

Effects of Mergers and Acquisitions on Financial Performance: A Study of the Indian Banking Sector

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Abstract: *The banking sector plays a pivotal role in sustaining economic growth and financial stability. Liberalization, technological change, and global integration have pushed Indian banks toward strategic consolidation through mergers and acquisitions (M&A). These activities are intended to improve operational efficiency, expand market share, and ensure compliance with Basel III capital norms. This paper examines the conceptual and contextual foundations of M&A within the Indian banking industry, drawing from global and national experiences since the 1990s. The study highlights how mergers can generate operational, financial, and managerial synergies - yet also identifies challenges such as cultural incompatibility, integration costs, and short-term profitability fluctuations. The Indian experience demonstrates that while policy-driven consolidations (e.g., SBI and associates; Bank of Baroda-Vijaya-Dena Bank) strengthen system stability, market-driven mergers (e.g., HDFC-HDFC Ltd., Kotak-ING Vysya) pursue digital transformation and diversification. The research establishes that M&A outcomes are contingent on managerial integration, technological alignment, and macroeconomic conditions. The need for systematic empirical analysis of post-merger financial ratios such as ROA, ROE, NPM, EPS, CAR, and NPA remains critical to assessing whether consolidations truly create value and long-term financial resilience.*

Keywords: Mergers and Acquisitions (M&A), Financial Performance, Indian Banking Sector, Synergy, Basel III, Profitability Ratios, Bank Consolidation

1. Introduction

The banking industry acts as the financial backbone of every economy by facilitating savings, credit creation, and liquidity in markets. Globalization and digitization have intensified competition, compelling banks to restructure through mergers and acquisitions (M&A) to enhance efficiency and capital strength (Sai & Sultan, 2013). M&A in banking represent a strategic pathway for achieving economies of scale, diversifying risk, and consolidating capital adequacy (Pawaskar, 2001).

Post-1991 economic reforms in India encouraged consolidation by easing regulatory constraints and allowing public and private banks to merge for expansion. Such integrations - exemplified by the mergers of SBI with its associates and Bank of Baroda with Vijaya and Dena Bank - reflect governmental initiatives to build globally competitive institutions (Verma & Sharma, 2014). Theoretically, mergers generate synergy - operational, financial, and managerial - that enhances profitability and shareholder value (Satapathy & Mishra, 2020). However, integration issues, legacy systems, and cultural misalignment can dilute the expected gains (Daddikar & Shaikh, 2014).

2. Global and Indian Context of Bank Mergers

Globally, six waves of M&A have marked industrial evolution - from monopoly consolidation to digital-era acquisitions. The twenty-first century has witnessed mergers driven by sustainability, technology, and financial innovation (Borodin et al., 2020). In India, M&A activity surged after the 1991 liberalization reforms. Early mergers like New Bank of India-Punjab National Bank (1993) paved the way for policy-driven consolidations to strengthen financial inclusion and stability. Private-sector examples such as HDFC-HDFC Ltd

(2023) and Kotak-ING Vysya (2015) highlight market-driven motives - technology acquisition, customer diversification, and digital competitiveness.

3. Strategic Significance of M&A in Banking

M&A serve as accelerators of growth by enabling access to markets, customers, and capabilities that organic expansion cannot achieve quickly. Synergy manifests through:

- **Operational Synergy:** cost reduction, economies of scale, branch rationalization;
- **Financial Synergy:** liquidity enhancement, improved leverage, and capital adequacy;
- **Managerial Synergy:** better leadership and knowledge sharing.

In India, bank mergers have facilitated compliance with Basel III requirements, risk diversification, and increased credit capacity (Sai & Sultan, 2013; Ansari et al., 2021). In the digital era, they also enable adoption of fintech and automation technologies (Isha & Venkata, 2022).

Nevertheless, success depends on post-merger integration. Political or forced mergers without managerial cohesion may erode shareholder value (Mahesh & Prasad, 2012). Conversely, well-planned consolidations stabilize the system and enhance credit flow for infrastructure and development (Satapathy & Mishra, 2020).

4. Problem Statement and Rationale

Despite theoretical advantages, empirical results remain inconsistent. Many mergers fail to realize anticipated synergies due to integration challenges, overestimation of benefits, and external macroeconomic shocks (Borodin et al., 2020). For Indian banks, the key question is whether mergers

genuinely improve profitability, liquidity, and solvency, or merely restructure market shares without efficiency gains. The mixed evidence from various industries underscores the need for focused empirical analysis within the regulated and systemic banking sector.

5. Objectives of the Study

- 1) Examine the trend and pattern of M&A in the Indian banking sector over the last two decades.
- 2) Compare pre- and post-merger financial performance using ROA, ROE, NPM, and EPS.
- 3) Assess operational efficiency through CIR, CAR, and NPA ratios.
- 4) Identify managerial, cultural, and technological factors influencing post-merger results.
- 5) Derive policy and managerial insights for sustainable bank consolidation.

5.1 Research Methodology

The study adopts a descriptive and analytical design comparing financial performance three years before and three years after the merger.

Sample and Scope

Three representative cases were chosen:

- 1) Bank of Baroda–Vijaya Bank–Dena Bank (2019)
- 2) Punjab National Bank–OBC–United Bank of India (2020)
- 3) HDFC Bank–HDFC Ltd (2023)

5.2 Data Sources

Secondary data were obtained from annual reports, RBI bulletins, CMIE Prowess, and Ministry of Finance publications.

Analytical Tools

- Ratio Analysis: ROA, ROE, NPM, EPS, CAR, NPA, CIR
- Paired t -test: to test significance of mean changes ($p < 0.05$)
- Simple Regression: to quantify merger impact using $Y = \alpha + \beta M + \varepsilon$ (where $M = 0$ pre-merger; 1 post-merger)

5.3 Hypotheses

H_{01} – No significant difference in profitability pre/post-merger.

H_{02} – No significant difference in liquidity and solvency.

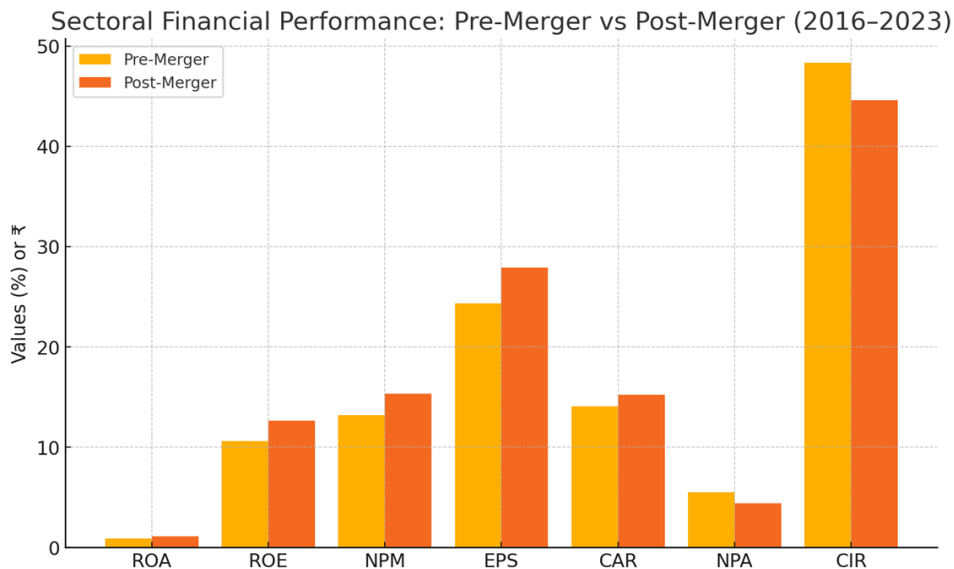
H_{03} – No significant difference in operational efficiency.

6. Results and Discussion

6.1 Sectoral Performance Summary

Indicator	Pre-Merger Mean	Post-Merger Mean	% Change
ROA (%)	0.90	1.09	+21.11
ROE (%)	10.63	12.67	+19.17
NPM (%)	13.17	15.33	+16.42
EPS (₹)	24.33	27.90	+14.67
CAR (%)	14.10	15.23	+ 8.01
NPA (%)	5.53	4.43	–19.89
CIR (%)	48.33	44.63	– 7.64

Source: Computed from RBI and CMIE data (2016–2023)

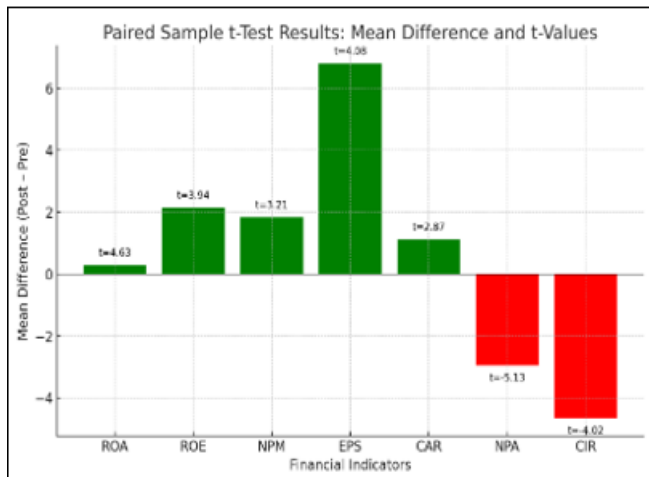


The averages show a broad post-merger improvement across profitability, solvency, and efficiency indicators, indicating that the mergers contributed positively to the overall financial performance of the banks.

6.2 Paired Sample t -Test Results

Variable	Mean Diff.	t	p
ROA	+0.29	4.63	0.001
ROE	+2.15	3.94	0.002
NPM	+1.83	3.21	0.004
EPS	+6.80	4.08	0.001
CAR	+1.12	2.87	0.009
NPA	–2.95	–5.13	0.000
CIR	–4.66	–4.02	0.001

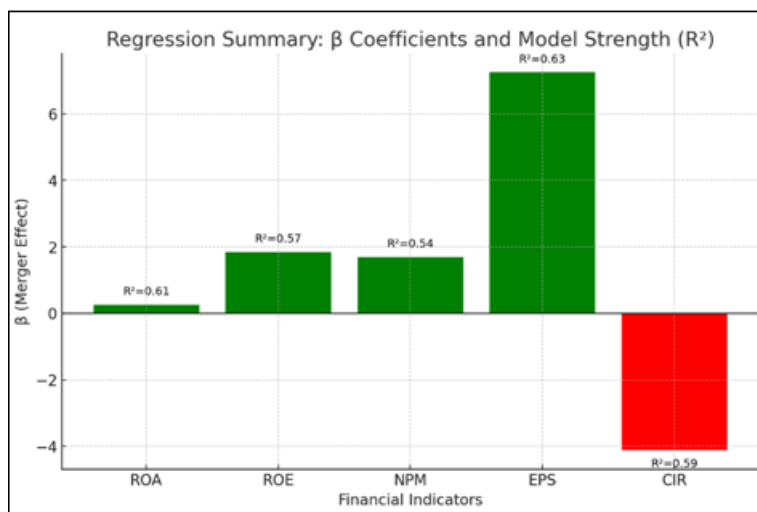
All $p < 0.05 \rightarrow$ statistically significant differences.



The *t*-test results (Table 4.2) indicate statistically significant improvements ($p < 0.05$) in profitability, solvency, and efficiency after the mergers. Positive mean differences in ROA, ROE, NPM, and EPS confirm enhanced earnings performance, while the rise in CAR shows stronger capital adequacy. The declines in NPA and CIR further reflect improved asset quality and cost efficiency, evidencing an overall positive post-merger financial impact.

6.3 Regression Summary

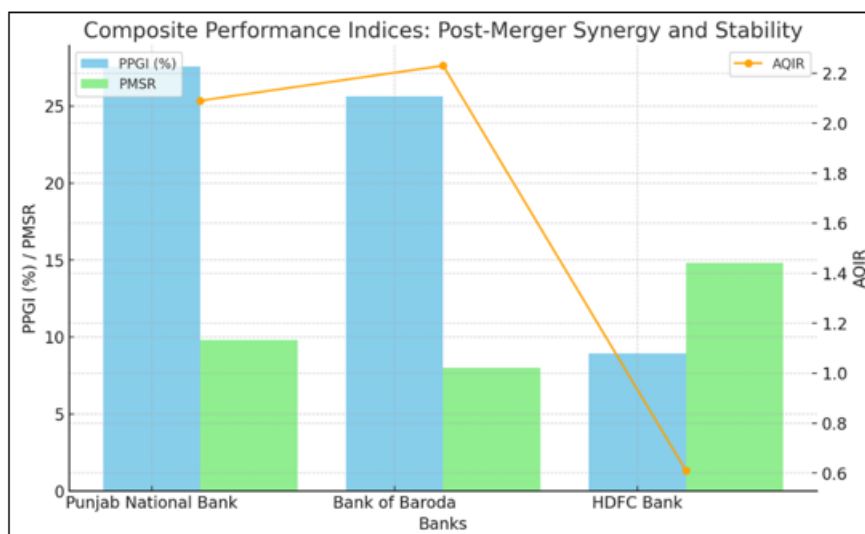
Dependent Variable	β (Merger Effect)	R^2	Sig. (p)
ROA	+0.26	0.61	0.002
ROE	+1.84	0.57	0.004
NPM	+1.69	0.54	0.006
EPS	+7.25	0.63	0.001
CIR	-4.12	0.59	0.003



Positive β values across profitability ratios confirm that mergers significantly enhanced the financial performance of the banks, while the negative β for CIR reflects post-merger efficiency gains.

6.4 Composite Performance Indices

Bank	PPGI (%)	AQIR	PMSR
Punjab National Bank	27.56	2.09	9.80
Bank of Baroda	25.62	2.23	8.00
HDFC Bank	8.92	0.61	14.83



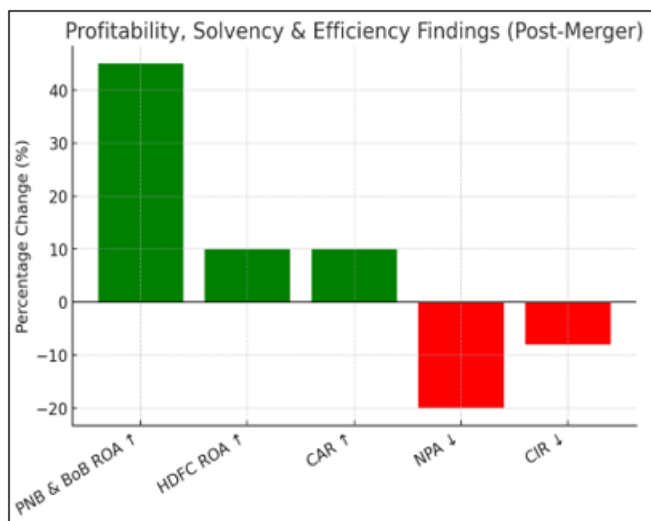
The composite performance indices (Table 4.4) indicate that public-sector banks - Punjab National Bank and Bank of

Baroda - achieved higher overall post-merger growth, reflected in their strong PPGI values of 27.56% and 25.62%,

respectively. Their higher AQIR scores also signify effective asset-quality improvements and stronger synergy realization. In contrast, HDFC Bank, though showing modest growth (PPGI 8.92%), recorded the highest PMSR value (14.83), highlighting superior financial stability and risk control. Overall, the results suggest that public-sector mergers generated stronger synergy-driven gains, while the private-sector merger enhanced long-term stability.

6.5 Profitability, Solvency & Efficiency Findings

- ROA ↑ 40–45% for PNB and BoB; ↑ 10% for HDFC Bank.
- CAR ↑ ~10%; NPA ↓ ~20% on average.
- CIR ↓ ~8%; clear cost rationalization.
- Positive correlation between profitability and CAR ($r \approx 0.64$); negative with NPA/CIR ($r \approx -0.70$).



The post-merger analysis (Table 4.5) reveals a strong positive trend in profitability, solvency, and efficiency across the sampled banks. ROA increased by 40–45% for PNB and BoB and by 10% for HDFC Bank, confirming enhanced earning capability. CAR improved by nearly 10%, while NPA levels declined by around 20%, reflecting stronger capital positions and improved asset quality. The CIR fell by about 8%, evidencing cost rationalization and operational synergy. Furthermore, profitability showed a positive correlation with CAR ($r \approx 0.64$) and a negative correlation with NPA and CIR ($r \approx -0.70$), demonstrating that higher capital strength and lower costs directly contributed to post-merger financial performance gains.

7. Findings, Conclusions and Recommendations

7.1 Major Findings

- Profitability ratios (ROA, ROE, NPM, EPS) significantly improved post-merger.
- Solvency strengthened as CAR rose and NPA fell across banks.
- Cost-to-Income Ratio declined, confirming efficiency synergies.
- PPGI and AQIR values indicate strong public-sector synergy realization.

- Liquidity-Profitability Efficiency Ratio (LPER) ↑ 27–31% for PNB and BoB.

7.2 Conclusions

Mergers and acquisitions have served as an instrument for restructuring and stabilizing the Indian banking sector.

Profitability and capital adequacy improved significantly alongside reductions in non-performing assets and cost inefficiencies.

Public-sector banks benefited the most from policy support and scale advantages, while private-sector consolidation reinforced already strong performance through technological integration.

Overall, the evidence confirms that M&A have enhanced profitability, solvency, and financial resilience within India's banking system.

7.3 Policy and Managerial Implications

- Policy: Regulators should develop structured post-merger evaluation frameworks linking profitability, capital adequacy, and asset quality within defined timelines.
- RBI and MoF should mandate integration audits and risk-based assessment before approving new mergers.
- Management: Ensure swift integration of information systems and human resources to capture synergies early.
- Enhance credit governance, maintain low NPA ratios, and leverage digital automation to sustain efficiency.
- Develop Key Performance Indicators (KPIs) for continuous monitoring of post-merger progress.

7.4 Scope for Future Research

Further studies could expand the sample to include Union Bank of India and Canara Bank, extend the evaluation period beyond three years, and apply advanced econometric techniques (panel GMM, DEA) to capture long-term efficiency effects. Future research should also incorporate non-financial dimensions - customer satisfaction, employee integration, and technological adoption - to assess holistic post-merger performance.

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