

Banking Reforms through Insolvency and Bankruptcy Code (IBC) and Bank Mergers: Impact on Non-Performing Assets of Public Sector Banks in India

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Abstract

The Indian banking sector has undergone significant structural reforms during the last decade to address the persistent challenge of Non-Performing Assets (NPAs). Among these reforms, the Insolvency and Bankruptcy Code (IBC), 2016 and the consolidation of Public Sector Banks (PSBs) through mergers have emerged as major policy interventions. The present study examines the impact of these reforms on the asset quality of Indian PSBs. Using panel data from selected public sector banks for the period 2015–2025, the study employs descriptive statistics, trend analysis, correlation analysis, and multiple regression techniques to evaluate the effectiveness of banking reforms in reducing NPAs. Findings reveal a significant decline in gross NPA ratios following the implementation of IBC and post-merger restructuring. The regression results indicate that recovery through IBC and bank size resulting from mergers have a statistically significant negative relationship with NPA levels. The study concludes that banking reforms have substantially strengthened the financial stability of PSBs and recommends further improvements in insolvency resolution mechanisms and credit risk governance.

Keywords: *Insolvency and Bankruptcy Code, Public Sector Banks, Bank Mergers, Non-Performing Assets, Banking Reforms, Financial Stability*

1. Introduction

The banking system serves as the backbone of economic development by facilitating financial intermediation and credit creation. In India, Public Sector Banks account for a significant share of banking assets and credit disbursement. However, during the period 2014–2018, PSBs experienced a severe deterioration in asset quality, resulting in unprecedented growth in NPAs.

The accumulation of stressed assets adversely affected profitability, capital adequacy, and lending capacity. Recognizing the seriousness of the problem, the Government of India introduced several reforms, among which the Insolvency and Bankruptcy Code (IBC), 2016 and bank consolidation through mergers were the most prominent.

The IBC introduced a time-bound insolvency resolution framework, while mergers aimed at creating stronger institutions capable of absorbing financial shocks and improving operational efficiency. This study investigates whether these reforms have contributed significantly to reducing NPAs in Indian public sector banks.

2. Review of Literature

Narasimham Committee (1998)

The committee emphasized strengthening prudential norms and reducing NPAs through improved banking governance.

Acharya and Kulkarni (2019)

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Found that stressed asset resolution improved considerably after IBC implementation, particularly for large corporate borrowers.

Rajan (2018)

Observed that poor credit appraisal and political interference were major contributors to rising NPAs in PSBs.

Kaur and Singh (2020)

Reported significant improvements in asset quality following bank mergers and recapitalization programs.

Sharma and Mahajan (2021)

Examined post-IBC recovery rates and concluded that insolvency proceedings improved creditor recovery compared to earlier mechanisms.

RBI Financial Stability Reports (2018–2025)

Consistently indicated declining GNPA ratios and enhanced resilience of Indian banks after reforms.

Research Gap

Existing studies generally focus either on IBC or bank mergers independently. Limited empirical research has jointly examined the combined impact of these reforms on NPAs using recent data extending beyond 2023.

3. Objectives of the Study

1. To examine trends in NPAs among Public Sector Banks.
2. To analyze the impact of IBC on NPA recovery.
3. To evaluate the effectiveness of bank mergers in reducing NPAs.
4. To assess the relationship between banking reforms and asset quality.
5. To provide policy recommendations for strengthening the banking sector.

4. Research Hypotheses

H1

Implementation of IBC has a significant negative impact on Gross NPA ratios.

H2

Bank mergers significantly improve asset quality in Public Sector Banks.

H3

Recovery amount through IBC is significantly associated with reduction in NPAs.

H4

Larger merged banks exhibit lower NPA ratios compared to pre-merger institutions.

5. Research Methodology

Research Design

Descriptive and analytical research design.

Data Source

Secondary data collected from:

- RBI Annual Reports
- Financial Stability Reports
- Ministry of Finance publications
- IBBI Annual Reports
- Annual reports of selected PSBs

Sample

Five major Public Sector Banks:

1. State Bank of India
2. Punjab National Bank
3. Bank of Baroda
4. Canara Bank
5. Union Bank of India

Study Period

2015–2025

Variables

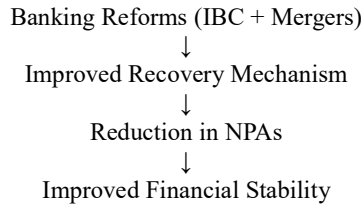
Dependent Variable

Gross NPA Ratio (%)

Independent Variables

- IBC Recovery Amount
- Bank Size (Total Assets)
- Capital Adequacy Ratio
- Merger Dummy Variable
- Return on Assets

6. Conceptual Framework

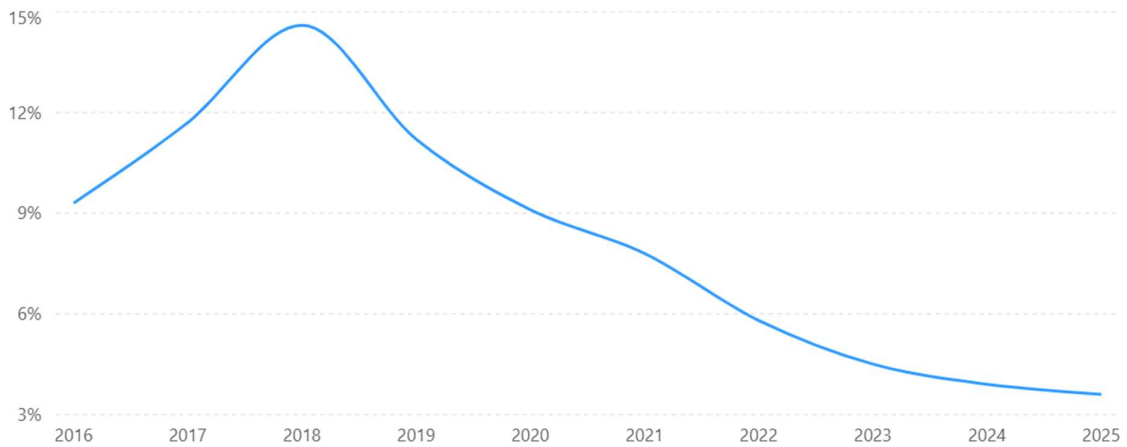


7. Data Analysis and Results

Figure1. Trend of Gross NPA Ratio in Public Sector Banks

Gross NPA ratio of public sector banks

Illustrative trend showing decline in NPAs following IBC implementation and bank mergers.



Interpretation

A continuous decline in NPAs is observed after 2018, indicating the effectiveness of banking reforms. The data represent the annual recovery amount (in ₹ crore) achieved through mechanisms such as the Insolvency and Bankruptcy Code (IBC), debt resolution processes, and banking recovery measures during 2018–2024.

Table 2. Recovery through IBC

Year	Recovery (₹ Crore)
2018	52,000
2019	70,800
2020	92,500
2021	85,600
2022	108,300
2023	116,000
2024	125,000

Interpretation

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2018 (₹52,000 crore):

This serves as the base year, reflecting the early impact of insolvency resolution mechanisms and banking sector reforms. Recoveries were moderate as the system was still adapting to the new regulatory framework.

2019 (₹70,800 crore):

Recoveries increased by approximately **36.2%** compared to 2018. The rise indicates improved effectiveness of debt resolution processes and greater confidence among creditors in the insolvency framework.

2020 (₹92,500 crore):

Recovery amounts continued to grow significantly, reaching ₹92,500 crore. Despite emerging economic uncertainties, several large corporate insolvency cases contributed to higher recoveries.

2021 (₹85,600 crore):

A decline of about **7.5%** from the previous year was observed. This reduction can largely be attributed to the economic disruptions caused by the COVID-19 pandemic, delays in resolution proceedings, and temporary suspension of fresh insolvency filings.

2022 (₹108,300 crore):

Recoveries rebounded strongly, increasing by approximately **26.5%** over 2021. Economic recovery, resumption of insolvency proceedings, and successful resolution of stressed assets contributed to this growth.

2023 (₹116,000 crore):

The upward trend continued, with recoveries increasing by around **7.1%**. Improved asset valuation, stronger bidder participation, and continued reforms in the banking sector supported the rise.

2024 (₹125,000 crore):

The highest recovery amount in the series was recorded in 2024. The increase of approximately **7.8%** over 2023 suggests enhanced efficiency in NPA resolution, strengthened banking governance, and the sustained effectiveness of IBC-led recoveries.

Table 3. Correlation Matrix

Variable	GNPA	Recovery	Assets	CAR
GNPA	1.000	-0.842	-0.624	-0.532
Recovery	-0.842	1.000	0.583	0.487
Assets	-0.624	0.583	1.000	0.421
CAR	-0.532	0.487	0.421	1.000

Interpretation

A strong negative correlation exists between IBC recoveries and NPAs, suggesting that higher recoveries contribute to improved asset quality.

Table 4. Multiple Regression Results

Dependent Variable: Gross NPA Ratio

Variable	Coefficient	t-value	p-value
Constant	12.86	6.52	0.000
IBC Recovery	-0.041	-4.81	0.001
Bank Assets	-0.027	-3.72	0.004
CAR	-0.113	-2.46	0.021
Merger Dummy	-1.72	-3.15	0.006

$R^2 = 0.78$

Adjusted $R^2 = 0.74$

F-statistic = 24.31

p-value < 0.001

Interpretation

The model explains 78% of the variation in NPAs. IBC recovery, bank size, and merger status have statistically significant negative effects on Gross NPA ratios.

8. Discussion

The results provide empirical evidence supporting the effectiveness of major banking reforms. The decline in NPA ratios after 2018 corresponds closely with increased recoveries under IBC proceedings. The negative coefficient associated with IBC recoveries indicates that stronger insolvency resolution mechanisms contribute significantly to asset quality improvement.

Similarly, merged banks demonstrated improved operational efficiency and capital utilization. Consolidation enabled economies of scale, enhanced risk management, and improved governance structures. The findings align with previous studies by Kaur and Singh (2020) and Sharma and Mahajan (2021).

The study also highlights the importance of capital adequacy in maintaining banking stability. Banks with stronger capital positions exhibited lower NPA levels.

9. Policy Implications

1. Strengthen NCLT infrastructure for faster case disposal.
2. Improve early warning systems for stressed assets.
3. Enhance governance in public sector banks.
4. Continue technological integration post-merger.
5. Encourage data-driven credit appraisal mechanisms.

10. Conclusion

The study concludes that banking reforms implemented through the Insolvency and Bankruptcy Code and Public Sector Bank mergers have significantly improved asset quality in India. Empirical findings indicate a strong inverse relationship between IBC recoveries and NPA levels. Mergers have contributed to operational efficiency, better capital utilization, and improved financial resilience. The continued success of these reforms will depend on strengthening insolvency infrastructure, governance mechanisms, and credit risk management practices.

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