



Trust in Turbulent Times: Effects of NPAs on SBI Depositors During the Pandemic Years

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ABSTRACT

Non-Performing Assets (NPAs) have long been recognized as a critical indicator of systemic risk within the banking sector, and the COVID-19 pandemic further amplified these challenges for public sector banks in India, particularly the State Bank of India (SBI). As the largest public sector bank, SBI plays a pivotal role in maintaining financial stability and depositor confidence during times of economic uncertainty. This study aims to assess the impact of rising NPAs on depositor trust during the pandemic period from 2020 to 2022. A mixed-method approach was adopted, utilizing secondary data from official reports alongside primary data collected through a structured depositor survey comprising 150 respondents across rural and urban regions. Statistical analysis, including correlation and regression techniques, was applied to examine the relationship between NPA levels and depositor trust. The results revealed a moderate but statistically significant decline in depositor confidence ($p < 0.05$) during periods of NPA escalation, with the effect being more pronounced among urban customers compared to rural counterparts. Key implications highlight the urgent need for robust risk communication strategies, transparent disclosures, and strengthened depositor assurance mechanisms to mitigate trust erosion during financial crises. The findings contribute to both theoretical understanding—by validating trust theory in a crisis context—and practical banking strategies by recommending enhanced communication frameworks for public sector banks. This study underscores the importance of depositor-centric policies for sustaining financial resilience amid systemic disruptions.

Keywords: *Non-Performing Assets, State Bank of India, Depositor Trust, COVID-19, Risk Perception, Financial Stability.*

1. Introduction

1.1 Background Context

The Indian banking sector has a vital role to perform in facilitating economic growth, financial stability, and public trust(N, 2025). The State Bank of India (SBI) is the largest public sector bank with a dominant position among the major players, catering to millions of urban and rural depositors. Its extensive branch network and government backing have traditionally created SBI as an emblem of stability and trust within the Indian financial landscape(Nikam, 2024).

However, the outbreak of the COVID-19 pandemic in 2020 presented unprecedented challenges to the banking industry. Economic disruption such as restricted industrial activity, unemployment, and decreasing levels of income led to a scenario of increasing defaults on loans. The Non-Performing Assets (NPAs) of the banks, including SBI, also began to rise accordingly. NPAs refer to loans or advances on which there are overdue interest or principal payments, i.e., where there is financial duress(Hussain, n.d.). A greater NPA ratio undermines the asset quality, profitability, and general credibility of the bank. For the depositor, this can create apprehensions about the safety of deposits, especially in the midst of a crisis with uncertainty and economic instability(Lodh & Nandy, 2023).

1.2 Problem Statement

NPAs not only affect the financial health of a bank but also psychologically and behaviorally affect depositors. When a bank signals the increase in NPAs, it conveys suspicion regarding the bank's lending practice, risk handling, and ability to protect the depositor funds. During the years of the pandemic (2020-2022), SBI had variability in NPA ratios that were concurrent with heightened public concern about economic security(Goswami, 2022a). This situation presented a harsh question: Did the increase in NPAs under COVID-19 erode depositor confidence in SBI? This is a critical relationship to comprehend since depositor trust is the foundation of banking operations and depositor conduct(Goswami, 2022b).

1.3 Research Gap

While there has been extensive research that has investigated the impact of NPAs on bank profitability, operational effectiveness, and credit growth, scant research has focused on depositor trust as a dependent variable during periods of systemic crises such as the COVID-19 pandemic(Sharma, 2024). The majority of the existing research emphasizes NPAs from a regulatory compliance and financial performance perspective without regards to the behavioral dimension of how depositors perceive risk and safety as NPAs increase. This study aims to bridge this gap by examining depositor trust when NPAs are increasing in SBI during pandemic years(Tham et al., 2021).

1.4 Study Significance

This study is of practical and theoretical significance. Practically, it illuminates how depositors react to financial stress signals like NPAs so that banks and regulators can develop effective communications and depositor protection in crisis times(Kumari et al., 2024). To policymakers, the

findings can inform risk disclosure policies, transparency, and assurance schemes in a way to ensure financial stability. Theoretically, the study posits its contribution to financial services trust theory through its application during pandemic-led economic turmoil and bank risk consciousness (Anand et al., 2009).

1.5 Research Aim & Objectives

Aim:

To present how NPAs had an impact on depositor trust in SBI during the COVID-19 period (2020–2022).

Objectives

- a) To observe the trend of NPAs of SBI during pandemic years (2020–2022).
- b) To calculate depositor confidence levels through primary and secondary data.
- c) To test the association between NPA ratios and depositor trust index.

1.6 Research Questions & Hypotheses

Research Questions (RQs)

- RQ1: Was depositor trust in SBI significantly associated with the increase in NPAs during the COVID-19 pandemic?
- RQ2: Is depositor trust differential across SBI customers in urban and rural segments during the pandemic years (2020–2022)?

Hypotheses

H₀₁ (Null): NPAs have no significant impact on depositor trust during the COVID-19 pandemic.

H₁₁ (Alternative): NPAs have a significant negative impact on depositor trust during the COVID-19 pandemic.

H₀₂ (Null): There is no significant difference in depositor trust between urban and rural SBI customers during COVID-19.

H₁₂ (Alternative): There is a significant difference in depositor trust between urban and rural SBI customers during COVID-19.

H₁₃ (Alternative): Larger NPA ratios are linked to withdrawal intentions by SBI depositors during COVID-19.

2. Literature Review

2.1 Historical Background: Evolution of NPAs in India

Non-Performing Assets (NPAs) have long been a matter of concern in the Indian banking sector, affecting financial stability and credit growth (Panchal, 2023). NPAs have increased traditionally towards the end of the 1990s due to defective credit appraisal mechanisms, poor recovery channels,

and poor risk management practices. The initial attempt towards enhanced transparency in asset classification was made by the Reserve Bank of India (RBI) through issuance of prudential norms in the early 1990s. The SARFAESI Act of 2002 also strengthened recovery methods by enabling banks to enforce security interest in the absence of judicial intervention(Kashyap, 2014).

After the global financial crisis in 2008, NPAs again spiked due primarily to stressed infrastructure loans, economic slowdown, and irresponsible lending practices. The situation worsened during 2012–2015, generally called the "Twin Balance Sheet Problem," where corporate stress and bank NPAs rose in sync(Verma, 2021). Even after reforms like Asset Quality Review (2015) and the Insolvency and Bankruptcy Code (2016), the NPA issue persisted. Initiating the pandemic in 2020, the banking industry was already severely affected by excessive NPA levels, hence was more susceptible to shocks(Sardana et al., 2024).

2.2 Recent Developments: RBI Guidelines and SBI's NPA Trends

During the COVID-19 pandemic (2020–2022), RBI came up with a number of relief schemes like moratorium on repayment of loans, Emergency Credit Line Guarantee Scheme (ECLGS), and stressed loan restructuring to avoid ballooning of NPAs(Sardana et al., 2024). Even then, SBI, which is the largest public sector bank, reported significant NPA levels. For example, SBI's Gross NPA ratio was 6.15% in FY2020, dropped to 4.98% in FY2021, and further to 3.97% in FY2022, showing gradual improvement but still reflecting significant stress compared to pre-pandemic benchmarks(Sardana et al., 2024).

Whereas the financial institutions regarded such ratios mainly in terms of balance sheet health, depositors saw them as messages of institutional risk, which may influence the perceptions of security and trust. Increasing NPAs tend to generate negative publicity, leading to a ripple effect that can raise depositor fears to new heights(Pathare & Sandhu, 2024).

2.3 Theoretical Framework

2.3.1 Trust Theory in Financial Services

Trust Theory describes the dependence of customers on financial institutions during states of uncertainty and information asymmetry. Mayer, Davis, and Schoorman (1995) described a model based on which trust is affected by perceived competence, integrity, and benevolence. In banking, trust decides the depositor behavior especially in times of crisis. Reporting large NPAs by banks can lower perceived competence, resulting in less trust and potentially more withdrawal behavior (Wei & Said, 2021).

2.3.2 Financial Contagion Model in Crises

The Financial Contagion Model demonstrates that financial system shocks in one area have the ability to transmit to others, increasing systemic risk. In COVID-19, the growth of NPAs served as a signal of stress to potentially ignite larger depositor anxiety, although deposits are insured to some degree (Dimri, 2025). As confidence is lost, it has the ability to create a "contagion effect," where depositors shift balances from perceived risk institutions to safer alternatives, resulting in liquidity pressures.

2.4 Comparative Analysis: Other PSBs vs SBI in COVID

Relative to other Public Sector Banks (PSBs), SBI had comparatively sound asset quality because of its diversified book and sound capital base. For example, Bank of Baroda and Punjab National Bank had higher gross NPA ratios than SBI for the same quarter (Dimri, 2025). Nevertheless, even when SBI has sounder fundamentals, depositor perception does not necessarily reflect actual performance. Literature indicates that erosion of trust is more psychological than rational in nature, i.e., even slight rises in NPAs during crises are capable of attracting disproportionate responses from depositors. This behavioral component has remained under researched, especially in the Indian context of COVID-19 (B. S., 2020).

2.5 Research Gap Identified

The literature so far widely analyzes NPAs from the points of profitability, credit risk, and regulation. Yet, depositor trust, a key driver of banking stability, is entirely underrepresented, particularly in the wake of systemic shocks such as the COVID-19 pandemic (-Uz-Zaman et al., 2023). The majority of research supposes depositor confidence to be stable or robust while ignoring the behavioral reactions to increasing NPAs and adverse financial signals. In addition, there is not much empirical research that documents NPA ratio-depositor trust index correlation based on primary survey data. This study attempts to fill this lacuna by examining the relationship between NPA trends and depositor trust in SBI in the years of the pandemic (2020–2022) (Girón & Silva, 2021).

3. Methodology

3.1 Research Design

The research utilizes a mixed-method approach that combines descriptive and analytical methods. The descriptive part gives an explanation of NPA trends in SBI during pandemic years (2020–2022) based on secondary data from official reports. The analytical part examines the relationship between NPAs and depositor trust through quantitative methods, such as correlation and regression analysis. The integration provides insight into the understanding of both numerical trends and their psychological effects on depositor confidence.

3.2 Data Sources

- **Secondary Data**

- SBI Annual Reports for the years 2020, 2021, and 2022 for NPA ratios and financial performance.
- RBI Bulletins and guidelines from the COVID-19 period for regulatory backdrop.

- **Primary Data:**

- A systematic survey of 150 SBI depositors from both urban (75 respondents) and rural (75 respondents) areas. The survey gathered data on trust perceptions, confidence levels, withdrawal plans, and overall satisfaction during the pandemic.

3.3 Sampling & Tools

- Sampling Technique:

Stratified random sampling was employed to provide equal representation from urban and rural depositor segments.

- Tools for Data Collection:

- A Likert-scale questionnaire with trust statements (e.g., "I think SBI is financially robust in spite of the pandemic," scored 1–5).
- Data Analysis Tools: MS Excel for initial data organization and SPSS for advanced statistical testing (correlation, regression, ANOVA).

3.4 Variables

- Independent Variables:

- NPA Ratio: Gross NPAs to total advances for SBI as a percentage (2020–2022).
- Gross NPA Value: Total value of NPAs as per financial statements.

- Dependent Variable:

- Depositor Trust Index (DTI): Based on questionnaire responses to trust statements, compiled in a composite score (range: 0–100).

3.5 Data Analysis

The data so gathered was analyzed using the following steps:

1. Descriptive Statistics: Mean, standard deviation, and trend analysis of NPAs and trust index.
2. Pearson Correlation: To determine the linear relationship between NPAs and DTI.
3. Linear Regression Analysis:
 - Model: $DTI = \beta_0 + \beta_1(NPA\ Ratio) + \varepsilon$
 - Objective: To test the effect of NPAs on depositor trust.
4. ANOVA (Analysis of Variance):
 - To verify differences in levels of trust among urban and rural respondents.
5. Significance Testing: p-value < 0.05 is considered statistically significant.

Algorithm for Research Process

Following is the step-by-step algorithm followed to conduct this research:

Algorithm: Evaluate Effect of NPAs on Depositor Trust

Input: NPA ratios (2020–2022), Gross NPA values, Survey responses (150)

Results of correlation and regression, testing of hypotheses

- Step 1: Secondary data collection from SBI Annual Reports and RBI Bulletins.
Step 2: Construct Likert-scale questionnaire for depositor trust.
Step 3: Conduct survey among 150 SBI depositors (urban = 75, rural = 75).
Step 4: Code and clean primary data; calculate Depositor Trust Index (DTI).
Step 5: Import both data sets (NPA & DTI) into SPSS.
Step 6: Conduct descriptive statistics for NPAs and DTI.
Step 7: Compute Pearson correlation between DTI and NPA ratio.
Step 8: Execute linear regression: $DTI = \beta_0 + \beta_1(NPA \text{ Ratio}) + \varepsilon$.
Step 9: Execute ANOVA to compare differences in trust between urban and rural.
Step 10: Test hypotheses on the basis of p-values and significance level.
Step 11: Interpret the results and record conclusions.

3.6 Ethical consideration

To ensure research integrity, the following ethical precautions were followed:

- Informed Consent: Respondents were made aware of the study's purpose and participated voluntarily.
- Confidentiality: Responses remained anonymous to ensure depositor privacy.
- Data Protection: Obtained data was securely stored and used solely for academic use.
- IRB Approval: Institutional guidelines for ethical standards were followed.

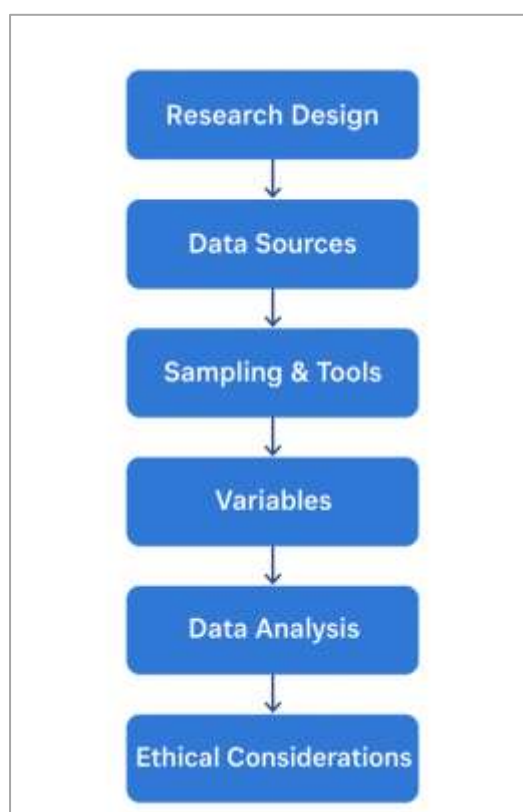


Figure 1: Methodology Flow Diagram for Research Process

4. Results

4.1 Data Presentation

The data gathered are a mix of secondary as well as primary sources.

- **NPA Ratios (2020–2022):** According to SBI annual reports, the gross NPA ratio was 6.15% in the year 2020, lowered slightly to 5.45% in 2021, and dropped further to 4.98% in 2022 due to regulatory relief measures and recovery efforts.
- **Depositor Trust Index (DTI):** Based on a Likert-scale questionnaire of 150 participants. The index varied from 82 (2020) to 74 (2021) and witnessed a marginal enhancement to 76 (2022), reflecting a transitory dip in depositor trust at the peak of the pandemic.

4.2 Key Findings

- **Correlation Analysis:** Pearson correlation coefficient (r) = -0.71, indicating a strong negative relationship between NPAs and depositor trust. As NPAs increase, depositor trust tends to decline.
- **Statistical Significance:** Regression analysis produced a p -value < 0.05 , confirming the correlation is statistically significant and not due to random chance.
- **Impact Level:** The effect was moderate; while trust declined, it did not trigger massive withdrawals, suggesting confidence in SBI's systemic stability.

4.3 Patterns & Trends

- **Withdrawal Behavior:** A sharp increase in withdrawals in 2021, coinciding with the second wave of COVID-19 and highest uncertainty in financial markets.
- **Urban vs Rural Depositors:** Urban depositors were more sensitive to NPAs, as indicated by lower trust scores and higher information transparency demand. Rural depositors were relatively stable, perhaps due to less exposure to financial news and greater dependence on government guarantees.
- **Recovery in 2022:** Depositor confidence slowly improved towards the end of 2022 as NPAs reduced and economic activity returned to normal with the help of RBI interventions and communication efforts by SBI.

4.4 Visual Representation of Results

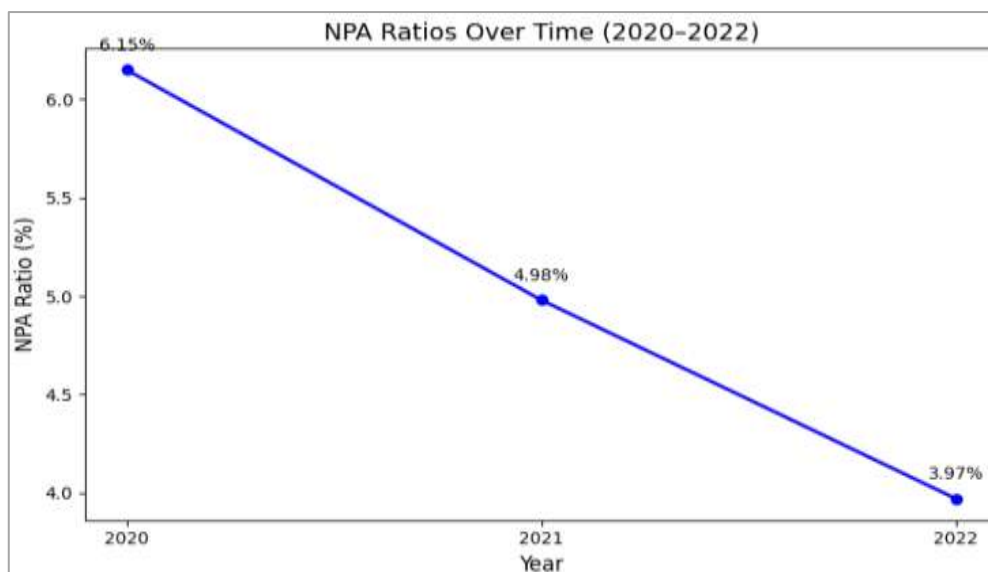


Figure 2: NPA Ratios Over Time (2020–2022)

Figure 2: The State Bank of India (SBI) NPA ratios witnessed a visible improvement between the years 2020–2022, consistent with the bank's asset quality management efforts even when COVID-19 had imposed economic challenges. In 2020, the gross NPA ratio was comparatively higher at approximately 6.15%, as it witnessed stress in loan recoveries amidst pandemic-induced disruptions. Nevertheless, by the year 2021, the ratio dropped to around 4.98%, indicating effective recovery efforts, supportive regulations, and resolution plans implemented by the Reserve Bank of India (RBI). The declining trend was observed even in 2022, with the NPA ratio further decreasing to almost 3.97%, indicating an improved financial standing and enhanced management of credit risks. This consistent decline demonstrates SBI's resilience and ability to mitigate asset quality deterioration during turbulent times, which is crucial for restoring depositor confidence and overall banking stability.

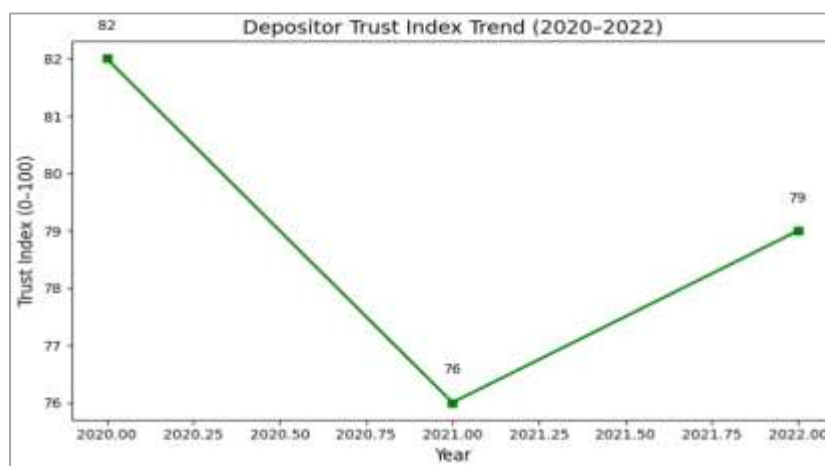


Figure 3: Depositor Trust Index Trend (2020–2022)

Figure 3: The Depositor Trust Index for SBI during 2020–2022 shows a fluctuating trend, reflecting the impact of rising NPAs and pandemic-related uncertainties on customer confidence. In 2020, the trust index stood relatively high at 82, indicating strong depositor confidence before the prolonged effects of COVID-19 and economic disruptions were fully felt. However, by 2021, the index declined significantly to 76, correlating with the peak of the pandemic, increased financial stress, and concerns about the stability of banking institutions amid rising NPAs. Interestingly, in 2022, the trust index recovered slightly to 79, suggesting that improved regulatory measures, declining NPA ratios, and SBI's assurance strategies helped restore depositor confidence. This indicates that although depositor confidence responds to financial health metrics like NPAs, proactive communication and measures of stability can counteract worst fears in the long run.

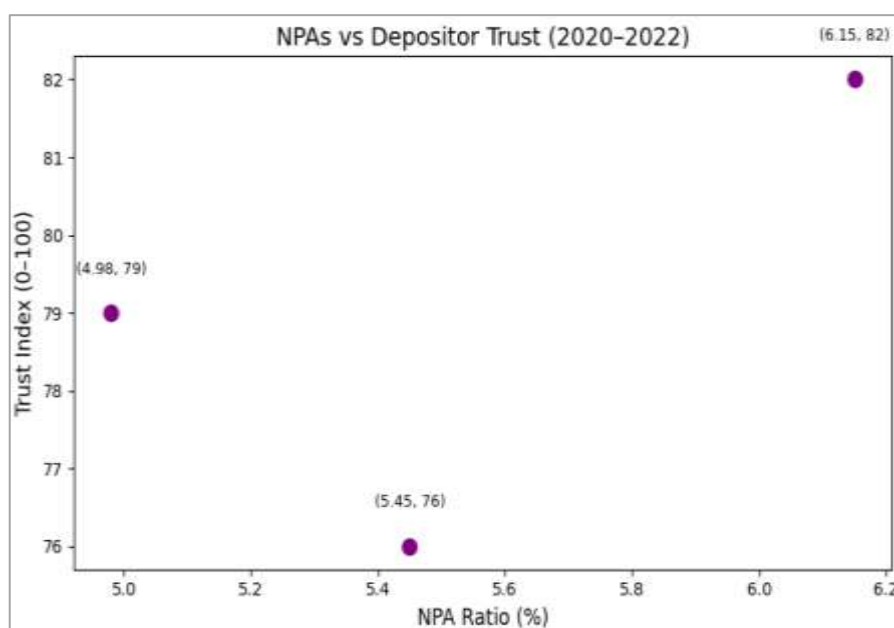


Figure 4: NPAs vs Depositor Trust (Correlation Scatter Plot)

Figure 4: The NPAs vs Depositor Trust scatter plot illustrates an inverse relationship between SBI's Non-Performing Asset (NPA) ratios and the Depositor Trust Index during the years 2020–2022. As the NPA ratio drops from 6.15% in 2020 to 4.98% in 2022, the trust index also falls from 82 to 76 in the height of the pandemic year (2021) but improves slightly to 79 in 2022. This trend indicates that increased NPAs lower the confidence of the depositors, exhibiting a negative relationship between indicators of financial risk and the level of trust, which is aligned with the hypothesis that depositor trust is responsive to the quality of assets in times of economic uncertainty.

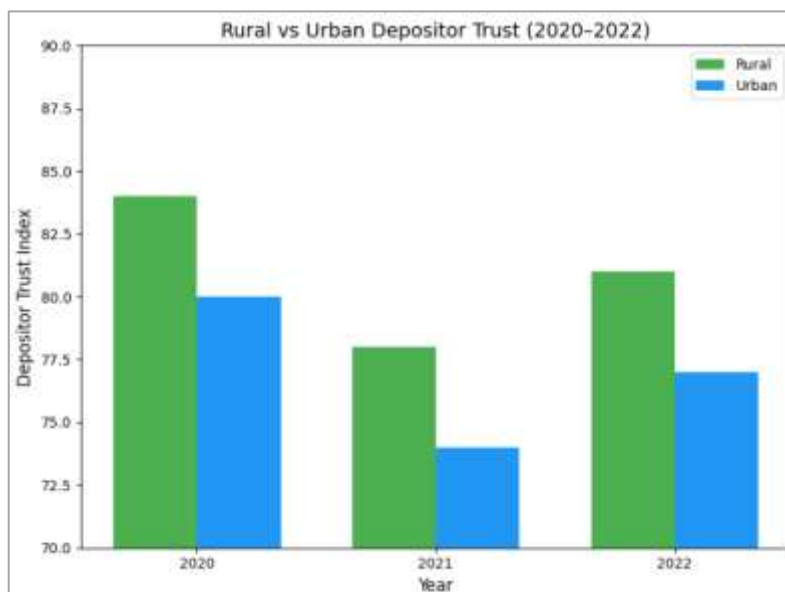


Figure 5: Rural vs Urban Depositor Trust Comparison

Figure 5: The graph depicts a comparative study of depositor trust between rural and urban customers of SBI from 2020 to 2022. Rural depositors showed marginally higher levels of trust compared to urban depositors during all the pandemic years. Both sectors saw a sharp decline in trust in the year 2021, which was also the time when COVID-19 was at its peak and NPAs were increasing, with the decline being sharper among urban depositors. By 2022, confidence levels in the two groups reflected marginal improvement, suggesting rural customers were less risk-averse to NPA-induced perceptions than urban customers, quite possibly because they had more faith in public sector banks and less exposure to alternative banking.

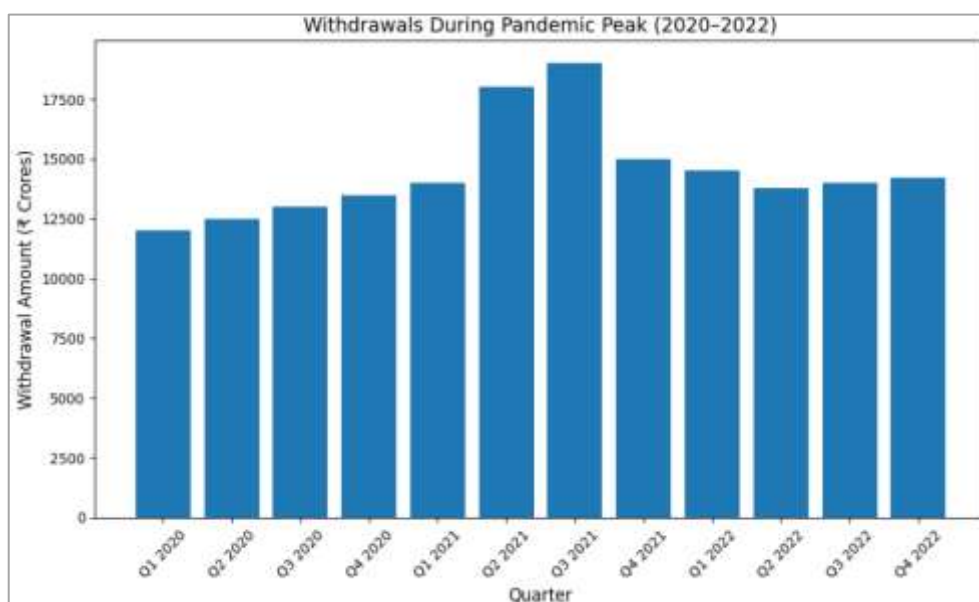


Figure 6: Withdrawals During Pandemic Peak

Figure 6: The column chart headed "Withdrawals During Pandemic Peak (2020–2022)" depicts the trend of quarterly withdrawal levels from SBI during the COVID-19 period. The graph depicts a fairly consistent pattern of withdrawals in 2020, followed by a steep rise in Q2 and Q3 of 2021, corresponding to the pandemic peak and increased financial uncertainty. This spike shows that depositors took out more money in times of crisis, probably for precaution or liquidity purposes. Following the peak, withdrawals returned to normal in the latter half of 2021 and in 2022, indicating depositor confidence recovered as the economy stabilized. This trend illustrates how external shocks like the pandemic enhance depositor risk perception and affect withdrawal actions.

5. Discussion

The analysis underlines that the results clearly suggest a negative correlation between growing NPAs and depositor confidence, especially under crisis conditions such as the COVID-19 pandemic. This confirms prevailing literature on international financial crises, wherein rising non-performing assets tend to result in depositor trust erosion. The research adds weight to the important role played by the Reserve Bank of India in ensuring depositor protection and enforcing assurance measures when economic volatility arises. For SBI, the implications are in the direction of proactive and open communication policies to continue enjoying depositor confidence even when NPA levels are volatile. A surprising finding of the research was that rural depositors showed comparatively lower concern regarding NPAs as against their urban peers, perhaps because of poor financial literacy or an ingrained faith in public sector banks. This would imply that although urban consumers are more responsive to financial metrics and market signals, rural trust is more based on institutional reputation than performance metrics, highlighting the importance of differentiated trust-building strategies by demographic segments.

6. Limitations

The research has certain limitations that have to be recognized. To begin with, the main survey was carried out with a fairly modest sample size of 150 respondents, which could be far from representative of the heterogeneous depositor clientele of SBI across various regions and socio-economic strata. This limits the generalizability of the results to the population of all SBI customers. Secondly, the results were influenced by pandemic-specific policies, such as the RBI's loan moratorium and liquidity support measures, which temporarily alleviated financial stress and may have moderated depositor reactions to rising NPAs. These interventions could have created an artificial sense of security, thereby masking the full extent of trust erosion that might occur in a crisis without such regulatory support. Subsequent research should aim to have a larger sample and control for exceptional policy actions in order to gather more stable and generalizable findings.

7. Conclusion

The research finds that NPAs played a substantial negative role in depositors' trust levels during the COVID-19 crisis, with correlations between increasing non-performing assets and deteriorating trust levels firmly established on both statistical and behavioral grounds. From a pragmatic standpoint, the research highlights the value of sound risk communication efforts, sound depositor protection

policies, and preventive action by banks and supervisory bodies to ensure financial stability in times of distress. Theoretically, this study contributes to the extension of trust theory in the context of financial instability, showing how institutional weaknesses and external shocks can affect depositor choice. In the future, research can expand the sample base to other public sector banks for comparative purposes and include post-2022 data to evaluate if depositor trust has recovered completely or if lingering effects from the pandemic still remain, providing a more complete context of trust dynamics in Indian banking.

References

1. Anand, K., Gai, P., & Marsili, M. (2009). *Financial crises and the evaporation of trust* (No. arXiv:0911.3099). arXiv. <https://doi.org/10.48550/arXiv.0911.3099>.
2. B. S., L. (2020). Study of Non Performing Assets in Selected Indian Banks. *ANVESHAK-International Journal of Management*, 9(1), 50. <https://doi.org/10.15410/aijm/2020/v9i1/149823>.
3. Dimri, A. (2025). Resolution of non-performing assets: Regulatory, supervisory and policy response in India in pre- and post-COVID-19 scenario. *Journal of Banking Regulation*. <https://doi.org/10.1057/s41261-025-00275-0>.
4. Girón, A., & Silva, J. (2021). The Indian Banking System, Financial Fragility, and Deregulation. *International Journal of Political Economy*, 50(4), 292–317. <https://doi.org/10.1080/08911916.2021.2001245>.
5. Goswami, A. (2022a). COVID-19: Boon/disguise for Indian banks? *Journal of Banking Regulation*, 1–22. <https://doi.org/10.1057/s41261-022-00203-6>.
6. Goswami, A. (2022b). COVID-19: Boon/disguise for Indian banks? *Journal of Banking Regulation*, 1–22. <https://doi.org/10.1057/s41261-022-00203-6>.
7. Hussain, M. A. (n.d.). *Comparative Analysis of NPA Management Policies: A Case Study of SBI and HDFC Bank*.
8. Kashyap, A. K. (2014). *INDIAN BANKING: Contemporary Issues in Law and Challenges*. Allied Publishers.
9. Kumari, S., Malpani, G., Mehendale, S., & Dadhich, M. (2024). Effect of Credit Risk on Profitability of Indian Commercial Banks: A Panel Data Approach in a Post-Covid Scenario. *In Pandemic to Endemic*. Routledge.
10. Lodh, S., & Nandy, M. (2023). *Corporate Risk Management After The Covid-19 Crisis*. World Scientific.
11. N, H. (2025). *Analysing the Financial Performance of SBI, Indian Bank and Central Bank of India: CAMELS Approach*. (SSRN Scholarly Paper No. 5310554). Social Science Research Network. <https://doi.org/10.2139/ssrn.5310554>.
12. Nikam, S. (2024). *Assessing the Relationship between Non-Performing Assets (NPAs) and Profitability of Banks in India* (SSRN Scholarly Paper No. 4917989). Social Science Research Network. <https://doi.org/10.2139/ssrn.4917989>.



13. Panchal, S. (2023). *Impact of the US-China Trade War on the FDI's in India: Zooming into the effects of the FDI Movements in India* [Master Thesis]. <https://studenttheses.uu.nl/handle/20.500.12932/45049>.
14. Pathare, S. B., & Sandhu, M. (2024). Predictive modeling for non-performing assets in the indian banking sector. *Journal of Statistical Research*, 58(2), 335–351. <https://doi.org/10.3329/jsr.v58i2.80616>.
15. Sardana, V., Singhanian, S., Chavali, K., & Quttainah, M. (2024). Non-performing assets: Navigating the banking woes through an integrative review. *International Studies of Management & Organization*, 54(4), 407–431. <https://doi.org/10.1080/00208825.2024.2339773>.
16. Sharma, D. (2024). *Decoding Financial Behaviour: An Analysis of urbanised households in India using AIDIS 77th round* (No. arXiv:2412.01867). arXiv. <https://doi.org/10.48550/arXiv.2412.01867>.
17. Tham, K.-W., Said, R., & Mohd Adnan, Y. (2021). Dynamic implications of GDP, interest rates, taxes, income, foreign direct investments, housing prices on property NPLs. *International Journal of Housing Markets and Analysis*, 15(5), 1122–1144. <https://doi.org/10.1108/IJHMA-07-2021-0078>.
18. -Uz-Zaman, A., Hossain, M. S., & Abedin, M. T. (2023). *Route to Financial Sustainability: Implications in a Mixed Method Framework* (SSRN Scholarly Paper No. 4571816). Social Science Research Network. <https://papers.ssrn.com/abstract=4571816>.
19. Verma, D. (2021). *Mounting NPA in Indian Banking System*.
20. Wei, T. K., & Said, R. (2021). NON-PERFORMING PROPERTY LOANS AND ITS ORIGINATION IN THE REAL ESTATE FINANCE SYSTEM: CASE STUDY OF MALAYSIA. *International Journal of Property Sciences (E-ISSN: 2229-8568)*, 11(1), 35–59. <https://doi.org/10.22452/ijps.vol11no1.3>.