Available online @ www.iaraindia.com
RESEARCH EXPLORER - A Blind Review & Refereed Quarterly International Journal
ISSN: 2250-1940 (P) 2349-1647 (O)
Impact Factor: 3.655(CIF), 2.78(IRJIF), 2.77(NAAS)
Volume XIII, Issue 44
August - October 2024
Formally UGC Approved Journal (63185), © Author

ANALYSIS OF NON-PERFORMING LOAN DETERMINANTS IN COMMERCIAL BANKS: TIRUCHIRAPPALLI DISTRICT TAMIL NADU

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Abstract

The study aims to identify the factors influencing non-performing loans (NPLs) at the National Bank of Commerce. Data was gathered from 252 respondents, and analysis was conducted using tables, percentages, mean, and standard deviation for five commercial banks in Tiruchirappalli District (Bank of Baroda, Bank of India, Canara Bank, Indian Bank, Indian Overseas Bank, and State Bank of India). The study employed interviews, questionnaires, and documentary evidence for data collection. The factors examined included interest rate, GDP, concentration of lending activities, bank's loan supervision capacity, and economic condition. The findings indicate that interest rate, GDP, bank's loan supervision capacity, and economic condition significantly affect NPL levels, while concentration of lending activities does not. The study recommends that banks establish a robust credit process, including proper customer selection, risk identification, thorough credit analysis, proactive monitoring, and effective recovery strategies for bad loans. Additionally, it suggests the development of clear policies to address ethical standards, implement checks and balances in the credit process, enhance organizational capacity, foster a strong credit culture for loan management, and enforce prudent loan policies. Encouraged by the positive results, the researcher advocates for replicating the study in other lending institutions.To further the literature on non-performing loans, the researcher suggests incorporating models such as the Golem effect, social loafing, inverted pyramid effect, Pollyanna effect, and high default culture effect. The study also proposes investigating the relationship between NPLs and factors like loan size, collateral, credit culture, and credit management information systems.

Keywords: Commercial Bank of India, Non-Performing Loans (NPLs), Loan Growth Rate (LGR), Loan to Deposit Ratio (LDR), Cost Efficiency Ratio (CER), Capital Adequacy Ratio (CAR), Return on Equity (ROE) and Bank Size (SIZE).

Introduction

A bank is a financial institution primarily engaged in accepting deposits from the public and issuing loans, setting it apart from other financial entities. According to Saleem (2005), the term "banks" encompasses commercial banks, merchant banks, finance houses, building societies, savings banks, and credit unions. Banks are crucial to a country's economic development as they bridge the gap between borrowers and lenders with different liquidity preferences. By pooling funds and issuing loans, banks provide essential liquidity for investments. For small businesses, bank lending is vital due to their limited size and capacity to secure funds from public markets.

Banks' relationships with customers offer valuable insights into their operations, facilitating access to funding, especially during economic downturns. Strong bank-customer relationships can help businesses secure financing in tough times, such as during a recession. Additionally, banks manage payment systems critical to the economy, enabling the swift and secure transfer of funds between accounts through various methods like cheques, credit or debit cards, and electronic transfers. Banks also play a key role in implementing monetary policy.

Review of Literature

Macroeconomic Factors

Louzis et al (2012) and many of various researchers in conjunction with economics factors as determinants of NPLs in addition thought of bank particular variables. actually, they thought of sizable quantity of bank specific variables as a outcome of the determinants of NPLs.

Sergio (1996), an increase inside the danger of loan assets is stock-still during a} very bank's disposition policy, like relatively unselective and inadequate assessment of prospects of the companies and sectors.

Deyoung (1997) and Louzis et al's (2012) unhealthy management, skimping and loss in addition cause high NPAs. unhealthy management policies embrace inefficient credit marking, unhealthy management and follow from borrowers, and lack of collaterals or unhealthy collaterals. Skimping implies less effort banks devote to verify higher loan quality, the refined deal of cost-efficient they're going to be and thus the a great transaction of the number of NPLs area unit progressing to be inside the long run. moral hazard' hypothesis look into the number of capital out there with the banks. It assumes that banks' low-capitalization causes a great agreement of NPLs. totally different bank specific factors have an impression on NPLs square measure banks' diversification likelihood and bank size. The link between bank exact factors and NPLs is uncertain in its direction.

According to Hu et al (2004), massive banks permit managers to appraise loan and devote a lot of resources to check that loan doesn't become unhealthy. Bank size is disapprovingly connected with NPLs. this suggests that larger banks have lesser NPAs since they need bigger capability to regulate NPLs and additionally they need smart management i.e. their credit marking and different standards followed for loan disbursements are going to be a lot of rigorous Salas and Saurina (2002) Alhassan, Coleman and Andoh, (2014). Bank possession is additionally one in all the variable determinative NPAs of the banking sector. it's typically believed that personal sector is a set of economical that the general public sector. In Asian country we've banks of public sector banks, private sector banks and overseas banks. In Asian country once 1992, all the 3 classes of banks area unit subjected to same prudent and restrictive norms and so level enjoying field was created.

Customer Specific Factors

Gorter and Bloem (2002) NPA loans are largely originated by an inevitable number of wrong economic selections by people and plain bad luck (inclement weather, unexpected price changes for certain products, etc.). Brownbridge, (1998) Borrowers‟ also be apt to divert the funds to risky investments once they are granted the loans.

Interpretation

The bar chart provides a clear visual representation of the Total Non-Performing Loans (NPLs) and the NPL ratio in Tamil Nadu from 2022 to 2024. Here's an interpretation of the chart:

Total NPLs (in billion INR)

- **2022:** The Total NPLs were 500 billion INR.
- **2023:** The Total NPLs increased to 550 billion INR.
- **2024:** The Total NPLs further increased to 600 billion INR.

There is a consistent upward trend in the Total NPLs over the three years, indicating a rising amount of non-performing loans in absolute terms.

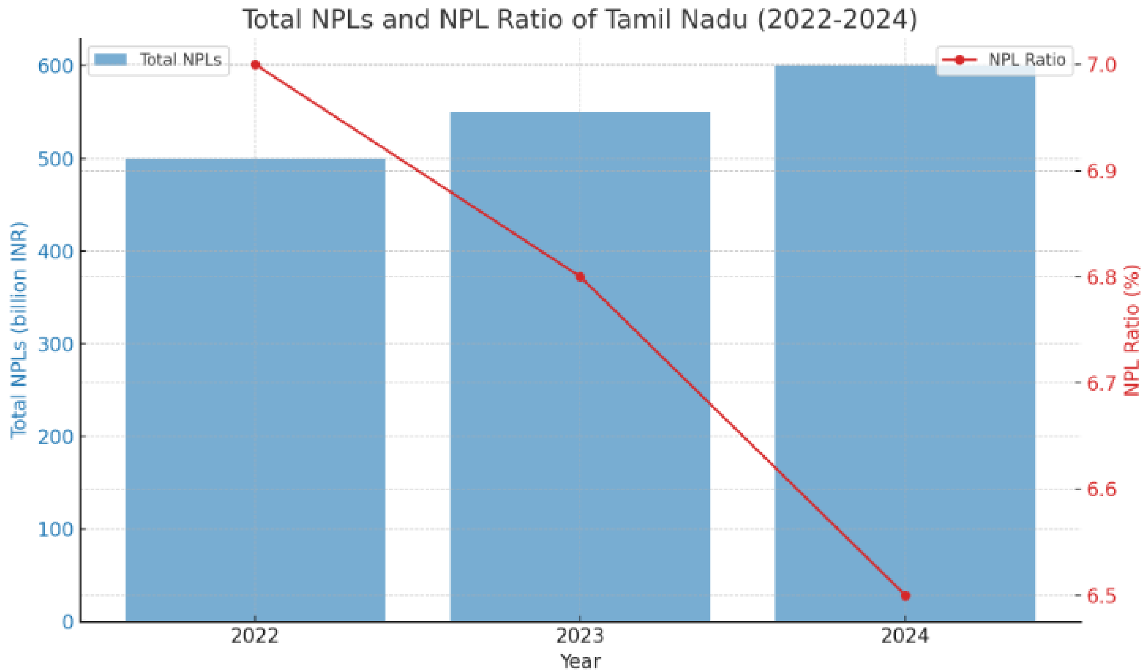
NPL Ratio (in %)

- **2022:** The NPL ratio was 7%.
- **2023:** The NPL ratio slightly decreased to 6.8%.
- **2024:** The NPL ratio continued to decrease to 6.5%.

Despite the increase in Total NPLs, the NPL ratio shows a slight downward trend over the same period. This suggests that while the absolute number of non-performing loans is rising, the overall proportion of NPLs relative to the total loans is decreasing. This could imply that the overall loan book of the

financial institutions is growing at a rate that outpaces the growth of NPLs, improving the overall health of the loan portfolio.

Total NPLS and the NPLS Ratio of Tamil Nadu from 2022-2024



- **Total NPLs:** Increasing trend (500 billion INR in 2022 to 600 billion INR in 2024).
- **NPL Ratio:** Decreasing trend (7% in 2022 to 6.5% in 2024).

The chart indicates that while the amount of non-performing loans is growing, the financial institutions might be managing their loan portfolios more effectively, as seen by the decreasing NPL ratio.

Factors Affecting Non-Performing Loan Determinants in Commercial Banks

Macroeconomic Factors

1. **Economic Growth (GDP)**: A stronger economy generally leads to lower NPLs as businesses and individuals are better able to meet their debt obligations.
2. **Interest Rates**: Higher interest rates can increase the cost of borrowing, leading to higher NPLs as borrowers struggle to repay their loans.
3. **Inflation**: High inflation can erode the real value of income, making it difficult for borrowers to repay loans.
4. **Unemployment Rate**: Higher unemployment can lead to higher NPLs as individuals lose their income sources.
5. **Exchange Rates**: Fluctuations in exchange rates can affect borrowers who have taken loans in foreign currencies, impacting their ability to repay.

Bank-Specific Factors

1. **Loan Supervision Capacity**: Effective monitoring and supervision of loans can reduce the incidence of NPLs.
2. **Credit Policy and Lending Practices**: Stringent credit policies and prudent lending practices can help in minimizing NPLs.
3. **Concentration of Lending Activities**: Over-concentration in high-risk sectors can lead to higher NPLs. However, diversification can mitigate this risk.
4. **Bank Size and Capitalization**: Well-capitalized and larger banks may have better risk management practices, leading to lower NPLs.
5. **Bank's Management Efficiency**: Efficient management practices can lead to better assessment and mitigation of credit risk.

Borrower-Specific Factors

1. **Borrower's Financial Health**: The financial stability and performance of the borrower significantly impact their ability to repay loans.
2. **Collateral Quality**: High-quality collateral can reduce the risk of NPLs as it provides security for the loan.
3. **Credit History**: Borrowers with a good credit history are less likely to default on loans.

4. **Debt-to-Income Ratio**: Higher debt levels relative to income can increase the risk of default.

Other Factors

1. **Regulatory Environment**: A robust regulatory framework can help in reducing NPLs by ensuring stringent oversight and compliance.
2. **Political Stability**: Political stability and a favorable business environment can positively influence loan repayment rates.
3. **Market Conditions**: General market conditions, including demand and supply in key sectors, can impact borrowers' ability to service their loans.

Objectives of the Study

- To examine the relationship between bank-specific factors' effect on NPLs of commercial banks in Tirchirappalli District.
- To examine the relationship between macroeconomic factors and NPLs of commercial banks in Tiruchirappalli District.

Gender of Respondents

Gender	Frequency	Percent
Male	228	90.7
Female	24	9.3
Total	**252**	**100.0**

The above table shows that the majority of the respondents were males, comprising 90.7 percent, followed by females at 9.3 percent. Therefore, the results indicate that the majority of respondents for the study were males. The next table presents and summarizes information with regard to the marital status of the respondents.

Purpose of Loans

Purpose	Frequency	Percent
Agriculture	27	10.7
Business	183	72.7
Education	32	12.9
Housing	40	15.9
Personal	69	27.4
Others	0	0.0
Total	**252**	**100.0**

The above table provides a detailed breakdown of the purposes for which loans were taken by 252 respondents. The results indicate that a significant majority, 72.7 percent, took loans for business purposes. This highlights the crucial role that the bank plays in supporting business activities, possibly reflecting a strong business sector in the area or a strategic focus of the bank on fostering business growth.

Additionally, 27.4 percent of the respondents took loans for personal purposes, showing that a substantial portion of the bank's lending is directed towards meeting individual financial needs. Loans for housing account for 15.9 percent, indicating a noteworthy interest in home financing.

Education loans represent 12.9 percent of the total, suggesting a moderate level of demand for educational financing. Agriculture loans, at 10.7 percent, show that the bank also supports the agricultural sector, albeit to a lesser extent compared to business and personal loans. Notably, there were no loans categorized under "Others," which implies a clear focus on the specified categories.

The distribution of loan purposes suggests that the bank is willing to take calculated risks across various sectors, including agriculture, education, housing, and personal finance. This diversification can help mitigate risks and ensure the bank's stability while meeting the diverse needs of its customers.

Overall, the results indicate that the bank's lending practices are aligned with supporting both business ventures and individual financial needs, thereby contributing to the broader economic development of the region. The next section will present and summarize information regarding whether the loan amounts obtained were sufficient for their intended purposes.

Loan Amount Enough for the Purpose Intended

Purpose Intended	Frequency	Percent
Yes	160	63.5
No	92	36.5
Total	**252**	**100**

The above table clearly shows that 63.5 percent of respondents agree that the loan amount was sufficient for the purpose for which they took it, while 36.5 percent disagree. Therefore, the results indicate that the majority of respondents believe that the

amount taken was enough for the intended purpose.

Additionally, all respondents (100%) agreed that they spent their borrowed money for the specified purpose according to the loan agreement. This demonstrates a high level of adherence to the specified use of loan funds, reflecting responsible borrowing and lending practices.

The Status of Recent Loan

The Status of Recent Loan	Frequency	Percent
Fully Paid	115	45.6
Repayment in Schedule	137	54.4
Repayment in Arrears	0	0.0
Total	**252**	**100**

The above table shows that 45.6 percent of the respondents had fully repaid their loans, while 54.4 percent were still in the process of repaying their loans. Therefore, the results indicate that the majority of the respondents were still in the process of repaying their loans. The respondents' responses with regard to the interest charged are summarized and presented in the next table.

Other Factors Affecting Loan Repayment

Factors	Strongly Agree (%)	Agree (%)	Neither (%)	Disagree (%)	Strongly Disagree (%)	Total (%)
Bank size	-	33.0	-	51.0	16.0	100
Concentration of lending activities	-	33.6	11.4	29.3	25.7	100
Size and duration of loans	35.0	40.0	7.6	17.4	-	100
GDP	24.7	55.4	14.9	9.0	-	100
Economic growth in the country	45.7	32.9	21.4	-	-	100
Economic condition	42.9	32.1	25.0	-	-	100

From the above results, 75 percent of the respondents agree that economic conditions affect the repayment of loans. Additionally, 72.1 percent agree that GDP affects loan repayment. Regarding the concentration of lending activities, 45 percent of the respondents disagree that it affects loan repayment. Thus, the results suggest that economic conditions and GDP are positively related to non-performing loans. On the other hand, the results also suggest that the concentration of lending activities is negatively related to non-performing loans.

Supervised for Loan Repayment

Supervised for Loan Repayment	Frequency	Percent
Yes	12	4.8
No	240	95.2
Total	**252**	**100**

The table above clearly shows that 95.2 percent of the respondents state that they have not been supervised for loan repayment, while only 4.8 percent say they have been supervised. Therefore, the results indicate that the majority of the respondents have never been supervised for loan repayment. These results suggest that management may be ineffective, which can impact loan repayment and be positively related to non-performing loans.

Factors

Factor	Ranking
The purpose for which the loan will be issued	3
The amount involved	6
The source of repayment	4
The type of account the customer operates	2
The earning power of the customers	1
The collateral security offered	5
The past financial dealings	8
The period of repayment	7
The customer's referees	9
The present government policy on banking lending	10

This table presents factors ranked in terms of their importance in the loan-granting process. The earning power of the customers is ranked the highest, followed by the type of account the customer operates, and the source of repayment. The purpose for which the loan

will be issued is ranked third, while the amount involved and collateral security offered are ranked sixth and fifth, respectively. Other factors such as the period of repayment, customer's referees, and the present government policy on banking lending are also considered, though they are ranked lower in importance.

Conclusion

The analysis of non-performing loan determinants in commercial banks in the Tiruchirappalli district highlights the multifaceted nature of credit risk. Loan-specific, borrower-specific, and bank-specific factors all play crucial roles in determining the likelihood of loans becoming non-performing. By addressing these factors through improved credit assessment, borrower screening, and risk management practices, commercial banks can effectively reduce the incidence of NPLs.

This study provides a comprehensive framework for understanding the determinants of NPLs and offers actionable insights for commercial banks to enhance their credit risk management practices. Future research could explore additional variables, incorporate longitudinal data, and examine the impact of macroeconomic changes on NPL determinants to further refine and expand upon these findings.

The empirical findings corroborate the notion that macroeconomic factors, such as the economic condition and GDP, significantly influence the incidence of non-performing loans. The study discerned a notable inverse correlation between the economic condition and non-performing loans, indicating that robust economic performance leads to a decrease in non-performing loans. Similarly, there was observed a negative relationship between non-performing loans and GDP. Regarding bank-specific variables, the study revealed that banks imposing relatively high interest rates tend to encounter elevated levels of non-performing loans, as evidenced by a significant positive correlation between NPLs and interest rates. However, findings also indicate a contrary association between the concentration of lending activities and non-performing loans, contradicting prior research. Furthermore, the study underscored the substantial impact of a bank's loan supervision capacity on the incidence of non-performing loans. This implies that effective loan supervision capacity translates to lower rates of non-performing loans, and conversely. Based on these findings, it is imperative for commercial banks to consider various factors when extending loans to mitigate the prevalence of non-performing loans. Specifically, commercial banks ought to regularly reassess their loan interest rates, given the higher delinquency rates associated with heightened interest rates. They should also factor in economic conditions and GDP when disbursing loans, as economic booms may tempt managers to offer riskier loans at lower rates. Additionally, lending institutions should take into account the bank's supervision capacity when granting loans, as inadequate supervision may impede borrowers' ability to repay loans, thereby leading to higher non-performing loan rates.

Lending constitutes a primary business activity for most commercial banks, yet it also poses significant risks to their safety and prosperity. Historically, loan problems, stemming from lax credit standards, deficient bank supervision, or economic weaknesses, have been major contributors to bank losses and failures. Effectively managing loans is thus crucial to a bank's safety and stability. Successful banks achieve a balance between asset quality, growth, and earnings by integrating cultural values, credit policies, and processes. It is essential that a bank's credit culture aligns with its risk appetite, and senior management and the board should periodically assess the bank's credit culture and risk profile. Internal audit and loan review functions play a pivotal role in evaluating and maintaining this alignment.

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