

EFFECT OF DEPOSITS AND NON-PERFORMING LOANS ON BANK PROFITABILITY – A CASE STUDY ON CONVENTIONAL COOPERATIVE BANK OF BARODA REGION

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ABSTRACT

The banking sector plays a vital role in providing essential financial services, facilitating the allocation of funds to productive ventures, and aiding in the implementation of government fiscal and monetary policies. Historically, Non-Performing Assets (NPAs) have posed significant challenges for banks, but reducing NPAs has now become a top priority. The strength of a nation's economy relies heavily on the health of its cooperative banking sector. This study analyzes the non-performing assets (NPAs) of The Pragati Co-operative Bank Ltd. over a six-year period from 2017-18 to 2022-23. The research examines various aspects related to NPAs, including gross NPAs, net NPAs, provisions made towards NPAs, loans and advances, deposits, and relevant ratios such as net NPA ratio, provision coverage ratio, and credit-to-deposit ratio. The data analysis reveals that the bank maintained a zero net NPA throughout the period, indicating effective provisioning strategies. While gross NPAs fluctuated, the provision coverage ratio remained strong, suggesting the bank's ability to withstand asset quality pressures. The study also investigates the relationship between gross NPAs and net profits using correlation and regression analysis, finding a positive correlation but minimal significant impact of gross NPAs on profitability. Overall, the research highlights The Pragati Co-operative Bank Ltd.'s proactive approach to NPA management, financial stability, and adaptability to changing market conditions.

Keywords: Non-Performing Loans, Pragati Co-operative Bank Ltd., Net NPA Ratio, Provision Coverage Ratio, Credit to Deposit Ratio,

INTRODUCTION

Banks lend money to borrowers as advances, expecting future payments for principal and interest. Banks are exposed to a variety of risks during this process, including credit risk from non-performing loans and advances as well as borrower defaults. Loans made to consumers are shown as assets on banks' balance sheets. The largest risk to the banks arises when loan customers stop making their payments, which lowers the value of the loan assets. Non-Performing Loans are an unavoidable burden for the banking sector, and they have a substantial negative effect on banks' ability to maintain their financial stability. Therefore, maintaining control and administration over Non-Performing Loans is crucial. Non-Performing Loans create a danger to banks' productivity since they force them to make provisions to cover the expense of supporting these unpaid assets.

Meaning of Non-Performing Loans

An asset that generates no revenue for the bank is stated to as a non-performing asset. The loans that banks make to their clients are displayed as assets on their balance sheet. The bank faces its greatest risk when loan borrowers default on their payments, which impacts the value of the loan assets. When bank assets are not fixed for a period of time, they are categorized as non-performing. Most loans provide borrowers a grace period; if the grace period is over by ninety days, the loan is considered non-performing.

Financial institutions use this classification to identify loans that are at danger of defaulting. The loan is deemed a nonperforming asset once the borrower fails 90 days of interest or principal payments.

Types of Non-Performing Loans

1. **Gross Non-Performing Loans:** Gross Non-Performing Asset imitates the excellence of the loans approved by the banks. It includes all non-standard assets, including loss, doubtful, and sub-standard assets.

Gross Non-Performing Loans Ratio = Gross Non-Performing Loans/Gross Advances.

2. **Net Non-Performing Loans:** Net Non-Performing Loans are the Non-Performing Loans from which the bank has deducted the provision. The real challenge posed by banks is demonstrated by Net NonPerforming Assets. A significant number of Non-Performing Loans are included on Indian banks' balance sheets, and there is a significant amount of time dedicated to loan recovery and write-off procedures. In accordance with the Central Bank's standards, several provisions are required in regards to Non-Performing Loans.

Net Non-Performing Loans = Gross NPAs – Provisions/Gross Advances – Provisions.

Types of Non Performing loans (NPA)

Depending on how long an asset is in the non-performing asset (NPA) category, it can be of several forms.

Sub Standard Assets

These loans are Non-Performing Loans (NPAs) since they are past due by more than a year, have a higher risk, and the borrower has poor creditworthiness. Due to the possibility of nonpayment, banks create a haircut for such nonperforming assets.

Doubtful Debts

These are Non-Performing Loans, overdue for more than 18 months, banks having a danger of recovery, and are known as doubtful debts. Such NPA affects bank creditworthiness as more of them could put the bank at risk.

Loss Assets

It is the last classification of NPA as under these, the loan amount is classified as non-recoverable by the bank itself. Therefore, the bank can either write off the outstanding amount or make provision for the full amount, which will be written off in the future.

Effect of Non-Performing Loans(NPA) on the operations of the banks

1. **Profitability:** Non-Performing Loans with money in bad debts incurred as a result of choosing the wrong clients. The money gets stuck, which lowers the profitability of banks. Another effect of the reduction in productivity is low ROI (Return on Investment), which has an impact on the bank's current profitability.

2. **Liquidity:** The corporation is forced to borrow money for a brief period of time at additional expenditure because the available funds are limited and decreased profits lead to a lack of cash on hand.

3. **Management Involvement:** The bank has to absorb the additional secondary cost of management time and effort due to Non-Performing Loans (NPAs). Instead of focusing on other good projects that could have yielded positive outcomes, management's time and resources would have been better utilized on managing NPA.

4. **Credit Loss:** The bank's goodwill is being negatively impacted by an issue with Non-Performing Loans (NPA), which also affects market credit and causes their market share to consequently decline.

LITERATURE REVIEW

Dr. Lalitha B.S. and Ms. Shravya (2023): They utilized the Altman Z score model to foresee bankruptcy and examined data from 2019-2023 regarding Bangalore City Co-Operative Bank's risk management. 2020 showed financial strain, but 2019 and 2023 saw improvement. Their findings stress the crucial impact of proficient credit risk management on Non-Performing Loans (NPLs), vital for the bank's financial stability and growth.

Raman Matharu¹, Parkash Chandel² (2022): Their survey-based research identified lack of qualified staff, political interference, and poor borrower assessment as key factors in Non-Performing Loans (NPLs) for cooperative banks. Recommendations include tighter controls, better governance, and less political intervention to reduce NPAs.

V. Kalpana and U. Padmavathi (2020): Using a descriptive approach, they studied NPAs in Indian public and private banks, highlighting the importance of efficient NPA management for bank profitability and asset quality. The study compared gross and net NPAs between sectors, emphasizing NPA management's role in banking health.

J.K. Das and Surojit Dey (2018): Their study from 2005-2017 analyzed NPAs' impact on public and private banks, the relationship between NPAs and GDP, and the effect of corporate debt restructuring. They conclude that NPAs significantly affect banking health, with improvements in public sector NPA management despite challenges.

Ujjwal M. Mishra and Jayant R. Pawaskar (2017): This study focused on NPAs in Indian banking, emphasizing management challenges, recovery mechanisms, and impacts on public vs. private banks. They underscore the importance of robust legal and recovery frameworks to address the risks NPAs pose to the banking sector and the economy.

Payel Roy and Dr. Pradip Kumar Samant (2017): Their analytical study looked at Gross and Net Non-Performing Loans' influence on net profit in Public Sector Banks (PSBs). They found notable variations in NPAs among nationalized banks, highlighting the link between effective NPA management and better PSB profits.

K. Prasanth Kiran and T. Mary Jones (2016): This research defines NPAs' impact on banking efficiency, attributing causes to lending practices and environmental risks. They highlight the RBI's criteria for NPAs and the strain they pose on banking profitability, especially in the public sector.

Samir and Deepa Kamra (2013): Their report on NPAs in the Indian banking industry stresses the need for legal and credit management improvements. Despite efforts, NPAs remain significant, requiring modifications to collect past due amounts and reduce future credit risks.

Bhatati Gupta (2012): The study compared SBI & Associates' management of NPAs to other Public Sector Banks. They found NPAs significantly impact banks' sustainability and profitability, emphasizing the need for stricter corrective measures and improved risk management.

Pacha Malyadri, S. Sirisha (2011): Using data from 2004-2010, this study analyzed NPAs in Indian banks, focusing on weaker sections. They found public banks reach disadvantaged populations effectively, suggesting innovative strategies to boost profitability while fulfilling social objectives and reducing NPAs.

Ms. Richa Banerjee, Mr. Deepak Verma, Prof. (Dr.) Bimal Jaiswal (2011): Their decade-long trend analysis showed improved recovery management reducing NPA ratios in both private and public banks. They emphasized the role of prudential norms and regulatory initiatives in enhanced NPA management, focusing on credit risk and financial stability.

PROBLEM STATEMENT

Monetary support is given by banking institutions to businesses that contribute to the nation's development. The bank's advances, loans, and Non-Performing Loans currently do not provide the anticipated returns. The rate at which Non-Performing Loans are increasing is causing banks' profits to equal those assets.

Therefore, it is necessary to investigate the reason behind these Non-Performing Loans, and banking institutions and the government are taking reasonable measures to reduce them.

NEED FOR THE STUDY

To investigate the enactment of a bank Non-Performing Asset is a significant constraint as it results in diminishing boundaries and developed provisioning necessities for doubtful debts. The banking sector is impacted by Non-Performing Asset. It disturbs many aspects such as profitability and liquidity, in addition to it posing risks on quality of asset and endurance of banks. The intention of the research is to evaluate the Non-Performing Loans of The Pragati Sahakari Bank and its influence on effectiveness and to see the link amongst total advances, Net Profits, Gross and Net NPA. The facts have been premeditated by using coefficient and correlation and tables. The

significant point to be renowned is that the deterioration of Nonperforming Asset is crucial to progress productivity of banks.

Therefore, the proposed research will be an attempt to examine the effectiveness of Non-Performing Loans recovery measures.

OBJECTIVES OF THE STUDY

1. To analyze the effect of Deposits and Non non-performing loans on the profitability of the Bank.
2. To study the correlation between Gross Non-Performing Loans and the profits of the Bank
3. To evaluate the Deposits, loans and Advances, Gross NPA, and Net NPA of Pragati Cooperative Bank Ltd from 2017 to 2023.
4. To analyze the year-on-year growth on the various ratios of Non-Performing Loans.

SCOPE OF THE STUDY

The research was carried out in Pragati Sahakari Bank Ltd. Head office situated in Vadodara. The research was undertaken to have a comprehensive examination of the NPA of banks and also to know how NPA can be impact financial position of banks. The bank's 6 years annual report is verified for getting the information for the study.

Research Design - descriptive research design

Source of Data - Secondary data sources

Sample Size - Pragati Co-operative Bank Ltd

Time Frame - 2018 to 2023.

Data Analysis Tool

In this study, we have analysis the data with below ratios

1. Net NPA Ratio
2. Provision Coverage Ratio
3. Credit to Deposit Ratio
4. Correlation Analysis
5. Regression Analysis

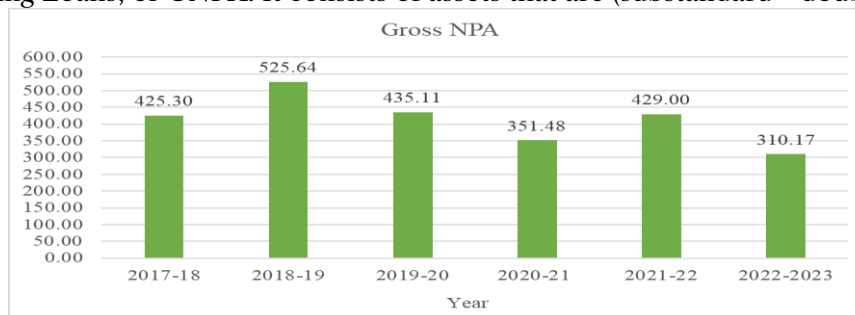
DATA ANALYSIS AND INTERPRETATION

Table 1 - Annual Data of Non Performing loans

(Rs. In Lakhs)

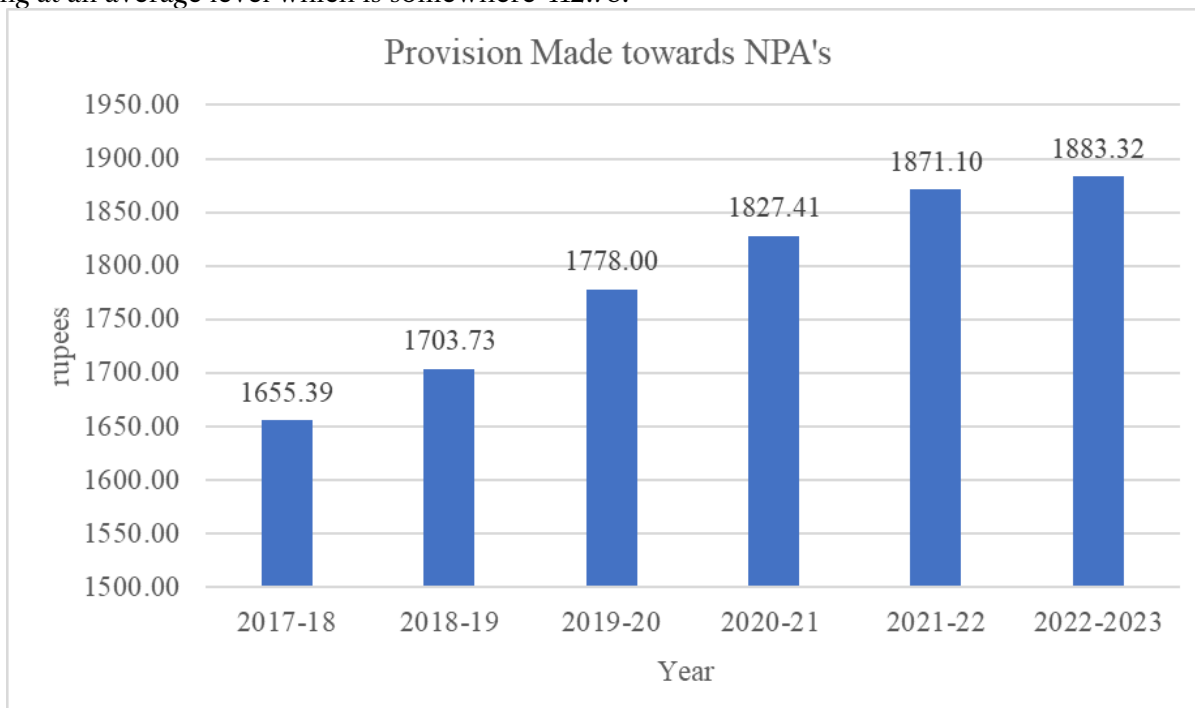
Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross NPA	425.30	525.64	435.11	351.48	429.00	310.17
Net NPA	0.00	0.00	0.00	0.00	0.00	0.00
Provision Made towards NPA's	1655.39	1703.73	1778.00	1827.41	1871.10	1883.32
Loans and Advance	13,200.39	13,730.32	12,198.00	12,987.49	12,472.18	13620.82
Deposits	31,564.61	30,158.68	29,285.79	34,128.25	35,462.91	30951.82

The total amount of loan assets that haven't been returned by borrowers within the allotted ninety days is known as gross Non-Performing Loans, or GNPA. It consists of assets that are (substandard + doubtful + loss).



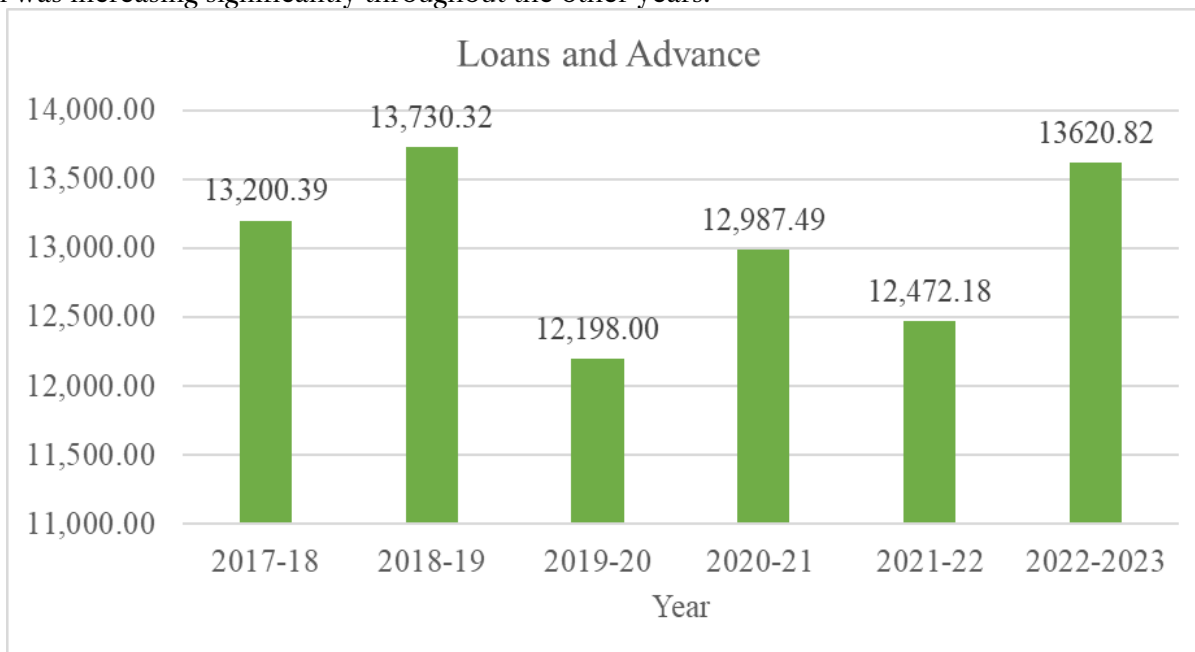
Graph 1 Gross NPA from 2017-18 to 2022-23

The above graph portrays that in the year of 2018-19 the highest Non-Performing Loans were 525.64 where as the lowest were in the year of 2022-23 that is 310.17. Though, in the other years the Non-Performing Loans were performing at an average level which is somewhere 412.78.



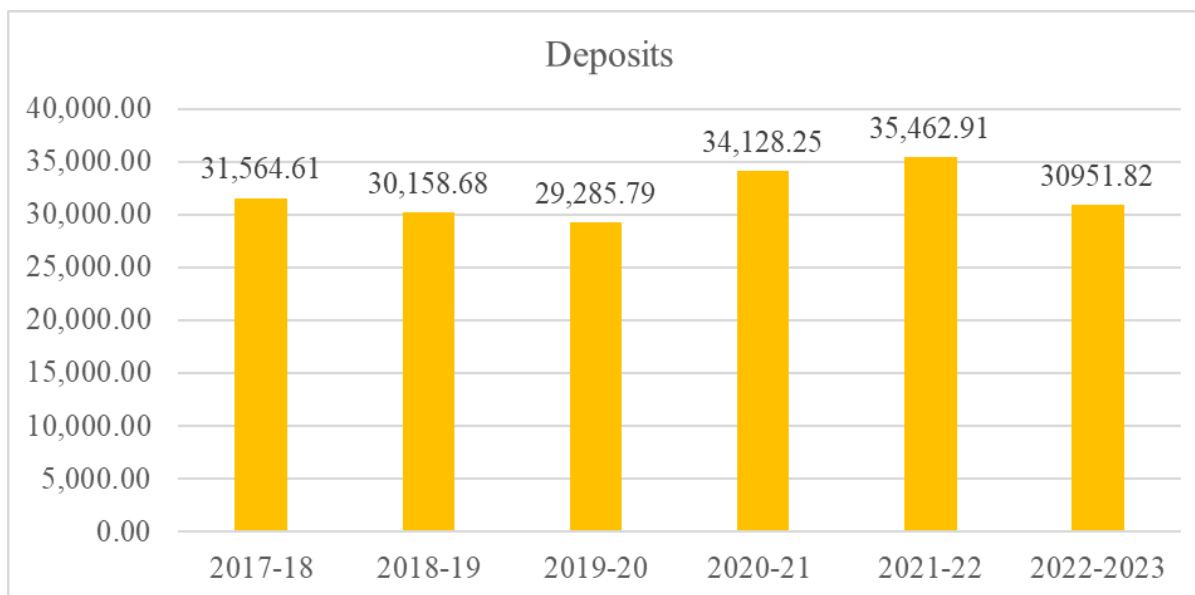
Graph 2 Provision made towards NPA from 2017-18 to 2022-23

The above bar diagram implies that in the year of 2017-18 the provision was at lowest which is 1665.30 lakhs. On contrary, in the year 2022-23 the provision was at it's highest peak which is 1883.32 lakhs. Furthermore, the provision was increasing significantly throughout the other years.



Graph 3 Loans and Advance from 2017-18 to 2022-23

The above chart depicts that the highest number of loans were taken in the year 2018-19 which is 13730.31 lakhs. Whereas, the lowest number of loans were taken in the year 2019-20 which is 12197.99 lakhs. However, in the other years the loans are average.



Graph 4 Deposits from 2017-18 to 2022-23

The leading year for the deposit is 2021-22 as it has 35462.91 lakhs in their bank accounts. On the other hand we have less deposits in the year of 2019-20 which is 29,285.79 lakhs; here the reason could be Covid for not maintaining the deposit. Though, in the other year they maintained the deposit at average of somewhere 30000.00 lakhs.

Net Non-Performing Loans Ratio

The Net NPA to loans ratio indicates the general caliber of the bank's loan book. Non-Performing Loans (NPAs) are assets with past-due interest balances of more than ninety-nine days.

$$\text{Net NPA Ratio} = \frac{\text{Net NPA}}{\text{Total Loan}} \times 100$$

Table 2 Net NPA Ratio from 2017-18 to 2022-23

(Rs. In Lakhs)

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Net NPA	0.00	0.00	0.00	0.00	0.00	0.00
Loans and Advance	13,200.38	13,730.32	12,197.99	12,987.49	12,472.18	13620.82
Net NPA Ratio	0	0	0	0	0	0

The share of Non-Performing Loans to total advances made by The Pragati Co-operative Bank Ltd. is shown in the above table. For every given year, the Net Non-Performing Loans Ratio is 0. Non-Performing Loans Ratio is 0 because bank is having more provision toward NPA than a Gross NPA.

Provision Coverage Ratio

The link between gross Non-Performing Loans and the bank's cumulative provision amounts as of a particular date is crucial for assessing the asset quality of the bank. It is a metric that illustrates the bank's contribution to the riskier segment of its loan portfolio. A high ratio indicates that the bank will likely make relatively few extra provisions in the upcoming years.

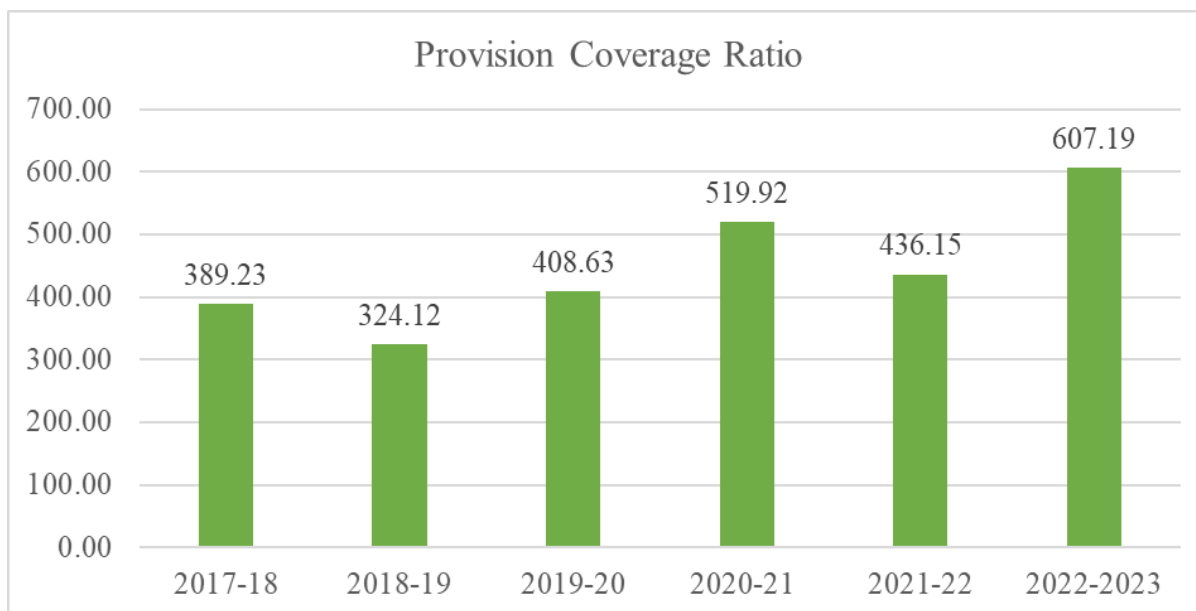
$$\text{Provision Coverage Ratio} = \text{Provisions/Gross NPA} \times 100$$

Table 3 Provision Coverage Ratio from 2017-18 to 2022-23

(Rs. In Lakhs)

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Provision Made	1655.39	1703.73	1778.00	1827.41	1871.10	1883.32

towards NPA's						
Gross NPA	425.30	525.64	435.11	351.48	429.00	310.17
Provision Coverage Ratio	389.23	324.12	408.63	519.92	436.15	607.19



Graph 5 Provision Coverage Ratio from 2017-18 to 2022-23

The provision coverage ratio (PCR) for Pragati Co-Operative Bank Ltd. fluctuated over the years: starting at 389.23% in 2017–18, dropping to 324.12% in 2018–19, then rising to 519.92% in 2020–21, with minor drops in between. By 2022–23, it reached 607.19%. This ratio indicates the bank's ability to cover Non-Performing Loans (NPLs) with its provisions. A higher PCR suggests the bank is well-equipped to manage asset quality strains and may not need significant additional funding during stressful periods.

Credit to Deposit Ratio

The percentage that deposits contribute to the bank's advances is shown by the ratio of credit to deposits. It is the proportion of loan assets that originates from deposits held by the bank.

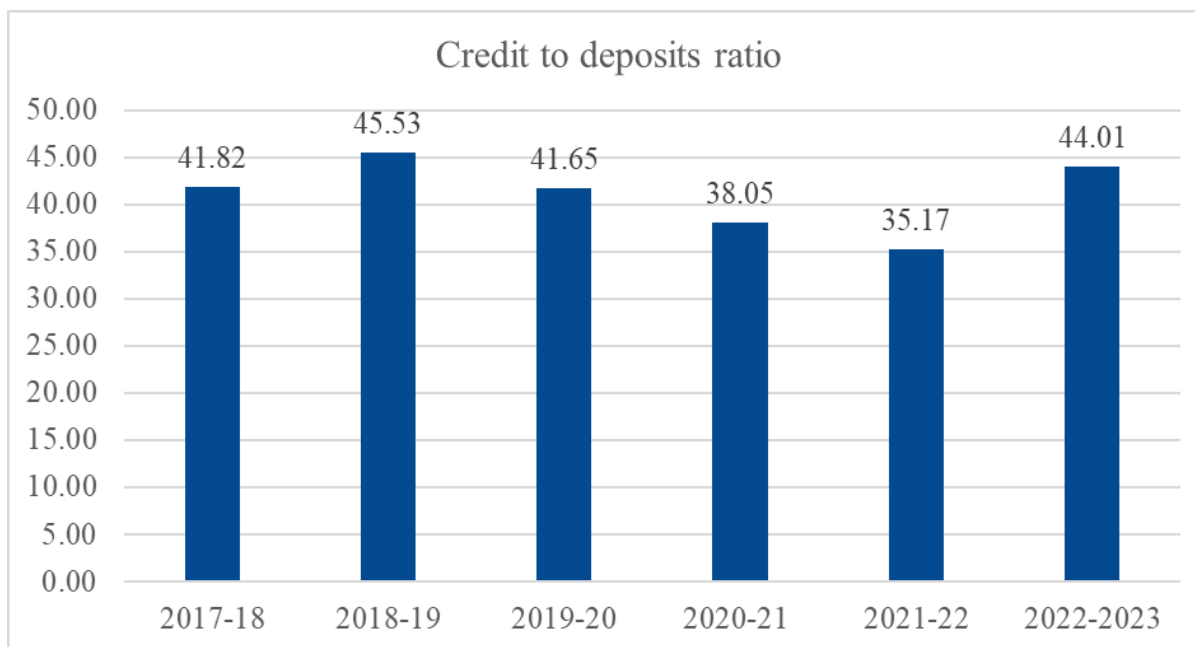
A greater ratio indicates a larger loan asset made from deposits. Term deposits, savings accounts, and current accounts would all be acceptable forms of deposits. The ratio's result indicates how well the bank can utilize the resources at its disposal.

$$\text{Credit Deposit Ratio} = \frac{\text{Loan}}{\text{Deposits}} \times 100$$

Table 4 Credit to Deposit Ratio from 2017-18 to 2022-23

(Rs. In Lakhs)

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Loans and Advance	13,200.39	13,730.32	12,198.00	12,987.49	12,472.18	13620.82
Deposits	31,564.61	30,158.68	29,285.79	34,128.25	35,462.91	30951.82
Credit to deposits ratio	41.82	45.53	41.65	38.05	35.17	44.01

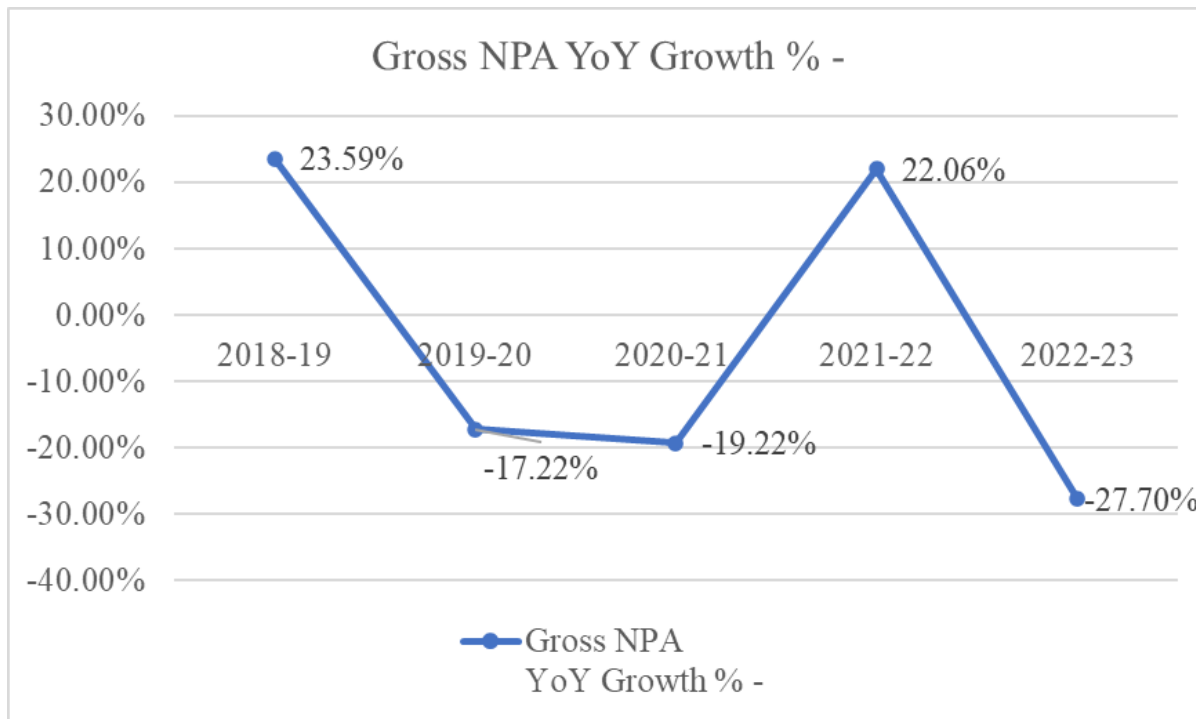


Graph 6 Credit to Deposit Ratio from 2017-18 to 2022-23

From 2018–19 to 2021–2022, the bank's deposits relative to the loans it has given its borrowers have been gradually declining. It was 41.82% in 2017–18, 45.53% in 2018–19, 41.65% in 2019–20, and then reduced by 38.05% and 35.17% in 2020–21 and 2021–22 before increasing to 44.01% in 2022–23 and beyond.

Table 5 Gross NPA YoY Growth % from 2017-18 to 2022-23
(Rs. In Lakhs)

Years	Gross NPA	Net NPA	Gross NPA YoY Growth %
2017-18	425.30	0.00	-
2018-19	525.64	0.00	23.59%
2019-20	435.11	0.00	-17.22%
2020-21	351.48	0.00	-19.22%
2021-22	429.00	0.00	22.06%
2022-23	310.17	0.00	-27.70%



Graph 7 Gross NPA YoY Growth % from 2017-18 to 2022-23

The Gross Non-Performing Loans (NPA) Year-over-Year Growth % for Pragati Co-Operative Bank Ltd. varied significantly: it increased by 23.59% in 2018–19, then dropped by 17.22% in 2019–20 and further by 19.22% in 2020–21, showing improvement. However, in 2021–22, there was a notable increase of 22.06%, but the trend reversed drastically in 2022–23 with a 27.70% decrease. These fluctuations in Gross NPA YoY Growth% reflect changes in asset quality and management effectiveness, impacting the bank's stability and financial health over time.

HYPOTHESIS TESTING

Ho1: There is no association between Gross NPA and Net Profit

Ha1: There is an association between Gross NPA and Net Profit

Table 6 : Correlation coefficient between Gross NPA and Net Profit

(Rs. In Lakhs)

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross NPA	425.30	525.64	435.11	351.48	429.00	310.17
Profit	217.75	322.23	494.59	249.01	156.44	152.86

	Gross NPA	Profit
Gross NPA	1	
Profit	0.451482	1

The association between gross Non-Performing Loans (NPA) and net profit of the bank is somewhat favorable, as indicated by the correlation coefficient (r) of 0.45. Although the association is not very strong, it is also not insignificant. Furthermore, both variables have a propensity to move in the same direction.

Ho2: There is no significant impact of Non-Performing Loans (NPA) on the profitability of the bank.

Ha2: There is a significant impact of Non-Performing Loans (NPA) on the profitability of the bank.

Table 7 : Regression Analysis between Gross NPA and Net Profit

Regression Statistics	
Multiple R	0.451482145
R Square	0.203836127
Adjusted R Square	0.004795159
Standard Error	128.4030503
Observations	6

	Coefficients	Standard Error	t Stat	P-value
Intercept	-55.3965057	321.381882	-0.172369722	0.871516725
Gross NPA	0.777343951	0.768146192	1.01197397	0.368790969

In the regression analysis, the p-value for the coefficient of gross non-profitable assets is roughly 0.369. Given that the p-value above the standard significance level of 0.05, the null hypothesis cannot be rejected. To put it another way, the data does not support the conclusion that Gross NPA significantly affects the bank's profitability.

FINDINGS AND SUGGESTIONS

- The bank's Non-Performing Loans (NPA) stayed at zero from 2017–18 to 2022–2023 in a regular manner. This is encouraging for The Pragati Co-operative Bank Ltd. as it shows that the bank's provisions were adequate to cover its Non-Performing Loans.
- The provision made towards NPA's witnessed a steady increase over the years, from 1655.39 lakhs in 2017-18 to 1883.32 lakhs in 2022-23. This indicates a proactive approach in managing Banks asset quality.
- The total advances approved by the bank experienced fluctuations, with a decrease from 13,200.39 lakhs in 2017-18 to 13,620.82lakhs in 2022-23. This suggests that the bank may have implemented more stringent lending policies or faced subdued demand for loans during certain periods.
- The Gross NPA varied, reaching its highest point at 525.64 lakhs in 2018-19 and its lowest at 310.17lakhs in 2022-23. These variations could be a result of shifting economic conditions or the success of the bank's risk-reduction plans.
- The Provision Coverage Ratio (PCR) fluctuated over the years, ranging from 389.23% in 2017-18 to 607.19% in 2022-23. The highest ratio in 2022-23 at 607.19% suggests the bank's strong capital adequacy to withstand asset quality pressures.
- The Credit Deposit Ratio declined slightly from 41.82% in 2017-18 to 35.17% in 2021-22 and again increased in 2022-23 at 44.01%. This indicates a decrease in the ratio of loans granted compared to the bank's deposits, possibly implying a more conservative lending approach or changes in deposit mobilization strategies.
- Correlation Analysis shows the positive relationship between the Gross NPA and Net Profits of the Banks.
- Based on the Regression Analysis, it is determined that the impact of Gross Non-Performing Loans (NPA) on the Bank's profitability is negligible, amounting to only 20%.

CONCLUSION

In conclusion, the analysis of The Pragati Co-operative Bank Ltd.'s financial data discloses several vital trends and patterns. Firstly, the bank demonstrated commendable performance in managing its Non-Performing Loans (NPA), maintaining a consistent zero NPA ratio throughout the six-year period. This underscores the effectiveness of the

bank's provisioning strategies, which saw a steady increase in provisions towards NPAs over the years. Despite fluctuations in total advances granted, the bank exhibited prudent risk management, possibly implementing more stringent lending policies in response to changing market conditions. The variability in Gross NPA levels indicates the bank's adaptability to economic fluctuations and the efficacy of its risk management measures. Moreover, the fluctuating Provision Coverage Ratio (PCR) reflects the bank's robust capital adequacy, with the highest ratio in 2022-23 indicating ample provisions against troubled assets. However, the slight decline and subsequent increase in the Credit to Deposit Ratio suggest shifts in the bank's lending and deposit mobilization strategies, possibly towards a more conservative approach. Overall, these findings highlight The Pragati Co-operative Bank Ltd.'s proactive stance in managing asset quality, maintaining financial stability, and adapting to changing market dynamics. from the hypothesis testing it can be concluded that there is very minimal or negligible significant impact of Gross NPA on the profitability of the Bank.

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