International Research Journal of Multidisciplinary Scope (IRJMS), 2025; 6(3):16-26

Original Article | ISSN (O): 2582-631X DOI: 10.47857/irjms.2025.v06i03.05725

To Analyse the Non-Performing Assets and Their Influence on Profitability: A Critical Study on Canara Bank

Chandra Kishore Yadav*, KB Asthana

Maharishi Law School, Maharishi University of Information Technology, Lucknow, Uttar Pradesh, India. *Corresponding Author's Email: ckishoreji@gmail.com

Abstract

Non-performing assets (NPAs) are loans for which debtors have failed to pay the principal and interest for a specified period. An increase in the number of assets classified as non-performing may result in a decline in the profitability of financial institutions and banks. Therefore, the objective of this research is to evaluate the impact of NPAs on the profitability of Canara Bank, which has a moderate to high level of NPAs. For this, we predominantly obtained data from primary sources, including Canara Bank's annual reports, RBI publications, SEBI filings, NPA trends, future prognoses, and strategic plans from Canara Bank investors. We have opted for a mixed-method, i.e., a quantitative and qualitative approach for fulfilling the objectives, where we collected data from academic databases, business news portals, journals, and finance research reports. In this investigation, we implemented quantitative and qualitative analysis methodologies, including trend and ratio analyses of net profits and NPAs. We also conducted regression and correlation tests to assess the relationship between profitability and NPAs and the effect of NPAs on profitability. The findings suggest that NPAs have a significant adverse effect on profitability and negatively impact the performance of banks. Elevated NPA levels influence the net income and return ratios of banks due to increased provisioning and decreased interest revenue. This research clearly shows that NPAs significantly negatively impact Canara Bank's profitability.

Keywords: Banking Sector, Canara Bank, Net NPA, NPA Ratio, NPAs, Profitability.

Introduction

Banks, essential to the economy, serve as middlemen between depositors and borrowers under the government's and the RBI's supervision to safeguard depositors and uphold confidence. Banking operations are crucial to national economies, as banks are intermediary financial organisations between surplus and deficit entities. Asset management involves selecting the optimal investment mix for the available financial resources, which are deployed in various ways to minimise risks and maximise profits (1).

Importance of Profitability and Asset Management

Asset management involves acquiring and allocating capital to yield a profit margin. It is referred to as "margin management" in finance. Allocation refers to dispersing a bank's available cash across various uses and investments to balance liquidity and profitability. The bank distributes resources among money, securities, loans, and additional assets (2). The bank finance section is responsible for asset management to optimise returns. Thus, they designate the necessary financial resources according to their investments in various assets and economic redistribution (3), and it was established due to asset investment. The researcher posits that banking asset management pertains to the oversight that dictates the configuration of a bank's asset portfolio. Asset management is crucial in the banking sector for maintaining liquidity and profitability while achieving a balanced equilibrium (4). Asset management is essential because it is responsible for selecting the most appropriate investments from the bank's sources of funds to achieve the maximum potential return. This procedure entails reducing hazards and maintaining bank profitability. As a result, the bank made an effort to invest and diversify assets conventionally while preserving its total assets in exchange for safeguarding deposits from liquidity risk (5).

Importance of Profitability of the Bank

Profits are crucial for augmenting capital to

(Received 18th April 2025; Accepted 18th June 2025; Published 20th July 2025)

facilitate bank expansion through lending and investment activities by reinvesting earnings to accomplish this objective. From a microeconomic perspective, profit constitutes the project's objective, as the rational producer consistently endeavours to optimise the profit function or mitigate losses along with it reflects the allocation of national revenue among various production factors, their equity, and the per capita income level (6). The administration seeks to ascertain the profitability of diverse investment sectors to allocate funds to the most lucrative regions and understand the expenses associated with banking services (7).

NPAs and Rationale of Bank Selection

NPAs are loans or advances that have failed to produce interest or principal repayments for a designated duration, typically over 90 days. The increasing occurrence of NPAs presents considerable issues for financial institutions, as they can negatively impact profitability, liquidity, and general stability. Modern banking in India commenced in the early 20th century, experiencing considerable expansion following independence, marked by establishing the State Bank of India and the nationalisation of major banks. This growth has enhanced the presence of banks in India, notably Canara Bank, which has considerable exposure to various high-risk sectors, including infrastructure, agriculture, and MSMEs, rendering it an exemplary subject for analysing asset quality and profitability. Interest can only be counted when received, making NPAs a significant concern because they reduce bank profits and require more management work; therefore, it is crucial to turn NPAs into investments (8). The prevalence of NPAs is a significant factor influencing the financial stability and growth of the banking system, particularly for Canara Bank. The moderate to high degree of NPAs at Canara Bank is a substantial difficulty for the institution (9).

The increasing incidence of NPAs in India has compelled regulatory bodies, including the Reserve Bank of India (RBI), to enact policies designed to manage and diminish these non-performing assets. Regulatory bodies have implemented initiatives such as the Insolvency and Bankruptcy Code (IBC), Debt Recovery Tribunals (DRTs), and asset reconstruction businesses to optimise recovery. However, even with these efforts, NPAs still create a significant problem, particularly for public sector banks that often lend to riskier areas of the economy, like agriculture and small to medium-sized companies (SMEs) (10). Canara Bank, one of India's major public sector banks, is an exemplary case study for analysing the circumstances leading to the accumulation of NPAs, the patterns seen over time, and the impact of these NPAs on the bank's profitability (11).

Canara Bank and its NPA Trends

Established in 1906, the Bengaluru-headquartered Canara Bank is one of India's top public-sector banks. With approximately 9,800 domestic branches and nearly 9,700 automated teller machines distributed nationwide, the bank provides a complete range of banking and financial products. The bank diversifies its portfolio across corporate banking, retail banking, and foreign operations to cater to a wide range of customers (12).

Over the past few years, Canara Bank has consistently reported improving asset quality. Such improvements have been reflected in steep reductions in gross non-performing assets (GNPA) and net non-performing assets (NNPA) (13).

- Gross NPA Ratio: As of 31 December 2024, the GNPA ratio stood at 3.34%, much lower than 4.39% as of December 2023 (14).
- Net NPA Ratio: The NNPA ratio declined to 0.89% as of December 2024 from 1.32% as of December last year (15).
- Provision Coverage Ratio (PCR): The bank's PCR increased to 90.89% as of September 2024 from 89.22% as of June 2024, indicating a greater cushion against likely loan losses (16).

This research aims assessing the impacts of NPAs on profitability of Canara Bank. Along with this aim, this research also follows to assess the relationships in between NPAs and Profitability in Canara Bank.

For this research, we studied the literature on banking profitability, performance, NPAs, and asset management, as described earlier.

NPAs and Asset Management

In a research where analysis of agricultural loans' non-performing assets was discussed that banks' treatment of non-performing holdings before and after agrarian loan approval did not significantly differ. Political parties' debt waiver policies are blamed for the deliberate default by borrowers and the rise of non-performing assets in banks

(17). In another research, where the researchers used a regression model to find that repaying agricultural loans hurt agricultural productivity for the year, poor crop export value, and the rural population. Farm-loan waivers cannot solve this problem (18).

NPAs are proper signals for financial institutions and commercial banks by comparing and categorising the loan assets of private sector banks (PrSBs) and public sector banks (PSBs) as discussed by the researchers. Moreover, research demonstrates that private-sector banks have a reduced prevalence of non-performing assets (NPAs) relative to public-sector banks (19). The researchers also investigated the implications of non-performing assets and identified a correlation between public and private sector banks. This assessment recognises and assumes private banks have significantly improved their performance on nonperforming assets (20).

The positive causal link between advancements and economic growth real interest rates, net interest margins, real exchange rates, and interbank loans were examined by researchers. This study finds that the declining rate of NPA is associated with the stability of macroeconomic indicators and economic growth. The increasing rate of non-performing assets can be attributed to adverse macroeconomic factors, diminished interest rate margins, and elevated capital costs (21). The high levels of non-performing assets (NPAs) were pointed out which are caused by several issues, such as people intentionally not paying back loans, a slow and busy court system, slow progress in industry and the economy, competition from multinational companies against local businesses, problems within the financial system, drops in the capital market, and insufficient help from banks to borrowers (22).

Banking Profitability and NPAs: With Canara Bank

The researchers investigated the bank-specific, industry-specific, and macroeconomic determinants affecting bank profitability. The research revealed no substantial association between concentration and bank profitability, indicating a lack of validation for the Greek banking sector's structure-conduct-performance (SCP) paradigm. The business cycle has a robust and positive correlation with bank profitability; however, this association is only apparent during the peak phase of the cycle. Various profitability aspects of non-performing assets (NPAs) are analysed (23). The researchers also found that non-performing assets hurt the return on assets for Indian commercial banks by using a random effects model that includes economic factors like inflation and GDP growth rates (24).

The profitability of select public and private banks in India from 2010 to 2018 were examined, that reveals that non-performing assets (NPA) adversely affected the earnings of public sector banks while benefiting those of private sector banks (25).

Seven specific public sector banks from 2007 to 2016 and demonstrates that, except SBI and PNB were examined, all banks exhibit a negative relationship between gross non-performing assets (NPA) and net profitability (26). Around 46 Indian banks over eight years (2007 to 2014) were examined to see how different financial factors, like operating ability, liquidity, and profitability, affect NPAs. They discovered a substantial negative correlation between NPAs, return on assets, and the intermediation cost ratio (27).

The economic reform and the effects of NPAs on banking sector operations were examined in research where we observed that the NPAs have impacted profitability and come with various dangers. The capital-to-risk-weighted-assets ratio, credit risk management, and procedures for reducing NPA threats are also crucial for public-sector banks (28).

NPAs were shown as a significant problem for financial institutions, especially public sector banks (PSBs) in India. This study investigates the causes of the increase in NPAs and their financial effects on liquidity and profitability. The results clarify the necessity for better regulatory actions and strong credit risk management (29).

The relationship between Non-Performing Assets (NPAs) and bank profitability has been a central concern in Indian banking literature. Studies have consistently shown that rising NPAs lead to reduced interest income increased provisioning requirements and deteriorating financial performance (30). For public sector banks such as Canara Bank, the burden is particularly heavy due to legacy loans, directed lending mandates, and policy-induced exposures. According to the Reserve Bank of India (31), gross NPAs in the public sector banking space peaked in 2017–18,

with Canara Bank reporting over ₹47,000 crore in NPAs, which adversely impacted its Return on Assets (ROA) and Net Interest Margin (NIM).

The introduction of the Insolvency and Bankruptcy Code (IBC) in 2016 (32) was a landmark policy aimed at strengthening recovery processes and improving asset quality. While IBC has led to some high-profile recoveries across the sector, its effect on Canara Bank's profitability remains under-analyzed. The Researchers argued that IBC significantly reduced the resolution time compared to pre-IBC mechanisms like DRTs and SARFAESI, yet banks often recover less than 40% of the claim amount, thereby limiting profitability gains (33). Canara Bank's Annual Reports from 2017 to 2022 reveal that while IBC-linked recoveries have contributed to reducing NPAs, delayed legal proceedings and promoter challenges under Section 29A of the IBC continue to affect resolution timelines (34).

Furthermore, in a research it was emphasized tha the role of political influence and recapitalization policies in shaping the NPA landscape. They argue that in the absence of stringent corporate governance, even post-IBC frameworks may not yield consistent profitability improvements. For Canara Bank, which merged with Syndicate Bank in 2020, the challenge of integrating stressed loan portfolios has compounded the impact of NPAs on financial health. Therefore, while the IBC and other reforms have provided a partial cushion, they have not fully neutralized the drag of NPAs on Canara Bank's profitability (35).

Methodology

This study uses quantitative and qualitative approaches. For this, research mainly depends on primary sources and, to a minor degree, on secondary sources of data collections as described below.

Data Collection and Analysis Strategies

Primary Data: This research uses Canara Bank's annual reports **(2020-2024)**, RBI publications, Securities and Exchange Board of India (SEBI) filings, NPA trends, future outlooks, and strategic plans of Canara Bank investors as its primary data.

Secondary Data: The secondary data for this research were obtained from journals, academic databases, business news portals, and banking research reports.

Data Analysis Strategies

This research used mixed-method approach combining quantitative and qualitative analysis techniques, including trend and ratio analyses of NPA and NPA ratios and net profits. We used trend analysis, correlation and regression analysis, and diagnostic statistical testing to look at the secondary data we got from Canara Bank's annual reports. We also used qualitative interpretation of financial ratios to back up our findings. We also tested correlation, regression and diagnostic tests to assess the relationship between NPA and profitability and the impact of NPA on profitability. We used qualitative information from management remarks in annual reports and market research to improve and explain the statistical data.

Results

Analysis of Secondary Sources

We gathered data from Canara Bank's website regarding NPAs over the past five years, utilising annual reports that emphasise Gross and Net NPA figures along with their corresponding percentages, as well as NPAs and their coverage ratios, as depicted in Tables 1 and 2, respectively, employing the trend analysis methodology.

Table 1: Gross and Net NPA of Canara Bank (Annual Report of Canara Bank)

Fiscal Year	Gross NPA (₹ Cr)	Gross NPA (%)	Net NPA (₹ Cr)	Net NPA (%)
FY 2020	60,288	8.93%	24,442	3.82%
FY 2021	55,652	7.51%	18,668	2.65%
FY 2022	46,160	5.35%	14,349	1.73%
FY 2023	40,605	4.23%	11,823	1.27%
FY 2024	Not yet reported	3.25%*	Not yet reported	0.80%*

The Table 1 shows a ratio analysis of Canara Bank's NPAs during the past five financial years. This study indicates that banks' asset quality has been consistently improving. Including 8.93% of its total advances, the bank revealed in fiscal year 2020 a Gross NPAs value of Rs 60,288 crore. Equivalent to 3.82%, Net NPAs came to Rs 24,424 crore during the same period. Over the coming years, each of

these ratios will show a slow decline. While the net NPA dropped to Rs 18,668 (2.65%), the gross NPAs had fallen to Rs 55,652 crore (7.51%). By the end of fiscal year 2021, the situation had significantly improved. With Gross NPAs dropping to Rs 46,160 crore (5.35%) and Rs 40,605 crore (4.23%), this declining trend persisted in the fiscal years 2022 and 2023. Conversely, net NPAs dropped to 14,349 crores (1.73%) and Rs 11,823 crores (1.27%). The projected percentages show that there will be more progress, even though the absolute numbers for NPAs for fiscal year 2024 have not yet been formally issued. Gross NPA is projected to be roughly 3.25 per cent, and net NPA is approximately 0.80 per cent. Asset quality improved as banks strengthened their credit monitoring and recovery systems. These advances are reflected in these developments. Taken as a whole, the information shows that Canara Bank has been regularly trying to improve its financial situation and lower the level of stressed assets it owns. Canara Bank has shown in Table 2 the provision coverage ratio for the NPAs.

Table 2: NPA Coverage Ratio of Canara Bank

Financial Year	Gross NPA (%)	Net NPA (%)	Provision Coverage Ratio (%)	Reference (Annual Report)
2023–24	3.34% (as of Dec 2024)	0.89% (as of Dec 2024)	90.89% (as of Sep 2024)	2023–24 Report
2022–23	5.35%	1.73%	86.32%	2022–23 Report
2021–22	7.51%	2.65%	84.91%	2021–22 Report
2020–21	8.93%	3.82%	81.18%	2020–21 Report

The Table 2 given above thoroughly analyses the NPAs of Canara Bank compiled over the past four fiscal years. The values listed above are essential, including Provision Coverage Ratio (PCR), Gross NPA, and Net NPA, which are underlined in the table. Analysing the funds the bank has set aside to counter expected losses from NPAs, the PCR measures this factor. Based on the data, the quality of banks' assets steadily and strikingly improved during this period. The gross NPA ratio, which measures the total value of defaulted loans before provisioning, has been continuously decreasing since fiscal year 2020–21. In December 2024, the net nonperforming asset ratio was 3.34%. Considered as clauses against problematic loans, the net NPA have reduced from 3.82% to 0.89% over the same period. This drop in net non-performing assets reminds us of past remarks regarding bank performance.

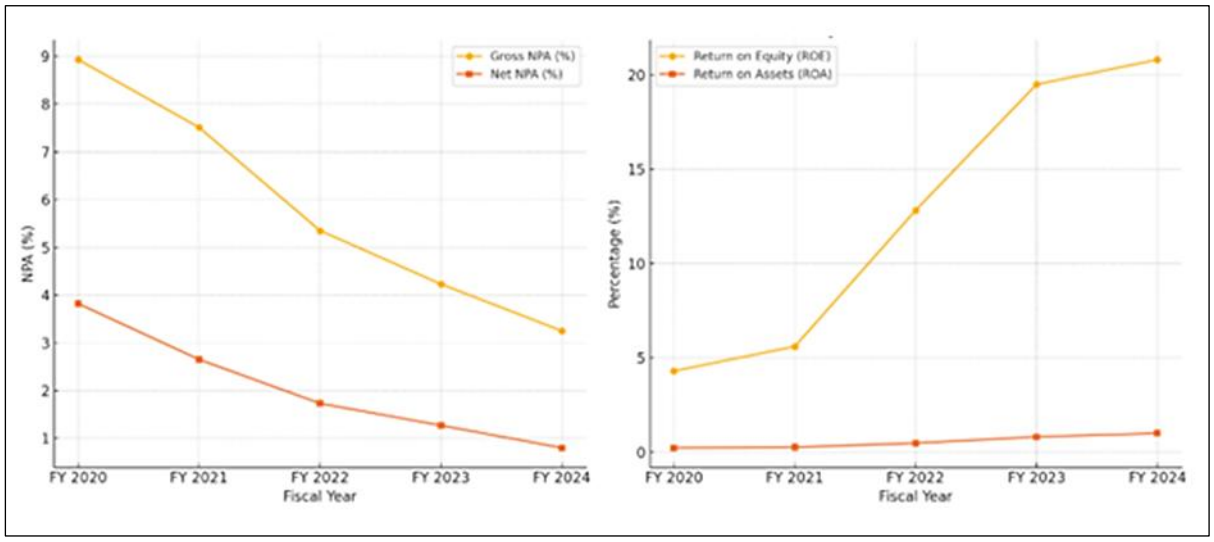
The bank cleared certain bad loans and strengthened itself against the financial difficulties. Applying 81.18% in the fiscal year 2020–21 to 90.89% by September 2024, the equally crucial indicator, the PCR, has shown a notable rise. This indicated a significant change. A higher PCR suggests the extent to which a bank provides for potential future losses. This approach helps banks absorb financial shocks and maintain compliance with the regulatory criteria. The PCR represents the provisioning ratio. Given these developments, the Canara Bank seems to have proceeded aggressively to improve its credit assessment procedures, fortify recovery strategies, and reduce its exposure to high-risk sectors. The declining trend in NPAs and the increasing proportion of PCR are indicators of banks' financial stability and health improvement. This ability enables banks to rank well among Indian banks. Regarding PCR, we can review the figures from profitability ratio studies published by the Canara Bank in Table 3.

Table 3: Profitability Overview of Canara Bank

Fiscal Year	Net Interest Income (₹ Cr)	Operating Profit (₹ Cr)	Net Profit (₹ Cr)	Return on Assets (RoA)	Return on Equity (RoE)
FY 2020	21,433	17,206	3,269	0.23%	4.30%
FY 2021	24,403	19,019	4,301	0.26%	5.60%
FY 2022	26,384	23,089	5,678	0.48%	12.82%
FY 2023	31,435	27,716	10,604	0.81%	19.49%
FY 2024	36,566	29,413	14,554	1.00%	20.80%

The return on equity (RoE) assessment evaluates a bank's profitability about shareholder equity as shown in table 3 given above. Conversely, the return on assets (RoA) metric evaluates a bank's profit margin from its asset efficiency. Based on data, the Canara Bank has shown a strong and consistent financial performance over the five fiscal years—from FY2020 to FY2024—a strong and consistent financial performance. From Rs 21,433 in fiscal year 2020 to Rs 36,566 in fiscal year 2024, a bank's Net Interest Income (NII) has steadily risen. This increase is a noteworthy sign of the basic income a bank creates from its lending activities. Over time, this increase has been observed. This change is due to higher interest earnings and better loan book quality.

The sharp increase in operating profits in the same period reflects better cost control and operational efficiency. In particular, the bank's net profit rose from Rs 3,269 crore in the fiscal year 2020 to Rs 14,554 crore in the fiscal year 2024—a surge of more than four times. Apart from this notable rise in profitability, the ROA and RoE rose from 0.23% and 4.30%, respectively, in FY2020 to 1.00% and 20.80% in FY2024. This increase matches the profitability increase. When comparing these numbers to those from the previous year, one finds a notable increase. These tests indicate higher profitability and better shareholder returns, suggesting that the company's earnings increased. The findings indicated that Canara Bank has successfully implemented its recovery strategy. This approach is defined by increasing income generation, better cost control, and greater use of assets and equity. The following table presents a synopsis of the relationship between profitability and NPAs. We derived this overview from previously investigated tables.



(A) (B)

Figure 1: A) NPA Trends, B) Profitability Trends

From fiscal year 2020 to fiscal year 2024, Canara Bank's Gross and Net Non-Performing Asset ratios have steadily gone down. This means that the quality of the bank's assets has improved and its recovery operations have gotten stronger in Figure 1 (A & B). The Return on Equity (ROE) and the Return on Assets (ROA) have both been a lot better over the same time period. This shows that the company is more efficient and shareholders are getting more value.

Table 4: Correlation between NPAs and Profitability

Variable 1	Variable 2	Correlation Coefficient (r)	Strength and Direction	Significance (p-value)
NPA Ratio	ROA	-0.65	Strong Negative	0.002
NPA Ratio	ROE	-0.60	Moderate Negative	0.005
NPA Ratio	Net Profit Margin	-0.58	Moderate Negative	0.007

Correlation and Regression Analysis between NPAs and Profitability

The correlation and regression analyses are presented in the table below to examine how NPA relate to profitability (usually measured by ROA, ROE, or net profit margin).

The analysis in Table 4 shows that NPA have a strong negative relationship with ROA (r = -0.65, p = 0.002), a moderate negative relationship with ROE (r = -0.60, p = 0.005), and a moderate negative relationship with net profit margin (r = -0.58, p = 0.007). These results indicate that rising NPAs levels are associated with decreased profitability. Changes in the monetary policy, inflation rates, GDP growth, unemployment rates, and pandemic-related problems may have had a big effect on the quality and profitability of the assets. No matter how a bank decides whether or not a borrower is creditworthy, the number of loans that go into default may go up during global crises like COVID-19 or economic downturns. If you don't pay attention to these things, one can oversimplify the cause-and-effect relationship and think that NPAs are the only thing that affects profitability. The relationship is more complicated and affected by other economic factors.

The regression analysis model as shown in Table 5 using ROA as the outcome and the NPA ratio as the predictor shows that the model accounts for approximately 42% of the differences in ROA (R^2 = 0.4225) and is statistically significant (F = 21.33, p = 0.002).

Table 5: Regression Analysis (Model Summary)

Dependent Variable	Independent Variable	R-squared	Adjusted R-squared	F-statistic	p-value (F)
ROA	NPA Ratio	0.4225	0.4031	21.33	0.002

Table 6: Coefficient of Regression

Predictor	Coefficient (β)	Std. Error	t-value	p-value	Interpretation
Constant	0.083	0.012	6.92	0.000	Intercept
NPA Ratio	-0.045	0.010	-4.62	0.002	Negative impact on ROA

Table 7: Diagnostic Tests Conducted

Test	Statistic	p-value
Breusch-Pagan (Heteroscedasticity)	0.4652	0.4952
Shapiro-Wilk (Normality of residuals)	0.8156	0.1079
Durbin-Watson (Autocorrelation)	1.5472	N/A

The regression analysis further supported this relationship as elaborated in Table 6. A linear regression model that uses ROA as the result and the NPA ratio as the factor shows that it explains about 42% of the differences in ROA (R^2 = 0.4225), and the model is statistically significant (F = 21.33, p = 0.002).

Diagnostic Tests of the Variables

We did diagnostic tests, we collected data from the sources and disclosed in the Table 7.

The diagnostic test shows that the regression model is strong. The Breusch-Pagan test for heteroscedasticity gave a p-value of 0.4952, which is higher than 0.05. This means that the residuals have constant variance (i.e., there is no heteroscedasticity). The Shapiro-Wilk test gave a p-value of 0.1079, which means that the residuals are about normally distributed, which means that the normality assumption is met.

Table 8: Diagnostic Tests Results and Interpretation

Diagnostic Test	Result	Interpretation
Multicollinearity	Not applicable (single predictor)	No issue
Heteroscedasticity	Likely absent	Visual/assumed based on residuals
Normality of Residuals	Likely normal	Model assumptions met
Autocorrelation	Not critical in this context	Annual data with few points
Linearity	Clear negative trend	Supported by regression output

Lastly, the Durbin-Watson statistic of 1.5472 is close to the ideal value of 2, which means that the residuals do not have a lot of autocorrelation. In general, the diagnostic checks show that the regression assumptions are mostly correct as disclosed in Table 8 given above.

The model only has one independent variable, the NPA Ratio; therefore, multicollinearity isn't a problem here. There is no heteroscedasticity, which means that the residuals do not have a constant variance, as shown by the residual plots and the results of the Breusch-Pagan test. The test results led to this conclusion. This means that the errors' variance stays the same over the complete range of fitted values. The Shapiro-Wilk test was used to make sure that the residuals were normal. The test results indicate that the residuals are distributed in a way that is close to normal. This evidence shows that the model fits one of the main requirements for linear regression.

In this case, autocorrelation isn't critical because there are just five data points per year. The Durbin-Watson value, which is about 1.55, also shows that there is a moderate amount of autocorrelation. In conclusion, both the scatter plot and the regression output support the idea of linearity, which means that there is a straight line between the independent and dependent variables. The NPA Ratio's negative coefficient shows that it has a negative linear relationship with ROA. The diagnostic results show that the model does a good job of figuring out how non-performing assets (NPAs) affect bank earnings as a whole.

Discussion

Canara Bank's performance over the previous five fiscal years shows a notable asset quality and profitability increase. This improvement is illustrated by declining NPAs and increasing profitability measures such as ROE and ROA. These results indicated a negative link between asset quality and profitability in the banking sector, consistent with the results of several previous studies.

Improvement in Asset Quality

The net non-performance ratio fell from 3.82% to the expected 0.80%, and the gross non-performance ratio of the Canara Bank fell from 8.93% to 3.25% between 2020 and 2024. This dramatic and sustained decline is evidence that the bank's work to recover and improve the assessment of loans is paying off, as highlighted in a research that stressed the need for prudent credit risk management and monitoring of loans after advancement to lower NPAs in Indian banks, thereby complementing these trends (36). In addition, the bank's PCR increased significantly from 81.18% in fiscal year 2020–21 to 90.89% in fiscal year 2023–24. Higher provisioning buffers indicate better financial and regulatory compliance. A higher PCR value is also a sign of these traits. A high PCR indicates good risk management and buffers banks during periods of financial crisis. This assertion has been observed to be consistent with the results (37).

Profitability Enhancement

Simultaneously, Canara Bank's net profit increased from ₹3,269 crore to ₹14,554 crore. The ROE increased from 4.30% to 20.80%, and the ROA increased from 0.23% to 1.00%. The quality of the bank's loan portfolio has improved, provisioning standards have declined, and operational efficiency has contributed to some of this increase in profitability. The reductions in NPAs were observed typically in a research that led to higher profitability measures, are among the evidence supporting the results of this research. This is because profits rise when credit losses decrease. The consistent upward trend in Canara Bank's profitability measures corroborates this finding: the bank successfully implemented its recovery plan (38).

Correlation and Regression Insights

Further evidence that higher levels of non-performing assets are detrimental to profitability is found in the negative correlations found in this study: ROA: r = -0.65, ROE: r = -0.60, and Net Profit Margin: r = -0.58. Regression analysis also showed that variations in NPA levels may account for approximately 42% of the variation in ROA change. In addition, the beta coefficient for the theory is high and negative (-0.045). This result is in line observed in a research that finds a strong negative correlation between the profitability of Indian PSBs and NPAs (39). From these findings, one can view how high bad loans constrain income generation and operational viability. These results also complement in the results that concluded, especially those related to the public sector, asset quality directly and in terms of quantities affect the performance of Indian banks (40).

NPAs and Canara Bank

The steady drop in Gross NPA (from 8.93% in FY2020 to 3.25% in FY2024 projected) and Net NPA (from 3.82% to 0.80%) suggests that loan appraisal systems and post-sanction monitoring have gotten better. Canara Bank probably put in place better internal controls, used data analytics to look for early warning signs, and reviewed loans based on risk. The careful monitoring of credit risk after a loan is approved greatly lowers the number of slippages, which fits with the trend of NPAs going down (30). The steady rise in the Provision Coverage Ratio (PCR) from 81.18% to 90.89% and the drop in NPAs at the same time show that bad loans are being actively resolved and paid for. Higher PCRs not only protect against losses but also show that a bank is willing to clean up its balance sheet. This goes along with the improvement that was seen (41). Under the PSB consolidation plan, Canara Bank and Syndicate Bank merged in 2020. This may have led to operational synergies, better resource mobilization, and a single recovery mechanism. This merger made it easier to rationalize the portfolio, which cut down on overlapping exposures and made the loan book work better. The RBI's Asset Quality Review (AQR) in the past, even though it first showed hidden NPAs, made banks make honest provisions. Canara Bank's push for digital banking helped with customer due diligence, automated credit scoring for the retail and MSME sectors, and ensured compliance through analytics-based NPA tracking. Similar results were observed that said about how technology-led financial governance is important for reducing operational and credit risk (38).

There is a statistically significant negative relationship between NPAs and profitability (ROA: r = -0.65; ROE: r = -0.60). Regression analysis shows that about 42% of the ROA variation can be explained by changes in the NPA ratio. This is probably why bank leaders wanted to get rid of bad assets and make operations more efficient to get better financial returns. The same were observed when NPAs go down, PSBs make more money. Canara Bank's ROA went from 0.23% to 1.00% and its ROE went from 4.30% to 20.80%, which shows that this is true (39, 40).

Conclusion

Based on a rigorous study of its financial records, Canara Bank has consistently and improved its asset quality and profitability over the previous five fiscal years. Trend studies on gross and net NPAs indicated that stressed assets are significantly decreasing. The net NPAs fell from 3.82% to an anticipated 0.80% over the same period, while GDP fell from 8.9% in FY 2020 to 3.25% in FY 2024. Complementing this new development, the PCR increased from 81.18% to 90.89%. This increase shows how well a bank can welcome the risk of loan losses. As a result, the profitability of the bank has also substantially improved. From fiscal year 2020 to fiscal year 2024, the net profit, operational profit, and interest income soared; the net profit increased by more than four times. In addition, the net profit has grown somewhat conspicuously. Increased use of assets and improved returns for shareholders resulting from the company's higher valuation point to clear changes in RoA and RoE.

The empirical results of the correlation and regression analyses validated the noted tendencies. Profitability rises when asset quality improves because non-performing asset ratios have a strong negative link with profitability indices, including return on assets and equity. Their relationship created this. Because changes in the NPA ratio can roughly account for over 42 per cent of the variance in the RoA, the results of the regression study offer more proof that there is a true association. The negative character of the regression coefficient indicates that an increase in NPAs significantly influences profitability. Indices of outstanding financial control and credit risk management abound at Canara Bank: declining NPAs, increasing the PCR, and improving profitability indicators. According to statistical studies, NPAs have lower profitability and highlight the need to maintain asset quality to achieve ongoing financial success.

Recommendations

Based on the conclusion, we explored the factors affect NPAs and profitability of Canara Bank along with we provided number of ways to improve relationships in between these two factors. Furthermore, we can suggest below policy recommendations to enhance banking experience and resolving NPAs issues as pointed below:

- Improve the company's credit risks, assign risk ratings to borrowers, and monitor the situation after disbursing of the funds.
- Utilize advanced analytics and AI-driven prediction techniques to identify underperforming assets before they become apparent.
- Actively use SARFAESI, Lok Adalats, and One-Time Settlements (OTS).
- Add macroeconomic stress tests to the evaluations of agricultural loans.
- Utilize predictive analytics to identify changes in borrower behavior that may indicate they are experiencing significant stress.
- Structured programs should be used in place to teach borrowers about the effects of late payments, protracted defaults, and the law.
- The Provisioning Coverage Ratio (PCR) has gotten better, but it's important to keep strong capital adequacy ratios.

Abbreviations

NII: Net Interest Income, NPAs: Non-Performing Assets, PCR: Provision Coverage Ratio, PSBs: Public Sector Banks, ROA: Return on Assets, ROE: Return on Equity, RBI: Reserve Bank of India, SEBI: Securities and Exchange Board of India.

Acknowledgement

The author would like to thank Maharishi University of Information Technology for providing access to research resources and Canara Bank for making financial data publicly available. Also, the author thanks to Dr. (Prof.) K. B. Asthana for his valuable support and assistance throughout this research.

Author Contributions

Chandra Kishore Yadav: Written Original Draft. Dr. (Prof.) K. B. Asthana: Supervise in whole research especially guidance in methodology and data analysis section.

Conflict of Interest

The authors declare that there is no conflict of interest for the publication of this paper.

Ethics Approval

Not Applicable.

Funding

The funding agency is not involved in this research.

References

1. Al-Sadi ASMS, Al-Mamouri AMT. The impact of asset management on achieving bank profitability (Applied study within Al-Khaleej commercial bank). Period Eng Nat Sci (PEN). 2022;10(5):5.
2. Ramadhani FH, Lestari YO. The effect of working capital management on profitability with liquidity as a moderating variable. AP. 2024;10(1):17-34. doi:10.26905/ap.v10i1.12811.
3. Lee CF. Introduction to investment analysis, portfolio management, and financial derivatives. In: Handbook of Investment Analysis, Portfolio Management, and Financial Derivatives. Singapore: World Scientific; 2024:1–68.
4. Menike MGPD. The impact of portfolio diversification on the profitability of licensed commercial banks in Sri Lanka. J Accountancy Finance. 2024;11(1):120-41. doi:10.57075/jaf1112407
5. Adejoh MO. Commercial bank credit to Micro, Small, and Medium Enterprises (MSMEs) and economic growth in Nigeria. J Econ Allied Res. 2021;6(4):24–34.
6. Sholeha I. The influence of capital structure, profit growth, profitability and company size on the quality of earnings. Scientia. 2023;2(1):53-62. doi:10.51773/sssh.v2i1.133
7. Maulana B, Anggriani R, Alpiansah R. A Third-Party Funds, Capital Adequacy, Bi Rate On The Profitability Of Digital Bank Indonesia. International Student Conference on Business, Education, Economics, Accounting, and Management (ISC-BEAM). 2024;2(1):254-72. doi:10.21009/isc-beam.012.19
8. Sahithi K, Yadav DMV. A study on impact of non-performing assets on profitability. Int J Sci Res Eng Manag. 2024;8(7):1–9.
9. A comprehensive study on non-performing assets of Canara Bank. Int Res J Mod Eng Technol Sci. 2024. http://dx.doi.org/10.56726/irjmets61784
10. Dubey B, Chaudhary A. An analytical study on non-performing assets (NPAs) in Canara Bank: causes, trends, and impact on profitability. Eur Econ Lett. 2025;15(1):3376–81.
11. Mohan R, Ray P. The roller coaster ride of non-performing assets in Indian banking. CSEP; 2022. https://csep.org/wp-content/uploads/2022/02/22-Rollercoaster-of-Indian-NPAs-PR-RM.pdf
12. Canara Bank. CRISIL SIGN Report. 2025. https://canarabank.com/UploadedFiles/Pdf/CRISILSIGN_270225.pdf
13. Canara Bank. Results for the quarter ended. Livemint. https://www.livemint.com/market/market-stats/canara-bank-q4-results-s0003040
14. Canara Bank Q3 results for FY25: Profit rises 12.25% to Rs 4,104 cr, NII down 3%. Business Standard. Available from: https://www.business-standard.com/companies/results/canara-bank-q3-fy25-results-profit-non-performing-assets-net-income-125012700619_1.html.
15. Moneycontrol. Canara Bank quarterly results. Mumbai: Moneycontrol. https://www.moneycontrol.com/financials/canarabank/results/quarterly-results/CB06

16. Canara Bank. Financial Results. Canara Bank. https://canarabank.com/financial-result
17. Hawaldar IT, Spulkar C, Lokesh A, Birau R, Robegen C. Analysing non-performing assets in agricultural loans: a case study in India. 2020;2020:42–53.
18. Jethwani B, Dave D, Ali T, Pramselkar S, Ahhiran S. Indian agriculture GDP and non-performing assets: a regression model. IOP Conf Ser Mater Sci Eng. 2020;989:012008.
19. Arora N, Ostwal N. Unearthing the epidemic of non-performing assets: a study of public and private sector banks. Manag Insights. 2014;10(1):47–52.
20. Rayudu TS, Rajesh P. A study on non-performing assets in selected public and private sector banks in India. Int J Sci Res Rev. 2018;7(2):360–8.
21. Fifack H. Non-performing loans in Sub-Saharan Africa: causal analysis and macro-economic implications. World Bank Policy Res Work Pap. 2005;(3769):1-36.
22. .Bidani SN. Managing non-performing assets in banks. New Delhi: Vision Books Pvt Ltd; 2002. p. 171-86.
23. Athanasoglou PP, Brissimis SN, Delis MD. Bank-specific, industry-specific and macroeconomic determinants of bank profitability. J Int Financ Mark Inst Money. 2008;18(2):121–36.
24. Das SK, Uppal K. NPAs and profitability in Indian banks: an empirical analysis. Future Bus J. 2021;7(1):53.
25. Amazonaws.com. IJMER. 2020. http://ijmer.s3.amazonaws.com/pdf/volume9/volume9-issue5(5)-2020.pdf#page=54
26. Dudhe C. Impact of non-performing assets on profitability of banks – a select study. 2017; 26(1):307-314.
27. Bawa JK, Goyal V, Mitra SK, Basu S. An analysis of NPAs of Indian banks: using a comprehensive framework of 31 financial ratios. IIMB Manag Rev. 2019;31(1):51–62.
28. Are non-performing assets gloomy or greedy from Indian perspective? AENSI. 2008. http://www.aensiweb.net/AENSIWEB/rjss/rjss/2008/4-12.pdf
29. Shreyas P, Baskaran DS. Comparative analysis of non-performing assets between Canara and public sector banks in India. Int J Adv Res Sci Commun Technol. 2024:274–8. http://dx.doi.org/10.48175/ijarsct-19755
30. Rajaraman I. NPAs and public sector banks: fiscal and regulatory challenges. Econ Polit Wkly. 2018;53(12):23–7.
31. Reserve Bank of India (RBI). Financial Stability Report: January 2023. https://www.rbi.org.in
32. Bandyopadhyay S. Non-performing assets and profitability of Indian banks: an empirical study. J Bank Finance India. 2020;5(2):33–46.
33. Gupta R, Bansal P. IBC effectiveness in NPA resolution: a study on Indian public sector banks. Int J Law Econ. 2021;4(1):12–25.
34. Insolvency and Bankruptcy Board of India (IBBI). Quarterly Newsletter Jan–Mar 2020. https://ibbi.gov.in
35. Joshi D, Raman A. Corporate governance and NPA recovery in Indian banking. Policy Perspect. 2023;9(3):44–60.
36. Ranjan R, Dhal SC. Non-performing loans and terms of credit of public sector banks in India: an empirical assessment. Reserve Bank of India Occasional Papers. 2003;24(3):81-121.
37. Agarwala V, Agarwala N. A critical review of non-performing assets in the Indian banking industry. Rajagiri Management Journal. 2019;13(2):12-23. doi:10.1108/RAMJ-08-2019-0010.
38. Das SK, Uppal K. NPAs and profitability in Indian banks: an empirical analysis. Future Bus J. 2021;7(1):1-15.
39. Das A, Ghosh S. Determinants of credit risk in Indian state-owned banks: an empirical investigation. Econ Issues. 2007;12(2):27-46.
40. Kaur H, Saddy NK. A comparative study of non-performing assets of public and private sector banks. Int J Res Commer Manag. 2011;2(9):82-9.
41. Mohanty B. Provisioning coverage ratio and financial stability in Indian banks. J Bank Finance. 2019;6(2):45–58.