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CAPITAL ADEQUACY AND NPA RESILIENCE IN PUBLIC SECTOR BANKS

Dr. S. Baskaran[1], Mr. Vikas Kumar Shetty[2]

[1]Professor and HOD, Department of MBA, Dr. Ambedkar Institute of Technology Bengaluru-560056, Karnataka, India

[2]Student, Department of MBA, Dr. Ambedkar Institute of Technology Bengaluru-560056, Karnataka, India

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ABSTRACT

This empirical study explores the pivotal relationship between capital adequacy and Non-Performing Asset (NPA) resilience within India's public sector banks. It investigates the influence of capital adequacy levels on these banks' capacity to effectively manage NPAs. Through an analysis of key NPA indicators and capital adequacy ratios, this research highlights the significance of a robust capital foundation in fortifying the financial well-being of public sector banks. Higher capital adequacy ratios are linked to enhanced NPA resilience. These findings bear substantial relevance for banking strategies and regulatory policies, underscoring the imperative of well-capitalized foundations for ensuring financial stability. In a persistently challenging NPA landscape, this study offers valuable insights to inform decision-making for banks and regulatory bodies, promoting financial resilience.

Keywords: Capital Adequacy Ratio, Non-Performing Assets, Public Sector Banks, Asset Quality, Financial Resilience, Capital strength, Banking Performance, Financial Indicators.

1. INTRODUCTION

India's banking sector is the backbone of its economic stability and growth, serving as the primary channel for capital allocation and financial intermediation. Within this critical landscape, the prudent management of Non-Performing Assets stands as a central challenge and priority. NPAs, often comprising loans that have ceased to generate interest income or repayments, can erode a bank's capital base, compromise financial stability, and hinder its ability to support economic growth. As such, understanding the dynamics of NPA management is paramount. Central to this challenge is the idea of "capital adequacy," which essentially means how much financial cushion a bank has to handle losses, including those caused by loans that borrowers aren't paying back. It's like having savings to cover unexpected expenses without risking the bank's stability or the money of its customers. The Reserve Bank of India (RBI) regulates this through something called "Capital Adequacy Ratios" (CAR), which ensure banks have enough financial strength based on the risks they take. This empirical research seeks to address this critical gap by shedding light on how capital adequacy shapes the ability of public sector banks to effectively manage and withstand NPA challenges. Through meticulous examination of key NPA indicators and CAR, this study aims to provide insights into the central role of a robust capital foundation in preserving the financial health of public banks.

2. REVIEW OF LITERATURE AND RESEARCH GAP

Mital and Mital (2012) compared the NPA management practices of SBI and other PSBs, finding that SBI's approach was more efficient with lower NPAs and better recovery rates.

They also noted SBI's transparency and accountability in NPA management. Namitha (2017) conducted a comparative analysis of NPAs in PSBs and Pvt. banks, noting that PSBs had higher NPAs, posing a significant challenge to India's banking sector stability. Gupta and Bhushan (2017) emphasized timely identification and provisioning of NPAs and effective credit risk management in their comparative study of PSBs and Pvt. sector banks. Sharma and Arora (2019) identified economic downturns, inadequate credit assessment, and fraud as major NPA contributors, urging stricter credit monitoring, risk management, and recovery mechanisms. Rajak (2018) delved into the significant NPA problem in SBI, citing causes such as poor corporate governance, lending practices, and political intervention, which pose a risk to India's financial stability. Pathak (2020) focused on SBI's NPA levels compared to other PSBs, highlighting SBI's lower NPA ratio and better recovery performance. The existing literature on 'Capital Adequacy and NPA Resilience in Public Banks' predominantly focuses on individual components, such as capital adequacy or NPA management, in isolation. There is a noticeable research gap in comprehensive studies that systematically analyze the interrelationships between capital adequacy and NPA resilience in the context of public banks, providing a holistic understanding of how these factors mutually influence each other and contribute to the overall financial stability and sustainability of public banking institutions.

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3. NEED AND SCOPE OF THE STUDY

This study addresses the critical need for a comprehensive understanding of NPA management practices in Indian Public Sector Banks. It aims to achieve this by conducting a comparative analysis across all PSBs operating in India, focusing on the time period from 2020-2021 to 2022-2023. This research delves into successful NPA management strategies while also evaluating the significant financial impact of NPAs on profitability, asset quality, and lending activities. The study's broad scope covers all relevant PSBs and utilizes data from official sources like the RBI website, annual reports of PSBs, and other reliable publications to provide comprehensive insights into NPA management practices in the Indian public banking sector.

4. OBJECTIVES OF THE STUDY

1. To conduct a comprehensive Capital Adequacy Analysis by examining the capital adequacy ratios of public banks, ensuring compliance with regulatory standards, and assessing their capacity to absorb potential losses.
2. To perform a Comparative Evaluation by conducting a thorough comparative analysis of NPA management practices and capital adequacy across various public banks, with the goal of identifying best practices and areas for improvement.
3. To conduct a Financial Impact Assessment to measure the financial consequences of NPAs on public banks, encompassing an evaluation of their profitability, asset quality, and lending capacity.

5. HYPOTHESIS FOR THE STUDY

Hypothesis 1: There is a significant negative correlation between the Capital Adequacy Ratio and the Gross NPA Ratio for all the banks studied, indicating that banks with higher capital adequacy tend to have lower Gross NPA ratios.

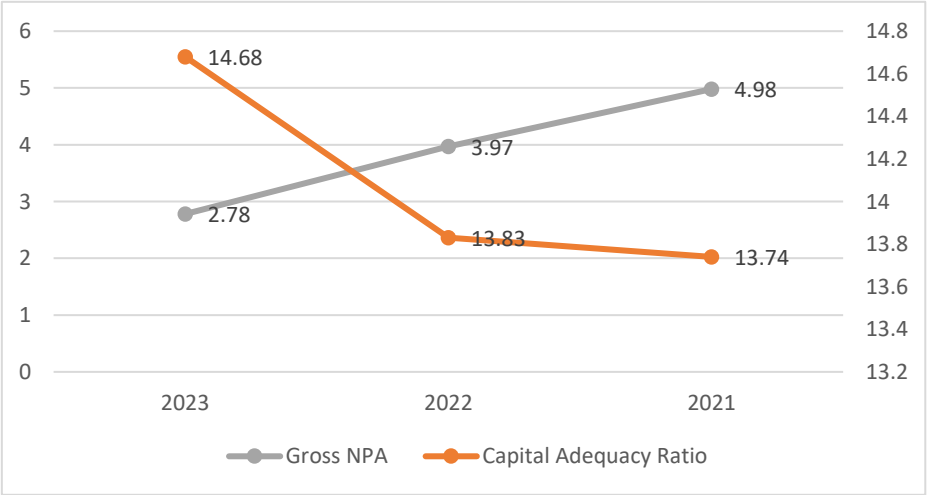
Hypothesis 2: Analysing Asset Quality Categories in 12 PSBs.

6. RESEARCH DESIGN

In this quantitative research study, data for analysing capital adequacy and NPA resilience in public banks was sourced primarily from Research Papers and Studies, Annual Reports from Official Websites of Public Sector Banks, and RBI's official website. The research population includes all Public Sector Banks (PSBs) in India, such as SBI, PNB, BOB, and others, with the sampling unit being the NPA data of each individual PSB within this population. Employing a census or complete enumeration method, the study comprehensively covers data from all public sector banks in India, ensuring the inclusion of all banks. As of July 2023, the analysis incorporated a total of 12 PSBs to provide a comprehensive understanding of the research subject.

7. DATA ANALYSIS AND INTERPRETATION

State Bank of India		
Year	**Capital Adequacy Ratio**	**Gross NPA**
2023	14.68	2.78
2022	13.83	3.97
2021	13.74	4.98



Hypothesis 1: There is a significant negative correlation between the Capital Adequacy Ratio and the Gross NPA ratio for all the banks, indicating that banks with higher capital adequacy tend to have lower Gross NPA ratios

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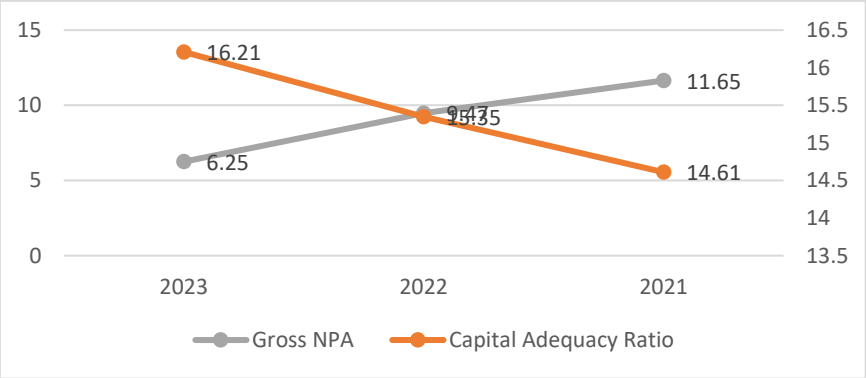
Other Public Sector Banks (Excluding SBI)		
Year	**Average Capital Adequacy Ratio**	**Average Gross NPA**
2023	16.21	6.25
2022	15.35	9.47
2021	14.61	11.65



INTERPRETATION- From the above table and graph, the study shows that, there is a negative correlation between the Capital Adequacy Ratio and the Gross NPA to Gross Advances ratio for both SBI and other Public Sector Banks. This supports Hypothesis, suggesting that banks with higher capital adequacy tend to have lower Gross NPA ratios. For SBI, as the Capital Adequacy Ratio increases from 13.74% in 2021 to 14.68% in 2023, the Gross NPA to Gross Advances ratio consistently decreases from 4.98% in 2021 to 2.78% in 2023. Similarly, for OPSBs, as the Capital Adequacy Ratio increases from 14.61% in 2021 to 16.21% in 2023, the Gross NPA to Gross Advances ratio declines from 11.65% in 2021 to 6.25% in 2023. The comparison between SBI and OPSBs reveals interesting insights. The data shows that OPSBs generally have higher Capital Adequacy Ratios than SBI across the years, with an average CAR of according to RBI is approximately 12% for PSBs and around 10% for Private Sector Banks. This higher average CAR among OPSBs corresponds to their lower Gross NPA to Gross Advances ratios, which tend to be lower than those of SBI, supporting Hypothesis. The findings suggest that banks within OPSBs maintain more robust capital positions compared to both SBI and the overall PSBs, enabling them to effectively manage non-performing assets and reduce the incidence of Gross NPA.

Correlation:

		Capital Adequacy Ratio	GNPA to Gross advances
Capital Adequacy Ratio	Pearson Correlation	1	-.925
	Sig. (2-tailed)		.248
	N	3	3
GNPA to Gross advances	Pearson Correlation	-.925	1
	Sig. (2-tailed)	.248	
	N	3	3
		Capital Adequacy Ratio	GNPA to Gross advances
Capital Adequacy Ratio	Pearson Correlation	1	-.998*
	Sig. (2-tailed		.045
	N	3	3
GNPA to Gross advances	Pearson Correlation	-.998*	1
	Sig. (2-tailed)	.045	
	N	3	3

*. Correlation is significant at the 0.05 level (2-tailed).

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The Problem:

Investigate the relationship between Capital Adequacy Ratio and Gross NPA.

H_1: There is a significant negative correlation between the Capital Adequacy Ratio and the Gross NPA to Gross Advances ratio for all the PSBs banks studied, indicating that banks with higher capital adequacy tend to have lower Gross NPA ratios.

Reporting Pearson Correlation-

Pearson correlation analysis between Capital Adequacy Ratio and Gross NPA ratio, a very high negative correlation was observed for both State Bank of India and other Public Sector Banks ($r = -0.925$ for SBI and $r = -0.998$ for OPSBs).

The correlation was found to be statistically insignificant for SBI ($p > 0.5$) but statistically significant for OPSBs ($p < 0.5$). These findings suggest that there is a strong negative association between Capital Adequacy Ratio and Gross NPA for both SBI and OPSBs.

The data indicates that banks with higher capital adequacy tend to have lower Gross NPA ratios, supporting Hypothesis. However, while this relationship is statistically significant for OPSBs, caution is needed when interpreting the results for SBI due to the lack of statistical significance.

H_1: Partially supported. OPSBs exhibit a significant negative correlation between Capital Adequacy Ratio and Gross NPA, indicating higher capital adequacy relates to lower Gross NPA ratios. For SBI, the correlation is not statistically significant, requiring caution in drawing conclusions.

Analysing Asset Quality Categories in 12 PSBs

Banks	Capital Adequacy Ratio (Avg.)	Standard Assets Ratio (Avg.)
State Bank of India	14.1	96.5
Punjab National Bank	14.8	88.5
Bank of India	15.3	89.7
Bank of Baroda	15.6	93.6
Bank of Maharashtra	16.4	94.4
Union Bank	14.6	89.3
Canara Bank	14.9	92.7
Central Bank of India	14.3	86.7
Indian Bank	16.2	91.9
Indian Overseas Bank	15.1	89.9
Punjab and Sind Bank	17.5	89.0
UCO bank	14.6	91.6

Analysis: The analysis of the provided data on the "Capital Adequacy Ratio (Avg.)" and "Standard Assets Ratio (Avg.)" for several banks reveals noteworthy variations in their financial indicators. In terms of the average Capital Adequacy Ratio, it ranges from 14.1% for SBI to 17.5% for Punjab and Sind Bank, showcasing diversity in capital adequacy across these banks.

A higher CAR generally signifies better capital strength and the ability to withstand financial shocks. On the other hand, the average Standard Assets Ratio varies from 86.7% for Central Bank of India to 96.5% for SBI. A higher SAR typically indicates a healthier proportion of standard assets in a bank's portfolio. Notably, SBI boasts the highest SAR despite its CAR being lower than some other banks, possibly indicating a larger share of standard assets, which can contribute to its resilience in managing non-performing assets.

In contrast, Punjab and Sind Bank stands out with the highest CAR, suggesting robust capital adequacy. Meanwhile, Central Bank of India exhibits relatively lower CAR and SAR figures, highlighting potential areas for improvement in both capital adequacy and asset quality. These findings offer preliminary insights into the financial strength and asset quality of the listed banks, though further in-depth analysis, including historical trends and external factors, is essential for a comprehensive assessment of financial stability and NPA resilience. The variation in these ratios underscores the importance of considering multiple financial indicators when evaluating the health and resilience of public sector banks in India.

8. FINDINGS

- Capital Adequacy and NPA Resilience Relationship: The study found a significant negative correlation between the Capital Adequacy Ratio and the Gross Non-Performing Asset ratio, indicating that banks with higher capital adequacy tend to have lower Gross NPA ratios, supporting the hypothesis.
- Diversity in Capital Adequacy: Significant variation in CAR was observed among public sector banks, with State Bank of India (SBI) having a CAR of 14.1% and Punjab and Sind Bank having the highest CAR at 17.5%. This diversity reflects differences in capital strength.
- Standard Assets Ratio (SAR) as an Indicator: SAR varied significantly among banks, with SBI having the highest SAR at 96.5% despite a lower CAR. A higher SAR suggests a healthier proportion of standard assets, possibly contributing to NPA resilience.
- Comparative Analysis Highlights: A comparative analysis revealed that SBI displayed lower NPAs and better recovery rates, indicating efficient NPA management practices, transparency, and accountability.
- Impact on Financial Stability: The study emphasized that NPAs can impact profitability, asset quality, and lending activities. Banks with higher capital adequacy and lower Gross NPA ratios are better positioned to maintain financial stability.
- Capital Strength Variability: The findings revealed substantial differences in capital adequacy among public sector banks.

9. SUGGESTIONS

- Public sector banks should prioritize strengthening their capital adequacy levels to ensure a resilient financial foundation.
- Regular stress testing and risk assessments can help identify potential capital shortfalls and prompt proactive measures.
- Banks must maintain a healthy proportion of standard assets in their portfolios, as indicated by the Standard Assets Ratio, to contribute to NPA resilience.
- Ongoing reviews of asset quality and risk exposure are essential to ensure a significant portion of assets remains standard.
- Banks should continuously monitor economic conditions, credit assessment practices, and fraud prevention measures as contributors to NPAs.
- Engage in continuous comparative analysis of NPA management practices to identify successful strategies employed by high-performing banks. Benchmarking against peers can facilitate the adoption of best practices for NPA management.

10. CONCLUSION

In the world of India's public sector banks, managing Non-Performing Assets has always been a tough challenge. This research dug deep into the crucial connection between having enough money (capital adequacy) and being able to handle NPAs effectively. What we discovered is that when banks have more capital, they are better at dealing with NPAs, which is a key to financial stability. These findings have significant implications for banking strategies and rules. It's crystal clear that well-capitalized banks are essential for financial stability. As India's economic landscape changes, this research reminds us that having a strong financial foundation is like a safety net, helping banks and the entire economy navigate through rough times. In essence, this study highlights the vital relationship between financial strength and resilience against NPAs, offering a vital lesson for banks and regulators in ensuring the financial health of India's public sector banks and the stability of the country's economy.

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