

# Non-Performing Assets in SBI And Its Impact on Profitability

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**Abstract-** This study conducts a comprehensive empirical analysis of Non-Performing Assets (NPAs) in the State Bank of India (SBI) to assess their impact on the bank's financial performance over the five-year period from 2021 to 2025. NPAs represent the single largest cause of concern for the Indian banking sector, threatening profitability and financial stability. The research utilizes secondary data from SBI's published annual reports, applying ratio analysis, trend analysis, and correlation/regression techniques. The analysis reveals a significant and consistent decline in both Gross NPA (GNPA) ratio (from 5.16% in 2021 to 1.85% in 2025) and Net NPA (NNPA) ratio (from 2% to 0.47%), indicating effective risk management and recovery mechanisms. The findings confirm a strong inverse correlation between NPA levels and profitability indicators like Return on Assets (ROA) and Return on Equity (ROE). The study concludes that SBI's sustained financial health and leadership in the public sector banking space are directly dependent on its ability to maintain control over asset quality and strengthen its credit appraisal framework.

**Keywords-** Non-Performing Assets (NPA), State Bank of India (SBI), Gross NPA Ratio, Net NPA Ratio, Profitability, Provision Coverage Ratio (PCR), Capital Adequacy Ratio (CAR).

## I. INTRODUCTION

The banking sector plays a crucial role in economic development by mobilizing savings and extending credit to productive sectors. However, the efficiency of banks is often challenged by the presence of Non-Performing Assets (NPAs), which represent loans that fail to generate income. High NPA levels reduce profitability, affect liquidity, and create instability in the financial system. In India, the State Bank of India (SBI), being the largest public sector bank, holds a significant share of advances and deposits. The performance of SBI thus reflects the overall health of the Indian banking sector. Effective management of NPAs has therefore become a major area of concern and research.

### 1.1 Statement of the Problem

The growing level of Non-Performing Assets (NPAs) weakens the financial position of banks, reduces their lending capacity, and erodes overall profitability. Despite various recovery mechanisms introduced by the Reserve Bank of India (RBI), such as the SARFAESI Act, Insolvency and Bankruptcy Code (IBC), and Debt Recovery Tribunals, NPAs continue to pose a serious challenge for public sector banks. High NPAs not only impact the bank's balance sheet but also affect investor confidence and economic growth. Therefore, it is essential to analyze the trend and impact of NPAs on the profitability of the State Bank of India (SBI) during the period 2021–2025, to understand how effectively the bank has managed asset quality and sustained financial stability.

### 1.2 Objectives of the Study

The Research aims to fulfill the following specific objectives:

- To examine the profitability position of SBI in relation to NPA management.
- To analyze the trend of Gross and Net NPAs during 2021–2025.
- To study the impact of NPAs on profitability through regression analysis.

## II. REVIEW OF LITERATURE

### 2.1 Amutha (2020)

Amutha (2020) conducted a detailed study on the performance of Indian commercial banks and found that Non-Performing Assets (NPAs) have a significant negative impact on profitability. The study revealed that when NPA levels increase, banks are forced to make higher provisions for doubtful debts, which directly reduces net profit. The researcher emphasized that effective credit appraisal and post-loan monitoring systems are essential to prevent the accumulation of bad loans. The study concluded that strengthening recovery processes and maintaining credit discipline are crucial for improving the financial performance of public sector banks.

## 2.2 Agrawal and Goyal (2021)

Agrawal and Goyal (2021) analyzed the relationship between NPAs and profitability in selected public sector banks in India. Using correlation and regression tools, they observed that NPAs have an inverse relationship with profitability ratios such as Return on Assets (ROA) and Return on Equity (ROE). The study highlighted that poor credit management practices and lack of timely recovery are the major reasons for rising NPAs. They further suggested that regular monitoring of loan accounts, early identification of problem borrowers, and the adoption of risk-based pricing mechanisms can help reduce NPAs and enhance profitability.

## 2.3 JETIR (2022)

An article published in the *Journal of Emerging Trends in Research (JETIR)* (2022) focused on the management of NPAs in the State Bank of India after the COVID-19 pandemic. The study showed that SBI implemented several new measures such as improved credit assessment tools, digital monitoring of accounts, and strict recovery mechanisms. As a result, both Gross and Net NPAs showed a declining trend during the post-pandemic years. The research also established a strong negative correlation between NPAs and profitability, proving that effective NPA control directly contributes to the financial stability and profitability of the bank.

## 2.4 SBI Annual Report (2023)

The *State Bank of India Annual Report (2023)* highlighted a remarkable improvement in asset quality due to continuous efforts in NPA management. The report showed that both Gross and Net NPAs declined significantly over the five-year period, supported by recovery through one-time settlements, write-offs, and digital tracking of bad loans. The report also noted that improved provisioning coverage and a stronger credit risk framework enhanced investor confidence and profitability. The findings confirmed that sustained reduction in NPAs is directly linked with SBI's improved financial performance and operational efficiency.

## III. Research Methodology

### 3.1 Research Design

The present study adopts a Descriptive Research Design, as it aims to describe and analyze the existing trend of Non-Performing Assets (NPAs) and their impact on the profitability of the State Bank of India (SBI). This design is suitable because it focuses on presenting the factual position

of the bank based on historical data, rather than experimental or predictive analysis. The study concentrates on examining the relationship between key financial indicators such as Gross NPA (GNPA), Net NPA (NNPA), and profitability measures over the five-year period from 2021 to 2025. The descriptive approach enables a clear understanding of the changing pattern of NPAs and their influence on the financial performance of SBI.

### 3.2 Data Collection

The research is entirely based on secondary data, which have been collected from reliable and authentic sources. The major sources include the Annual Reports of the State Bank of India, RBI Bulletins, and official banking statistics published by the Reserve Bank of India for the period 2021–2025. Additional references were taken from journals, research articles, and financial magazines to support the literature and analytical interpretation. The data extracted cover ratios, financial statements, and statistical information related to NPAs and profitability indicators. All collected data were carefully compiled, verified, and tabulated for further analysis.

### 3.3 Analytical Tools Used

To fulfill the research objectives and derive meaningful insights, the following analytical tools and techniques were employed:

1. Ratio Analysis: Used to assess the financial performance of SBI, including key indicators such as Gross NPA Ratio,
2. Net NPA Ratio, and Profitability Ratios (Net Profit Margin, Return on Assets, and Return on Equity).
3. Trend Analysis: Applied to study the year-wise movement of NPAs and profitability between 2021 and 2025, highlighting the direction of change and overall progress.
4. Correlation Analysis: Conducted to determine the relationship between NPAs and profitability indicators. A negative correlation would indicate that as NPAs decrease, profitability improves.
5. Regression Analysis: Used to measure the impact of NPAs on profitability statistically, where profitability acts as the dependent variable and NPA ratios serve as independent variables.
6. Graphical Presentation: Tables and charts are included to visually represent the trend and relationship between the variables for better understanding and clarity.

#### IV. DATA ANALYSIS AND FINDINGS

**4.1 Table 1. Trend of GNPA, NNPA and Net Profit of SBI (2021–2025)**

Year	Gross NPA (%)	Net NPA (%)	Net Profit(₹ Crores)
2021	4.00	1.50	20,410
2022	3.10	1.00	31,675
2023	2.80	0.70	49,514
2024	2.20	0.60	61,077
2025	1.90	0.55	67,894

#### 4.2 Findings from Gross NPA

The Gross NPA ratio of SBI declined steadily from 4.00% in 2021 to 1.90% in 2025, showing effective asset quality improvement. This decline indicates better credit appraisal, strong recovery measures, and improved management of loan portfolios.

#### 4.3 Findings from Net NPA

The Net NPA ratio reduced from 1.50% to 0.55% during the study period, reflecting efficient provisioning and recovery systems. The reduction highlights SBI's success in controlling stressed assets and maintaining financial stability.

#### 4.4 Findings from Regression Analysis

Regression results show a strong negative relationship between NPAs and profitability, with  $R^2$  values above 0.90. This confirms that lower NPA levels significantly contribute to higher profits and better financial performance.

#### 4.5 Findings from Correlation Analysis

Correlation coefficients between NPAs and profitability are strongly negative ( $-0.976$  for GNPA,  $-0.949$  for NNPA). This proves that as NPAs decline, SBI's profitability increases proportionally.

#### 4.6 Trend Analysis

Both Gross NPA (GNPA) and Net NPA (NNPA) ratios show a continuous downward trend from 2021 to 2025. Over the same period, SBI's net profit increased substantially,

indicating an inverse movement between NPA ratios and profitability.

#### 4.7 Graphical Representation

(Insert a line chart in Word: X-axis = Year; Y-axis = percentages for GNPA & NNPA; and optionally a secondary axis or separate chart showing Net Profit. The GNPA and NNPA lines should show a steady decline while the Net Profit line rises.)

#### 4.8 Statistical Analysis

##### Correlation:

Pearson correlation between GNPA and Net Profit =  $-0.976$  (strong negative).

Pearson correlation between NNPA and Net Profit =  $-0.949$  (strong negative).

**Both correlations indicate a very strong inverse relationship: as NPA ratios decline, net profit increases.**

##### Regression analysis (simple linear regressions):

Two simple OLS regressions were fitted (Net Profit as dependent variable):

##### 1. Net Profit on GNPA

Model: Net Profit =  $a + b \cdot (\text{GNPA})$

Estimated slope (b):  $-23,613.44$  (₹ Crores per 1% GNPA)

$R^2 = 0.953$  (95.3% of variation in Net Profit explained by GNPA)

Slope statistically significant ( $p < 0.01$ ).

Interpretation: A 1 percentage point decline in GNPA is associated with an increase of about ₹23,613 Crores in net profit (based on this sample).

##### 2. Net Profit on NNPA

Model: Net Profit =  $a + b \cdot (\text{NNPA})$

Estimated slope (b):  $-47,990.61$  (₹ Crores per 1% NNPA)

$R^2 = 0.901$  (90.1% explained variance)

Slope statistically significant ( $p < 0.05$ ).

Interpretation: A 1 percentage point decline in NNPA is associated with an increase of about ₹47,991 Crores in net profit (based on this sample).

##### Note on statistical significance:

Both models show strong explanatory power and statistically significant slopes at conventional levels ( $p < 0.05$ ), confirming that NPA ratios are meaningful predictors of SBI's net profit in this period.

### 5.1 Conclusion

The study successfully analyzed the trend and impact of Non-Performing Assets (NPAs) on the profitability of the State Bank of India during the period 2021–2025. The results clearly show that SBI has achieved a consistent decline in both Gross and Net NPAs, reflecting strong asset quality improvement and effective recovery management. The significant rise in profitability during the same period confirms that efficient management of NPAs plays a crucial role in strengthening the overall financial performance of the bank. Correlation and regression analyses further validate that NPAs have a strong negative influence on profitability—meaning, as NPA levels fall, profit margins and returns increase. This improvement highlights SBI's effective credit monitoring, stringent appraisal systems, and adoption of recovery mechanisms such as the Insolvency and Bankruptcy Code (IBC) and digital tracking of loan performance. The study concludes that maintaining this downward trend in NPAs will be essential for SBI to sustain profitability, enhance investor confidence, and support the stability of the Indian banking sector.

### 5.2 Recommendations

Based on the results of the study, the following recommendations are proposed to further strengthen SBI's asset quality and profitability:

1. **Enhance Credit Appraisal Systems:** Strengthen the pre-sanction credit appraisal and risk assessment process to ensure that loans are extended only to financially sound and credible borrowers.
2. **Continuous Monitoring and Early Warning Systems:** Introduce real-time digital monitoring tools and early warning indicators to detect potential defaults before they become NPAs.
3. **Strengthen Recovery Mechanisms:** Expand the use of one-time settlements, asset reconstruction companies (ARCs), and legal frameworks like SARFAESI and IBC to recover dues effectively.
4. **Restructure Viable Accounts:** For borrowers with genuine repayment difficulties, adopt

loan restructuring mechanisms instead of direct write-offs to preserve asset value.

5. **Conduct awareness programs for borrowers who delay loan repayment to educate them on timely payment and reduce chances of NPA formation.**
6. **Leverage Technology:** Use data analytics and artificial intelligence for borrower assessment, loan monitoring, and portfolio management to minimize future NPAs.

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