International Journal of Multidisciplinary Research and Growth Evaluation.

A Study on Merger and Acquisition in Indian Banking Sector

Sujatha N Sheeri [1*], **Sujaya H** [2]
[1] Research Scholar, Institute of Management & Commerce, Srinivas University, Mangalore, India
[2] Research Professor, Institute of Management & Commerce, Srinivas University, Mangalore, India

* Corresponding Author: **Sujatha N Sheeri**

Article Info
ISSN (online): 2582-7138
Volume: 06
Issue: 02
March-April 2025
Received: 18-02-2025
Accepted: 14-03-2025
Page No: 1107-1117

Abstract
The Indian banking sector has undergone significant transformation in recent years, particularly through mergers and acquisitions (M&A), aimed at strengthening financial institutions and improving operational efficiency. One of the prominent mergers is the amalgamation of Vijay Bank with Bank of Baroda, forming a major player in the Indian banking landscape. This study investigates the impact of this merger on the operational performance, financial stability, and customer service in the banking sector. It explores the strategic motives behind the merger, including synergies, cost reduction, market expansion, and enhanced competitiveness. The study analyzes both pre- and post-merger financial data, operational metrics, and customer satisfaction to evaluate the success of the merger. Additionally, it addresses the regulatory environment, the role of government policy, and challenges faced during integration. By offering insights into the merger's outcomes, the research contributes to understanding the effects of such consolidations on the banking sector's growth and sustainability. The findings provide valuable implications for policymakers, banking professionals, and future merger strategies in India's evolving financial sector.

DOI: https://doi.org/10.54660/.IJMRGE.2025.6.2.1107-1117

Keywords: Merger and Acquisition, Vijay Bank, Bank of Baroda, Indian Banking Sector, Operational Performance, Market Share, Customer Satisfaction, Synergies, Financial Stability, Regulatory Challenges, Government Policy, Banking Consolidation

Introduction

Mergers & Acquisitions

Mergers and Acquisitions (M&A) involve strategic transactions where companies consolidate or transfer ownership, assets, or business units to create new entities or enhance existing operations. Through various mechanisms, M&A enables organizations to reorganize their operations, driving expansion, diversification, or restructuring. As a key element of corporate strategy, M&A allows businesses to adjust their market presence, respond to changing circumstances, and strengthen their competitive position. A merger represents the statutory fusion of two separate business entities, culminating in a unified organization. Conversely, an acquisition entails the purchase of a majority stake or assets of one entity by another, effectively transferring ownership. In rare instances, a 'merger of equals' occurs when leaders of both organizations mutually recognize the symbiotic benefits, fostering an equitable union. From a legal and financial standpoint, mergers and acquisitions typically result in the consolidation of assets and liabilities under a single entity, often blurring the distinction between the two terms.

Mergers and acquisitions are tightly regulated globally to prevent anti-competitive practices. In the US, the Clayton Act bans deals that significantly reduce competition or foster monopolies. The Hart-Scott-Rodino Act requires companies to alert the Federal Trade Commission and the Department of Justice's Antitrust Division to large mergers and acquisitions.

History of Banking Sector

India's banking legacy predates its 1947 independence, with roots tracing back to ancient civilization. The nation's financial framework, integral to economic development, has evolved significantly over five centuries. The Indian banking system, a vital component, has transformed in response to economic fluctuations, shifting financial demands, and technological innovations.

Throughout its storied history, India's banking industry has adapted to various milestones, from traditional lending practices to modern digital finance. This dynamic evolution has been shaped by the interplay between economic growth, consumer needs, and technological advancements.

The First banking institution was the Bank of Hindustan established in 1770 and it is the first bank at Calcutta under European management. It was liquidated in 1830-32. In 1782 General Bank of India was set up but it failed in 1791.

Following India's independence, the government implemented a mixed economy model in 1948, integrating state intervention with market forces to propel economic development. This strategy profoundly influenced the Indian banking sector's evolution.

The Reserve Bank of India, established in 1935, underwent nationalization in 1949, granting it comprehensive regulatory powers over the country's banking system.

History of Bank Of Baroda

BOB is one of India's largest bank in public sector, with assets totaling INR 16 trillion! It has established itself as a prominent player in the banking industry, catering to a diverse range of customer. With a presence across 167 countries, BOB operates through a network of the 8,000 branches, serving approximately 165 million customers. The bank's wealth business covers a broad spectrum of clients, ranging from mass affluent to HNI (High Net worth Individuals) and UHNI (Ultra High Net worth Individuals) clients.

Founded by visionary Maharaja Sayajirao Gaekwad III on July 20, 1908, in Baroda, Gujarat, Bank of Baroda has traversed a remarkable journey. From its humble beginnings, the bank has evolved into one of India's premier public sector banks.

Throughout its illustrious history, Bank of Baroda has demonstrated adaptability, responding to the dynamic needs of its customers and the ever-changing banking landscape. With a legacy of delivering comprehensive financial solutions to individuals, businesses, and communities, the bank has significantly contributed to India's economic development. As a pivotal player in the nation's growth story, Bank of Baroda has facilitated progress across various sectors, fostering economic expansion and empowering generations.

Bank of Baroda has consistently enhanced its offerings and broadened its presence through forward-thinking initiatives and a customer-centric strategy. Demonstrating resilience, the bank effectively navigated the COVID-19 pandemic's disruptions. A significant milestone was achieved with the successful integration of Dena Bank and Vijaya Bank, transforming Bank of Baroda into India's second-largest public sector bank. This strategic merger bolstered the bank's market position, amplifying its capabilities and reach.

Under the Leadership of Sanjiv Chadha, who assumed the role of managing Director and CEO in September 2020, Bank of Baroda has taken a fresh approach, focusing on customer-centricity and implementing innovative strategies to enhance the overall banking experience. With its extensive history, strong presence, and commitment to customer satisfaction, Bank of Broad continues to play a vital role in Indian banking sector. In the following sections, we will conduct a comprehensive SWOT analysis of Bank of Baroda, assess its financial performance, explore its market position and competition, delve into its international operations and expansion, and examine its strategic initiatives and innovations.

Vijaya Bank Merger

Vijaya Bank, a publicly traded financial institution, delivers a wide range of services including online banking, personal financial solutions, corporate banking, and NRI services."

"With an extensive network of 1,786 branches, 50 extension counters, and 1,562 ATMs, Vijaya Bank maintains a robust presence, particularly in its home state of Karnataka."

"Vijaya Bank ranks 43rd among its 208 industry peers, with notable sector trends including $674 million in funding across 15 rounds, involving 29 investors, and 48 publicly traded companies.

Vijaya Bank was established on October 23, 1931, by the late Shri A.B. Shetty and other enterprising farmers in Mangalore, Karnataka. The bank was founded to foster banking habits among the farming community in the Dakshina Kannada district. In 1958, Vijaya Bank was recognized as a scheduled bank. Between 1963 and 1968, the bank expanded significantly, merging with nine smaller banks, which contributed to its growth and prominence. On April 15, 1980, Vijaya Bank was nationalized.

The bank is notable for being one of the few in India to hold principal memberships with both VISA International and MasterCard International. Vijaya Bank has consistently focused on technological advancements; by October 2005, all 913 branches were computerized, covering 97% of the bank's total business.

Literature reviews on the study

1) Verma, P & Sharma, R. (2023)

Topic: Impact of mergers on performance and efficiency in Indian Banks

Banks involved: Oriental Bank of commerce and Punjab National Bank

The study evaluates the post-merger performance of oriental bank of commerce and Punjab National Bank. The analysis highlights improvements in operational efficiency but notes challenges with workforce integration and technological upgrades.

2) Kumar, A & Singh, M (2023)

Topic: The effect of bank mergers on shareholder wealth in India.

Bank involved: Bank of Baroda and Vijay bank

This paper investigates the effect of mergers on shareholder value in the case of Bank of Baroda's merge with Vijay Bank.

3) Sharma, P & Gupta, A (2022)

Topic: Post merger preference analysis of public sector banks in India

Banks Involved: Canara Bank and Syndicate Bank

The study examines the merger of Canara Bank and Syndicate Bank, focusing on financial performance and customer satisfaction. The merger is found to have boosted overall profitability, but integration challenges in human resources and technology adoption slowed the potential benefits in the short term.

4) Nair, R & Rajan, V (2022)
Topic: Consolidation in the India Banking Sector: Challenges and Opportunities
Bank involved: Union Bank of India, Corporation Bank, and Andhra Bank
This research provides a holistic review of the Union Bank, Corporation Bank, and Andhra Bank merger. It discusses the operational challenges, the cultural integration issues, and the long-term positive prospects in terms of cost saving and market expansion.

5) Rao, S & Mishra, P (2021)
Topic: Analyzing the Efficiency of post-merger public sector banks
Banks involved: Indian Bank and Allahabad Bank
This paper studies the merger between Indian Bank and Allahabad bank, focusing on financial ratios and efficiency metrics.

6) Potel, R & Desai, S (2021)
Topic: Financial and operational performance of Indian Banks post-merger
Bank involved: state bank of India and its associate banks
The paper reviews the 2017 merger of the State bank of India with five associate banks, but continues the analysis into 2021 to assess long-term effects.

7) Jaiswal and Jain (2021)
Topic: Post-Merger Performance of Indian Public Sector Banks
Banks Involved: Allahabad Bank and Indian Bank
The study analyzed the financial performance following the merger of Allahabad Bank and Indian Bank. It found that the merger strengthened the financial position of the combined entity, although integration challenges continued to be a concern.

8) Prasad, S & Kumar, A (2020)
Topic: consolidation in Indian public sector banks : A case study approach
Bank involved: Bank of Baroda Vijay bank, Dena bank
The paper analyzes the large-scale consolidation of Bank of Baroda with Vijay Bank and Dena bank. The study focuses on the initial integration phase, identifying human resource and technological challenges while acknowledging potential long-term efficiency gains.

9) Mishra, R & Singh, K (2020)
Topic: Banking mergers in India: pre-and post-merger performance evaluation
Bank involved: Corporation Bank, Andhra Bank, And Union Bank of India.
This research assesses pre- and post-merger financial performance metrics, such such as return on assets and return on equity.

10) Yadav and Bhunia (2020)
Topic: Performance of Merger Entities in Public Sector Bank
Banks Involved: Canara Bank and Syndicate Bank
This paper reviewed the merger of Canara Bank and Syndicate Bank, highlighting the findings revealed that while the mergr was expected to improve profitability, there were short-term disruptions in day-to-day operations.

11) Kaur and Kaur (2019)
Topic: Impact of Mergers on Indian Public Sector Banks
Banks Involved: Punjab National Bank, Oriental Bank of Commerce, and United Bank of India
This study examined the 2019 mergers within the public sector and evaluated their potential effects on performance and market share.

12) Mukherjee and De (2019)
Topic: Evaluation of Risk in banking Mergers
Banks involved: Vijaya bank and Dena bank with Bank of Baroda
The research focused on the 2019 merger of Vijaya bank and Dena bank with Bank of Baroda. It discussed how the merger was a part of Broader banking consolidation efforts by the Indian government to reduce risk and increase competitiveness.

13) P. Ghosh and G. Dutta (2018)
Topic: Financial Performance of Bank after mergers
Bank involved: ICICI Bank of Bank of Rajasthan
The paper analyzed the post-merger financial performance of ICICI bank after acquiring the bank of Rajasthan in 2010.

14) Ruchi Tripathi (2016)
Topic: Impact of Mergers on the Efficiency of banks
Bank involved: State Bank of India and its subsidiaries
The Study examined the efficiency changes post-merger, particularly in the contest of SBI merging with its subsidiaries. The paper concluded that the merger enhanced overall operational efficiency and financial stability in the long term.

15) Kuriakose, S & Gireeshkumar, G. S (2017)
Topic: Mergers and Acquisitions in the Indian Banking Sector: Motives, Impact, and Challenges
Banking Mergers: Punjab National Bank and New Bank of Indian
The study highlighted the historical merger between Punjab National Bank and New Bank of India, analyzing motives such as gaing market share, reducing competition, and improving finanfial stability.

16) Kaur, R. & Kaur, G. (2015)
Topic: Post-Merger Financial Performance of Indian Banks
Bank Mergers: Oriental Bank of Commerce and Global Trust Bank
This paper analyzed the financial performance of Oriental Bank of Commerce before and after its merger with Global Trust Bank. It found that the merger contributed to recovery from non-performing assets and enhanced operational efficiency in the combined entity.

17) Gupta and Kumar (2013)
Topic: Impact of M&A on shareholder value
Banks Involved: Kotak Mahindra Bank and ING Vysya Bank
This paper analyzed the merger of kotak Mahindra Bank anf IMG Vysya Bank, particularly focusing on shareholder value. The study found that shareholder returns improved post-

merger, driven by enhanced customer base and operational synergies.

18) Devarajappa, S (2012)
Topic: Merger and Acquisition in the banking Sector: An Analysis of Indian Banks
Bank Mergers: ICICI Bank and Bank of Rajasthan
The paper analyzed the financial and strategic rationale behind the acquisition of Bank of Rajasthan by ICICI Bank

19) Sharma and Jain (2011)
Topic: Role of merger in financial sector Consolidation
Bank Involved: HDFC Bank and Centurion Bank of Punjab
The paper explored the strategic motives behind the merger of HDFC Bank and Centurion Bank of Punjab. The findings showed that the merger helped HDFC Bank expand its network and increase its market share, particularly in the retail banking sector.

Research Design

Problem of Statement

The study focus will be on "A Study on Merger and Acquisition in Indian Banking Sector".
Understanding how mergers and acquisitions influence the efficiency of operations, the stability of financial institutions, and the competitive dynamics within the sector. It sets a clear direction for research into significant aspect of bank of Baroda.

Need of Statement

The wave of mergers and acquisitions in the Indian banking sector represents a strategic initiative aimed at fostering financial stability, enhancing operational efficiency, and leveraging synergies to better customers. Consolidation among banks is pivotal in addressing challenges such as non-performing assets and strengthening the overall resilience of the banking system. These reforms are poised to reshape the sector, promoting robust competition and positioning Indian banks on a stronger footing to navigate global economic dynamics.

Objectives of Statement

- To study the performance of bank of Baroda & Vijya bank before merger.
- To assess the impact of merger and acquisition.
- To identify the success factors by using different ratios.

Scope of Study

The study examines all financial activities of the bank both before and after the merger of the two banks. It aims to evaluate the bank's performance through ratio analysis and to determine whether the bank is growing efficiently and effectively following the merger.

Research Methodology

1) Sample Size
a) Bank of Baroda
b) Vijaya bank

2) Sources of Data
Secondary data for this study was gathered from trustworthy internet sources, such as value Research, bankofbaroda.in screener
www.bankofbaroda.in
www.vijayabank.in

3) Tools and Techniques

- Return on Assets = Net Income/Total Assets
- Assets Turnover Ratio = Sales Revenue/ Total Assets
- Net benefit Ratio = Net Profit/ Capital employed *100
- Return on capital employed = Net profit/ Capital employed*100
- Current Ratio = Current assets/ Current Liabilities
- Quick ratio = Quick assets/ Current Liabilities
- Cash Ratio = Cash & Cash Equivalents/ Current Liabilities
- Net profit margin ratio = Net profit/Revenue

Advantages of Study

The study can identify how banks streamline their operations post-merger.
Provides insights into the bank's performance before and after the merger.
Assesses the bank's growth potential following the merger.

Limitations of the Study

Limited Data Availability: Historical data on M&A transactions, especially in smaller banks, may not be easily accessible or comprehensive.
Time Horizon: M&A effects on performance may take to materialize, but short study periods might not capture these changes effectively.
Lack of Standardized Metrics: Different banks use varying performance indicators, making it difficult to compare pre- and post-merger performance across institutions.

Data analysis and interpretation

1) Return on Assets = Net Income/Total Assets Pre-merger

Vijay bank -2017 = 750/1,45,409 = 0.005
2018 = 727/1,54,882 = 0.004
Bank of Baroda -2017 = 1,855/7,19,216 = 0.002
2018 = 1,836/7,47,796 = 0.002

Post-merger
Bank of Baroda – 2024= 18,869/16,54,775 = 0.011
2023= 15,005/15,25,871 = 0.009

4.1 The Table shows on return on assets

Table 1

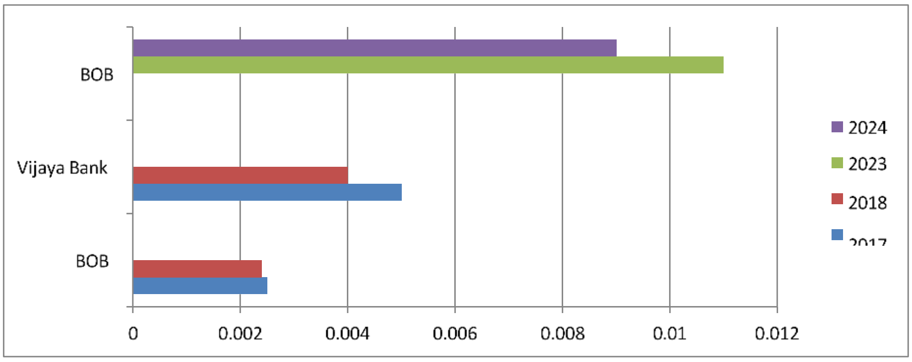
Pre-merger				Post-merge	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
0.005	0.004	0.002	0.002	0.011	0.009

Analysis:
Pre-Merger: Vijay Bank Value decreased from 0.005 in 2017 to 0.004 in 2018, a reduction of 0.001, or a 20% decrease. Bank of Baroda Value decreased from 0.002 in 2017 to 0.002 in 2018, a decrease of 0.000, or 0% decrease (essentially stable). Vijay Bank had significantly higher values compared to Bank of Baroda in both 2017 and 2018.

Post-Merger Trends: Bank of Baroda (post-merger): Value increased from 0.002 in 2018 (the last year of pre-merger) to 0.011 in 2023, which is a substantial increase of

0.009, or a 450% increase. Value then decreased from 0.011 in 2023 to 0.009 in 2024, a decrease of 0.002, or about an 18.18P% decrease.

4.1 The Graph Shows on Return on Assets



Graph 1

Interpretation:

Pre-Merger: Vijay Bank was performing better in terms of the values provided but saw a more significant reduction in value over the period. Bank of Baroda had lower values but showed stability during these years.

Post-Merger: The merger resulted in a substantial increase in the combined Bank of Baroda's performance from the pre-merger levels, indicating a successful integration and positive outcomes in the initial years following the merger. The recent decrease in 2024 could indicate emerging challenges or adjustments post-merger, necessitating further investigation into factors impacting this recent decline.

2) Assets Turnover Ratio = Sales Revenue/ Total Assets

Pre-merger

Vijay bank- 2017 = 12,590/1,45,409 = 0.08

2018 =12,590 /1,54,882 = 0.08

Bank of Baroda- 2017 = 44,473/7,19,216 = 0.061

2018 = 46,056/7,47,798 = 0.061

Post-merger

Bank of Baroda - 2024 = 1,18,379/16,54 774 = 0.071

2023 = 94,503/15,25,871 = 0.062

4.2 The table shows on assets turnover ratio

Table 2

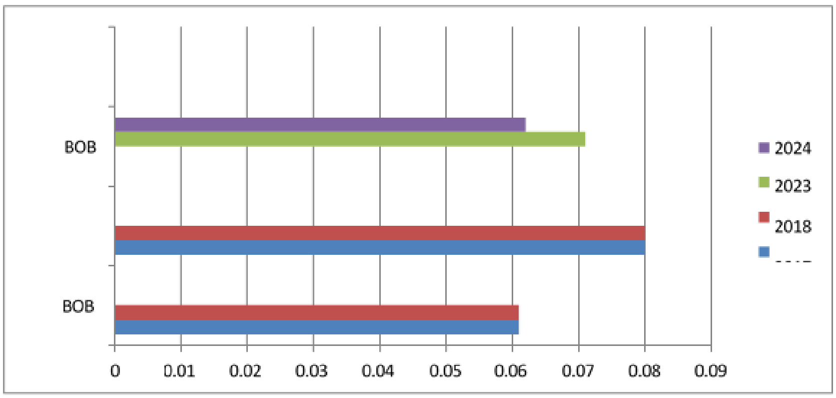
Pre-Merger				Post-merger	
Vijjay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
0.08	0.08	0.061	0.061	0.071	0.062

Analysis:

Pre-Merger Trends: Vijay Bank The value remained constant at 0.08 from 2017 to 2018. This indicates stability in performance during this period. Bank of Baroda The value also remained constant at 0.061 from 2017 to 2018, showing similar stability as Vijay Bank but at a lower level. Vijay Bank had a higher value (0.08) compared to Bank of Baroda (0.061) in both 2017 and 2018. Vijay Bank's values were consistently higher, indicating stronger performance in the years leading up to the merger

Post-Merger Trends: Bank of Baroda The value increased from 0.061 in 2018 to 0.071 in 2023, reflecting an increase of 0.01, or approximately a 16.39% increase. The value then decreased to 0.062 in 2024, a reduction of 0.009, or about a 12.68% decrease. Post-merger, Bank of Baroda experienced an initial increase in value from 0.061 in 2018 to 0.071 in 2023. This suggests that the merger had a positive impact, leading to improved performance in the early years after the merger.

4.2 The graph shows on assets turnover ratio



Graph 2

Interpretation:

Pre-Merger: Vijay Bank was performing better than Bank of Baroda, with a higher and stable value during the pre-merger period. Both banks showed stability but at different levels, with Vijay Bank having superior performance metrics.

Post-Merger: The merger led to an improvement in Bank of Baroda's performance initially, as evidenced by the increase from 0.061 to 0.071. This indicates that the merger had a positive impact on the combined entity's performance. The subsequent decrease in 2024 might indicate that while the merger improved performance initially, there are potential issues or adjustments that need addressing to sustain and further improve performance.

3) Net benefit Ratio = Net profit/Capital employed * 100

Pre-merger

Vijay Bank -2017 = 750/59136*100 = 1.26

2018 = 727/63395*100 = 1.14

Bank of Baroda - 2017 = 1855/4,25,924*100 = 0.43

2018 = 1836/3.86,457*100 = 0.48

Post-Merger

Bank of Baroda - 2023 = 18869/822384*100 = 2.29

2024 = 15005/711161*100 = 2.10

4.3 The table shows on net benefit ratio

Table 3

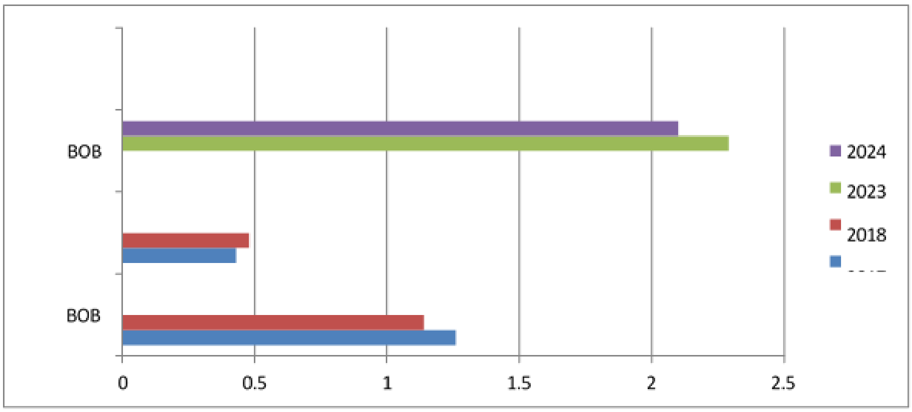
Pre-Merger				Post-Merger	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
1.26	1.14	0.43	0.48	2.29	2.10

Analysis:

Pre-Merger Trends: Vijay Bank The value decreased from 1.26 in 2017 to 1.14 in 2018. This represents a decrease of 0.12, or approximately a 9.52% reduction. Bank of Baroda: The value increased from 0.43 in 2017 to 0.48 in 2018. This represents an increase of 0.05, or approximately an 11.63% increase.

Post-Merger Trends: Bank of Baroda The value increased from 0.48 in 2018 to 2.29 in 2023. This represents an increase of 1.81, or approximately a 377.08% increase. The value then slightly decreased to 2.10 in 2024. This represents a decrease of 0.19, or approximately an 8.30% reduction.

4.3 The graph shows on net benefit ratio



Graph 3

Interpretation:

Pre-Merger: Vijay Bank was performing at a higher level than Bank of Baroda, though Vijay Bank's performance declined slightly, while Bank of Baroda's performance improved.

Post-Merger: The merger significantly boosted Bank of Baroda's performance, with a remarkable increase in value. The substantial growth from 0.48 in 2018 to 2.29 in 2023 highlights the success of the merger in enhancing the bank's overall performance.

4) Return on capital employed = net profit/capital employed *100 Pre-merger

Vijay Bank - 2017 = 750 /1,37,784(1,45,409-933+6692)*100 = 0.54

2018 = 727/ 1,46,730 (154,882-999+7153)* 100 = 0.49

Bank of Baroda - 2017 = 750/6,76,149(719216-462+42605) = 0.11

2018 = 727/701230(747796-530+46,036) = 0.10

Post-merger

Bank of Baroda - 2024 = 18,869/16,54,775-(3,864+76,429) 15,74,482 * 100 = 1.198

2023 = 15,005/15,25,871-(4,109+73,120) 14,48,642 * 100 = 1.035

4.4 The table shows on return on capital employees

Table 4

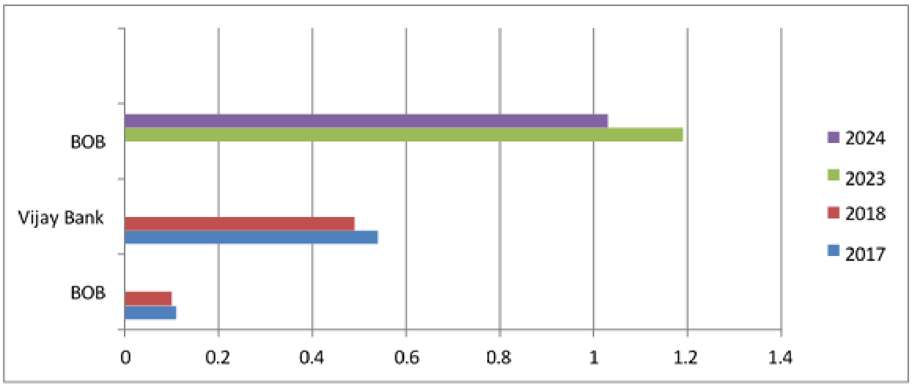
Pre-Merger				Post-Merger	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
0.54	0.49	0.11	0.10	1.198	1.035

Analysis:

Pre-Merger Trends: Vijay Bank The value decreased from 0.54 in 2017 to 0.49 in 2018. This represents a decrease of 0.05, or approximately a 9.26% reduction. Bank of Baroda The value decreased from 0.11 in 2017 to 0.10 in 2018. This represents a decrease of 0.01, or approximately a 9.09% reduction.

Post-Merger Trends: Bank of Baroda The value increased from 0.10 in 2018 to 1.198 in 2023. This represents an increase of 1.098, or approximately a 1098% increase. The value then decreased to 1.035 in 2024, which is a decrease of 0.163, or approximately a 13.6% reduction.

4.4 The graph shows on return on capital employees



Graph 4

Interpretation:

Pre-Merger: Vijay Bank was performing better than Bank of Baroda before the merger, with much higher values. Both banks experienced a reduction in their values from 2017 to 2018, but the impact has less severe for Bank of Baroda in percentage terms.

Post-Merger: The merger had a profound positive impact on Bank of Baroda, as evidenced by the dramatic increase in performance metrics. The value jumped from 0.10 in 2018 to 1.198 in 2023, indicating a highly successful merger and improvement in performance. The slight decrease in 2024, while notable, does not overshadow the substantial overall improvement achieved post-merger. It suggests that while the merger had a significant initial impact, there may be factors or adjustments needed to maintain this high level of performance.

5) Current ratio = current assets/ current liabilities Pre-merger

Vijay bank - 2017 = 4,086/2,04,545 = 0.019
2018 = 5,312/2,18,277 = 0.024
Bank of Baroda - 2017 = 55,065/11,45,140 = 0.048
2018 = 57,565/11,34,253 = 0.050
Post-merger
Bank of Baroda- 2023 = 161,586/24,77,159 = 0.065
2024 = 155,453/22,37,032 = 0.069

4.5 The table shows on current ratio

Table 5

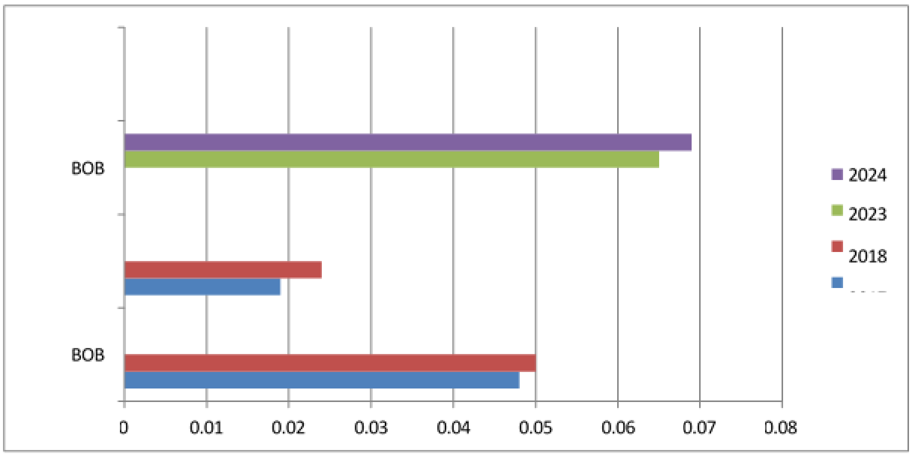
Pre-Merger				Post-Marger	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
0.019	0.024	0.048	0.050	0.065	0.069

Analysis:

Pre-Merger Trends: Vijay Bank The value increased from 0.019 in 2017 to 0.024 in 2018. This represents an increase of 0.005, or approximately a 26.32% increase. Bank of Baroda: The value increased from 0.048 in 2017 to 0.050 in 2018. This represents an increase of 0.002, or approximately a 4.17% increase.

Post-Merger Trends: Bank of Baroda The value increased from 0.050 in 2018 to 0.065 in 2023. This represents an increase of 0.015, or approximately a 30% increase. The value then further increased to 0.069 in 2024, an increase of 0.004, or approximately a 6.15% increase. Post-merger, Bank of Baroda saw an increase from 0.050 in 2018 to 0.065 in 2023, and then to 0.069 in 2024. This indicates an overall growth of 0.019 from the 2018 value, or a 38% increase, and a further 6.15% increase in the following year.

4.5 The graph shows on current ratio



Graph 5

Interpretation:

Pre-Merger: Bank of Baroda was performing better than Vijay Bank before the merger, with higher values in both 2017 and 2018. Vijay Bank showed a higher rate of growth (26.32%) compared to Bank of Baroda (4.17%) during the pre-merger period.

Post-Merger: The post-merger data shows that Bank of Baroda continued to improve its performance after the merger. The increase from 0.050 in 2018 to 0.065 in 2023, and then to
0.069 in 2024, indicates a successful merger that led to a consistent upward trend. The performance in 2024 is notably higher than the pre-merger values for both banks, reflecting a positive impact from the merger.

6) Quick ratio = quick assets/current liabilities

(Quick assets = cash & cash equivalents + investment) Post-merger

Vijay Bank - 2017 = 48,462/4,086 = 11.86
2018 = 50,356/5,312 = 9.47

Bank of Baroda - 2017 = 2,94,831/55,065 = 5.35
2018 = 2,72,560/57,565 = 4.73

Post-merger

Bank of Baroda - 2024 = 1,18,379 + 1,00,290 + 4,07,136/80,284 = 7.794
2023 = 94,503 + 1,02,373 + 3,97,487/77,229 = 7.696

4.6 The table shows on quick ratio

Table 6

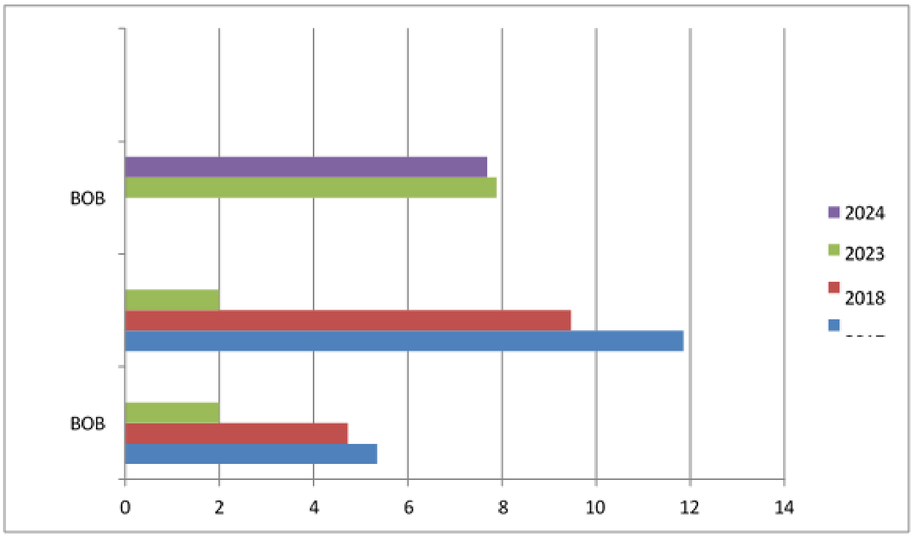
Pre-Merger				Post- Merger	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
11.86	9.47	5.35	4.73	7.794	7.696

Analysis:

Pre-Merger Trends: Vijay Bank The value decreased from 11.86 in 2017 to 9.47 in 2018. This represents a reduction of 2.39, or approximately a 20.2% decrease. Bank of Baroda The value decreased from 5.35 in 2017 to 4.73 in 2018. This represents a reduction of 0.62, or approximately an 11.6% decrease.

Post-Merger Trends: Bank of Baroda The value increased from 4.73 in 2018 to 7.794 in 2023. This represents an increase of 3.064, or approximately a 64.7% increase. The value then slightly decreased to 7.696 in 2024, which is a reduction of 0.098, or approximately a 1.3% decrease.

4.6 The graph shows on quick rati



Graph 6

Interpretation

Pre-Merger: Vijay Bank had higher values than Bank of Baroda prior to the merger, indicating stronger performance in the years leading up to the merger. Both banks experienced declines during this year, but Vijay Bank's decline was more pronounced in percentage terms.

Post-Merger: The post-merger performance of Bank of Baroda shows a remarkable improvement compared to pre-merger levels. The increase from 4.73 in 2018 to 7.794 in 2023 reflects a successful merger that enhanced the bank's performance. The slight decrease in 2024, while a minor concern, does not overshadow the significant overall improvement achieved through the merger.

7) Cash Ratio = Cash & Cash Equivalents/ Current Liabilities Pre-Merger

Vijay Bank - 2017 = 6,620/4086 = 1.62
2018 = 5931/5312 = 1.11
Bank of Baroda –2017 = 1,54,115/55,065 = 2.79
2018 = 97,423/57565 = 1.69

Post-Merger

Bank of Baroda - 2023 = 1,00,290/1,61,586 = 0.62
2024 = 1,02,373/1,55,453 = 0.65

4.7 The table shows on quick ratio

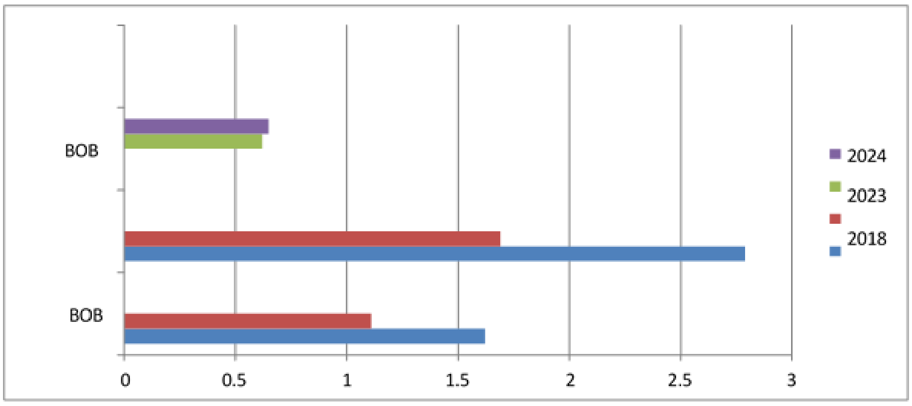
Table 7

Pre-Merger				Post-Merger	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
1.62	1.11	2.79	1.69	0.62	0.65

Analysis:
Pre-Merger Trends: Vijay Bank The value decreased from 1.62 in 2017 to 1.11 in 2018. This represents a reduction of 0.51, or approximately a 31.5% decrease. Bank of Baroda: The value decreased from 2.79 in 2017 to 1.69 in 2018. This represents a reduction of 1.10, or approximately a 39.4% decrease.

Post-Merger Trends: Bank of Baroda The value decreased from 1.69 in 2018 to 0.62 in 2023. This represents a reduction of 1.07, or approximately a 63.3% decrease. The value then increased to 0.65 in 2024, which is an increase of 0.03, or approximately a 4.8% increase. Post- merger, Bank of Baroda saw a significant decrease in its value from 1.69 in 2018 to 0.62 in 2023, representing a reduction of 63.3%. This indicates a notable decline in performance after the merger.

4.7 The graph shows on cash ratio



Graph 7

Interpretation:
Pre-Merger: Bank of Baroda had higher values than Vijay Bank before the merger, indicating stronger performance in the pre-merger years. Both banks experienced a decline in their metrics from 2017 to 2018, with Bank of Baroda's decline being more severe.

Post-Merger: Bank of Baroda experienced a substantial decline in performance metrics from 2018 to 2023. This significant drop suggests that the merger might have led to operational or integration challenges that negatively impacted performance. The slight improvement in 2024 indicates some recovery, but the performance remains considerably lower than pre-merger levels, highlighting on going issues or challenges post-merger.

8) Net profit margin ratio = net profit/ revenue Pre-merger
Vijaya Bank- 2017 = 750/12,590 = 0.059
2018 = 727/12,590 = 0.057
Bank of Baroda - 2017 = 855/44,473*100 = 1.922
2018 = 1,836/46,056*100 = 3.986

Post-merger
Bank of Baroda - 2024 = 18,869/1,18,379 = 0.159
2023 = 15,005/94,503 = 0.158

4.8 The table shows on net profit margin ratio

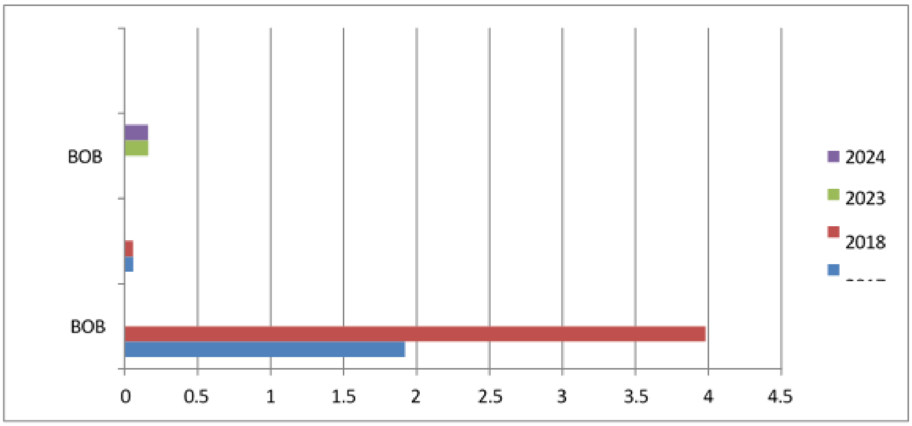
Table 8

Pre-Merger				Post-Merger	
Vijay Bank		Bank of Baroda		Bank of Baroda	
2017	2018	2017	2018	2023	2024
0.059	0.057	1.922	3.986	0.159	0.158

Analysis:
Pre-Merger Performance: Vijay Bank The figures for 2017 (0.059) and 2018 (0.057) show very minimal variation and are quite low. This could indicate that Vijay Bank had stable but low performance or financial metrics before the merger. Bank of Baroda The data for Bank of Baroda is significantly higher than that of Vijay Bank, with 2017 (1.922) and 2018 (3.986) showing a substantial increase. This indicates that Bank of Baroda was performing significantly better prior to the merger, showing a steady upward trend.

Post-Merger Performance: The values for 2017 and 2018 after the merger (0.159 and 0.158 respectively) are relatively lower than Bank of Baroda's pre-merger performance. But, these are higher than the Vijay Bank's pre-merger numbers. The values for 2023 and 2024 remain consistent at 0.159 and 0.158, indicating stability in performance after the merger but at a lower level compared to Bank of Baroda's pre-merger growth.

4.8 The graph shows on net profit margin ratio



Graph 8

Interpretation:

Pre-Merger Differences: The pre-merger differences between Vijay Bank and Bank of Baroda are evident, with Bank of Baroda performing much better.

Post-Merger Stability: Post-merger, the performance metric stabilizes, but the data suggests a decline compared to Bank of Baroda's pre-merger performance. While the post-merger performance improved slightly from Vijay Bank's numbers, it did not reach Bank of Baroda's pre-merger levels. This could imply that the merger might have led to a stabilization, but not necessarily growth, of the merged entity's overall performance.

Findings:

1. Vijaya Bank consistently outperformed Bank of Baroda before the merger, though both banks experienced varying degrees of decline.
2. Vijaya Bank generally had higher values, even though it experienced fluctuations in performance from 2017 to 2018.
3. Bank of Baroda displayed lower pre-merger performance levels than Vijaya Bank but exhibited more stability in some metrics.
4. The merger initially led to a substantial improvement in performance for the combined entity (Bank of Baroda), reflected by significant value increases in most metrics from 2018 to 2023.
5. In some analyses, Bank of Baroda's performance saw a strong post-merger increase e.g., a 377% rise in one case.
6. However, a slight decline in 2024 is visible across different data sets, suggesting the beginning of post-merger adjustments or operational challenges.
7. Pre-merger, Vijaya Bank generally had more growth rates but experienced sharper performance declines toward the end (2018). Bank of Baroda, while having lower metrics, showed more stable pre-merger trends.
8. Post-merger, Bank of Baroda improved considerably in the early years (2018-2023), but the downward trend in 2024 signals potential issues needing attention.
9. While initial merger results were positive, the recent drop in 2024 may indicate post- merger integration challenges or external market factors affecting performance.
10. Post-merger gains were not consistently sustained across all parameters, raising questions about the long-term sustainability of these improvements.

Suggestions

1. Addressing Decline in 2024 Investigate the factors leading to the decline in 2024 both internal (operational inefficiencies, integration challenges) and external (market conditions, regulatory changes) to address potential risks.
2. Operational Efficiency Focus on streamlining operations and enhancing synergy between the merged entities to avoid further dips in performance. Explore efficiency-enhancing strategies such as automation, cost optimization, and resource reallocation.
3. Sustainability and Growth Ensure that the positive post-merger momentum from 2018- 2023 is sustained by developing long-term strategies for growth, including customer acquisition, product innovation, and geographical expansion.
4. On going Monitoring Continue to monitor post-merger performance closely, with a focus on key financial metrics to detect and address early signs of instability. Conduct periodic reviews of post-merger integration strategies to identify areas for improvement.
5. Implement a comprehensive risk management framework to proactively identify and mitigate potential threats to sustaining post-merger performance excellence.

Conclusion

The merger of Bank of Baroda and Vijaya Bank can be considered largely successful in the initial phase. Post-merger, Bank of Baroda saw substantial increases in values from 2018 to 2023, suggesting that synergies from the merger were harnessed effectively during this period. The declines seen in 2024 in various analyses suggest that post-merger stability may not be fully achieved, with possible integration, operational, or market challenges impacting performance. The recent downward trends need to be investigated to identify underlying factors and implement strategies to mitigate further declines. A merger of two banks makes it possible to reap the advantages of economics of scale. Since the resource and asset base is combined, the merged entity finds it easier to target new customers and offer better and customized services, owing to its large base of finances.

References

1. Narasimhan S, Gokhale A, Neema S. Performance testing in distributed storage systems: Challenges and techniques. IEEE Transactions on Cloud Computing. 2015;3(2):170–83.
2. Verma P, Agrawal A, Mishra P. Ensuring data integrity in large-scale storage systems: A survey and practical approaches. IEEE Transactions on Storage. 2017;13(3):45–58.
3. Jiang T, Wei Y, Zhang H. Fault tolerance testing in cloud storage: Case studies and best practices. IEEE Computer. 2016;49(9):72–9.
4. Wang J, Liu Y, Zhang H. AI-based optimization of storage performance: A deep reinforcement learning approach. IEEE Transactions on Cloud Computing. 2018;6(3):550–61.
5. Patel A, Shah R, Mehta D. Machine learning for detecting silent data corruption in distributed storage systems. IEEE Transactions on Dependable and Secure Computing. 2017;14(4):893–906.
6. Kim S, Park J, Lee K. Predictive failure analysis of SSDs using machine learning algorithms. IEEE Transactions on Computers. 2016;65(11):3374–86.
7. Brown T, Johnson M. The impact of software-defined storage on cloud computing and AI-driven optimization. IEEE Transactions on Cloud Computing. 2017;5(2):110–21.
8. Smith J, Patel R. Predictive analytics in storage systems: Machine learning for disk failure detection. IEEE Transactions on Computers. 2016;64(8):2303–14.
9. Lee S, Park J. Storage performance testing using FIO: Challenges and best practices. IEEE Transactions on Cloud Computing. 2018;6(3):320–31.
10. Smith T, Zhang W. Predictive failure analysis in storage systems: Using SMART data for disk health monitoring. IEEE Transactions on Computers. 2017;65(11):2805–17.
11. Wang J, Liu H. AI-enhanced defect detection in semiconductor manufacturing: A case study on NAND flash memory production. IEEE Transactions on Semiconductor Manufacturing. 2018;31(4):512–23.
12. Kim S, Choi B. Machine learning for predictive maintenance in hard drive manufacturing: Improving reliability and reducing costs. IEEE Transactions on Industrial Informatics. 2017;13(6):2807–15.