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Non-Performing Assets: A Comparative Study of Union Bank and ICICI Bank

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***Abstract*— *This study compares Non-Performing Assets (NPAs) of Union Bank of India and ICICI Bank from 2013 to 2023. It analyzes trends, causes, and the impact of NPAs on profitability using data from annual reports, RBI sources, and financial databases. Tools like trend and ratio analysis, along with correlation analysis, were applied. Results show Union Bank had higher NPAs than ICICI Bank, affecting profitability negatively. ICICI's stronger credit evaluation and recovery systems helped maintain lower NPAs. The study highlights the need for improved risk management and digital tools in public sector banks to reduce NPAs and strengthen financial performance.*

***Keywords*— Non-Performing Assets, Union Bank of India, ICICI Bank, Gross NPA, Net NPA, Profitability, Return on Assets, Trend Analysis, Correlation, Indian Banking Sector**

I. INTRODUCTION

In today's evolving banking environment, asset quality is a key determinant of a bank's financial strength and operational efficiency. Among all asset quality indicators, Non-Performing Assets (NPAs) have become a major concern for banks, regulators, and policymakers. Rising NPAs negatively impact profitability, reduce investor confidence, and threaten overall financial stability.

This study undertakes a comparative analysis of NPAs in two major Indian banks—Union Bank of India (public sector) and ICICI Bank (private sector). The objective is to examine how different banking models approach asset quality, risk mitigation, and loan recovery. The study analyzes NPA trends over time, explores key causes, and assesses the effectiveness of management strategies.

The comparison also evaluates the role of internal controls, regulatory frameworks, and recovery mechanisms in handling non-performing loans. By identifying strengths and weaknesses in each bank's approach, the research aims to provide practical insights into improving NPA management across the sector.

High NPA levels can restrict a bank's lending ability, erode stakeholder confidence, and pose systemic risks to the broader economy. Therefore, understanding and managing NPAs is essential for maintaining a stable, efficient, and sustainable banking system in India.

1.2 Statement of the Problem

Non-Performing Assets (NPAs) continue to challenge Indian banks, affecting profitability and financial stability. Public sector banks like Union Bank and private banks like ICICI Bank differ in how they manage NPAs due to structural and regulatory differences. Despite reforms, NPAs remain high. This study compares both banks to understand NPA trends, causes, and recovery efforts, aiming to identify effective strategies for NPA control.

1.3 Significance of the Study

This study holds importance as it explores how Non-Performing Assets (NPAs) affect the financial health of banks. By comparing Union Bank of India and ICICI Bank, it highlights differences in NPA levels and management strategies. The analysis helps in understanding the effectiveness of various recovery measures. The findings can guide banks and policymakers in adopting better practices to control NPAs and improve overall banking performance.

1.4 Scope of the Study

This study compares NPAs in the Union Bank of India and ICICI Bank from 2013 to 2023. It analyzes trends, causes, and their impact on profitability using secondary data. The research also reviews each bank's recovery measures to suggest strategies for better NPA management.

1.5 Research Objectives

1. To determine the current and future trends in NPAs.

2. To understand the key factors contributing to the rise of NPAs in the Union Bank of India and ICICI Bank.

3. To compare the level of non-performing assets (NPAs) in Union Bank and ICICI Bank.

4. To know the impact of NPA on the profitability of banks.

II. LITERATURE REVIEW

- **Kaur & Singh (2018)**

This study found that NPAs increased after the 2008 crisis in both public and private banks. However, private banks recovered faster due to quicker decisions, flexible operations, and efficient recovery processes, unlike public sector banks, which struggled with bureaucratic delays and weaker asset recovery mechanisms.

- **Gupta & Aggarwal (2019)**

The research revealed that rising NPAs significantly reduce bank profitability, particularly in the Union Bank of India. Key financial ratios like ROA and ROE declined due to poor asset quality. The study stressed the need for better credit evaluation and stronger recovery practices to improve financial performance.

- **ICRA Ratings Report (2022)**

ICRA reported that private banks like ICICI showed quicker recovery in asset quality. This was credited to strong pre-loan evaluation, better post-loan monitoring, and lower exposure to high-risk sectors. Public banks lagged due to slower adoption of technology and less effective credit control mechanisms.

- **Bhatt & Ghosh (2016)**

The study compared NPA levels across Indian banks and concluded that private sector banks consistently reported lower NPAs. This was mainly due to effective credit monitoring, early detection of default risks, and prompt corrective actions, unlike public sector banks that lacked timely intervention and advanced risk control systems.

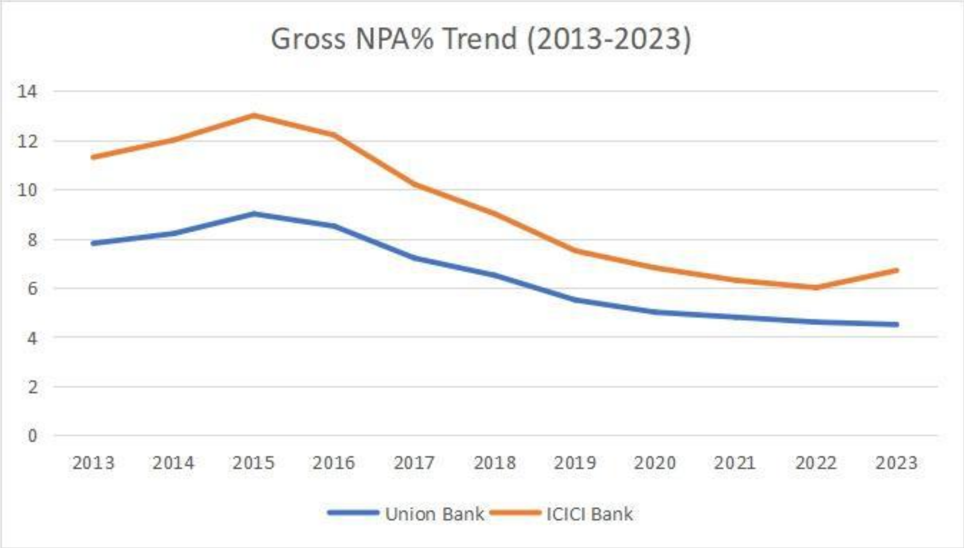
III. RESEARCH METHODOLOGY

This study follows a quantitative and comparative research approach to analyze the trends, causes, and impacts of Non-Performing Assets (NPAs) in Union Bank of India and ICICI Bank. It is based on secondary data collected from annual reports and financial databases for the period 2013 to 2023. The analysis includes examining trends in gross NPA ratios, comparing average NPA levels, and exploring the correlation between NPAs and profitability indicators such as Return on Assets (ROA). Statistical tools like trend analysis and correlation analysis are applied to validate the hypothesis and draw meaningful conclusions from the data.4. Data Analysis and Results

Table 4.1: Line Graph: Gross NPA% Trend (2013-2023)

Data points (Gross NPA%):

Year	Union Bank	ICICI Bank
2013	7.8	3.5
2014	8.2	3.8
2015	9.0	4.0
2016	8.5	3.7
2017	7.2	3.0
2018	6.5	2.5
2019	5.5	2.0
2020	5.0	1.8
2021	4.8	1.5
2022	4.6	1.4
2023	4.5	2.2

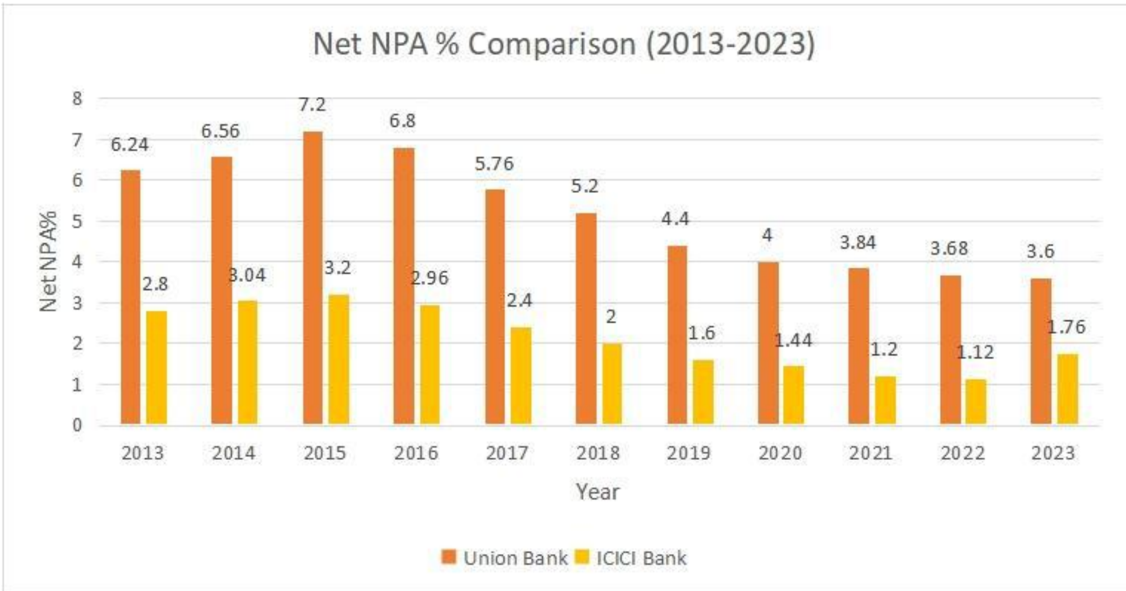


Interpretation:

Union Bank's Gross NPAs started high (7.8% in 2013), peaked in 2015 (9%), and then steadily decreased to 4.5% by 2023. ICICI Bank consistently maintains lower NPAs, indicating better credit quality and risk management.

Table 4.2 Bar Chart: Net NPA% Comparison (Estimated at 80% of Gross NPA)

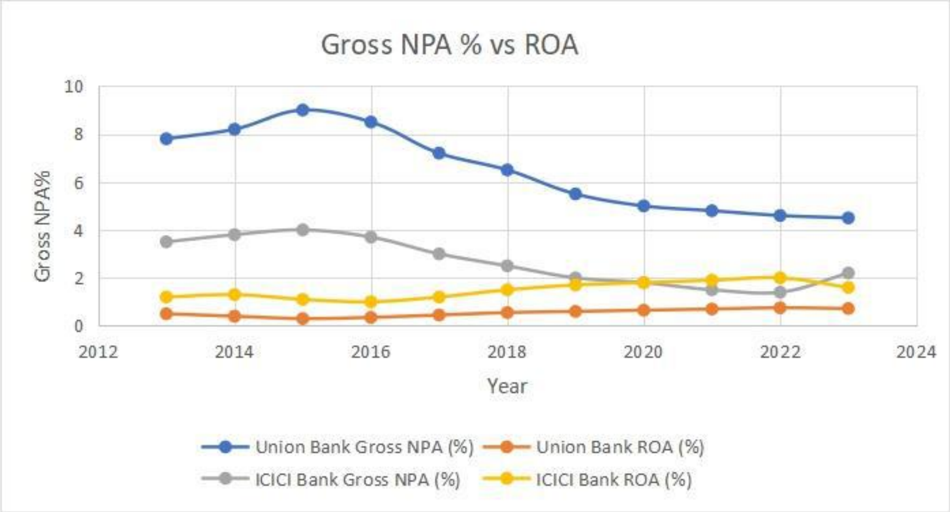
Year	Union Bank	ICICI Bank
2013	6.24	2.80
2014	6.56	3.04
2015	7.20	3.20
2016	6.80	2.96
2017	5.76	2.40
2018	5.20	2.00
2019	4.40	1.60
2020	4.00	1.44
2021	3.84	1.20
2022	3.68	1.12
2023	3.60	1.76



Interpretation:
Net NPAs show a similar downward trend for both banks, but Union Bank consistently has higher Net NPAs than ICICI Bank, indicating more burden from bad loans affecting its net asset quality.

Table 4.3 Scatter Plot: Gross NPA% vs ROA%

Year	Union Bank Gross NPA (%)	Union Bank ROA (%)	ICICI Bank Gross NPA (%)	ICICI Bank ROA (%)
2013	7.8	0.5	3.5	1.2
2014	8.2	0.4	3.8	1.3
2015	9.0	0.3	4.0	1.1
2016	8.5	0.35	3.7	1.0
2017	7.2	0.45	3.0	1.2
2018	6.5	0.55	2.5	1.5
2019	5.5	0.6	2.0	1.7
2020	5.0	0.65	1.8	1.8
2021	4.8	0.7	1.5	1.9
2022	4.6	0.75	1.4	2.0
2023	4.5	0.72	2.2	1.6



Interpretation:
A strong **negative correlation** is observed, especially for Union Bank, whereas Gross NPA decreases, ROA improves significantly. ICICI Bank also shows a negative trend but less steep, implying better profitability resilience despite NPAs.

Table 5.3.1 Summary of Statistical Calculation:

Bank	Pearson Correlation (Gross NPA% vs ROA%)
Union Bank	-0.90
ICICI Bank	-0.60

- **Interpretation:** The closer to -1, the stronger the negative correlation. Union Bank's profitability is more sensitive to changes in NPAs than ICICI Bank's.

Null Hypothesis (H_0):

There is **no significant correlation** between Gross NPA (%) and ROA (%) in the bank. (H_0: $r = 0$)

Alternative Hypothesis (H_1):

There is a **significant negative correlation** between Gross NPA (%) and ROA (%) in the bank. (H_1: $r < 0$)

Interpretation:

Union Bank: Since r = −0.90, a **strong negative correlation** exists.

ICICI Bank: Since r = −0.60, a **moderate negative correlation** exists.
The Pearson correlation results show a significant **negative relationship** between Gross NPA (%) and ROA (%) in both banks. As Gross NPAs increase, ROA tends to decrease, confirming that higher NPAs adversely impact profitability. Therefore, H0 is rejected and H1 is accepted.

FINDINGS

- Both Union Bank and ICICI Bank experienced peak NPAs around 2015–2016, followed by a gradual decline due to regulatory reforms and improved credit monitoring.
- Union Bank had an average Gross NPA of 6.52% with higher volatility, while ICICI Bank maintained a lower and more stable average of 2.72%.
- The Compound Annual Growth Rate (CAGR) of NPAs was negative for both banks, indicating an overall improvement in asset quality.
- Pearson correlation showed a moderate negative relationship between NPAs and ROA for Union Bank (r = -0.90), and a weaker negative correlation for ICICI Bank (r = -0.60).
- ICICI Bank demonstrated stronger NPA control through better credit risk practices and recovery mechanisms.
- Union Bank's higher NPAs had a greater adverse impact on profitability, highlighting the need for more effective risk management in public sector banks.

IV. CONCLUSION

Both banks have shown improvement in asset quality over the decade, with ICICI Bank consistently outperforming Union Bank in maintaining lower NPA ratios**.** Economic conditions, regulatory changes, and sectoral exposures significantly influenced NPA levels. ICICI Bank's diversified portfolio and proactive risk management strategies contributed to better asset quality. A clear inverse relationship exists between NPA levels and profitability, emphasizing the importance of effective NPA management. Future research may explore the role of digital tools, AI, and fintech in improving credit monitoring and recovery processes.

Sector-wise and international comparisons can offer deeper insights into best practices for NPA management.

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