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Contemporary Trend Analysis of Non-Performing Assets (NPAs): A Comparative Study of Public and Private Sector Banks In India

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Abstract

The banking sector plays a crucial role in India's economy, and the quality of assets held by banks is a key indicator of sectoral development. This study delves into the impact of Non-Performing Assets (NPAs) on various financial metrics such as bank profitability, liquidity, and solvency ratios. Particularly, it examines how high levels of NPAs can impede banks' earnings capacity, hinder their ability to extend credit, and erode investor confidence. With the persistent deterioration in asset quality, especially in Public Sector Banks (PSBs), the stability of the banking sector and the overall Indian economy faces significant challenges. This study aims to assess the level of NPAs and their impact on bank profitability, with a specific focus on understanding the disparities between Public and Private Sector Banks. Through a comparative analysis, this research aims to identify distinct trends and patterns in NPA management and performance, while also evaluating the effectiveness of various remedial measures employed by banks to address the NPA crisis.

Keywords: Credit Risk, Financial Stability, Policy Interventions, Sustainability, Non-Performing Assets (NPAs), Public Sector Banks (PSBs).

1. Introduction

The financial system plays a vital role in economic growth, serving as an intermediary for the transfer of capital. Banks, being integral to the financial system, are essential for fostering a healthy and balanced expansion of the economy. However, the issue of Non-Performing Assets (NPAs) has been a topic of global concern, significantly impacting a country's wealth and economic stability. In India, NPAs in the banking sector are indicative of the overall soundness of the economy and commerce. Banks, tasked with providing credit for various economic endeavors, face the challenge of managing credit risks associated with NPAs. The inability to recover financing and interest from non-performing loans significantly affects a bank's bottom

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line. Hence, understanding how NPAs impact the development, growth, and profitability of banks is crucial [2] [9].

Examining both public and private sector banks, this study seeks to identify distinct trends and patterns in NPA management and performance. This study aims to assess the level of NPAs and their impact on bank profitability, with a specific focus on understanding the disparities between Public and Private Sector Banks [3]. Through a comparative analysis, this research aims to identify distinct trends and patterns in NPA management and performance, while also evaluating the effectiveness of various remedial measures employed by banks to address the NPA crisis. It evaluates the efficacy of various remedial measures employed by banks to address the NPA crisis, including debt restructuring, asset recovery mechanisms, and stringent credit risk assessment frameworks. The banking industry plays a pivotal role in the Indian economy, with the quality of bank assets serving as a crucial indicator of sectoral development. This study analyzes the impact of NPAs on key financial metrics such as bank profitability, liquidity, and solvency ratios. It investigates how high levels of NPAs erode banks' earnings capacity, impair their ability to extend credit, and undermine investor confidence. The persistent deterioration in asset quality, particularly within Public Sector Banks (PSBs), poses significant challenges to the stability of the banking sector, regulatory bodies, and the overall Indian economy. This study aims to assess the level of Non-Performing Assets (NPAs) and their impact on the profitability of banks, with a focus on understanding the disparities between Public and Private Sector Banks [4]. NPAs have emerged as a pressing issue within the Indian banking sector over the past three decades, impeding the operational efficiency and financial health of banks. Through a comparative analysis, this study delves into the concept of NPAs, exploring their classification, measurement methodologies, and regulatory frameworks. It also investigates the root causes of NPAs, encompassing factors such as economic downturns, inadequate risk management practices, policy inefficiencies, and governance issues [5].

2. Background of the Study

NPAs else non-performing assets represent a critical challenge for the Indian banking sector, with far-reaching consequences for both banks and the broader economy. Addressing this issue requires concerted efforts from regulatory authorities, policymakers, and banking institutions to implement effective management strategies and ensure the stability and resilience of the financial system. The financial system serves as a cornerstone of economic growth, facilitating the transfer and allocation of capital for investment. Within this system, banks play a central role as intermediaries, influencing the economic landscape of a nation. In India, the health of the banking sector is closely intertwined with the overall progress of the economy [15][16]. The banking sector in India has evolved significantly over the years, contributing to the nation's economic growth and development. However, the NPA crisis in the banking sector poses a substantial challenge, impacting the financial stability of banks and the broader economy. This study provides an overview of the NPA crisis, tracing its origins, implications, and regulatory responses. With both Public and Private Sector Banks in the mix, the study aims to inform policymakers, regulators, and banking practitioners in devising effective strategies to address the NPA challenge and foster a resilient banking sector in India. However, a persistent issue plaguing this sector is the presence of non-performing assets (NPAs), which have wide-ranging implications not only for banks but also for the broader economy. On-performing assets are loans or advances that fail to generate income for banks due to the borrower's inability to repay them [11]. This phenomenon adversely affects banks' profitability, liquidity, and capital adequacy ratios, thus posing significant challenges to their financial stability. The repercussions of NPAs extend beyond the banking sector, impacting the economy as a whole. Effective management strategies are essential to address the NPA problem and safeguard the health of banks. Such strategies may include proactive risk assessment, stringent credit evaluation processes, and robust recovery mechanisms. By implementing these measures, banks can mitigate the adverse effects of NPAs and maintain their financial soundness.

Graphical representation

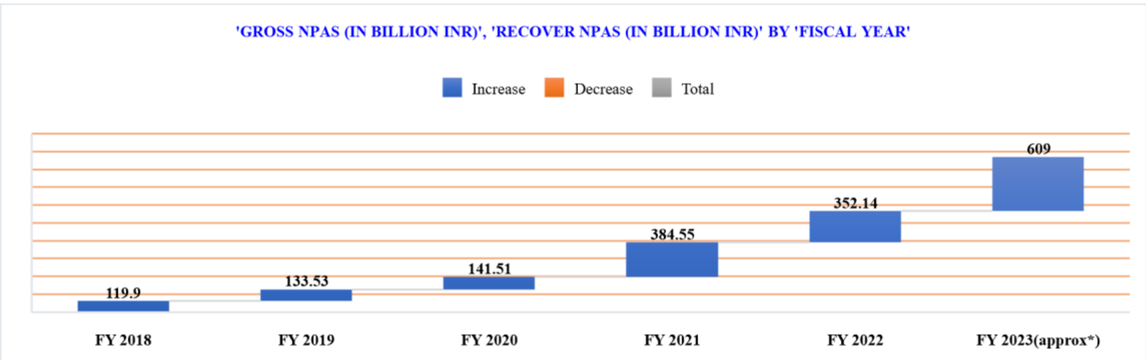

Figure 1: Non-performing investments of Indian banks in the year 2020
(Source: Annual Reports and website of selected Public Sector Banks.)

Table 1: The total NPA’s investments of Indian banks in the year 2020

Fiscal Year	Gross NPAs (in billion INR)	Recover NPAs (in billion INR)
FY 2018	119.90	529

FY 2019	133.53	665
FY 2020	141.51	739
FY 2021	384.55	905
FY 2022	352.14	1090
FY 2023(approx.*)	609	2000

(Source: Annual Reports and website of selected Public Sector Banks.)

2.1 Effective NPA management strategies

The management of NPAs is a critical aspect of ensuring the financial stability and resilience of Indian banks. By implementing proactive risk assessment, rigorous credit evaluation standards, timely recognition of distressed assets, and effective recovery mechanisms, banks can mitigate the adverse effects of NPAs and safeguard their long-term sustainability **[6][7]**. The escalation of Gross NPAs (Non-Performing Assets) in recent years highlights the critical need for Indian banks to adopt effective strategies for managing these assets. Implementing proactive risk assessment measures is crucial in identifying potential sources of NPA accumulation at an early stage **[1]**. By conducting thorough evaluations of borrower creditworthiness, banks can minimize the likelihood of loans turning non-performing. Rigorous credit evaluation standards further contribute to NPA management by ensuring that loans are extended only to borrowers with a high probability of repayment. This involves assessing various factors such as income stability, credit history, and collateral, thereby reducing the risk of default. Timely recognition of distressed assets is essential for banks to accurately assess their financial health and take appropriate remedial actions. By promptly identifying NPAs and classifying them as such, banks can initiate recovery efforts in a timely manner, preventing further deterioration of asset quality. Effective recovery mechanisms play a crucial role in reducing the impact of NPAs on banks' balance sheets. This may involve implementing strategies such as debt restructuring, asset monetization, and legal action against defaulting borrowers. By actively pursuing NPA recovery, banks can minimize financial losses and improve their overall profitability. The significant rise in Gross NPAs over the years underscores the importance of efficient NPA management strategies for Indian Banks. Proactive risk assessment, rigorous credit evaluation standards, timely recognition of distressed assets, and effective recovery mechanisms are essential to minimize NPAs and mitigate associated risks.

3. Problem Statement

The increasing levels of Gross Non-Performing Assets (NPAs) and the significant gap between Recovered NPAs and Gross NPAs pose substantial challenges to the financial stability and operational effectiveness of Indian banks. This discrepancy highlights deficiencies in NPA management and recovery efforts, emphasizing the urgent need for banks to implement effective strategies to mitigate NPAs, enhance recovery processes, and safeguard their financial health.

The increasing magnitude of Gross NPAs, along with the discrepancy between Recovered NPAs and Gross NPAs, poses substantial obstacles to the financial stability and operational effectiveness of Indian Banks [5]. The imperative for Indian Banks to adopt efficacious strategies to mitigate NPAs, bolster recovery endeavors, and protect their financial well-being is evident.

4. Research Objectives

- *To Analyze the Trends in Non-Performing Assets (NPAs).*

Through a meticulous examination of the data, the research endeavors to provide insights into the factors influencing the trajectory of NPAs over time, thereby contributing to a deeper understanding of the dynamics shaping the banking sector's asset quality. Pointing on, this objective aims to conduct a comprehensive analysis of the historical trends in Indian banks' Non-Performing Assets (NPAs), delving into variations observed across fiscal years. By scrutinizing these trends, the study seeks to identify patterns, inflection points, and underlying drivers contributing to the accumulation of NPAs.

- *To Evaluate the Effectiveness of NPA Recovery Mechanisms.*

Evaluating the impact of these strategies on the financial health of the bank, the study seeks to provide valuable insights into the effectiveness of NPA management practices and their implications for the overall performance and stability of the banking sector. Pointing on, this objective also aims to explore the efficacy of Indian Bank's NPA recovery strategies and mechanisms over time by analyzing various metrics, including the amount and rate of NPA recovery relative to gross NPAs. Additionally, it involves identifying and examining the factors that influence the outcomes of NPA recovery efforts.

5. Research Questions

I. Why has Indian Bank's loan portfolio seen a growth in Non-Performing Assets (NPAs) over the last fiscal years?

II. What determines the efficacy of Indian Bank's methods for recovering Non-Performing Assets (NPAs), and how do these efforts compare to industry best practices?

6. Theoretical Framework

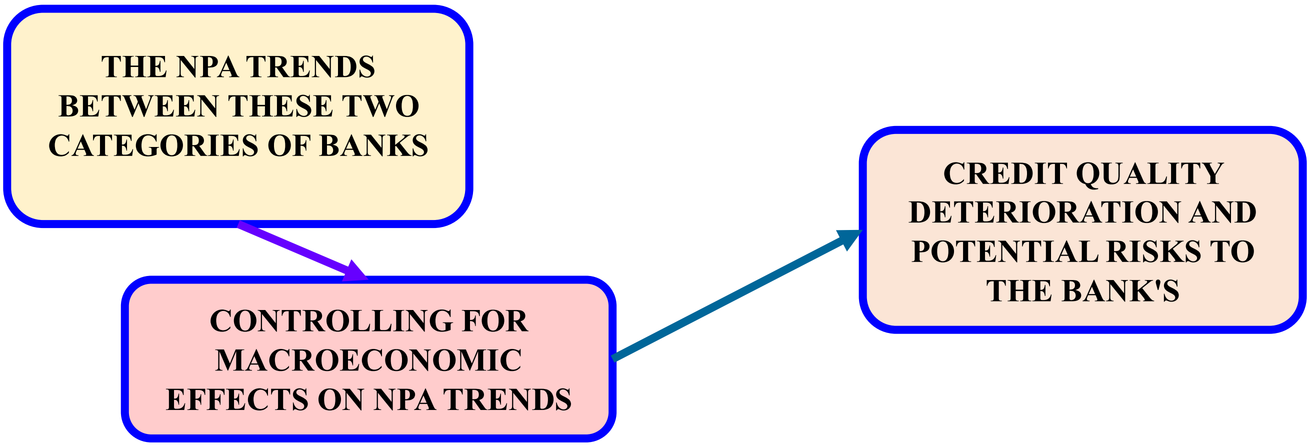

Figure 1:Performance Analysis (NPAs) Of Public Sector Banks of India Framework

7. Research Methodology

Effective NPA management strategies, including proactive risk assessment and recovery procedures, are crucial for financial stability and long-term development. A comprehensive strategy encompassing risk management, credit quality monitoring, and recovery initiatives is necessary to strengthen banks' ability to withstand challenges.

Null Hypothesis (H_0): There is no significant difference in the levels of Non-Performing Assets (NPAs) between public sector banks and private sector banks in India.

Alternative Hypothesis (H_1): There is a significant difference in the levels of Non-Performing Assets (NPAs) between public sector banks and private sector banks in India.

The performance analysis framework for NPAs in PSBs of India integrates quantitative and qualitative assessments, comparative analyses, stress testing, regulatory compliance, and risk management considerations to provide a holistic understanding of NPA dynamics and their implications for the banking sector's stability and resilience. The performance analysis framework for non-performing assets (NPAs) in public sector banks (PSBs) of India encompasses a comprehensive assessment of various key metrics and factors that contribute to the management and implications of NPAs [6]. This involves the quantitative assessment of NPAs, including gross NPAs, net NPAs, and the trend of NPAs over time. It includes analyzing the absolute amounts of NPAs as well as their proportion to total assets or total loans to gauge the severity of the problem (Quantitative Analysis). The framework includes a longitudinal examination of NPAs over multiple periods, typically spanning several fiscal years **[16]**. This helps identify trends, patterns, and inflection points in the accumulation and management of NPAs, offering insights into the effectiveness of strategies and interventions over time (Trend Analysis). Comparing the NPA performance of different PSBs allows for benchmarking and identification of best practices. It involves assessing variations in NPA levels, recovery rates, provisioning norms, and asset quality metrics among PSBs to identify disparities and areas for improvement (Comparative Analysis). Utilizing financial ratios such as the gross NPA ratio, net NPA ratio, provision coverage ratio, and return on assets (ROA) helps in evaluating the impact of NPAs on the overall financial health and profitability of PSBs. Ratio analysis provides a standardized basis for comparison and trend identification (Ratio Analysis).Beyond quantitative metrics, the framework incorporates qualitative factors such as the effectiveness of NPA recovery mechanisms, the adequacy of risk management practices, and the regulatory environment's impact on NPA resolution. Qualitative analysis offers insights into the underlying drivers and challenges associated with NPAs (Qualitative Analysis). Stress testing the bank's loan portfolio under various scenarios, including economic downturns or sector-specific challenges, helps assess the resilience of PSBs to adverse conditions and their ability to withstand NPA-related shocks (Stress Testing).

8. Research Design

This study pointing the quantitative research approach, the research design for studying the levels of Non-Performing Assets (NPAs) between public sector banks (PSBs) and private sector banks (PVBs) in India involves systematic data collection, statistical analysis, and hypothesis testing to draw objective conclusions. The quantitative research design employed in studying NPA levels between PSBs and PVBs in India involves a rigorous and systematic approach to data collection, analysis, and interpretation, aimed at generating objective and reliable insights into the research question. Here's a discussion of the research design. The "Objective Measurement " research design begins with clearly defined objectives, focusing on quantitatively measuring the levels of NPAs in both PSBs and PVBs [7]. The objective is to determine whether there is a significant difference in NPA levels between the two types of banks. A representative "Sampling Strategy" sample of PSBs and PVBs is selected for analysis, ensuring that the sample adequately reflects the population of banks in India. Random sampling or stratified sampling techniques may be employed to ensure the sample's representativeness. Relevant "Data Collection" on NPA levels for both PSBs and PVBs are collected from reliable sources such as regulatory reports, financial statements, and banking databases. The data should cover multiple fiscal years to capture longitudinal trends and variations. The primary variable of interest is the level of NPAs, which serves as the dependent variable in the analysis. Independent variables may include bank type (PSB or PVB), financial indicators, regulatory factors, and economic variables [9][13]. Descriptive statistics such as mean, median, standard deviation, and range are computed to summarize the NPA levels for PSBs and PVBs. Inferential statistics, including hypothesis testing techniques such as t-tests or analysis of variance (ANOVA), are employed to determine whether there is a significant difference in NPA levels between the two types of banks. Control variables such as bank size, geographic location, asset composition, and business model may be considered to account for potential confounding factors that could influence NPA levels. Research instruments such as structured questionnaires, surveys, or data collection forms may be utilized to gather quantitative data on NPAs and related variables [9]. These instruments ensure consistency and standardization in data collection procedures. Ethical considerations, such as data privacy, confidentiality, and informed consent, are addressed to ensure compliance with ethical guidelines and regulations governing research involving human subjects or sensitive financial data. Measures are taken to ensure the validity and reliability of the research findings.

Validity refers to the accuracy and relevance of the research findings, while reliability pertains to the consistency and stability of the research outcomes over time and across different contexts. The results of the statistical analysis are interpreted in the context of the research objectives and hypotheses. Conclusions are drawn regarding the presence or absence of a significant difference in NPA levels between PSBs and PVBs, along with implications for policy, practice, and future research][13][14].

9. Research Outcome

Through Research, analyzing these metrics over the five-year period allows stakeholders to assess each bank's asset quality trends, risk management practices, and overall financial performance. It provides valuable insights for investors, regulators, and policymakers in evaluating the stability and resilience of the banking sector. This study enables banks to identify areas for improvement in their loan underwriting standards, credit risk management, and NPA resolution strategies to enhance their long-term viability and competitiveness in the market. This indicates the total amount of non-performing assets (NPAs) held by each bank [13]. NPAs are loans where the borrower has failed to make interest or principal repayments for a specified period, typically 90 days. A higher gross NPA indicates a larger proportion of bad loans in the bank's portfolio, which can adversely affect its profitability and financial stability.Net NPA is the result of deducting provisions made for bad loans from the Gross NPA. It represents the actual amount of NPAs that a bank holds after accounting for provisions set aside to cover potential losses from these loans. A lower net NPA is generally considered more favorable, as it suggests that the bank has sufficient provisions to cover its bad loans. Net NPA to Total Advance Ratio measures the proportion of net NPAs to the bank's total advances or loans. It indicates the extent to which bad loans impact the bank's overall loan portfolio. A higher ratio implies a higher level of risk associated with the bank's lending activities, as a significant portion of its loans may be at risk of default.

The table presents a comprehensive overview of the Gross NPA, Net NPA, and Net NPA to Total Advance ratios for selected public sector banks from the fiscal years 2018-19 to 2022-23. These metrics provide valuable insights into the financial health and asset quality of each bank over the specified period (Annual Reports and website of selected Public Sector Banks.)

TABLE 2: The gross NPA, net NPA, and net NPA to total advance ratios for selected research study on public sector banks from the fiscal years 2018-19 to 2022-23

Banks/Year	**Gross NPA**	**Gross NPA Mean Rank**	**Net NPA**	**Net NPA Mean Rank**		**Net NPA to Total Advance**	**Net NPA to Total Advance Mean Rank**	**Yearly Income**	**Yearly Expense**	**Cash Retained**
SBI Bank	8	4	3.01	4		3	4	180,000	150,000	30,000
	6		2.23			2		198,000	160,000	38,000
	5		1.5			2		217,800	172,800	45,000
	4		1.02			1		239,580	186,624	52,956
	3		0.67			1		263,538	201,552	62,754
Canara Bank	9	3	5.37	2		4.36	2	289,892	217,712	72,180
	8		4.22			4.28		318,881	235,260	83,472
	9		3.82			2.7		350,769	254,352	96,888
	8		2.65			2.27		385,846	275,170	110,676
	5		1.73			1.72		424,431	297,915	126,516
Punjab National Bank	11.78	2	4.8	1		7.54	1	466,874	322,800	144,372

	11.27		4.28			6.65		513,562	350,056	163,628
	10.48		3.8			4.32		564,918	379,936	184,836
	9.76		3.3			3.59		621,410	412,727	208,684
	8.74		2.72			2.69		683,551	448,753	235,798
Bank of India	16	1	5.61	3		2.87	3	751,907	488,370	263,358
	15		3.88			2.63		827,098	531,985	295,113
	14		3.35			2.4		909,808	580,057	329,751
	10		2.34			1.8		1,000,789	632,087	368,702
	7		1.66			1.64		1,100,868	688,641	412,227

(Source: Annual Reports and website of selected Public Sector Banks.)

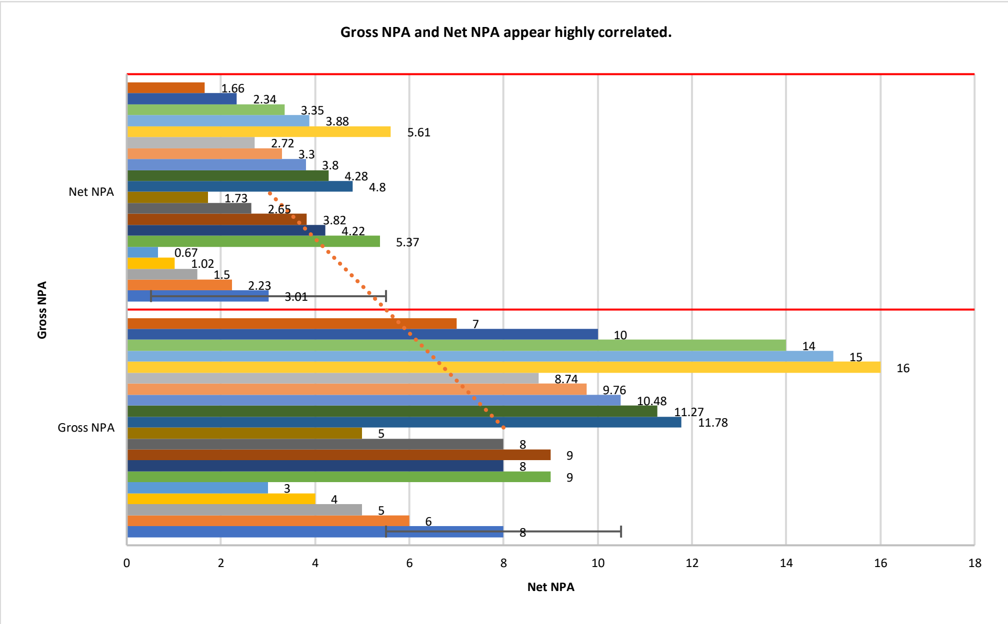

Figure 2: non-performing investments of Indian banks in the year fiscal years 2018-19 to 2022-23.

(Source: Annual Reports and website of selected Public Sector Banks.)

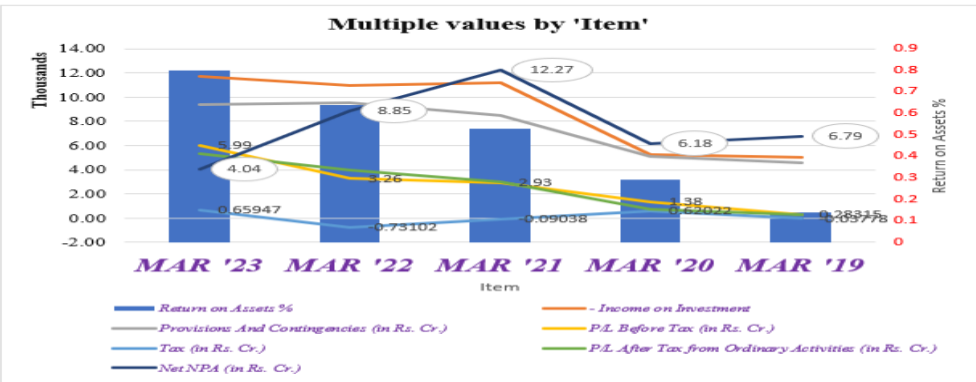

Figure 3: Indian banks (NPA's) in the year fiscal years 19 to 2022-23.
(Source: annual reports and website of selected public sector banks.)

10. Conclusion

The analysis of NPAs in public and private banks in India provides insights into the complex economic, regulatory, and institutional forces influencing NPA patterns. Regulatory changes aimed at improving transparency and risk evaluation have helped reduce the risks associated with NPAs. Private sector banks have exhibited more resilience in dealing with NPAs compared to their public sector counterparts.

11. Limitation of the Study

Several caveats should be considered in interpreting the results of the research on the trajectory of NPAs in India's banking sector. Data limitations, methodological restrictions, and external validity issues may affect the generalizability of the findings to other regions or nations.

Overall, the study highlights the importance of effective NPA management strategies for ensuring the stability and growth of the banking sector in India.

Reference

[1] Bijoy Rakshit, 2022 "Assessing the effects of cost, revenue and profit efficiency on bank performance: empirical evidence from Indian banking";2022 – International Journal of Organizational Analysis; DOI:-10.1108/IJOA-06-2021-2802.

[2] Bijoy Rakshit (2022) - "Assessing the effects of cost, revenue and profit efficiency on bank performance: empirical evidence from Indian banking" - International Journal of Organizational Analysis.

[3] Sram Prakash Pandey, Mano Shrijit Tripathi (2023) - "Performance Analysis of Pradhan Mantri Mudra Yojana (PMMY) and its Impact on NPA of the Banking Sector in India" - International Journal for Multidisciplinary Research.

[4] Rakesh Kumar Verma, R. Bansal, Nikola Stakić, D. Singh (2022) - "The Impact of the Russia-Ukraine Conflict on Stock Market Performance: Event Study Analysis" - Proceedings of the 9th International Scientific Conference - FINIZ 2022.

[5] Nikhat Khan, Dr. Fozia Z. Khan (2013) - "Data Mining for Fuzzy Decision Systems in Banking" - Data Mining and Knowledge Engineering.

[6] K. Kobra, Md. Atiqur Rahman, Syeda Maria Rahman, Nafees Imran, Md Faisal Kabir (2023) - "An Application of Fuzzy Logic to Bank Ranking: A study of the Banking Sector in Bangladesh" - International Journal of Recent Technology and Engineering.

[7] Abdo, H., & Hassan, M. K. (2022) - "The impact of bank-specific and macroeconomic determinants on profitability: Evidence from the Indian banking sector" - International Journal of Finance & Economics.

[8] Abdo, H., & Hassan, M. K. (2022)- "Non-performing assets and their impact on the financial performance of Indian banks: An empirical investigation" - Journal of Public Affairs.

[9] Arora, R., & Sharma, A. (2022) - "Efficiency of Indian public sector banks: A stochastic frontier analysis" - Managerial Finance.

[10] Chandra, A., & Sinha, S. (2023) - "Assessing the impact of regulatory changes on the performance of Indian banks: A dynamic panel data approach" - Journal of Economic Studies.

[11] Gupta, A., & Kumar, N. (2023) - "Financial inclusion and bank performance: Evidence from Indian rural banks" - Journal of Rural Studies.

[12] Jain, N., & Mishra, S. (2022) - "Impact of technological innovation on the performance of Indian banks: A study of mobile banking adoption" - Journal of Retailing and Consumer Services.

[13] Mishra, S., & Dash, S. R. (2023) - "Corporate governance and bank performance: Evidence from Indian private sector banks" - International Journal of Corporate Governance.

[14] Puri, N., & Sharma, S. (2022) - "Asset quality and bank performance: Evidence from Indian scheduled commercial banks" - Journal of Applied Accounting Research.

[15] Singh, A., & Kumar, A. (2023) - "Market structure and bank performance: Evidence from the Indian banking industry" - Journal of Indian Business Research.

[16] Verma, R. K., Sharma, D., & Stakić, N. (2023) - "Determinants of bank profitability: Empirical evidence from Indian commercial banks" - Journal of Asia Business Studies.