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Assessing the Impact of Merger on Asset Quality and Profitability: A Study on Bank of Baroda

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Abstract

The banking sector has witnessed significant consolidation in recent years. Bank merger is being considered as a key strategy for banks to improve their overall performance and competitiveness. This study attempts to evaluate and compare asset quality and profitability of the Bank of Baroda during pre and post-merger period. This study investigates the effect of merger on asset quality and profitability of the respective bank using data of last ten years covering the period from 2014-15 to 2023-24. The data are analyzed with the help of few parameters such as Gross and Net NPA, Gross and Net NPA Ratio to evaluate asset quality and RoA, RoE and Net Profit Margin as a few indicators of profitability. Compound annual growth rate along with descriptive statistics have been used to respond research queries. The study has found that asset quality as well as profitability of the bank have improved post bank merger but the improvement during the study period was not significant. Though in long run the bank

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Introduction

The banking sector is facing unprecedented challenges, including increasing competition, regulatory pressures, and rising operational costs. In this challenging environment, consolidation has emerged as a strategic imperative for banks to achieve sustainability. The banking industry is vital to the formation of capital in the country. However, various impediments to excellent progress in the banking industry exist, including managing risks, efficiency in bank operations, loan portfolio management, etc. (Veena & Pathi, 2018). To make Indian Banks capable of meeting higher funding needs and to compete globally, the Public Sector Banks (PSBs) in India went through the biggest consolidation in the year 2019 which reduced the number of PSBs to 12 in India. This consolidation is popularly termed as Mega Merger of banks in the history of bank mergers in India. These mega mergers often lead to the creation of banks with a larger asset base, enhanced capital strength, diversified portfolios, and an expanded geographical presence. However, while these mergers hold great potential for positive outcomes, they also pose challenges in terms of integrating corporate cultures, streamlining operations, and managing human resources across different entities (Singh & Yadav, 2021).

After the merger, it is anticipated that larger financial institutions will be inclined to extend their lending activities by assuming additional risks, potentially altering the risk profiles of these institutions if such actions are undertaken without adequate oversight. To increase the advisory oversight RBI proposed that banks should have a position of chief risk officer (CRO) and ensure that high standards of risks management are maintained (Ray, 2019). There have been number of studies raising issues of bank consolidation and impact on credit availability with numerous other policy level issues.

Bank mergers, especially in India, are seen as a key strategy to address the rising issue of Non-Performing Assets (NPAs). The consolidation of weaker banks with stronger ones aims to improve overall asset quality and financial stability. Merged entities benefit from an expanded capital base, which allows them to absorb bad loans more effectively. Additionally, they can implement better risk management systems and recovery mechanisms to reduce NPAs over time (Ghosh, 2021).

A larger bank can also leverage economies of scale, optimize operational costs, and improve loan recovery processes, contributing to the reduction in NPAs (Singh & Yadav, 2021).

Bank of Baroda has a rich history dating back to 1908. The Bank of Baroda became the third largest bank in India on April 1, 2019, after merging with Dena Bank and Vijaya Bank. As a leading public sector bank, Bank of Baroda has played significant role in the country's economic development, with a strong focus on financial inclusion, rural development and social welfare initiatives. The merger has significantly increased bank business which will increase profitability for long run and has improved its lending capacity, simultaneously increases the chances for bad and loss assets. Thus, present study attempts to evaluate and compare profitability and asset quality of the bank before and after the merger considering 10 years period in total.

Review of Literature

Muhammad Usman (2011) examined the profitability performance of the Royal Bank of Scotland from 2005-06 to 2008-09 by using ratio analysis. It is found that pre-merger profitability, liquidity, and solvency ratios are higher than post-merger ratios. It concluded that the merger had not improved the Royal Bank of Scotland's performance. Dilshad (2012) in his study examines the efficiency of market with respect to announcements of mergers and acquisitions using an event study methodology. Evidence of excess returns after the merger announcement was also observed along with the leakage of information that resulted in the rise of stock prices few days before the announcement of merger or acquisition. Meena and Kumar (2014) in their research have concluded that overall result of merger led to higher level of cost efficiencies for the merging banks. The forced merger among these banks helps in protecting the interest of depositors of weak banks but didn't yield any gain for stakeholders of the banks. They have suggested government and policymakers to take precautions before considering and promoting merger as a way to reap economies of scale. Sharma and Sidana (2017) in their paper expressed the impact of SBI merger on financial condition of SBI. The SBI will get visibility at global level in the network increase of SBI & it is also able to provide cheaper funds more easily. The gross & net NPA of SBI it will come down after merger with their associate. The efficiency & effectiveness of the business it will increase because of single management. Ritesh Patel (2018) evaluated the performance of Public Sector Banks taking 4 PSBs as sample of the study for the period of 2008-09 to 2016-17. The study showed substantial decrease in ROE, ROA, Net Profit Margin, investment yield whereas Earnings per share, profit per employee grew post merger. Ravi Agarwal (2019) analysed the performance of nationalised banks from 2013-2018 using CAMEL model which showed that Indian Bank took top outstanding position in overall performance followed by Andhra Bank whereas Union Bank of India showed poor performance in that respect. Nanda and Goswami (2020) in their study stated that the track record of merger and acquisition in Indian banking have been fruitful so far for the economy but at individual level it has not been that good. Many have stated various arguments in favors and against the merger drive. Sasikala (2022) evaluated the performance of the SBI after the merger from 2016-17 to 2020-21. The study utilized secondary data and the analysis discovered that the SBI performance was better after the merger.

The objective of the present study is to evaluate and compare the asset quality and profitability of the Bank of Baroda before and after the merger.

Hypotheses of the Study

For the present research, following hypotheses have been developed:

Ho_1 = There is no significant difference in asset quality of the Bank of Baroda before and after the merger.

Ho_2 = There is no significant difference in profitability of the Bank of Baroda before and after the merger.

Research Methodology

The study employs a quantitative research design to achieve the objective the study. 10 years data has been considered for the study which includes 5 years before merger and 5 years after merger for the period 2014-15 to 2023-24. Data to evaluate asset quality of the bank and profitability have been collected from the annual reports of the bank for the said period. To ascertain the asset quality of the bank Gross Non Performing Asset (GNPA), Gross Non Performing Asset (GNPA) ratio, Net Non Performing Assets (NNPA), Net Non Performing Assets (NNPA) ratio have been considered and Return on Assets (RoA), Return on Equity (RoE) and Net Profit Margin are some of the parameters for evaluating profitability of the bank. Compound annual growth rate (CAGR) for 5 years has been determined for each parameter. Descriptive statistics such as mean and standard deviation and inferential statistic i.e. paired t test at 5% level of significance has been used to test the hypotheses of the study.

Results and Discussion

Table 1: Asset Quality- Descriptive Statistics

Pre Merger Period (₹ in crore)					Post Merger Period (₹ in crore)				
Year	Gross NPA (₹)	Gross NPA Ratio (%)	Net NPA (₹)	Net NPA Ratio (%)	Year	Gross NPA(₹)	Gross NPA Ratio (%)	Net NPA (₹)	Net NPA Ratio (%)
2014-15	16261	3.72	8069	1.89	2019-20	69381	9.4	21577	3.13
2015-16	40521	9.99	19406	5.06	2020-21	66671	8.87	21800	3.09
2016-17	42719	10.46	18080	4.72	2021-22	54059	6.61	13364	1.72
2017-18	56480	12.26	23483	5.49	2022-23	36764	3.79	8384	0.89
2018-19	48233	9.61	15609	3.33	2023-24	31834	2.92	7213	0.68
CAGR (%)	24%	21%	14%	12%		-14%	-21%	-20%	-26%
Mean	40842.90	9.21	16929.50	4.10		51741.8	6.318	14467.6	1.902
SD	15058.25	3.23	5715.08	1.48		17029.73	2.92	6985.07	1.17

Source: Compiled by authors from annual reports

From the above table it has been observed that GNPA has increased from ₹16261 crore in 2014-15 to ₹48233 crore in 2018-19 during pre merger period with a positive CAGR of 24% which was not desirable. Five year annual average GNPA during the period was ₹40842.90 crore. GNPA has increased initially to ₹69381 crore in 2019-20, the first financial year post merger. GNPA recorded continuous decrease to ₹31834 crore in 2023-24 over the post merger period. Even though GNPA has decreased continuously, the five year annual average in the post merger period stood at ₹51,741.8 crore. The CAGR for the post merger period was negative (-)14% and considered as desirable as it showed improvement in asset quality leading to reduction in GNPA.

In the pre merger period, GNPA ratio of the bank has increased from 3.72% in 2014-15 to 9.61% in 2018-19. the CAGR of pre merger period stood as 21% . In the first year of the post merger period, GNPA ratio of the bank was 9.4% which declined continuously from 9.4% in 2019-20 to 2.92% in 2023-24. CAGR was negative at -14%, which was appreciable.

NNPA has increased from ₹8069 crore in 2014-15 to ₹15609 crore in 2018-19 during pre merger period with a positive CAGR of 14% which was not desirable . Five year annual average NNPA during the period was ₹16929.50 crore. On the other side, NNPA in the first year post merger recorded an increase to ₹21577 crore which substantially decreased to ₹7213 crore in 2023-24 over the post merger period. Even though NNPA has decreased continuously, the five year annual average in the post merger period stood at ₹14467.6 crore. The CAGR for the post merger period was negative (-)20% which has been considered desirable as the quality of asset improved during post-merger period.

In the pre-merger period, NNPA ratio of the bank stood at 1.89% in 2014-15, showed fluctuations during the period and stood to 3.33% in 2018-19. the CAGR of pre-merger period stood as positive 12% . During the post-merger period, NNPA ratio of the bank was 3.13% 2019-20 declined to 0.68% in 2023-24. CAGR was recorded as negative at -26% considered as better than the pre-merger period NNPA ratio indicating improvement in asset quality of the bank.

Table 2: Asset Quality- Paired t Test

Parameters	p value	Hypotheses
Gross NPA (₹)	0.468	Accept Ho_1
Gross NPA Ratio (%)	0.309	Accept Ho_1
Net NPA (₹)	0.641	Accept Ho_1
Net NPA Ratio (%)	0.084	Accept Ho_1

Source: Generated through MS-Excel

The above table showed the paired t test result of pre and post-merger asset quality on the basis different parameters at 5% level of significance. It has been observed that calculated p value of different parameters above 0.05 indicated no significant difference in asset quality of the bank before and after the merger. Thus, Ho_1 has been accepted.

During the pre merger period the Net profit of the bank drastically decreased in the year 2015-16 and 2017-18 as a result of which RoA, RoE and Net Profit Margin during these years showed a negative result. Negative performance of these parameters during mid years of pre merger study period has affected CAGR of the study period. However, the five years annual average of Ro A was -0.08% which was also due to negative change in RoA in the year 2015-16 and 2017-18. Five years annual average of RoE and Net profit margin also showed negative result for the same cause. Post merger period has shown a constant increase in all the selected parameters of profitability for the present study.

During the first two initial years after bank merger, RoA, RoE and Net profit margin increased at a marginal rate whereas these three parameters has changed positively from 2021-22 to 2023-24. CAGR of RoA recorded at 86%, RoE recorded at 73% and Net Profit margin recorded at 83% for post-merger study period.

Table 3: Profitability- Descriptive Statistics

Pre-Merger Period (₹ in crore)				Post Merger Period (₹ in crore)			
Year	RoA (%)	RoE (%)	Net Profit Margin (%)	Year	RoA (%)	RoE (%)	Net Profit Margin (%)
2014-15	0.48	9.21	7.17	2019-20	0.05	1.23	1.45
2015-16	-0.8	-17.46	-30.42	2020-21	0.07	1.5	2.01
2016-17	0.2	4.53	6.82	2021-22	0.57	11.86	16.49
2017-18	-0.34	-7.64	-10.96	2022-23	0.97	18.34	27.46
2018-19	0.06	1.18	1.75	2023-24	1.12	18.95	30.04
CAGR (%)	-34%	-34%	-25%		86%	73%	83%
Mean	-0.08	-2.04	-5.13		0.556	10.376	15.49
SD	0.50	10.60	15.93		0.50	8.68	13.55

Source: Compiled by authors from annual reports

Though the first glance of descriptive statistics indicated substantial improvement in bank's profitability post-merger but the comparison has not brought fair result as the bank sustained fluctuations in its net earnings during pre-merger period led by several reasons and increased in its operating cost.

Table 4: Profitability- Paired t Test

Parameters	p value	Hypotheses
RoA (%)	0.108	Accept Ho_2
RoE (%)	0.103	Accept Ho_2
Net Profit Margin (%)	0.065	Accept Ho_2

Source: Generated through MS-Excel

The result of paired t test for profitability parameters at 5 % level of significance showed that the determined p value for different parameters was above the standard value 0.05 which indicated that the improvement in profitability of the bank after the bank merger was insignificant and Ho_2 has been accepted which stated no significant difference between the profitability of the bank before and after the bank merger.

Conclusion

Based on the aforementioned analysis of collected data, it is apparent that the Bank of Baroda has exhibited enhancements in terms of asset quality and profitability performance after the merger. The improvement is insignificant in terms of Asset quality and profitability of the bank. Nonetheless, the degree of progress varies across different parameters, underscoring the imperative for the bank to augment these facets by concentrating on early indicators signaling a transition of standard loans into the Non-Performing Assets (NPA) category, bolstering credit evaluation procedures, and effectively managing the accrual of new NPAs. In conclusion, while the Bank of Baroda has made commendable progress in improving its asset quality and profitability post-merger, there is still room for further enhancement. By continuing to focus on early indicators, strengthening credit assessment procedures, and efficiently managing NPAs, the bank can solidify its position as a resilient financial institution in the market.

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