of variables called factors. This technique is helpful to identify the underlying factors that determine the relationship between the observed variables and provides an empirical classification scheme of clustering of statements into groups called factors.

PRE MERGER PERIOD

Using all the eleven operational ratios namely X12, X2... X3, factor analysis is performed and the results are presented in the table 2.

TABLE 2
ROTATED FACTOR LOADINGS

Ratios	FACTORS			Communality
	1	2	3	
X1	0.96	0.15	0.09	0.968
X2	0.02	0.71	0.53	0.790
X3	0.89	0.24	0.09	0.866
X4	0.77	0.54	0.02	0.904
X5	0.83	0.45	0.03	0.899
X6	0.56	0.43	0.49	0.753
X7	0.22	0.83	0.01	0.748
X8	0.42	0.71	0.18	0.722
X9	0.12	0.11	0.94	0.925
X10	0.65	0.24	0.55	0.797
X11	0.40	0.67	0.01	0.616
Eigen value	7.19	3.00	1.79	11.99
% of variance	38.12	27.31	16.27	81.71
Cum% variance	38.12	65.44	81.71	

Source: Compiled from Annual Reports of the Banks

It is observed from the table 2 that gives the rotated factor loadings, communalities, Eigen values and the percentage of variance explained by the factors. Out of the 11 operational ratios, 3 factors have been extracted and these three factors put together explain the total variance of these ratios to the extent of 81.71 %.

CLUSTER OF OPERATIONAL RATIOS

In order to reduce the number of factors and enhance the interpretability, the factors are rotated. The rotation increases the quality of interpretation of the factors. There are several methods of the initial factor matrix to attain simple structure of the data. The varimax rotation is one such method used here to obtain better result for interpretation and the results are given in table 3

TABLE 3
CLUSTERING OF OPERATIONAL RATIOS INTO FACTORS

Factor	Ratios	Rotated factor loadings
I. (38.122 %)	1-X1	0.966
	2-X2	0.893
	3-X3	0.779

	4-X4	0.832
	5-X5	0.568
	6-X6	0.652
II. (27.318 %)	7-X7	0.711
	8-X8	0.835
	9-X-9	0.712
	10-X10	0.670
III. (16.274 %)	11-X11	0.947

Source: Compiled from Annual Reports of the Banks

Three factors were identified as the maximum percentage variance accounted. The 6 operational ratios price earnings ratio, price to cash EPS, market capital to share capital, EV\EBIDT, non performing assets to net advance and return on equity were grouped together as factor I and accounts for 38.12 % of the total variance. The 4 operational ratios price to book value per share, business per employee, profit per employee, and capital adequacy ratio constituted the factor II and accounts for 27.31 % of the total variance. The one operational ratio return on assets constituted the factor III and accounts for 16.27 % of the total variance.

Thus, the factor analysis condensed and simplified the 11 operational ratios and grouped into 3 factors explaining 81.71 % of the variability of all the 11 ratios. Thus, it is concluded that the factor analysis based on the strength of inter- correlation between the operational ratio during pre merger period has extracted three factors on priority basis and clustered the 6 ratios price earnings ratio, price to cash EPS, market capital to share capital, EV\EBIDT, non performing assets to net advance and return on equity in factor I, four in factor II and one namely return on assets in factor III explaining 81.71% of the eleven operational ratios. It is concluded that all the operational variables are reduced and classified with 3 factors with the variability of 81.71%.

POST MERGER PERIOD

Using all the eleven operational ratios namely X1, X2... X3, factor analysis is performed and the results are presented in the following tables.

TABLE 4
ROTATED FACTOR LOADINGS

Operational Ratios	FACTORS			Communality
	1	2	3	
X1	0.52	0.82	0.18	0.968
X2	0.43	0.82	0.34	0.79
X3	0.53	0.83	0.05	0.866
X4	0.56	0.74	0.29	0.904
X5	0.85	0.17	0.16	0.899
X6	0.87	0.32	0.15	0.753
X7	0.86	0.27	0.15	0.748
X8	0.35	0.68	0.57	0.722
X9	0.77	0.31	0.50	0.925
X10	0.08	0.31	0.83	0.797
X11	0.02	0.01	0.83	0.616
Eigen value	4.19	3.00	1.78	8.989
% of variance	36.88	31.76	20.83	89.483

Cum % variance	36.88	68.65	89.48	
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Source: Compiled from Annual Reports of the Banks

It is observed from the table 4 gives the rotated factor loadings, communalities, Eigen values and the percentage of variance explained by the factors. Out of the 11 operational ratios, 3 factors have been extracted and these three factors put together explain the total variance of these variables to the extent of 89.48 %.

CLUSTER OF OPERATIONAL RATIOS

In order to reduce the number of factors and enhance the interpretability, the factors are rotated. The rotation increases the quality of interpretation of the factors. There are several methods of the initial factor matrix to attain simple structure of the data. The varimax rotation is one such method used here to obtain better result for interpretation and the results are given in the table 5.

TABLE 5
CLUSTERING OF OPERATING RATIOS INTO FACTORS

Factor	Ratios	Rotated factor loadings
I (36.889%)	1-X1	0.855
	2-X2	0.873
	3-X3	0.862
	4-X4	0.779
II (31.764 %)	5-X5	0.826
	6-X6	0.828
	7-X7	0.836
	8-X8	0.743
	9-X-9	0.684
III (20.830 %)	10-X10	0.834
	11-X11	0.832

Source: Compiled from Annual Reports of the Banks

Three factors were identified as the maximum percentage variance accounted. The 4 operational ratios EV\EBIDT, non performing assets to net advance, business per employee, and return on assets were grouped together as factor I and accounts for 36.889 % of the total variance. The 5 operational ratios price earnings ratio, price to book value per share price to cash EPS, market capital to share capital and profit per employee constituted the factor II and accounts for 31.764 % of the total variance. The 2 operational ratios return on equity and capital adequacy ratio constituted the factor III and accounts for 20.830 % of the total variance. Thus the factor analysis condensed and simplified the 11 operational ratios and grouped into 3 factors explaining 89.483 % of the variability of all the 11 operational ratios.

Thus, it is revealed that the factor analysis based on the strength of inter – correlation between the operational ratios during post merger period has extracted three factors on priority basis and clustered the four ratios EV\EBIDT, non performing assets to net advance, business per employee, and return on assets in factor I, 5 in factor II and two in factor III explaining 89.483% of the eleven operational ratios. It is concluded that the operational variables are reduced and classified into 3 factors with the variability of 89.483.

Findings

1. It is inferred from the study that SBI, IDFC, BOB bank and IB have a higher price earnings ratio during post merger than the pre merger period.
2. The study shows that the CB bank alone enjoys good growth in the market price compared to the book value of its shares.
3. The study indicates that SBI, IB, PNB, bank and UBI enjoy good market value compared to its cash EPS.
4. It is inferred from the study that PNB, UBI bank and IB enjoy good market value for their shares compared to its book value.
5. The study discloses that the level of earnings of all banks except PNB available to meet the fixed commitments and the surplus available is good.
6. The study shows that SBI, BOB, PNB, CB bank and IB are in a position to reduce the proportion of non-performing assets reasonably.
7. It is inferred from the study that all the banks except IDFC enjoy good employee productivity in terms of its business.
8. It can be understood from the study that all the banks show excellent performance of employees and it is an indication that the merger is well received by the employees of these banks and it is one among other factors responsible for the positive change in the bank's overall profitability.
9. It is indicated by the study that SBI, BOB and UBI are in a position to have high return during the post merger period.
10. It is a disclosed fact that SBI, IDFC, BOB, UBI, CB, and PNBbank have high return during post merger.
11. The study indicates that all the banks except SBI have increased capital adequacy during the post merger period and the banks are in a safe position to face any additional risk that they are exposed to.

Suggestions

The primary objective of M & As activities is to build new competencies and capabilities, to remain competitive and to grow profitably thereby increase the value of the firm and stand as a leader in the market. There are few suggestions to the banks which are merged and have a plan to merge in future and also to other stakeholders that emanate from the study. The banks may take steps to improve their interest income by maximizing the loan and advances through optimum utilization of the manpower and other facilities and relevant measures. The merger activity leads to no prominent change in the establishment expenses and operating expenses. So the banks could concentrate on this area and take relevant measures to reduce it. The banks should analyze the specific reason for reduction in profitability and aim for higher profit through increased business (traditional and core business activities) the banks may take steps to control NPAs and improve the market price of their shares.

Conclusion

The new economic environment of the 1990s has facilitated M&As between banks. The present study indicated average performance of acquiring banks based on all indicators during the study period was relatively better. But it could not be concluded as evidence of improvement in terms of various parameters. With supported relative information a correct position can be identified. The policy makers can use the findings of the study as a base for framing policies relating to M&As in service sector. Also it identifies the areas of improvement for better profitability and performance for the banks. The investors could decide their investments in the service sector and the researchers can base this study for their future research activities in the area of M&As.

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