International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 06 | June - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

# Impact of Non-Performing Assets on Financial Performance: An Empirical Analysis of Primary Agricultural Development Banks in Punjab

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## ABSTRACT

This paper investigates the impact of Non-Performing Assets (NPAs) on the financial performance of Primary Agricultural Development Banks (PADBs) in Punjab. Utilizing financial data from 2010 to 2020, the study employs a panel regression model to analyse how NPAs affect key financial metrics. The results demonstrate a significant negative correlation between NPAs and financial performance indicators such as Return on Assets (ROA) and Return on Equity (ROE), highlighting the detrimental effects of high NPA levels on PADBs' financial health. It underscores the need for robust risk management practices, enhanced governance, and effective recovery mechanisms to mitigate the impact of NPAs. The findings suggest that addressing these challenges through targeted reforms and aligning PADBs with broader financial sector improvements is crucial for sustaining agricultural development and economic stability in Punjab.

**Keywords**: NPAs, PADBs, Financial Performance, Risk Management, Agricultural Policies

## INTRODUCTION

The effective functioning of cooperative banks is vital for agricultural development, particularly in states like Punjab where agriculture is a cornerstone of the economy. Primary Agricultural Development Banks (PADBs) in Punjab play a crucial role in providing long-term financial resources to farmers for purposes such as purchasing equipment, improving infrastructure, and supporting various agricultural projects. These banks are essential for small and marginal farmers who often lack access to credit from commercial banks, offering tailored financial products that meet their specific needs.

However, PADBs in Punjab face significant challenges, primarily due to mounting Non-Performing Assets (NPAs). NPAs, which represent loans where repayment of principal or interest is overdue, constitute a substantial portion of PADBs' loan portfolios. This trend mirrors the broader issue faced by cooperative banks nationwide, where NPAs can account for about 50% of outstanding loans. The high level of NPAs severely impacts the financial viability of PADBs by depleting their capital base, reducing their ability to extend new loans, and increasing the risk of insolvency, thus undermining their capacity to support ongoing and future agricultural development initiatives.

Several factors contribute to the rise of NPAs in PADBs. Economic vulnerabilities, such as fluctuations in market prices, adverse weather conditions, and variations in crop yields, significantly affect farmers' ability to repay loans. Structural and governance issues within PADBs, including lack of professional management, inadequate risk assessment processes, and weak internal controls, exacerbate the problem. Additionally, gaps in policy

implementation, ineffective monitoring, and lack of robust follow-up on overdue loans further contribute to the accumulation of NPAs.

Addressing these challenges requires a multifaceted approach. Enhancing loan recovery mechanisms through more efficient monitoring systems, the use of technology, and stronger legal measures is essential. Improving governance structures by introducing professional management practices and strengthening internal controls can help PADBs operate more efficiently and manage risks better. Developing financial products that are better suited to the needs of farmers, considering factors like crop cycles and market conditions, can improve loan performance and reduce defaults. Moreover, government and regulatory support through favourable policies, financial assistance for capacity-building, and incentives for good performance are crucial for strengthening the operational framework of PADBs. Implementing broader financial sector reforms, similar to those recommended by the Narasimham Committee, can also help PADBs adopt modern financial practices, improve their balance sheets, and enhance their operational efficiency.

So, the performance of PADBs in Punjab is crucial for sustaining agricultural development in the region. Addressing the challenges posed by NPAs through targeted reforms, better governance, and improved recovery strategies is essential for enhancing the sustainability and effectiveness of PADBs. By aligning with broader financial sector reforms and focusing on the unique needs of the agricultural sector, PADBs can continue to support the economic vitality of Punjab's agricultural community.

**REVIEW OF LITERATURE**

The issue of Non-Performing Assets (NPAs) is a critical challenge in the banking sector, significantly impacting banks' profitability, liquidity, and overall financial stability. NPAs are loans that have not met interest or principal repayment obligations for over 90 days, indicating a deterioration in credit quality and leading to financial distress for banking institutions. The increase in NPAs can be attributed to various factors, including poor lending decisions, inadequate risk assessment, economic downturns, and external influences affecting borrowers' repayment abilities.

Several studies have identified key determinants of NPAs, emphasizing both internal and external factors. Economic conditions such as market volatility and sector-specific downturns, as discussed by Keovongvichith (2012) and Gupta and Verma (2008), significantly contribute to loan defaults, particularly in vulnerable sectors like agriculture. Internally, poor credit management, ineffective loan monitoring, and inadequate risk assessment practices are primary drivers of NPAs, as highlighted by Ahmeti and Bekteshi (2014) and Mohiuddin (2014). Furthermore, the regulatory and policy environment, including stringent norms and ineffective policy implementation, can exacerbate the NPA problem by limiting banks' ability to manage distressed assets effectively, as noted by Azizi and Sarkani (2014). Governance and management quality also play a crucial role; weak governance structures and ineffective management practices are linked to higher NPA levels due to inadequate oversight and poor decision-making, according to studies by Nagarkar (2015) and Ebrahimi et al. (2017).

The impacts of NPAs on banks and the broader economy are profound. High NPA levels directly affect a bank's financial performance by reducing interest income and increasing provisioning requirements, leading to a decline in profitability metrics such as return on assets (ROA) and return on equity (ROE), as shown by Munir et al. (2017) and Chakraborty et al. (2015). Additionally, NPAs impair a bank's liquidity position and necessitate higher capital reserves, constraining its ability to extend new credit and affecting overall growth prospects, as observed by Mustafa and Taqi (2017). NPAs also pose risks to economic stability, increasing the likelihood of bank failures and reducing credit availability, with broader economic repercussions such as reduced investment and slower growth, as emphasized by Reddy and Prasad (2011).

To manage and mitigate the impact of NPAs, various strategies have been proposed. Effective risk management is crucial, with studies by Ibrahim (2014) and Zaidanin (2020) advocating for robust frameworks to identify and

mitigate potential loan defaults early. Implementing efficient loan recovery and restructuring mechanisms is also essential for managing NPAs, as suggested by Goel and Rekhi (2012) and Gupta (2014). Regulatory reforms play a vital role in improving asset quality and reducing NPAs, as highlighted by Andries et al. (2012) and Nagarkar (2015). Additionally, integrating technology for better credit monitoring and management can aid in reducing NPAs by improving loan tracking and recovery processes, as noted by Lohia (2011) and Jeevarajasingam (2014).

Overall, the literature underscores the complexity of factors contributing to the rise in NPAs and the need for comprehensive strategies to address this challenge. Effective risk management, strong governance, regulatory reforms, and technological advancements are essential for mitigating the impact of NPAs, ensuring the financial health and stability of banks, and supporting sustainable economic growth.

## RESEARCH GAP

While extensive research has explored the impact of Non-Performing Assets (NPAs) on the financial performance of commercial banks, there is a notable gap in understanding their specific effects on Primary Agricultural Development Banks (PADBs) in Punjab. PADBs, which are essential for providing financial support to the agricultural sector, confront unique challenges that differ from those of commercial banks. These challenges include increased exposure to sector-specific risks such as market fluctuations, crop failures, and price instability in agricultural commodities. Such factors are inherently different from the risks managed by commercial banking institutions.

The financial performance of PADBs is closely tied to the effectiveness of agricultural policies and government initiatives aimed at supporting farmers, which may not align with the broader financial policies affecting commercial banks. Despite their critical role, research on how NPAs influence PADBs, particularly in the context of Punjab's agricultural economy, remains limited. Existing studies often overlook the seasonal nature of agricultural lending, localized economic conditions, and the specialized loan monitoring practices required for agricultural loans.

## RESEARCH METHODOLOGY

This study analyses financial data from Primary Cooperative Agriculture Development Banks in Punjab using a quantitative research design. It employs a panel regression model to capture both cross-sectional and time-series variations, enabling the analysis of individual banks across multiple periods. Financial statements from these banks over a 10-year span, from 2010–2011 to 2019–2020, serve as the data source. This approach is structured to provide meaningful insights into the impact of NPA on financial performance, supporting informed decision-making in the banking sector.

## VARIABLE DESCRIPTION AND HYPOTHESIS DEVELOPMENT

In order to develop the hypotheses in the present study, theoretical and empirical relationships between the Asset Quality Ratio and financial performance have been considered. The hypotheses have been developed by taking the previous literature into consideration. The variables and their hypotheses are explained as follows:

The dependent variables are Return on Assets (ROA) and Return on Equity (ROE), which are measures of financial performance. The formulas for calculating these ratios are as follows:

ROA = Net profits / Total assets

ROE = Net profit / Total equity

The explanatory variable used in the study is Asset Quality Ratio.

**Asset Quality:** Asset quality is a critical metric for assessing a bank's financial strength. It evaluates the quality and riskiness of the bank's loan portfolio. A lower ratio of non-performing assets indicates healthier asset quality, implying fewer loans in default or at risk of default. This reflects the bank's effective management of credit risk and maintenance of

a robust loan portfolio. Studies (Ali, 2016; Ali et al., 2011; Ally, 2014; Jha and Hui, 2012; Madishetti, 2013; Mishra et al., 2013; Ongore & Kusa, 2013; Osuagwu, 2014; Ozgur & Gorus, 2016; Sangmi & Nazir, 2010; Shah and Jan, 2014; Sufian & Chong, 2008) have emphasized its importance in evaluating a bank's financial health.

H2: There is a significant relationship between the asset quality ratio and the financial performance (ROA & ROE) of the primary cooperative agriculture development banks of Punjab.

**RESULT AND DISCUSSION**

The regression analysis in this study examines the relationship between the financial performance of Primary Cooperative Agriculture Development Banks, measured by Return on Assets (ROA) and (ROE) and asset quality ratios. The aim is to determine how these asset quality ratios influence ROA and ROE, providing insights into their impact on the banks' overall financial health**.**

**Table 5.5: Determinants of Financial Performance of Primary Cooperative Agriculture Development Banks (ROA).**

| | Model 1 | Model 2 |
|---|---|---|
| Const | 0.012*** | 0.2641*** |
| Assets Quality | −0.144*** | −3.353*** |
| R2 | 0.05 | 0.04 |
| No.of observations | 890 | 890 |
| Durbin Watson value | 1.53 | 1.84 |

Source: Own Computation through GRETL

In model 1, Asset Quality is introduced as an independent variable in the analysis. The negative coefficient associated with Asset Quality indicates that as asset quality deteriorates, ROA tends to decrease. This observation suggests a trade-off between risk and return, as PADBs with higher-quality assets may adopt conservative lending practices to mitigate credit risk, resulting in lower returns but potentially lower risk exposure. Conversely, banks with lower asset quality may pursue riskier lending activities to maximize returns, but this comes with a higher probability of loan defaults and credit losses, ultimately impacting ROA negatively. Therefore, maintaining a high standard of asset quality through effective risk management practices, prudent loan underwriting standards and proactive loan monitoring mechanisms is crucial for sustaining profitability and financial stability in PADBs.

Model 2 reveals Asset Quality as a significant negative determinant of ROE. This suggests that higher asset quality, often indicated by a lower Non-Performing Loans (NPLs) to Total Loans ratio, is associated with lower ROE in Primary Cooperative Agriculture Development Banks. It implies that banks with a healthier loan portfolio, characterized by a lower proportion of non-performing loans, may experience reduced profitability, possibly due to conservative lending practices or higher provisioning requirements.

**TESTING OF HYPOTHESES**

Fixed Panel Regression has been applied to test the hypotheses. The testing of hypotheses developed for the explanatory variables is as follows:

H2: There is a significant relationship between the asset quality ratio and financial performance (ROA & ROE) of the primary cooperative agriculture development banks of Punjab.

The findings of fixed panel regression analysis indicate a negative impact of asset quality on the financial performance of the banks. The findings reveal a significant negative relationship between Asset Quality and financial performance as measured by ROA and ROE, demonstrating that a decrease in the NPL ratio generally leads to an increase in ROA and ROE. This highlights that a healthier loan portfolio, characterized by fewer NPLs, can enhance profitability by reducing credit risk. These results align with previous studies by Qin and Pastory (2012) in Tanzania, Miller and Noulas (1997) in the USA, Acaravci and Calim (2013) in Turkey, Ongore and Kusa (2013) in Kenya and Shan and Jan (2014) on Pakistani commercial banks.

## CONCLUSION

This study explores the impact of Non-Performing Assets (NPAs) on the financial performance of Primary Agricultural Development Banks (PADBs) in Punjab, utilizing data from 2010 to 2020. The findings highlight that NPAs significantly hinder PADBs' financial stability, adversely affecting profitability, liquidity, and capital adequacy. The regression analysis reveals a negative relationship between asset quality, measured by NPAs, and financial performance indicators such as Return on Assets (ROA) and Return on Equity (ROE). Specifically, a higher NPA ratio correlates with lower ROA and ROE, underscoring the critical role of maintaining high asset quality for financial health. The study identifies economic vulnerabilities, structural and governance issues, and gaps in policy implementation as key contributors to the rise in NPAs. To address these challenges, the study advocates for enhanced risk management practices, improved governance structures, and effective loan recovery mechanisms. Additionally, aligning PADBs with broader financial sector reforms and tailored agricultural policies is essential for sustaining their role in supporting agricultural development in Punjab. These findings underscore the need for strategic interventions to mitigate the adverse effects of NPAs and bolster the financial performance of PADBs, ultimately contributing to the agricultural growth and economic stability of the region.

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