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Posted Date: 18 February 2025

doi: 10.20944/preprints202502.1165.v1

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Article

Economic Efficiency in Corporate Consolidation: A Data-Driven Analysis of Merger of Indian Public Sector Banks

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Abstract: This study examines the financial performance implications of the 2020 merger between Allahabad Bank and Indian Bank, a significant consolidation initiative within India's public sector banking reforms. Through empirical analysis of pre-merger (2017-2020) and post-merger (2021-2024) data, the research evaluates the effectiveness of this strategic consolidation in addressing systemic challenges such as non-performing assets and operational inefficiencies. Employing paired t-test analysis and financial metrics examination, the study reveals mixed outcomes. While statistical analysis indicates no significant improvement in overall financial performance ($p > 0.05$), specific indicators demonstrate positive trends, including enhanced earnings per share and substantial reduction in net NPA ratio to 0.43% by March 2024. The consolidated entity showed consistent profit growth post-merger, though a strong inverse Pearson correlation coefficient between pre- and post-merger metrics suggests complex underlying dynamics. These findings contribute to the discourse on public sector bank consolidation in emerging economies, indicating that merger success extends beyond immediate financial metrics. The study concludes that while the merger has achieved certain operational objectives, particularly in asset quality management, the full realisation of anticipated synergies remains an ongoing process requiring continued evaluation within India's evolving banking landscape.

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Introduction

M&As in banking have emerged as a strategic tool to strengthen financial institutions, enhance their operational capabilities, and address systemic challenges in a competitive economic environment. PSBs promote financial inclusion, ensuring credit availability, and fostering economic stability. However, these banks have historically faced challenges like high NPAs, inefficiencies in operations, an inability to compete effectively with private and international players. To address these issues, the Indian government and regulatory authorities have pursued consolidation initiatives within the banking sector, consolidation of two or more government-owned banks into single entity. Strategic aims to enhance financial strength, operational efficiency, and overall competitiveness of the participating banks. One of the significant consolidations in recent years was Allahabad Bank merger with Indian Bank, announced in 2019 and effective from April 1, 2020, resulted in the combined entity functioning under the name Indian Bank, with Allahabad Bank losing its independent identity. This merger aimed to create a stronger and more resilient banking entity capable of delivering better services, achieving operational efficiencies, and managing risks effectively. The merger also sought to optimize the use of resources, enhance capital adequacy, and improve the financial stability of the consolidated entity.

The rationale, process, and outcomes of the Allahabad Bank merger, provides an empirical analysis of its impact and delves into the financial performance of the merged entity, explores operational synergies, and evaluates the broader implications for the banking landscape in India. Key

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aspects such as profitability, asset quality, customer service, and market competitiveness, assess whether the merger has achieved its intended objectives.

The consolidation of public sector banks (PSBs) in India represents a significant transformation in the nation's banking landscape, marking a decisive shift in financial sector reform policy. Consolidation has been a critical area of study, given its significant implications on the financial ecosystem. This research focuses on the merger of the two banks, analysing empirical impact on Indian banking sector. The study investigates the rationale behind such mergers, including objectives like strengthening balance sheets, improving operational efficiency, and addressing non-performing assets (NPAs). By employing financial analysis and statistical tools, the research evaluates pre- and post-merger performance indicators, such as profitability, liquidity, and market share.

The merger between Allahabad Bank and Indian Bank in 2020 stands as a watershed moment, establishing a precedent for subsequent consolidation initiatives within India's public banking sphere. This amalgamation, which created an entity with combined assets exceeding ₹8.08 trillion, exemplifies the government's strategic approach to addressing the persistent challenges of non-performing assets (NPAs), capital adequacy requirements, and various inefficiencies that have historically plagued India's public banking sector.

The theoretical underpinnings of bank mergers suggest that consolidation can yield substantial economies of scale, enhance market competitiveness, and improve operational efficiency. However, the unique characteristics of India's public sector banks, including their social banking mandates and historical role in national economic development, necessitate a nuanced examination of merger outcomes. The Allahabad Bank-Indian Bank merger presents a compelling case study, as it combines two institutions with distinct regional strengths and operational cultures, while sharing a common legacy of public sector banking.

This paper examines the rationale, implementation process, and preliminary outcomes of this landmark merger, situating it within the broader context of India's banking sector reforms. Particular attention is paid to the structural challenges encountered during the consolidation process, the impact on operational efficiency, and the implications for financial inclusion objectives. Through a detailed analysis of this case, this study contributes to the growing body of literature on public sector bank consolidation in emerging economies, while offering insights into the effectiveness of merger strategies as a tool for banking sector reform in India.

The examination of mergers and acquisitions within India's public sector banking domain necessitates a methodical analysis of both strategic imperatives and operational outcomes. The merger between Allahabad Bank and Indian Bank serves as a critical case study, illuminating the complex interplay of regulatory requirements, market dynamics, and institutional capabilities that drive banking sector consolidation. This research endeavours to scrutinise the fundamental rationale underlying this significant merger, examining how the amalgamation addresses persistent challenges in India's banking sector whilst pursuing operational synergies and enhanced market competitiveness.

A comprehensive evaluation of financial metrics forms the cornerstone of this analysis, encompassing key performance indicators such as capital adequacy ratios, asset quality measures, and operational efficiency parameters. This financial assessment is particularly pertinent given the pressing challenge of non-performing assets within India's public sector banks. The research examines how the consolidated entity has approached NPA resolution, investigating whether the merger has facilitated more effective asset quality management through enhanced recovery mechanisms and improved risk assessment frameworks.

The broader implications of this merger for India's public sector banking landscape warrant careful consideration, particularly regarding systemic stability and competitive dynamics. The consolidation process has introduced significant operational challenges, notably in the domains of cultural integration and technological harmonisation. These challenges present both immediate hurdles and opportunities for long-term institutional development. The research explores how the merged entity has navigated these complexities, paying particular attention to the integration of

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diverse organisational cultures, the harmonisation of technological infrastructure, and the maintenance of operational continuity during the transition period.

The study "Mergers and Acquisitions in British Banking" by Braggion, Dwarkasing and Moore examines the performance of bank shareholder wealth throughout the course of the British banking industry's notable forty-year merger and acquisition history. They offer a thorough analysis of mergers and acquisitions over a long period of time, making it possible to investigate the returns from mergers as the banking sector gradually got more consolidated. Profitability, liquidity, solvency, asset quality, and managerial efficiency all improved after the merger, according to Jagdish R. Raiyani's report on the "Effect of Mergers on Efficiency and Productivity of Indian Bank." In terms of profitability and liquidity, private sector merged banks performed better than public sector merged banks; however, this was not the case for capital adequacy or non-performing assets (NPAs). The combined banks from the private sector performed better overall.

Of paramount importance is the merger's impact on service delivery and stakeholder relationships. The research investigates how the consolidated bank has managed customer expectations and maintained service quality standards whilst implementing integration initiatives. This analysis extends to examining stakeholder confidence levels, including the perspectives of depositors, investors, and regulatory authorities. The study provides understanding into the efficacy of public sector bank mergers as a strategy for institutional strengthening and sector-wide reform in India's banking system.

Research Methodology

The study looks into the consequences before and after the merger using an empirical and analytical research design. The method is used to concentrate on mergers in particular, allowing for a thorough investigation of their effects on stakeholders and financial indicators. In order to obtain information on the qualitative effects of the merger, systematic interviews and surveys are carried out with important stakeholders, such as bank staff, clients, and legislators. Data has been taken in eight-year period, covering four years before the merger (2017–2020) and four years post-merger (2021–2024), to capture immediate effects. Paired t-test has been used to measure the variables, examines a comprehensive financial performance, operational efficiency, and broader implications of the merger.

Results and Discussion

Allahabad Bank, established in 1865 held a significant position in the Indian banking sector due to its long history, widespread presence, and comprehensive range of banking services such as financing agriculture, small businesses, and priority sectors, aligning with government objectives. It became a pioneer in adopting digital banking solutions to serve its customers better in an increasingly technology-driven world. Despite its rich legacy, Allahabad Bank struggled with challenges like high NPAs and mounting operational inefficiencies in its later years. Stiff competition in the market from the private sector and a need for technological upgrades further highlighted its vulnerabilities. Its merger with Indian Bank represents a pivotal move toward stronger resilient PSBs, brought significant advantages in terms of scale and efficiency, it also posed challenges during the integration process. The success of this merger underscores the transformation the Indian banking sector.

Table 1 displays Allahabad Bank's data from the year ending mar 2015 to year ending mar 2019 before merger with Indian bank which clearly reveals that the EPS of the banking was in negative figures denoting poor financial performance during the reporting period., indicates that the company's expenses and losses exceeded its revenues and profits for that period. The net profit for the relevant years also showed negative values showing losses, which was maximum in the year ending Mar 2019.

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Table 1. Allahabad Bank's data.

Year ending	EPS (in INR million)	Capital Adequacy Ratio	Net NPA to Advances (%)	Net profit/loss (in INR million)
Mar-19	-403.3	13	5	-83339.6
Mar-18	-542.0	9	8	-46743.7
Mar-17	-37.5	11	9	-3135.2
Mar-16	-117.3	11	7	-7433.1
Mar-15	113.6	10	4	6209.0

Indian Bank, established in had a long history of serving customers across various segments, including retail, corporate, and rural banking. Over the decades, Indian Bank has grown into a robust financial institution with a wide network, offering a range of products and services. In April 2020, Indian Bank merged with Allahabad Bank, making it one of the largest banks in India. Indian Bank is known for its strong capital base and efficient risk management practices. Post-merger with Allahabad Bank, its capital adequacy ratio improved, making it better equipped to handle financial challenges. The bank has a focus on reducing NPAs while maintaining profitability.

Table 2 shows the data before and after merger of Allahabad with Indian bank showing that there has been significant rise in the net profit of the banks over years after merger. The EPS also showed positive rise and it rose to 59.86 in the year ending 2024 which was maximum amongst all.

Table 2. Indian Bank's data.

	Year Ending	EPS (in Rs crores)	Capital Adequacy Ratio	Net NPA to Advances (%)	Net profit/loss (in INR million)
After Merger	Mar-24	59.86	16.44	0.43	80629.4
	Mar-23	42.41	16.49	0.9	52817.0
	Mar-22	31.67	16.53	2	39448.2
	Mar-21	31.67	15.71	3	30046.8
Before Merger	Mar-20	12.37	14.12	3	7533.6
	Mar-19	6.70	13.21	4	3,2092.8
	Mar-18	26.21	12.55	4	16292.4
	Mar-17	26.21	13.64	4	141291.2

Table 3. Results of t test.

	After merger	Before merger
Mean	5073.535	7680.25
Variance	4844677.8	44683934.7
Observations	4	4
Pearson Correlation	-0.919031	
Df	3	

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t Stat	-0.595782
P(T<=t) one-tail	0.2966384
t Critical one-tail	2.3533634
P(T<=t) two-tail	0.5932768
t Critical two-tail	3.1824463

Paired t-test of means before and after merger signifies that the two- tail p-value of the observations under study is 0.5932768 with the alpha level of significance being taken as 0.05. As calculated p-value being more in comparison to the alpha level of significance (0.5932768>0.05), author failed to reject H_0 thereby accepting H_0, which means this merger has no significant impact on financial performance of consolidated entity in terms of profitability, operational efficiency, and asset quality. The Pearson correlation of coefficient revealed a strong inverse relationship between the two variables being observed.

Based on the empirical analysis presented, this study of the merger between Allahabad Bank and Indian Bank yields several significant conclusions. The consolidation, while representing a strategic initiative in India's banking sector reforms, has produced mixed results in terms of financial and operational outcomes. The statistical analysis, particularly the paired t-test results (p-value 0.5932768 > 0.05), indicates no statistically significant improvement in the consolidated entity's financial performance. However, the descriptive data reveals noteworthy positive trends in specific metrics. The earnings per share (EPS) demonstrated substantial improvement, rising to 59.86 by March 2024, whilst the net profit showed consistent growth in the post-merger period.

The merger's implementation has successfully addressed certain pre-existing challenges, particularly in capital adequacy and asset quality. The consolidated entity's Net NPA to Advances ratio decreased markedly from pre-merger levels, reaching 0.43% by March 2024, indicating enhanced asset quality management. This improvement suggests effective integration of risk management practices and recovery mechanisms. Nevertheless, the strong inverse Pearson correlation coefficient between pre- and post-merger performance metrics suggests complex underlying dynamics that warrant further investigation. The findings indicate that whilst the merger has achieved some operational objectives, the full realisation of anticipated synergies remains an ongoing process.

These results contribute to the broader discourse on public sector bank consolidation in emerging economies, suggesting that the success of such mergers cannot be evaluated solely through immediate financial metrics. The findings underscore the importance of considering longer-term strategic benefits alongside short-term performance indicators when assessing merger outcomes in the public banking sector. Future research might productively explore the qualitative aspects of this merger, particularly regarding organisational culture integration and technological harmonisation, to provide a more comprehensive understanding of the consolidation's impact on India's banking landscape.

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