

ANALYSING THE RELATION BETWEEN NON-PERFORMING ASSETS AND CERTAIN SELECTED DETERMINANTS OF PROFITABILITY OF PAYMENT BANKERS IN INDIA

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ABSTRACT

The issue of non-performing assets (NPAs) continues to be a problem despite existing legal frameworks and regulatory bodies. A comprehensive comparison study has been conducted to restore confidence in all sectors and to examine the policies and causes of NPAs at all stages and levels. This thorough research, which includes a significant number of scholars who have focused their studies exclusively on commercial banks or separately on private banks, aims to provide an unbiased perspective on these interconnected concerns. The study specifically focuses on the Indian context, using data on payment bankers from 2019 to 2023, covering five financial years. This research found that the profitability of payment bankers in India is mainly determined by gross non-performing assets (GNPA) and earnings per share (EPS).

Keywords: NPA, EPS, GNPA, Commercial Banks, Private Banks.

Introduction

Scheduled and non-scheduled banks are the primary classifications describing the Indian banking sector. Financial organisations included under the Reserve Bank of India Act, 1934's 2nd Schedule, are known as scheduled banks. Nationalised banks, the State Bank of India and its affiliates, Regional Rural Banks (RRBs), foreign banks, and other private sector banks in India are all part of the scheduled banks (GoI, 2015). The term "commercial bank" refers to any financial institution subject to the Banking Regulation Act of 1949, whether a scheduled or non-scheduled bank (RBI, 2015).

The primary functions of Indian banks are shown in the figure as follows:

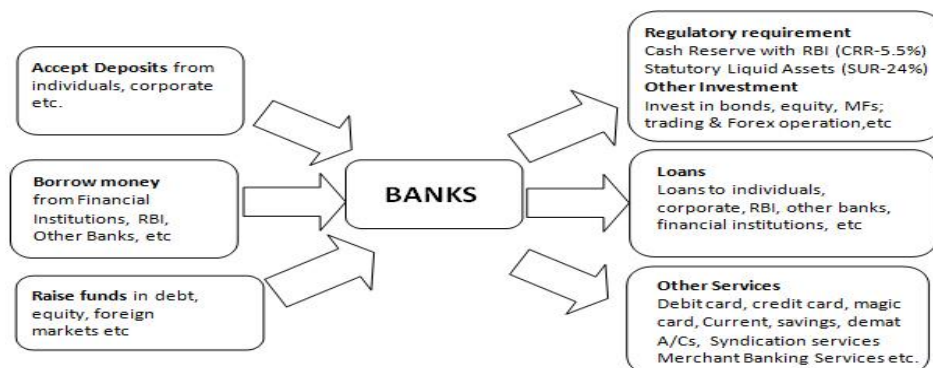


Figure 1: Main Work of Indian Banks

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Payment banks (PBs) focus on providing payment and remittance services to migratory labourers, low-income families, small enterprises, and other unorganised sector organisations and consumers. By the end of June 2023, six Public Banks (PBs) were functioning in the country, operating 88 branches. The bulk of these branches were located in semi-urban areas. Among the six functioning PBs, five PBs generated profits during the fiscal year 2022-23.

Table1: Consolidated Balance Sheet and Financial Performance of Payments Banks

| Sr. No. | Amount (in ₹ crore) | | | Y-o-y growth (in per cent) | |
|--|---------------------|---------------|---------------|----------------------------|-------------|
| | 2020-21 | 2021-22 | 2022-23 | 2021-22 | 2022-23 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Total Capital and Reserves | 1,761 | 2,485 | 2,932 | 41.1 | 18.0 |
| 2. Deposits | 4,625 | 7,859 | 12,222 | 69.9 | 55.5 |
| 3. Other Liabilities and Provisions | 6,083 | 7,771 | 8,407 | 27.8 | 8.2 |
| Total Liabilities/ Assets | 12,469 | 18,115 | 23,561 | 45.3 | 30.1 |
| 1. Cash and Balances with RBI | 1,255 | 1,560 | 2,427 | 24.3 | 55.6 |
| 2. Balances with Banks and Money Market | 2,393 | 3,322 | 5,003 | 38.8 | 50.6 |
| 3. Investments | 7,116 | 10,178 | 12,414 | 43.0 | 22.0 |
| 4 Fixed Assets | 355 | 372 | 565 | 4.7 | 52.1 |
| 5 Other Assets | 1,350 | 2,683 | 3,153 | 98.8 | 17.5 |
| Note: Data pertain to 6 PBs. Source: Off-site returns (domestic operations), RBI. | | | | | |

| Sr. No. | Amount (in ₹ crore) | | | Y-o-y growth (in per cent) | |
|---|---------------------|---------|---------|----------------------------|---------|
| | 2020-21 | 2021-22 | 2022-23 | 2021-22 | 2022-23 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| A Income (i + ii) | | | | | |
| i. Interest Income | 360 | 459 | 877 | 27.5 | 91.1 |
| ii. Non-Interest Income | 3,562 | 4,802 | 5,644 | 34.8 | 17.5 |
| B Expenditure | | | | | |
| i. Interest Expenses | 100 | 156 | 246 | 56.0 | 57.7 |
| ii. Operating Expenses | 4,585 | 5,216 | 6,168 | 13.8 | 18.3 |
| Provisions and Contingencies of which, Risk Provisions | 36 | 20 | 20 | -44.4 | 0.0 |
| Tax Provisions | 9 | 21 | 3 | 133.3 | -85.7 |
| C Net Interest Income | 261 | 302 | 629 | 15.7 | 108.3 |
| D Profit | | | | | |
| i. Operating Profit (EBPT) | -762 | -111 | 107 | | |
| ii. Net Profit/Loss | -798 | -131 | 87 | | |
| Source: Off-site returns (domestic operations), RBI. | | | | | |

Source: RBI Publication 2023

The combined balance sheet of PBs had a significant expansion, while there was a decrease in growth rate from 45.3% in 2021-22 to 30.1% in 2022-23. Their rate of growth continued to exceed that of SCBs and SFBs. Deposits accounted for 51.9% of the liabilities, leading to a balance sheet development on the liabilities side. The assets side had a decline in investments, which offset the more than 50 per cent gain in balances with RBI and other banks.

In 2022-23, for the first time since their establishment, PBs achieved profitability as the rise in interest revenue surpassed that of interest expenditures. Non-performing assets pose a significant challenge for banks in India. Therefore, a bank's success relies on strategies to handle non-performing assets (NPAs).

The objectives of the papers are as follows:

- To assess the characteristics, scope, and scale of non-performing assets (NPAs) the chosen Payment Bankers hold.
- To analyse the impact of NPAs on the financial performance of the selected Payment Bankers.

Banks' balance sheets in the fiscal year 2022-23 saw robust growth as deposits and loan expansion accelerated. Loans in the retail and services sector primarily drove credit growth. The financial situation of banks has improved due to their more significant net interest margins and earnings. Banks' reduction in slippages and increase in write-offs resulted in enhanced asset quality universally. As deposit rates rise to match lending rates, banks' profitability may decrease but will remain strong. The proportion of unsecured loans in the overall loan portfolio has increased. The Reserve Bank's planned macroprudential policies implemented in November 2023 are intended to maintain long-term financial stability while promoting economic development.

Technology integration in the banking sector has facilitated the development of a more comprehensive and streamlined financial ecosystem. Indian banks are progressively using information technology to improve customer satisfaction and resolve concerns at the last stage of service delivery. Using novel technology has led to a corresponding rise in the potential hazards of cyberattacks, data breaches, and operational breakdowns. In the future, banks must improve their ability to identify and

mitigate technological and cyber security threats to reduce possible weaknesses. Given the changing risks that the banking system encounters, it is crucial to establish resilience by implementing effective governance and robust risk management techniques.

Reviews of Literature

Sardana et al. (2024) found that “the existing literature on non-performing assets (NPAs) in the banking industry, although extensive, lacked coherence. This article aims to examine, combine, and monitor the development of studies on Non-Performing Assets (NPAs) in the banking industry. This research conducts a thorough and inclusive examination of the literature, explicitly emphasising the quantitative aspects using bibliometric analysis and the qualitative elements using a systematic method. Analysed were 1,285 research papers obtained from the Scopus database over 27 years. The paper reveals the underlying principles and present state of research on Non-Performing Assets (NPAs). The results document the development of different topics in the NPA field throughout three stages, and the co-citation analysis reveals the presence of six separate themes that have emerged.

Additionally, it summarises the developing keywords that provide potential for additional exploration and emphasises the areas that need further inquiry. The exclusive dependence on a solitary database for obtaining pertinent papers and the use of predetermined screening criteria may have resulted in the omission of items that may have been appropriate but fell outside the purview of our source. Nevertheless, this work has academic and practical significance for the banking industry. It improves scholars’ comprehension of the subject and provides a comprehensive perspective for banks and policymakers to make better decisions about NPAs. This research is the first to combine a qualitative evaluation with a quantitative method to identify the trends in the NPA literature”.

Gautam (2021) said that “there are around 41 million daily transactions conducted via banking channels, according to a study by FIS worldwide. This statistic demonstrates the significance of banking in an economy. However, in 2014, a majority of 53 per cent of the whole population in India used banking services. In 2013 the RBI introduced a new financial institution, a limited-scale payment bank. This research paper will focus on the Evolution of payment banks in India before or after the demonetisation period. It will also explain the business model used by payment banks in India. Furthermore, the latter section of the study paper focuses on the prospects of payment banks in India.”

Mahajan & Sharma (2017) discovered that “the Reserve Bank of India (RBI) committee, headed by Nachiket Mor, first proposed the idea of a payment bank. The Reserve Bank of India (RBI) has granted preliminary clearance to 11 out of 41 enterprises to expand the range of banking services and promote financial inclusion. This initiative aims to provide basic banking facilities to the low-income class, small-scale businesses, and other unorganised sector organisations. Its main function is to provide remittance, payment, and direct money transfers to banks. NSDL is the only depository among all Depositories and Exchanges with permission from the payment bank. Establishing NSDL as a payment bank creates new opportunities for the depository participants and investors. The bank strives to cater to a diverse variety of devices used by its target client segments, including desktops, laptops, and mobile devices, to access the maximum number of consumers within the segment. The realisation of a comprehensive Three account, including trading, DEMAT, and saving/current bank accounts, which may be initiated via a Depository Participant, will soon become a reality. Investors may fully use the advantages of the settlement process, including access to the same banking channel, the accrual of interest, making purchases and payments to merchants, investing in the Ipsos platform, selling third-party goods like mutual funds via a single window, obtaining loans and insurance, and making peer-to-peer payments. Furthermore, the revenue model will only consist of transaction money derived from bill payments and charges. This change in the capital market will establish a significant milestone for both the depository and capital market.”

According to Mani & Agarwal (2022), “the establishment of the payment banking system in India aims to achieve financial inclusion and encourage digital transactions. After 2 to 3 years after its inception, the model is under criticism on several fronts. Research suggests that payment banks face difficulties achieving success due to intense competition from commercial banks and their fundamental framework. This research aims to analyse the situation of payment banks based on consumers’ perspectives. A comprehensive investigation was conducted using a well-designed questionnaire. The findings indicate that clients appreciate payment institutions’ simplicity, ease, security, and efficiency. Both male and female consumers of young and middle age have an equal affinity for and use of payment banks. These banks are often used for cellphone recharge, ticket booking, bill payments, and similar

purposes. However, they are not used for all banking activities. This research offers a comprehensive understanding of the practical aspects associated with payment banks. Therefore, this information might benefit payment bankers and regulators' future decision-making processes."

Kokila & Krishnan (2019) defined "a payments bank as a specialised financial institution targeting the unbanked and underbanked population. While the Pradhan Mantri Dhan Yojana has reduced the number of individuals without bank accounts, millions remain unbanked. According to a study by the World Bank, the Republic of India has a population of twenty-one people who do not have access to banking services. Payment banks aim to cater to this clientele, including migratory workers and those from lower-income families, while integrating them into the official financial system. Furthermore, it also offers the added benefit of safe, technology-driven transactions that can be easily monitored without any possibility for illicit funds."

Mwalo (2004) said that "technology advancements have fundamentally transformed how customers may make payments for products and services, as well as access financial services, by altering the traditional notions of how, where, and when these transactions occur. Many individuals worldwide depend on various payment cards to cover university fees, medical expenses, and grocery expenditures. We are now shifting from using physical forms of currency such as cash and checks to electronic means of payment such as credit/debit cards, electronic checks, and online/offline electronic wallets."

Shrey et al. (2018) examined "the potential of payment banks in India, a recent effort implemented by the Reserve Bank of India and the Government of India. The exclusion of the banking sector in rural India is a significant obstacle confronting the Indian economy. Payment banks are being established to cater to the needs of low-income people and small enterprises, primarily emphasising handling large numbers of low-value transactions. This research paper examines the feasibility of payment banks and analyses the potential possibilities and problems associated with this novel endeavour. This paper aims to assess public opinions of payment banks and develop conclusions based on qualitative and quantitative data."

The objective of Yüksel S. (2017) was "to identify the factors that contribute to the credit risk of banks in developing nations during an economic crisis. The analysis of Turkey's banking industry was attempted under this framework. This research investigated 23 deposit banks in Turkey. In addition, a probit model was used to analyse yearly data from 24 Turkish deposit institutions from 2004 to 2014. Data about the subject were obtained from the Banks Association of Turkey, OECD, and World Bank. The non-performing loans ratio was used as the dependent variable for credit risk. Conversely, the model used nine explanatory variables to establish the factors contributing to non-performing loans. Consequently, it was concluded that the decline in the industrial output index is the primary factor contributing to the rise in non-performing loans in Turkey."

Hernando, I. and Villanueva, E. (2014) used data from "the balance sheets of Spanish banks from 1995 to 2009, which was then linked to credit information at both the bank-industry and bank-firm level. Through this analysis, they determined the average effect of present and expected alterations in banks' capital on their lending to companies. We examine the impact of credit supply determinants by analysing the changes in capital growth linked to the historical exposure of banks to real estate development and how this exposure interacts with changes in home values in the provinces where the banks are located. To ensure the quality of borrowers, we include geographical and industry-fixed factors in our analysis. An increase of 1% in capital growth leads to a slight rise in business lending to non-real estate businesses, ranging between 0.7% and 0.8%. However, this magnitude is quite small compared to what has been documented in the existing research. The limited impact of credit supply issues may be attributed to the lack of demand for loans in a severe economic downturn".

According to Guo M. (2016), while "facing challenging worldwide and local economic conditions and many problems, the financial sector in China's special economic zones achieved significant progress in 2013. Additionally, several new features emerged in the business. In 2014, it was imperative to capitalise on fresh prospects and implement innovative strategies to address emerging obstacles to advance the development of the financial sector in the special economic zones, which had been initiated in 2013."

Tan Y. (2016) said, "China initiated the policy of reform and opening up to the international community at the onset of the 3rd Plenary Session of the 11th Central Committee of the Communist Party of China. The Chinese banking sector has initiated many changes with the specific goals of enhancing performance, fostering competition, and ensuring stability within the business. This chapter

will sequentially examine the several rounds of banking reforms in China. Additionally, it will provide an overview of the five major commercial banks and the 12 joint-stock commercial banks in China. In addition to large-scale commercial and joint-stock commercial banks, this book will examine municipal commercial banks in China. In China, the three dominant kinds of banking ownership are large-scale commercial banks, joint-stock commercial banks, and municipal commercial banks. This chapter will also discuss more banking institutions and non-financial organisations in China. Ultimately, this chapter will provide a definitive conclusion”.

Research Methodology

The research technique for this study includes the following aspects:

- **Data Source:** The data for the present study article was gathered from secondary sources, including RBI publications, to confirm the data’s legitimacy. To achieve this objective, data was collected from 10 payment bankers.
- **Sample type:** The sample comprises ten financial organisations, and data was collected from 2019 to 2023.
- **Universe of Study:** The present analysis encompasses all banks operating in India, including payment bankers, in its universe.
- **Data Analysis Tools:** The research included statistical tools and procedures such as correlation analysis and multiple regressions.

Data Analysis

This study aims to identify the factors determining Payment Bankers’ profitability. A hypothesis was formulated:

H₀: The select attributes in Payment Bankers do not impact the banks’ profitability.

A multivariate regression analysis was conducted using SPSS-19 software to determine the significant factors that affect profitability. The findings of this study are shown in Table 2 below:

Table 2: Multiple Regressions of the Impact of NPA on the Profitability of Payment Bankers

| A-Descriptive Statistics | | | | | |
|--------------------------|----------|----------------|----|--|--|
| | Mean | Std. Deviation | N | | |
| Net_profit | 2119.924 | 4599.51826 | 10 | | |
| EPS | 49.38 | 32.38508 | 10 | | |
| GNPA | 518197.8 | 285731.0207 | 10 | | |
| NNPA | 297141.4 | 164250.5529 | 10 | | |

| B-Correlations | | | | | |
|---------------------|------------|------------|-------|-------|-------|
| | | Net_profit | EPS | GNPA | NNPA |
| Pearson Correlation | Net_profit | 1.000 | 0.707 | 0.889 | 0.868 |
| | EPS | 0.707 | 1.01 | 0.397 | 0.408 |
| | GNPA | 0.889 | 0.397 | 1.01 | 0.998 |
| | NNPA | 0.868 | 0.408 | 0.998 | 1.01 |
| Sig. (1-tailed) | Net_profit | | 0.023 | 0.01 | 0.011 |
| | EPS | 0.023 | | 0.145 | 0.137 |
| | GNPA | 0.01 | 0.145 | | 0.01 |
| | NNPA | 0.011 | 0.137 | 0.01 | |
| N | | 10 | 10 | 10 | 10 |

| D-Model Summary | | | | | | | | | |
|-----------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 2 | .960 ^b | .922 | .900 | 1450.44942 | .150 | 13.527 | 1 | 7 | .008 |

a. Pre.: (Con.), GNPA
b. Pre.: (Con.), GNPA, EPS

| E-ANOVA | | | | | | |
|---------|------------|-------------|-----|-------------|--------|-------------------|
| Model | | SS | df | MS | F | Sig. |
| 2 | Regression | 1.853 | 2.1 | 87629879.04 | 41.753 | .000 ^b |
| | Residual | 14726624.67 | 7.1 | 2103803.609 | | |
| | Total | 2 | 9.1 | | | |

a. Pre.: (Con.), GNPA
b. DV: Net_profit

| F- Coefficients | | | | | | | | | | | |
|-----------------|--------|-------------------|----------|-----------------|--------|------|---------|------|------|-------|-------|
| Model | | Understand. Coef. | | St. Coeff. Beta | t | Sig. | r | | | Coll. | |
| | | B | SE | | | | o-order | Par | Part | Tol | VIF |
| 1 | (Con.) | -5216 | 1585.10 | | -3.29 | .011 | | | | | |
| | GNPA | .014 | .003 | .879 | 5.215 | .001 | .879 | .879 | .879 | 1.000 | 1.000 |
| 2 | (Con.) | -6496 | 1048.950 | | -6.193 | .000 | | | | | |
| | GNPA | .012 | .002 | .717 | 6.282 | .000 | .879 | .922 | .661 | .850 | 1.176 |
| | EPS | 70.410 | 19.144 | .420 | 3.678 | .008 | .697 | .812 | .387 | .850 | 1.176 |

a. DV: Net_profit

| G-EV ^c | | | | | | | | |
|-------------------|------|--------------------|--------|-------|---------------------|-------------------------|--------|-------------------|
| Model | | Beta In | t | Sig. | Partial Correlation | Collinearity Statistics | | |
| | | | | | | Tolerance | VIF | Minimum Tolerance |
| 1 | EPS | .410 ^a | 3.878 | 0.208 | 1.012 | 1.05 | 1.376 | 1.05 |
| | NNPA | -.436 ^a | -0.196 | 0.904 | 0.052 | 0.224 | 41.954 | 0.224 |
| 2 | NNPA | -.724 ^b | -0.905 | 0.512 | -0.211 | 0.224 | 42.48 | 0.224 |

a. Pred.: (Con.), GNPA
b. Predict.: (Con.) GNPA, EPS
c. DV: Net_profit

The ultimate Regression model, including two independent variables (GNPA and EPS), effectively accounts for about 90% of the variation in the accounting disclosure of Sustainable items. Furthermore, the estimate's standard errors have been decreased to 1450.45. Consequently, at a 95% confidence level, the margin of error for any projected Profitability number may be computed as ± 2842.88 (1.96 multiplied by 1450.45). Both regression coefficients, as well as the limitations, are statistically significant at the 0.05 level. The presence of multicollinearity between the two variables has a considerable influence. All of them have a tolerance value below 0.85, which suggests that the other variables in the equation explain more than 15% of the variation. The ANOVA analysis utilises the F Ratio to determine the statistical test for the model's overall fit. The sum of squares (1.900) is the squared error that would occur if the profitability mean were used to forecast the dependent variable. Using the values of GNPA and EPS, these errors can be minimised. The decrease is considered statistically significant, as shown by the F ratio 41.653 and a significance level of 0.000b. Based on the data mentioned above, it can be inferred that the profitability of Payment Bankers in India is primarily influenced by two factors, namely GNPA (Gross Non-Performing Assets) and EPS (Earnings Per Share).

Conclusion

The RBI considers digital financial services to be crucial in achieving financial inclusion. The goal is to do this while prioritising a smooth payment process, maintaining financial security, and minimising privacy issues. However, in a densely populated world where payment aggregators, payment gateways, and fintechs strive to increase transaction volumes to maintain relevance, payment banks have a competitive advantage due to their ownership of client accounts. Most PBs are primarily concerned with acquiring and retaining customers at this point in their company development. After almost seven years of existence, several payment banks have become profitable. Although there are still uncertainties over their business strategy, they have used creative approaches to attract and keep clients. Using PBS as a model has always been uncertain and continues to be so. The players will reconsider whether they should continue conducting business with a banking license, which entails higher costs and more compliance requirements. Alternatively, they may align with fintech companies who, besides raising CASA, can offer the same services with greater flexibility and agility, considering the evolving business models and regulations. This research found that the profitability of payment bankers in India is mainly determined by gross non-performing assets (GNPA) and earnings per share (EPS).

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