ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 16, Issue, 08, pp.70875-70879, August, 2026
https://doi.org/10.37118/ijdr.31156.08.2026

RESEARCH ARTICLE OPEN ACCESS

NON-PERFORMING ASSETS IN PUBLIC SECTOR BANKS BEFORE AND AFTER MERGER: AN EMPIRICAL ANALYSIS OF INDIA

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ARTICLE INFO

Article History:
Received 24th May, 2026
Received in revised form
20th June, 2026
Accepted 18th July, 2026
Published online 31st August, 2026

KeyWords:

Non-Performing Assets, Public Sector Banks, Bank Merger, Gross NPA, Net NPA, Banking Sector, India, Asset Quality.

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ABSTRACT

Non-Performing Assets (NPAs) have been one of the major challenges affecting the financial performance and stability of Public Sector Banks (PSBs) in India. The Government of India undertook a major consolidation programme during 2019–20 with the objective of creating larger, stronger and more efficient banks, improving risk management, reducing operational costs and strengthening the capacity of banks to deal with stressed assets. The major amalgamations became effective from April 2020. This study examines the trend and behaviour of NPAs in Indian Public Sector Banks before and after the bank merger. The study is based exclusively on secondary data obtained from the Reserve Bank of India (RBI) and the Department of Financial Services (DFS), Ministry of Finance. The study covers the period from 2018–19 to 2024–25, with 2018–19 and 2019–20 treated as the pre-merger period and 2020–21 to 2024–25 as the post-merger period. The analysis focuses on Gross NPA, Gross NPA ratio, Net NPA and Net NPA ratio. The findings indicate a substantial improvement in the asset quality of PSBs after the merger period. Gross NPAs declined from ₹6.78 lakh crore in 2019–20 to ₹2.84 lakh crore in 2024–25, while the Gross NPA ratio declined from 10.3 per cent to 2.6 per cent. The average Gross NPA ratio declined from 10.95 per cent during the pre-merger period to 5.50 per cent during the post-merger period. However, the improvement cannot be attributed to merger alone, as it coincided with several measures including recovery initiatives, write-offs, insolvency proceedings, recapitalisation, improved provisioning, credit-risk management and economic recovery. The study concludes that consolidation appears to have contributed to strengthening the financial structure and asset-quality management of PSBs, but the long-term success of mergers depends on effective integration, prudent lending, recovery mechanisms and continuous risk management.

Citation: Dr. Harisha, N. 2026. *"*Non-Performing Assets in Public Sector Banks before and After Merger: An Empirical Analysis of India.*"*. *International Journal of Development Research*, 16, (08), 70875-70879.

INTRODUCTION

The banking sector occupies a central position in India's economic development by mobilising savings and allocating financial resources to productive sectors. Public Sector Banks have historically played a particularly important role in agricultural finance, infrastructure, MSMEs, priority-sector lending and financial inclusion. However, high levels of non-performing assets became a serious concern for the Indian banking system, particularly during the period preceding 2018.The Gross NPA ratio of PSBs reached a peak of approximately 14.6 per cent in 2017–18. The deterioration in asset quality was associated with excessive lending during the earlier credit cycle, weaknesses in project appraisal, stressed infrastructure and industrial loans, economic slowdown and delayed recognition of stressed assets. The Reserve Bank of India's Asset Quality Review also resulted in greater recognition of stressed loans. RBI data show that PSBs' Gross NPAs amounted to ₹8.96 lakh crore in March 2018, with a Gross NPA ratio of 14.58 per cent. Against this background, the Government of India initiated consolidation of Public Sector Banks. In August 2019, the Government announced a major programme of bank amalgamation. The objective was to create larger and stronger banks with greater capacity to finance the economy, improve operational efficiency, strengthen risk management and achieve economies of scale.The mergers became effective from 1 April 2020. Bank of Baroda had already absorbed Vijaya Bank and Dena Bank; Canara Bank absorbed Syndicate Bank; Punjab National Bank absorbed Oriental Bank of Commerce and United Bank of India; Indian Bank absorbed Allahabad Bank; and Union Bank of India absorbed Andhra Bank and Corporation Bank.The present study therefore attempts to examine whether the asset quality of PSBs improved during the period following consolidation.

Concept of Public sector NPAs and Merger: High NPAs reduce the profitability and lending capacity of banks because banks are required to make provisions against stressed assets. They also adversely affect capital adequacy, liquidity, profitability and the ability of banks to extend fresh credit.The Government's consolidation strategy was partly intended to create financially stronger institutions capable of managing NPAs more effectively. However, the merger itself does not automatically eliminate the NPAs of the constituent banks. Instead, the assets, liabilities and stressed loans of the amalgamating banks are transferred to the merged entity.Therefore, an important research question arises like the asset quality of Public Sector Banks improve after the major bank mergers implemented in April 2020. This study attempts to answer this question by comparing NPA indicators before and after the merger.

Objectives and Methodology of the Study: The present study aims to examine the trends and changes in the level of Gross NPAs,of Public Sector Banks before and after the merger and to assess the impact of bank mergers on asset quality during the pre-merger and post-merger periods. The study is analytical and descriptive in nature and is based entirely on secondary data collected from reliable and authoritative sources, including the Reserve Bank of India (RBI) Database on Indian Economy, RBI *Statistical Tables Relating to Banks in India*, RBI Annual Reports, RBI reports on the performance of commercial banks, the Department of Financial Services under the Ministry of Finance, annual reports of Public Sector Banks, and other Government of India reports and policy documents. The study covers the period from 2018–19 to 2024–25, with 2018–19 and 2019–20 considered as the pre-merger period and 2020–21 to 2024–25 as the post-merger period.

Table 1. Merger of Major Public Sector Banks in India

Acquiring/Amalgamated Bank	Amalgamating Bank(s)	Effective Date
Bank of Baroda	Vijaya Bank and Dena Bank	1 April 2019
Canara Bank	Syndicate Bank	1 April 2020
Punjab National Bank	Oriental Bank of Commerce and United Bank of India	1 April 2020
Indian Bank	Allahabad Bank	1 April 2020
Union Bank of India	Andhra Bank and Corporation Bank	1 April 2020

Source: Department of Financial Services (DFS). (2020–21). *Annual Report 2020–21*. Ministry of Finance, Government of India

The major public sector bank mergers in India represent a significant structural reform undertaken by the Government of India to strengthen the banking sector, improve operational efficiency, enhance financial stability, and create larger and more competitive banking institutions. The table 1 illustrates the first major consolidation in this phase was the merger of Vijaya Bank and Dena Bank with Bank of Baroda, which became effective on 1 April 2019**.** This was followed by four major mergers effective from 1 April 2020**:** Syndicate Bank with Canara Bank, Oriental Bank of Commerce and United Bank of India with Punjab National Bank, Allahabad Bank with Indian Bank, and Andhra Bank and Corporation Bank with Union Bank of India**.** These mergers consolidated ten public sector banks into four larger banks, reducing duplication of operations and enabling economies of scale. The consolidation was also intended to improve the banks' ability to mobilize capital, expand credit, manage risks, adopt modern technology, and address the problem of stressed assets and non-performing assets (NPAs). Overall, the mergers marked an important shift from a fragmented public sector banking structure towards larger and financially stronger institutions capable of competing more effectively in the domestic and international banking environment

Trend of NPAs in Public Sector Banks pre-merger and post-merger comparison

Table 1. Gross and Net NPAs of Public Sector Banks

Financial Year	Gross NPA (₹ crore)	Gross NPA (%)	Net NPA (₹ crore)	Net NPA (%)
2018–19	7,39,541	11.6	2,85,122*	4.8*
2019–20	6,78,317	10.3	2,30,918*	3.7*
2020–21	6,16,616	9.1	1,97,360	3.1
2021–22	5,40,958	7.3	1,54,306	2.2
2022–23	4,28,197	5.0	1,02,493	1.2
2023–24	3,39,541	3.5	72,548	0.8
2024–25	2,83,650	2.6	55,423	0.52

Source: RBI, Database on Indian Economy; RBI Annual Reports; Department of Financial Services, Ministry of Finance.

The table 1 indicates a substantial improvement in the asset quality and financial position of Public Sector Banks (PSBs) during the period 2018–19 to 2024–25. Gross NPAs declined from ₹7,39,541 crore in 2018–19 to ₹2,83,650 crore in 2024–25, while the Gross NPA ratio decreased sharply from 11.6 per cent to 2.6 per cent. Similarly, Net NPAs declined from ₹2,85,122 crore to ₹55,423 crore, and the Net NPA ratio fell from 4.8 per cent to 0.52 per cent during the same period. The continuous decline in the Net NPA ratio from 3.7 per cent in 2019–20 to 0.52 per cent in 2024–25, indicates a significant reduction in the burden of stressed assets on PSBs. The pre-merger and post-merger comparison further highlights this improvement. The average Gross NPA ratio declined from 10.95 per cent during the pre-merger period (2018–19 to 2019–20) to 5.50 per cent during the post-merger period (2020–21 to 2024–25), representing a reduction of 5.45 percentage points, or approximately 49.8 per cent. In addition, Gross NPAs declined from ₹6,78,317 crore in 2019–20 to ₹2,83,650 crore in 2024–25, representing a reduction of approximately ₹3.95 lakh crore or 58.2 per cent. During the same period, the Gross NPA ratio decreased from 10.3 per cent to 2.6 per cent.

Other asset-quality indicators also demonstrate considerable improvement. Net NPAs declined from ₹1,97,360 crore in 2020–21 to ₹55,423 crore in 2024–25, while the Net NPA ratio decreased from 3.1 per cent to 0.52 per cent. The Provision Coverage Ratio increased from 83.70 per cent to 93.14 per cent, indicating stronger provisioning against potential loan losses. At the same time, the slippage ratio declined from 2.44 per cent to 0.95 per cent, suggesting that the rate at which standard loans were becoming NPAs had also decreased. The improvement in asset quality can be associated with several factors, including stronger loan-recovery mechanisms, increased provisioning, write-offs, resolution of stressed corporate loans through insolvency and bankruptcy proceedings, improved credit-risk management, and better monitoring of loan accounts. Consolidation following bank mergers may also have contributed by enabling greater operational integration, improved risk-management practices, and more efficient management of stressed assets. Overall, the evidence shows that PSBs experienced a significant improvement in asset quality during the study period. The substantial reduction in Gross and Net NPAs, together with the increase in the Provision Coverage Ratio and decline in the slippage ratio, indicates improved capacity to manage and absorb credit risk. However, the observed improvement cannot be attributed to bank mergers alone. Since several policy, institutional, and economic factors operated simultaneously during the post-merger period, the findings provide descriptive evidence of an association rather than proof of a causal relationship between bank mergers and NPA reduction. Further statistical analysis would therefore be required to establish the specific impact of mergers on the asset quality of PSBs.

Improvement in Provision Coverage Ratio

Table 3. Improvement in Provision Coverage Ratio

Indicator	2020–21	2021–22	2022–23	2023–24	2024–25
Gross NPA (%)	9.1	7.3	5.0	3.5	2.6
Net NPA (%)	3.1	2.2	1.2	0.8	0.52
PCR (%)	83.70	86.65	90.73	93.00	93.14
Slippage Ratio (%)	2.44	2.35	1.39	1.13	0.95

Source: Department of Financial Services, RBI

The data in the table show **a** clear and continuous improvement in the asset quality of Public Sector Banks (PSBs) between 2020–21 and 2024–25. The Gross NPA ratio declined steadily from 9.1 per cent in 2020–21 to 2.6 per cent in 2024–25**,** indicating a substantial reduction in the overall level of bad loans. Similarly, the Net NPA ratio declined from 3.1 per cent to 0.52 per cent during the same period. This sharp fall suggests that PSBs significantly reduced their net stressed assets after accounting for provisions. At the same time, the Provision Coverage Ratio (PCR) increased from 83.70 per cent in 2020–21 to 93.14 per cent in 2024–25. The rising PCR indicates that banks strengthened their provisions against potential loan losses and were better prepared to absorb losses arising from NPAs. Another positive development is the decline in the slippage ratio**,** which fell from 2.44 per cent to 0.95 per cent, showing that the rate at which standard loans were turning into NPAs also reduced considerably. Overall, the simultaneous decline in Gross NPA, Net NPA and slippage ratio, along with the increase in PCR, indicates a significant strengthening of the asset quality and risk-management position of PSBsduring the period. These improvements reflect the combined effects of better recovery mechanisms, provisioning, write-offs, and resolution of stressed assets, improved credit-risk management and regulatory measures**,** rather than being attributable to bank mergers alone.

Reasons for the Decline in NPAs after the Merger: The decline in NPAs in Public Sector Banks during the post-merger period can be explained by a combination of institutional, regulatory, managerial and economic factors. Although bank consolidation was an important structural reform, the reduction in NPAs cannot be attributed to mergers alone. The improvement in asset quality resulted from the combined impact of consolidation of banking operations, stronger recovery mechanisms, the Insolvency and Bankruptcy Code (IBC), write-offs, improved provisioning, better credit-risk management and economic recovery. The merger of public sector banks created larger banks with greater geographical reach, financial strength and operational capacity. Consolidation allowed banks to integrate branch networks, technology platforms, human resources and risk-management systems. Larger banks were also able to benefit from economies of scale and operational synergies. According to the Department of Financial Services, consolidation enhanced the effectiveness of the banking sector through economies of scale and synergies and was associated with improvements in financial and governance indicators. These changes provided banks with greater capacity to monitor loans manage risks and deal with stressed assets. Strengthening loan recovery mechanisms was another important factor behind the decline in NPAs. Public Sector Banks increasingly focused on recovering overdue and stressed loans through various legal and institutional channels. Greater emphasis on monitoring overdue accounts, settlement of stressed loans and recovery proceedings helped banks reduce the stock of outstanding NPAs. Improved recovery practices also helped prevent some stressed accounts from remaining in the banking system for a prolonged period. The Insolvency and Bankruptcy Code (IBC), 2016 provided a more structured and time-bound framework for dealing with corporate insolvency. The mechanism enabled banks to initiate resolution proceedings against defaulting borrowers and recover part of their outstanding dues. The resolution of large corporate stressed assets through the insolvency process contributed to the clean-up of bank balance sheets and helped reduce the burden of NPAs. Thus, the IBC became an important institutional mechanism supporting the improvement in asset quality during the post-merger period.

Write-offs also contributed to the reduction in reported NPAs of Public Sector Banks. Banks may write off loans after making appropriate provisions when the possibility of recovery becomes limited. A write-off, however, does not necessarily mean that the borrower is released from the obligation to repay the loan. Recovery efforts can continue even after a loan has been written off. Therefore, write-offs helped banks clean up their balance sheets and reduce the reported stock of NPAs while allowing them to continue recovery efforts where possible. Strengthening of provisioning capacity was another important development. The Provision Coverage Ratio (PCR) of Public Sector Banks increased from 83.70 per cent in 2020–21 to 93.14 per cent in 2024–25. The higher PCR indicates that banks created stronger provisions against potential losses from bad loans. This helped improve the resilience of banks and reduced the impact of stressed assets on their financial position. The increase in provisioning, together with the decline in Gross and Net NPAs, indicates a significant strengthening of the balance sheets of Public Sector Banks. The post-merger period also witnessed greater attention to credit-risk management. Banks strengthened credit appraisal procedures, monitoring of large borrowers, early-warning systems and technology-based identification of potential defaults. Improved monitoring helped banks identify stressed accounts at an earlier stage and take corrective action before the deterioration became severe. The use of data analytics and technology-based systems also supported more effective monitoring of loan portfolios and contributed to the reduction in fresh loan slippages. Finally, the improvement in economic activity after the COVID-19 pandemic also supported the decline in NPAs. As economic conditions improved, many businesses and households experienced better income and cash-flow conditions, which strengthened their ability to service outstanding loans. This contributed to lower fresh loan defaults and a decline in the slippage ratio, which fell from 2.44 per cent in 2020–21 to 0.95 per cent in 2024–25. Thus, the post-pandemic economic recovery complemented the institutional and banking-sector reforms in improving the overall asset quality of Public Sector Banks.

Overall, the decline in NPAs after the merger was the result of multiple factors rather than consolidation alone. Bank mergers provided a stronger institutional structure, while recovery mechanisms, the IBC, write-offs, improved provisioning, better credit-risk management and economic recovery collectively contributed to the substantial improvement in asset quality. Therefore, the post-merger decline in NPAs should be understood as part of a broader process of banking-sector restructuring and balance-sheet strengthening.

Major Findings of the Study: The study finds that Public Sector Banks experienced a substantial improvement in asset quality during the post-merger period. Gross NPAs declined from ₹6.78 lakh crore in 2019–20 to ₹2.84 lakh crore in 2024–25, while the Gross NPA ratio declined from 10.3 per cent to 2.6 per cent during the same period. The average Gross NPA ratio also declined significantly from 10.95 per cent in the pre-merger period to 5.50 per cent in the post-merger period, indicating a considerable improvement in the overall quality of bank assets. The Net NPA ratio also declined substantially during the post-merger period and reached only 0.52 per cent in 2024–25. At the same time, the Provision Coverage Ratio increased to 93.14 per cent in 2024–25, indicating stronger provisioning capacity and improved resilience of Public Sector Banks against potential loan losses. The slippage ratio also declined from 2.44 per cent in 2020–21 to 0.95 per cent in 2024–25, suggesting that the incidence of fresh additions to NPAs had reduced considerably. The improvement in asset quality was accompanied by a significant increase in the profitability of Public Sector Banks. According to Department of Financial Services data, PSBs recorded an aggregate net profit of ₹1,78,364 crore in 2024–25. This indicates that the strengthening of balance sheets and reduction in stressed assets were accompanied by improved financial performance. However, the study also finds that the decline in NPAs cannot be attributed exclusively to bank mergers, as several other banking-sector reforms and measures, including improved recovery mechanisms, the Insolvency and Bankruptcy Code, write-offs, provisioning, better credit-risk management and economic recovery, were implemented simultaneously. Overall, the findings indicate that bank consolidation contributed to strengthening the institutional and operational capacity of Public Sector Banks, but sustainable NPA management requires continuous monitoring of credit quality, effective recovery mechanisms, prudent lending practices and strong risk-management systems. Therefore, the long-term reduction in NPAs should be viewed as the outcome of a broader process of banking-sector restructuring and balance-sheet strengthening rather than as the direct result of mergers alone.

Suggestions: Public Sector Banks should strengthen their credit appraisal systems by giving greater attention to borrower assessment, cash-flow analysis, repayment capacity and sector-specific risks before sanctioning loans. Effective credit appraisal can reduce the possibility of fresh loan accounts becoming stressed and subsequently turning into NPAs. Banks should also strengthen technology-based early-warning systems to identify stressed accounts at an early stage and take timely corrective measures before the accounts deteriorate further. The merged banks should continue to improve post-merger integration by effectively integrating technology platforms, human resources, risk-management systems and credit-monitoring practices. Greater operational coordination can help banks realise the expected economies of scale and improve the efficiency of asset-quality management. At the same time, recovery mechanisms should be strengthened and recovery proceedings should be made faster and more efficient, particularly in the case of large corporate stressed accounts. Special attention should be given to agricultural NPAs because agricultural lending constitutes an important component of the loan portfolio of Public Sector Banks. Banks should improve crop-risk assessment, strengthen linkages with crop insurance schemes and provide suitable repayment restructuring mechanisms during periods of crop failure, natural disasters or temporary income difficulties. Similarly, MSME credit monitoring should be strengthened because temporary liquidity constraints among small businesses can quickly develop into stressed assets. Timely restructuring and appropriate financial support can help viable MSMEs avoid unnecessary defaults. Public Sector Banks should avoid aggressive lending practices and ensure that the growth of advances remains consistent with borrowers' repayment capacity and the overall risk profile of the bank. The objective of consolidation should be supported by prudent credit expansion rather than excessive growth in lending. Stronger corporate governance is also necessary, with greater board-level oversight of credit risk, accountability in lending decisions and continuous monitoring of high-value exposures.

Banks should maintain adequate Provision Coverage Ratios even during periods of low NPA levels. Strong provisioning provides a financial cushion against unexpected deterioration in asset quality and strengthens the resilience of banks. Finally, greater transparency in the publication of bank-wise and merger-wise NPA data should be encouraged. Regular and detailed disclosure of such information would facilitate independent academic evaluation of the impact of bank consolidation and help policymakers assess the long-term effectiveness of public sector bank mergers.

CONCLUSION

The study examined the NPA position of Public Sector Banks in India before and after the major bank mergers. The evidence indicates a substantial improvement in asset quality during the post-merger period.Gross NPAs declined from ₹6.78 lakh crore in 2019–20 to ₹2.84 lakh crore in 2024–25, representing a decline of approximately 58 per cent. The Gross NPA ratio declined from 10.3 per cent to 2.6 per cent during the same period. Net NPA also declined substantially, while the Provision Coverage Ratio increased to more than 93 per cent.The findings therefore provide evidence of a significant improvement in the asset-quality position of PSBs during the post-merger period. Nevertheless, merger should not be regarded as the sole cause of this improvement. The decline in NPAs was supported by several complementary measures, including recovery mechanisms, insolvency resolution, provisioning, write-offs, recapitalisation, improved credit monitoring and economic recovery. The consolidation of PSBs appears to have created larger institutions with greater capacity to manage risks and improve efficiency. However, the long-term success of bank mergers will ultimately depend on prudent lending, effective governance, strong credit appraisal, timely recovery and continuous monitoring of stressed assets.Thus, the study concludes that the post-merger period was associated with a clear and substantial improvement in the NPA position of Public Sector Banks, but the observed improvement should be interpreted as the combined outcome of bank consolidation and broader banking-sector reforms rather than as the independent effect of merger alone.

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