

A Study on the Impact of Non – Performing Assets on SBI’S Operational Performance

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Abstract:

This study examines the impact of Non-Performing Assets (NPAs) on the profitability and operational efficiency of the State Bank of India (SBI) during the period 2021–2025. The study uses secondary data collected from SBI Annual Reports, RBI publications, journals, and other published sources. Financial indicators such as Gross NPA, Net NPA, Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), Cost Income Ratio, Operating Profit, and Profit per Employee were analyzed using ratio analysis, correlation, and regression techniques. The findings reveal that SBI significantly improved its asset quality, with Gross NPA declining from 5.0% in 2021 to 1.82% in 2025 and Net NPA reducing from 1.5% to 0.47%. During the same period, profitability indicators such as ROA increased from 0.45% to 1.06%, while operating profit and profit per employee showed continuous growth. Correlation analysis indicated a strong negative relationship between Gross NPA and ROA, confirming that higher NPAs adversely affect profitability. Regression results further demonstrated that declining NPAs positively influence profitability and operational efficiency. The study concludes that effective NPA management is essential for enhancing financial performance, operational efficiency, and long-term stability of SBI.

Key words: Non-Performing Assets (NPAs), Return on Assets (ROA), Return on Equity (ROE)

Introduction:

Non-Performing Assets (NPAs) are one of the major challenges faced by banks as they reduce income generation, increase provisioning requirements, and affect overall financial performance. High NPAs restrict a bank’s lending capacity, weaken profitability, and reduce operational efficiency. As the largest public sector bank in India, the performance of State Bank of India (SBI) plays a significant role in the stability and growth of the Indian banking sector.

This study focuses on analyzing the impact of NPAs on SBI’s profitability and operational efficiency during 2021–2025. The research evaluates the relationship between NPAs and key performance indicators such as ROA, ROE, NIM, Cost Income Ratio, Operating Profit, and Profit per Employee. The study employs ratio analysis, correlation analysis, and regression analysis to assess how changes in NPAs influence the bank’s financial performance.

Review of Literature:

S. Nayak, R. Kumar, and P. Sharma (2025)

Nayak et al. (2025) conducted a comparative study on State Bank of India and ICICI Bank to examine the impact of NPAs on profitability and operational efficiency. Their study concluded that higher NPAs adversely affect profitability, reduce credit growth, and weaken operational performance due to declining interest income and increasing.

Verma and A. Sinha (2024)

Verma and Sinha (2024) analyzed recent trends in NPAs after banking sector reforms in India. The researchers found that stricter lending policies, improved recovery systems, and regulatory reforms significantly reduced NPAs in Indian banks. The study concluded that declining NPAs positively influence profitability, liquidity, and operational efficiency of banks

K. Shyam (2023):

Shyam (2023) examined the relationship between NPAs and profitability in SBI and found a strong negative correlation between NPAs and ROA. The study concluded that higher NPAs reduce profitability and operational performance, emphasizing the need for effective NPA management to improve financial performance.

N. Reddy and K. Ramesh (2022):

Reddy and Ramesh (2022) studied the impact of NPAs on banking stability and found that rising NPAs reduce liquidity, lending capacity, and financial stability. The study emphasized the need for effective recovery mechanisms and strict lending policies to ensure operational efficiency and long-term sustainability.

Ankur Agrawal and Priyanka Goyal (2021):

Agrawal and Goyal (2021) found that increasing NPAs negatively affect banks' liquidity, profitability, and operational efficiency. The study highlighted the importance of effective recovery systems and continuous monitoring to improve banking performance. It also observed that higher NPAs increase provisioning requirements, reducing the funds available for productive lending. The researchers recommended strengthening credit appraisal and risk management practices to minimize future loan defaults.

Research Gap:

Most previous studies on NPAs focused mainly on bank profitability and analyzed indicators such as ROA, ROE, and NIM separately. Limited research has examined both profitability and operational efficiency together, particularly for the State Bank of India. Moreover, few studies have used recent data and statistical tools like correlation and regression to assess the impact of NPAs on operational performance indicators. Therefore, this study fills the gap by analyzing the effect of NPAs on both profitability and operational efficiency of SBI during 2021–2025.

Need of the study:

This study is important to understand the impact of NPAs on the operational performance of SBI. Rising NPAs affect efficiency, increase costs, and reduce lending capacity. The study evaluates the effect of NPAs on cost control, productivity, and resource utilization. Its findings will help bank management, policymakers, and researchers develop strategies to improve operational efficiency and reduce NPAs.

Problem of the Study:

The increasing level of NPAs is a major challenge for SBI as it reduces income, increases recovery costs, and affects profitability and efficiency. High NPAs also restrict the bank's lending capacity and weaken its financial position. Despite various measures taken to control NPAs, the issue continues to impact performance. Therefore, this study examines the effect of NPAs on SBI's operational performance and ways to reduce their impact.

Objectives:

1. To study the relationship between NPAs and key performance indicators such as ROA, ROE, and Net Interest Margin.
2. To evaluate the impact of NPAs on profitability and operational efficiency.
3. To analyze the impact of Non-Performing Assets (NPAs) on the operational performance of the State Bank of India.

Scope of the Study:

The study focuses on analyzing the impact of NPAs on the profitability and operational efficiency of SBI during 2021–2025. It examines financial indicators such as ROA, ROE, NIM, Cost Income Ratio, Operating Profit, and Profit per Employee. The analysis is based on secondary data and uses ratio analysis, correlation, and regression techniques. The study provides insights into the role of NPA management in improving bank performance and financial stability.

Limitations of the Study:

The study is limited to the State Bank of India and does not compare other banks. It is based solely on secondary data collected from published sources and covers only the period from 2021 to 2025. The analysis focuses on selected

profitability and operational efficiency indicators. External factors affecting bank performance and advanced statistical techniques are not considered in the study.

Research Design:

The present study is based on a Descriptive Research Design. The study aims to analyze the impact of Non-Performing Assets (NPAs) on the operational performance of State Bank of India (SBI). It examines profitability, asset quality, and operational efficiency using financial ratios and statistical techniques.

Data Collection Methods:

Secondary Data:

- The secondary data required for the study were collected from:
- Annual Reports of State Bank of India (SBI)
- Reserve Bank of India (RBI) Reports
- Research Journals and Articles
- Official Website of SBI
- Financial Databases and Published Sources

Data Analysis and Interpretation:

Analysis according to ROA

Year	ROA (%)
2025	1.06
2024	0.99
2023	0.91
2022	0.64
2021	0.45

Table 1: ROA Data

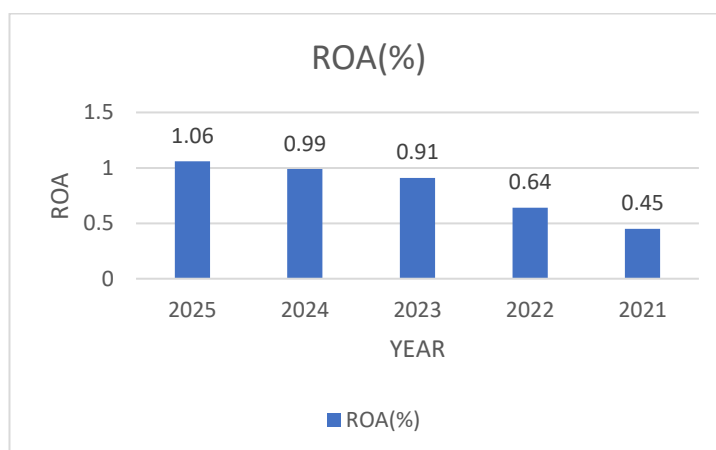


Figure 1: ROA Trend (2021–2025)

Interpretation:

The ROA of SBI increased steadily from 0.45% in 2021 to 1.06% in 2025, showing improved profitability. The consistent growth indicates better utilization of assets and enhanced operational efficiency. This improvement may be attributed to effective credit management and reduced NPAs. Overall, the trend reflects strong financial performance and sound asset management.

Analysis according to ROE:

Year	ROE (%)
2025	118.81628
2024	123.74212
2023	122.54856
2022	122.82921
2021	121.5743

Table 2: ROE Data

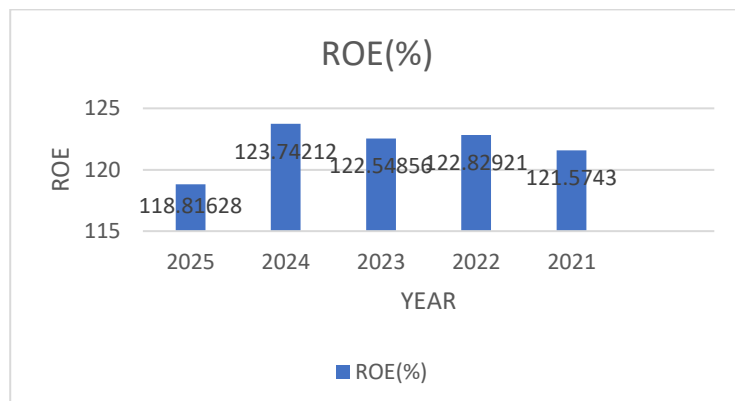


Figure 2: ROE Trend (2021–2025)

Interpretation:

The ROE of SBI remained strong and relatively stable during 2021–2025. It increased gradually and reached its highest level in 2024, reflecting efficient utilization of shareholders’ funds. However, ROE declined in 2025, indicating a slight reduction in profitability. Overall, the bank maintained a healthy return on equity throughout the study period.

Analysis according to NIM:

Year	NIM (%)
2025	2.85
2024	2.97
2023	3.04
2022	2.86
2021	2.91

Table 3: NIM Data

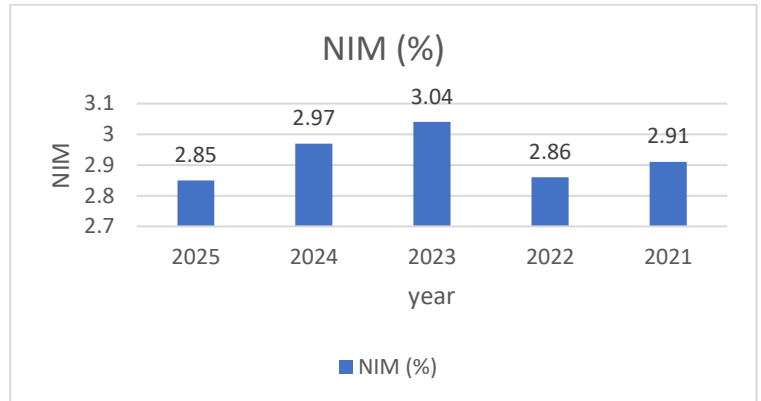


Figure 3: NIM Trend (2021–2025)

Interpretation:

The NIM of SBI improved from 2.91% in 2021 to 3.04% in 2023, showing better interest-earning efficiency. It declined slightly in 2024 and 2025 but remained stable overall. The bank maintained a consistent margin between 2.8% and 3.0% throughout the period. This reflects steady core banking performance and effective fund management

Analysis according to gross NPA:

Year	Gross NPA (Cr)
2025	76880.2
2024	84276.3
2023	90927.8
2022	112023
2021	126389

Table 4: Gross NPA Data

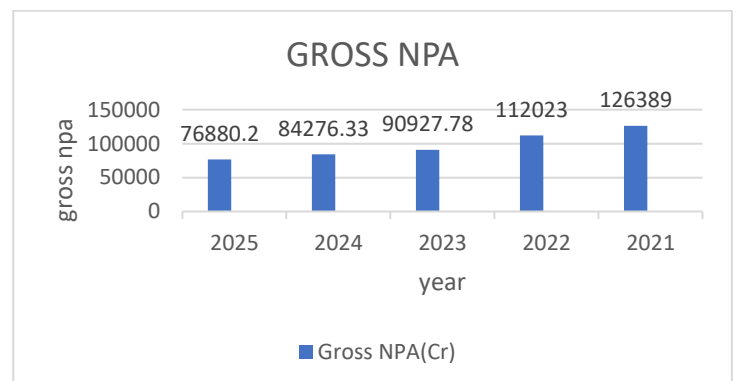


Figure 4: Gross NPA Trend (2021–2025)

Interpretation:

The Gross NPA of SBI declined significantly from 2021 to 2025, indicating a continuous improvement in asset quality. The Gross NPA ratio also decreased from 5.00% to 1.82% during the period. This reflects effective credit risk management, stronger loan recovery, and better lending practices. Overall, the trend highlights improved financial stability and operational

Analysis according to net NPA:

Year	Net NPA(Cr)
2025	19666.9
2024	21051.1
2023	21466.6
2022	27965.7
2021	36809.7

Table 5: Net NPA Data

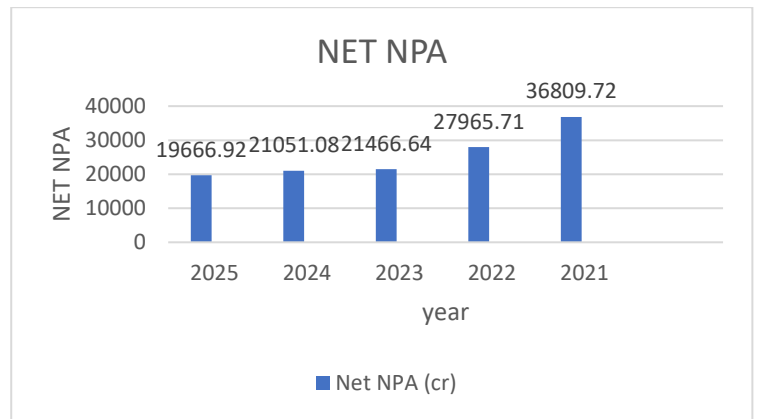


Figure 5: Net NPA Trend (2021-2025)

Interpretation:

The Net NPA of SBI declined steadily from 2021 to 2025, showing a significant improvement in asset quality. The Net NPA ratio decreased from 1.50% to 0.47% during the period. This reflects effective credit risk management, stronger recovery mechanisms, and prudent lending practices. Overall, the trend indicates enhanced financial stability, operational efficiency, and profitability.

Analysis according cost income ratio:

Year	Cost Income Ratio (%)
2025	24.40%
2024	22.57%
2023	19.36%
2022	17.21%
2021	16.46%

Table 6: Cost Income Ratio Data

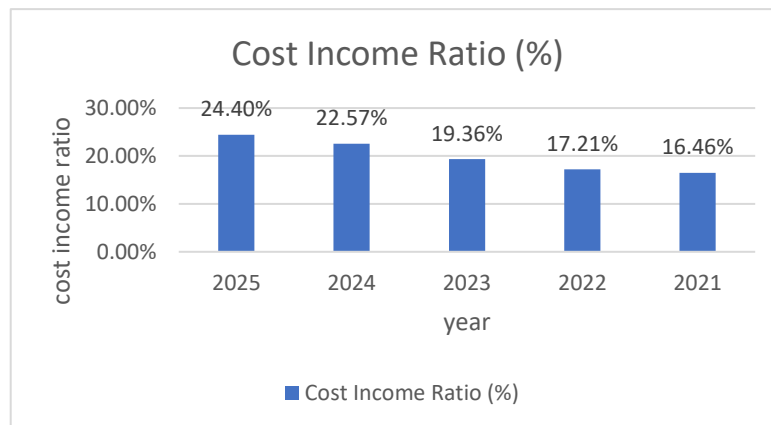


Figure 6: Cost Income Ratio Trend (2021-2025)

Interpretation:

The Cost Income Ratio of SBI declined steadily during the study period, indicating improved operational efficiency. The reduction shows that the bank effectively controlled its operating expenses while increasing income. A lower ratio reflects better cost management and resource utilization. Overall, the trend signifies enhanced profitability and financial stability.

Calculation of correlation of ROA:

Year	X = Gross NPA	Y = ROA
2025	1.82	1.06
2024	2.24	0.99
2023	2.78	0.91
2022	3.97	0.64
2021	5	0.45

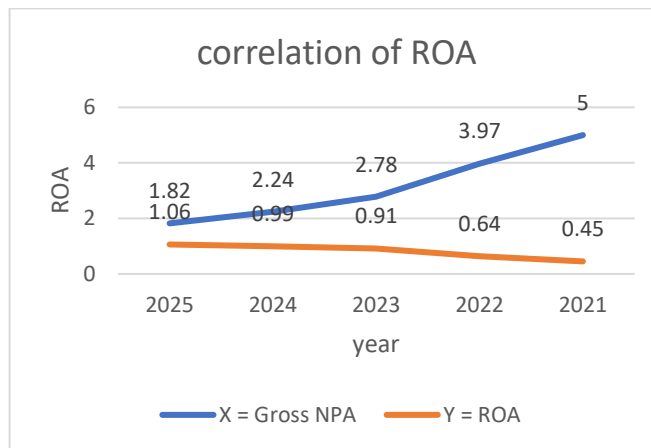


Table 7: Correlation Data

Figure 7: Correlation between Gross NPA and ROA

Interpretation:

The correlation coefficient (-0.99822) shows a very strong negative relationship between Gross NPA and ROA. As NPAs increase, the bank's profitability declines significantly. Higher NPAs reduce income from assets and weaken operational efficiency. This highlights the importance of controlling NPAs to improve profitability and financial performance.

Calculation of Regression of SBI on ROA

Year	X = Gross NPA	Predicted ROA (Y)
2025	1.82	1.07
2024	2.24	0.99
2023	2.78	0.89
2022	3.97	0.65
2021	5	0.45

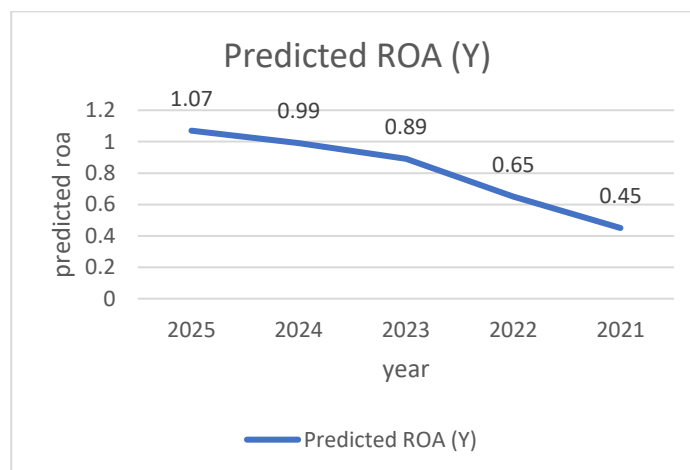


Table 8: Regression Data

Figure 8: Predicted ROA (Regression Analysis)

Interpretation:

The predicted values are very close to the actual values, indicating that the regression model fits the data reasonably well. The analysis confirms that as Gross NPA increases, ROA decreases, showing a negative impact of non-performing assets on profitability.

Chi-Square Test Between Gross NPA and ROA:

Hypothesis:

H₀ (Null Hypothesis): There is no significant relationship between Gross NPA and ROA of SBI.

H₁ (Alternative Hypothesis): There is a significant relationship between Gross NPA and ROA of SBI.

O (Observed value)	E (Expected value)	(O-E) ² /E
3	1.8	0.8
0	1.2	1.2
0	1.2	1.2
2	0.8	1.8
Total		5

Table 9: Chi-Square

Interpretation:

The calculated Chi-Square value (5.00) is greater than the table value (3.841) at the 5% level of significance. Hence, the null hypothesis is rejected. It is concluded that there is a significant relationship between Gross NPA and ROA of SBI. The analysis indicates that a decrease in Gross NPA is associated with an increase in ROA, thereby improving the bank's profitability and operational performance.

Findings of the Study:

- ROA increased consistently from 0.45% in 2021 to 1.06% in 2025, indicating improved profitability and efficient utilization of assets by SBI.
- ROE remained strong throughout the study period, reflecting effective utilization of shareholders' funds and stable financial performance.
- NIM remained stable between 2.85% and 3.04%, showing consistent earning efficiency from core banking operations despite fluctuations in interest expenses.
- The Cost Income Ratio showed changes during the study period, indicating variations in operating expenses associated with business expansion and operational activities.
- The correlation coefficient between Gross NPA and ROA was -0.99822, showing a very strong negative relationship. This indicates that higher NPAs significantly reduce the profitability of the bank.
- Regression analysis confirmed that increasing NPAs negatively affect ROA and other profitability indicators. The predicted values were very close to the actual values, indicating that the regression model is reliable and accurate.
- No Chi-Square test results are available in the uploaded document. The methodology section mentions only Correlation Analysis, Regression Analysis, Mean, and Growth Rate Analysis as statistical tools used.
- Gross NPA showed a continuous decline from 5.00% in 2021 to 1.82% in 2025, indicating significant improvement in SBI's asset quality. The reduction in bad loans reflects effective credit monitoring, recovery mechanisms, and better risk management practices adopted by the bank.
- Net NPA also decreased steadily during the study period, demonstrating SBI's strong provisioning policies and improved recovery performance. The declining trend in Net NPA indicates a lower burden of stressed assets and enhanced financial stability.

Conclusion:

The study concludes that Non-Performing Assets (NPAs) have a significant impact on the profitability and operational efficiency of the State Bank of India (SBI). During the period 2021–2025, SBI successfully reduced its Gross NPA and Net NPA ratios, which contributed to improvements in key profitability indicators such as Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), Operating Profit, and Profit per Employee. Correlation and regression analyses confirmed that higher NPAs negatively affect profitability and operational performance. The findings highlight that effective NPA management, strong credit appraisal systems, and efficient recovery mechanisms are essential for maintaining financial stability, improving operational efficiency, and ensuring sustainable growth of the bank.

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