
A Study on Non-Performing Assets of District Cooperative Central Bank with Special Reference to Coastal Districts in Andhra Pradesh

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Abstract: The cooperative bank is an essential part of the Indian financial system. This bank's main objective is to assist rural areas, particularly those involved in agriculture. The District Central Bank as well as all participating banks in particular, cooperative banks contribute significantly to the expansion of the economy. DCC Banks have direct connection to the rural and agricultural sectors. DCC Banks has a unique place in the cooperative banking industry. They function as an intermediary between state cooperative banks and primary credit cooperative societies. Under the New Economic Policy, DCC Banks' operations and governance undergo a significant change. Even though DCC Banks in Andhra Pradesh have tried to address the financial challenges, non-performing assets continue to be a significant problem for most of these banks. Understanding the current status of non-performing assets (NPAs) and the distinctions between NPAs and profits is the goal of this study. An investigation is carried out to ascertain the effects of the bank's advances and loans on the district's earnings and non-performing assets. Essential features including loans and advances, deposits, and profits are investigated, along with the link between the selected banks. It has been found that non-performing assets (NPAs) and the earnings of a select few banks are negatively correlated. Furthermore, it has been found that GDCCB has the highest number of non-performing assets of any bank, and as such, has advised safeguards.

Keywords: District Co-operative Central Banks, Non-Performing Assets, loans and advances, deposits.

Introduction

A strong financial sector is necessary for a thriving economy. The lending industry is one of the most crucial and important functions that the banking sector plays. It's frequently encouraged since it shifts money out of the system and into productive usage, which further boosts economic growth. A lending organization that takes on credit risk has advantages and disadvantages, just like everything else. The source of credit risk is the borrower's failure to perform as agreed upon either during the transaction or in a later obligation. The collapse of the banking sector could have an impact on other sectors. For Indian banks, one of their top priorities is performing assets. The performance of banks can be inferred from NPAs. The expansion of non-performing assets necessitates prescriptions, which reduces shareholder value and all benefits. The subject of non-performing assets has been widely studied in

financial systems worldwide. Non-performing assets (NPAs) are problematic for the economy as a whole in addition to banks. The high percentage of non-performing assets (NPAs) in Indian banks is indicative of the state of the sector and trade. This project covers the following topics: comprehending the notion of non-performing assets (NPAs), their magnitude and main reasons for an account's initial and final performance, projecting NPAs in banks for the upcoming years, and closing thoughts.

When principle and interest payments are not made by the borrower for 180 days, the asset is categorized as a non-performing asset (NPA). However, as of March 2004, default status will be assigned to the borrower if payments are not made for 90 days. If a bank grants an advance or credit facility to a business and that business becomes non-performing, the bank must treat all of the advances and credit facilities given to that business as non-performing, without considering the possibility that some advances and credit facilities may still be in existence with a performing status. Our banks have far higher non-performing assets (NPAs) than the national average. One cannot deny that the writing-off of bad loans by banks is somewhat to blame for the reduction in non-performing assets (NPAs). Indian banks need to exercise caution while granting loans to customers who demonstrate creditworthiness. In this particular context, the golden rule for lowering NPAs is the adage "prevention is always better than cure." In an effort to advance toward global best practices and guarantee increased transparency, it has been determined to adopt the "90 days" past due policy for non-performing assets (NPAs) starting on March 31, 2004. As per the statement, a non-performing asset (NPA) is defined as a loan or advance as of March 31, 2004. Interest and/or instalment of principal remain overdue for more than 91 days in respect of a term loan,

Need of The Study

The managing an account segment of India comprises open segment banks private segment banks co-operative banks and remote banks. But among these four types, "open segment banks still overwhelm the keeping money industry, with inexact 82% of the showcase share in adding up to store and progresses of the industry. The Open division banks play a vital part in the Indian economy, by contributing straightforwardly to the GDP, mobilizing investment funds, and channelizing ventures. But after overseeing each challenge effectively and by giving standard administrations to the clients, NPA gets to be the greatest of all challenges, and overseeing NPA is one of the hardest assignments for these banks, as the expanding NPA has an unfavorable effect on the bank's benefit. This ponder is an exertion to see into the commitment of the chosen nationalized banks in India individually to the NPA within the industry by looking into its benefit. A tall level of NPAs recommends the tall likelihood of a huge number of credit defaults that influence the benefit and net worth of banks and additionally, dissolves the esteem of the resources.

Scope Of The Study

We have gone through many articles related to NPAs of private and public sector Banks, where they are confined articles on districted co-operative central banks. So, I have chosen to do work on district cp-operative Central Banks of the coastal region in Andhra Pradesh as the banks mainly work for farmers. Where these farmers are mainly dependent on agriculture. I would

like to study how their banks lend money to the farmers and how these farmers pay back the loans.

Literature Review

1. Biswas, D. (2014). Has discussed The paper discusses various risks in the banking sector, including liquidity, interest, market, operational, and management risks, and loan recovery risk. It highlights the importance of reducing and controlling NPA to improve efficiency and profitability, and analyzes the NPA of scheduled commercial banks in India over the past year.
2. Bag, S., & Islam, S. (2017). The study examines the trend of Non-Performing Assets (NPAs) in banking in India and Bangladesh, examining their relationship with profitability. Secondary data from RBI reports and state-owned and private banks from 2010-2016.
3. Divya, N., & Ranjith Kumar, S. (2017). This study examines the relationship between advances and NPAs in Public and Private Sector Banks, using data from 2012 to 2016. The research found a significant correlation between advances and bank growth, with advances negatively impacting NPAs in both sectors. Hypothesis co-relation and sign test were used.
4. Lyngdoh, S. W. (2017). The study examines IDBI's trends in Total advances, net profit, Gross NPA, and Net NPA over the past five years. While Gross and Net NPA have increased, Total Advances and Net Profits have decreased. Mismanagement in reducing NPAs has led to significant net losses.
5. Banerjee, R., Verma, D., & Jaiswal, B. (2018). This article examines the impact of Non-Performing Assets (NPAs) on the asset quality of Indian banks. It highlights the negative impact of NPAs on profitability, net worth, and value. The study examines the status of Gross and Net NPAs in private and public sector banks and their impact on asset quality.
6. Sarkar, S. C., & Karak, D. K. (2018). The study examines NPAs in rural credit structures, particularly BDCCBL, using mathematical and statistical tools. Findings suggest inadequate NPA management, suggesting partial or full reduction measures and improving appraisal, supervision, and follow-up quality to improve BDCCBL's standing.
7. Richa Banerjee, Deepak Verma, and Dr. Bimal Jaiswal (2018) A study on Non-Performing Assets (NPAs) suggests banks improve credit recovery policies, strategy formulation, and provide advances to creditworthy customers. The government should enforce strict provisions for NPA settlement to improve profitability, asset quality, and competitiveness in India's banking industry.
8. Sreedevi, N., & Amose, T (2020). The study examines gross NPAs in Indian commercial and cooperative banks from 2011-2018, forecasting for ten years up to 2028. It reveals higher annual growth rates of non-performing assets, suggesting strategies to recover bad loans.

9. Dodia, B. M. (2020). The study outlines RBI guidelines for NPA recognition, classification, and provisioning, evaluating operational performance of 10 Public and Private Sector Banks using statistical tools and techniques.
10. Lalitha, B. S. (2020). The study examined bank employee perceptions of Non-Performing Assets (NPA) in SBI, ICICI, Axis, and PNB using a structured questionnaire. Variables affecting NPA and recovery suggestions were identified, with findings indicating a lack of experienced staff and quality borrower information.
11. Rani, N., & Uniyal, A. K. (2021). The study examines the impact of private and public sector institutions on the banking industry, revealing higher NPA growth in private sector banks compared to public sector banks. This suggests that private sector banks failed to effectively address problematic loans, leading to extraordinary growth.
12. Kumar, H., & Bansal, A (2022). The study compares the performance of Indian public and private sector banks, focusing on their Non-Performing Assets (NPAs). It finds that public sector banks have higher NPAs than private sector banks. Bank of India has the highest average NPAs in the non-priority sector.

Objectives of The Study

- To Study the Non-Performing Assets of district cooperative central banks of the coastal area in Andhra Pradesh
- To study the relationship between Non-Performing-Assets with the key parameters of selected banks in the coastal region
- To find out the impact of Non-performing-Assets on net profit and return on assets of the selected banks

TABLE :1

%Gross NPA of District Cooperative Central Banks of Coastal Region during the period 2015-16 to 2020-21

Year						
	NDCCB	PDCCB	GDCCB	KDCCB	WDCCB	EDCCB
2015-16	6.97	2.15	2.37	2.9	2.97	4.88
2016-17	5.33	1.6	2.29	2.72	4.57	3.44
2017-18	4.63	3.62	2.78	2.16	6.09	2.18
2018-19	4.52	2.82	2.27	2.72	5.7	2.11
2019-20	5.5	4.22	2.51	3.16	6.59	2.14
2020-21	5.22	2.41	3.57	2.47	5.79	7.37
Mean	5.361	2.803	2.631	2.688	5.285	3.686
SD	0.879	0.969	0.496	0.345	1.315	2.107

Interpretation

The table presents the Gross Non-Performing Assets (NPA) percentages of District Cooperative Central Banks (DCCBs) in the Coastal Region during the period 2015-16 to 2020-21. It includes data for six banks: NDCCB, PDCCB, GDCCB, KDCCB, WDCCB, and EDCCB. The mean and standard deviation (SD) of the Gross NPA percentages for each bank over the six years are also provided. Here's an interpretation of the data:

Overall Trends: The Gross NPA percentages for most banks exhibit fluctuations over the six-year period, with some years showing significant increases or decreases.

Best Performing Banks: GDCCB and KDCCB have the lowest mean NPA percentages and standard deviations, suggesting strong and consistent NPA management.

Most Volatile Banks: EDCCB and WDCCB exhibit higher variability and mean NPA percentages, indicating challenges in managing NPAs effectively.

TABLE NO: 2

Relationship between Profit and NPA of District Central cooperative banks of the coastal region in Andhra Pradesh during the period 2015-16 to 2020-21

(Rs in Crores)

YEAR	NDCCB		PDCCB		GDCCB	
	Profit	NPA	Profit	NPA	Profit	NPA
2015-16	0.27	30.02	6.39	17.07	6.27	19.53
2016-17	0.2	24.96	4.4	15.62	7.03	20.41
2017-18	0.02	26.27	-1.43	38.5	2.01	32.03
2018-19	1.09	31.83	0.27	30.9	7.01	34.79
2019-20	0.42	40.17	0.03	48.19	12.81	42.66
2020-21	5.2	45.18	0.65	32.4	16.58	81.43
Mean	1.2	33.071	1.718	30.446	8.618	38.475
SD	1.993	7.998	3.0005	12.506	5.201	22.816

YEAR	KDCCB		WDCCB		EDCCB	
	Profit	NPA	Profit	NPA	Profit	NPA
2015-16	10.17	48.63	5.51	52.52	2.36	61.23
2016-17	12.44	54.18	7.97	84.23	1.69	51.17
2017-18	14.06	55.43	4.54	126.03	2.19	41.34
2018-19	15.6	87.07	1.9	126.53	2.56	52.72
2019-20	17.48	110.75	-14.11	146.28	0.28	57.61
2020-21	25.61	110.05	17.66	146.21	0.64	216.44
Mean	15.893	77.685	3.911	113.633	1.62	80.085
SD	5.386	28.708	10.365	37.540	0.950	67.140

Interpretation

The table illustrates the relationship between Profit and Non-Performing Assets (NPA) of District Central Cooperative Banks (DCCBs) in the coastal region of Andhra Pradesh over the period from 2015-16 to 2020-21. The data is provided for six DCCBs: NDCCB, PDCCB, GDCCB, KDCCB, WDCCB, and EDCCB.

All six DCCBs show a general increase in both profit and NPA over the six-year period. The variability in NPA is higher compared to profit across all banks, suggesting a more unstable trend in the management of NPAs. PDCCB shows the highest variability in profit, whereas EDCCB shows the highest variability in NPA. The increasing trend in NPAs is a concerning factor as it can indicate worsening asset quality despite the rise in profits.

TABLE NO:3

% of Gross NPA as the Percentage of Loans and advances during the period 2015-16 to 2020-21

Year	NDCCB	PDCCB	GDCCB	KDCCB	WDCCB	EDCCB
2015-16	6.969	2.153	2.367	2.972	2.965	2.153
2016-17	5.330	1.906	2.291	2.715	4.571	1.599
2017-18	4.624	3.621	2.780	2.158	6.085	3.621
2018-19	4.454	2.816	2.265	2.719	5.696	2.816
2019-20	5.500	4.219	2.510	3.161	6.587	4.219
2020-21	3.359	2.408	3.570	3.161	4.980	7.373
Mean	5.039	2.854	2.630	2.814	5.147	3.630
SD	1.213	0.899	0.497	2.814	1.294	2.065

Interpretation

- **NDCCB** Started high in 2015-16 at approximately 7. Generally decreased over the years, with a slight increase in 2019-20 before dropping again in 2020-21.
- **PDCCB** Showed a significant increase in 2017-18 and 2019-20. Fluctuated notably over the years, peaking in 2019-20 before decreasing in 2020-21.
- **GDCCB** Remained relatively stable with minor fluctuations. Slight increase in 2020-21.
- **KDCCB** Remained fairly consistent, with minor fluctuations. Notable stability in the latter three years (2018-19 to 2020-21).
- **WDCCB** Displayed a strong upward trend until 2019-20. Slight decline in 2020-21 but still remained high compared to earlier years.
- **EDCCB** Showed significant fluctuation with peaks in 2017-18 and a sharp increase in 2020-21.

TABLE NO: 4

Correlation between mean NPA and mean Profit During the period 2015-16 to 2021-22

Bank	Mean profit	Mean NPA	Correlation
Nellore	1.2	33.07166667	0.855678951
Prakasam	1.718333333	30.4466667	-0.636700173
Guntur	8.618333333	38.475	1.632915737
Krishna	15.89333333	77.685	0.396225915
East Godavari	3.911666667	113.6333333	-0.69916353
West Godavari	1.62	80.085	-5.078817817

Interpretation

- **Positive Correlations:** Nellore and Krishna show positive correlations, with Nellore having a strong positive correlation.
- **Negative Correlations:** Prakasam and East Godavari show moderate negative correlations, indicating that higher NPAs generally correspond to lower profits.
- **Data Anomalies:** Guntur and West Godavari have correlation values that are not within the possible range for correlation coefficients, suggesting data or calculation errors.

TABLE:.5

% of Gross NPA as the percentage of Deposits during the year 2015-16 to 2020-21

Year	NDCCB	PDCCB	GDCCB	KDCCB	WDCCB	EDCCB
2015-16	178.8	471.32	597.63	1435.86	1001.64	679.6
2016-17	206.88	592.02	755.39	1675.81	1199.56	881.68
2017-18	240.81	570.93	732.66	1732.14	1338.66	1116.48
2018-19	260.34	596.04	815.77	1937.25	1370.09	1230.73
2019-20	279.18	658.36	911.77	2183.6	1438.39	1264.72
2020-21	317.75	805.35	1125.37	2707.72	1672.61	1479.71
Mean	247.29	615.67	823.09	1945.39	1336.82	1108.82
SD	50.03	110.98	180.49	450.71	225.99	287.265

Interpretation

- **General Increase:** All DCCBs show an increasing trend in % Gross NPA as a percentage of deposits over the six years.
- **NDCCB:** Increased from 178.8 in 2015-16 to 317.75 in 2020-21. **PDCCB:** Increased from 471.32 in 2015-16 to 805.35 in 2020-21. **GDCCB:** Increased from 597.63 in 2015-16 to 1125.37 in 2020-21.

- **KDCCB:** Increased significantly from 1435.86 in 2015-16 to 2707.72 in 2020-21.
- **WDCCB:** Increased from 1001.64 in 2015-16 to 1672.61 in 2020-21.
- **EDCCB:** Increased from 679.6 in 2015-16 to 1479.71 in 2020-21.

Mean and Standard Deviation:

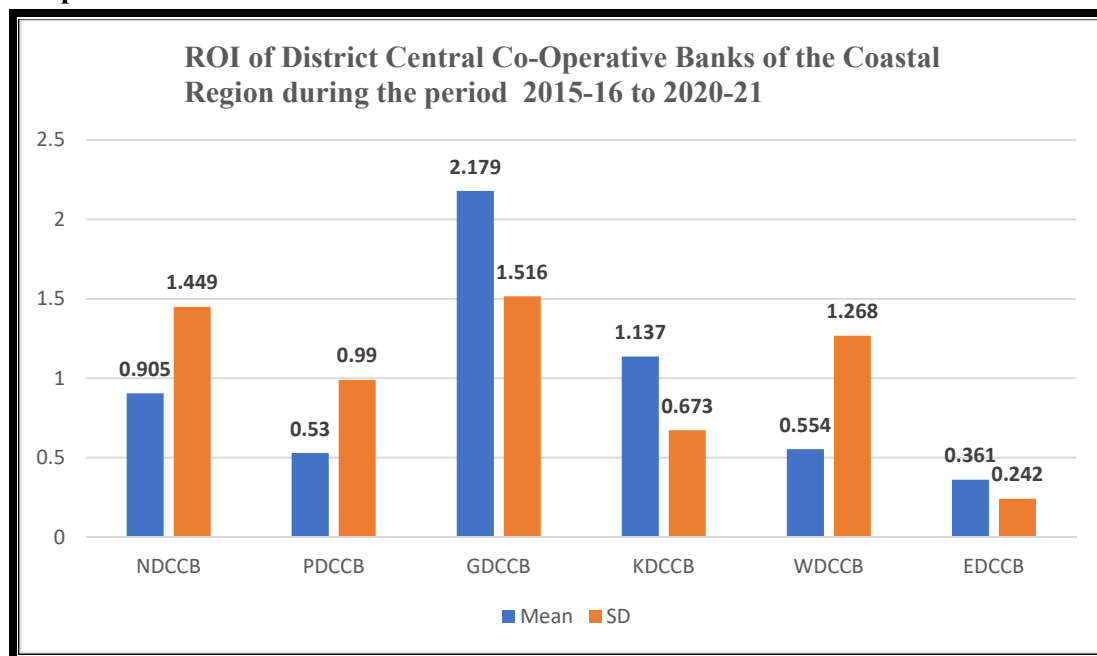
- **Mean Values:** The mean % Gross NPA as a percentage of deposits varies across DCCBs, with KDCCB having the highest mean value (1945.39) and NDCCB the lowest (247.29).
- **Standard Deviation (SD):**
- **NDCCB** has the smallest SD (50.03), indicating relatively consistent NPA percentages.
- **EDCCB** has the largest SD (287.27), suggesting greater variability in NPA percentages over the years.

TABLE NO :7

ROI of District Central Co-Operative Banks of the Coastal Region during the period 2015-16 to 2020-21

YEAR	NDCCB	PDCCB	GDCCB	KDCCB	WDCCB	EDCCB
2015-16	0.244	1.907	1.106	1.032	0.996	0.706
2016-17	0.154	1.446	1.182	1.388	1.175	0.413
2017-18	0.020	-0.836	0.560	1.62	0.681	0.445
2018-19	0.887	0.158	2.221	0.015	0.271	0.444
2019-20	0.324	0.175	3.812	1.590	-1.764	0.054
2020-21	3.800	0.329	4.195	1.661	1.967	0.107
MEAN	0.905	0.530	2.179	1.137	0.554	0.361
SD	1.449	0.990	1.516	0.673	1.268	0.242

Graph-1



Interpretation

The table presents the Return on Investment (ROI) of district central co-operative banks (DCCBs) in the coastal region over the period from 2015-16 to 2020-21. The table includes data for six banks: NDCCB, PDCCB, GDCCB, KDCCB, WDCCB, and EDCCB.

- **Overall Performance:** GDCCB appears to be the most profitable bank over the six-year period, despite higher variability. NDCCB also shows significant returns, especially in 2020-21, but with high variability.
- **Stability:** EDCCB, although having the lowest average ROI, shows the least variability, indicating more stable returns.
- **Volatility:** PDCCB and WDCCB have shown considerable fluctuations in ROI, including periods of negative returns.
- **Trend Analysis:** There is a noticeable improvement in ROI for most banks in the final year (2020-21), especially NDCCB and GDCCB, which could suggest a recovery or improved performance conditions in the recent period.

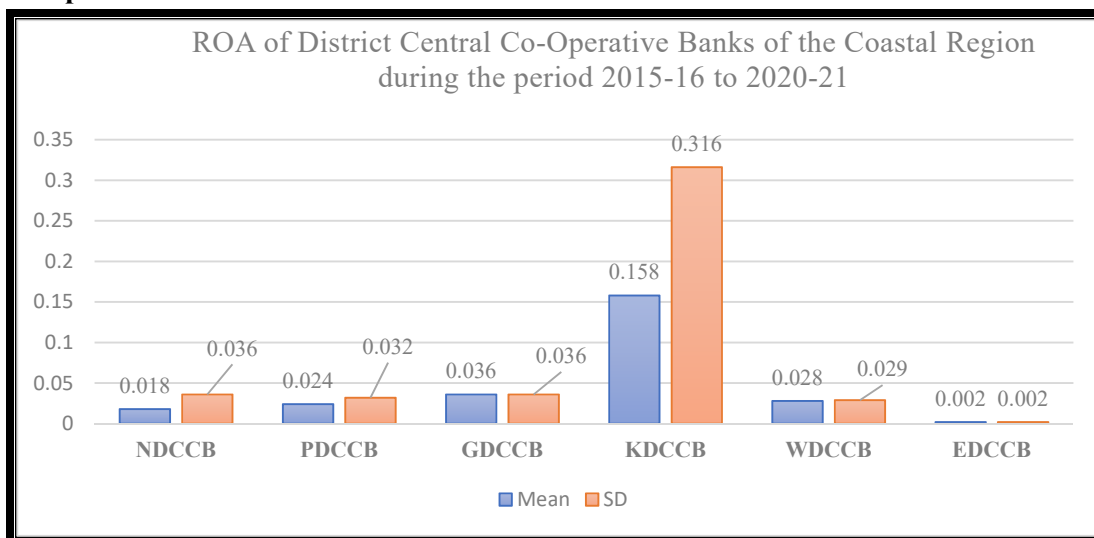
TABLE :8

ROA of District Central Co-Operative Banks of the Coastal Region during the period 2015-16 to 2020-21

YEAR	NDCCB	PDCCB	GDCCB	KDCCB	WDCCB	EDCCB
2015-16	0.0004	0.007	0.028	0.009	0.036	0.007
2016-17	0.098	0.094	0.078	0.065	0.072	0.002
2017-18	0.008	0.004	0.008	0.0008	0.0007	0.001
2018-19	0.0002	0.008	0.093	0.008	0.001	0.0002

2019-20	0.0002	0.001	0.009	0.002	0.057	0.001
2020-21	0.0002	0.031	0.0003	0.863	0.0002	0.0002
MEAN	0.018	0.024	0.036	0.158	0.028	0.002
SD	0.036	0.032	0.036	0.316	0.029	0.002

Graph: 2



Interpretation

The table provides the Return on Assets (ROA) for district central co-operative banks (DCCBs) in the coastal region from 2015-16 to 2020-21. The ROA data is shown for six banks: NDCCB, PDCCB, GDCCB, KDCCB, WDCCB, and EDCCB.

Overall Performance: KDCCB shows the highest average ROA, driven largely by its exceptional performance in 2020-21. However, its high standard deviation indicates substantial variability.

Stability: EDCCB, despite having the lowest mean ROA, shows the least variability, indicating stable but minimal returns.

Volatility: The high standard deviations of NDCCB, PDCCB, and GDCCB suggest considerable fluctuations in their ROA, similar to KDCCB but less pronounced.

Trends: ROA values peaked for many banks in 2016-17, followed by significant declines in 2017-18. KDCCB's performance in 2020-21 is an outlier, contributing to its high mean ROA and SD.

Mean ROA: KDCCB has the highest average ROA (0.158), primarily due to the exceptional performance in 2020-21. GDCCB and PDCCB follow with average ROAs of 0.036 and 0.024, respectively.

Standard Deviation (SD): KDCCB shows the highest variability in ROA with an SD of 0.316, indicating a significant fluctuation in performance. Other banks have lower variability, with EDCCB being the most stable (SD of 0.002).

Findings:

1. In summary, the table -1 provides a comprehensive view of the Gross NPA percentages for various DCCBs in the Coastal Region, highlighting both the stability and variability in their performance over six years. This information is crucial for understanding the financial health and risk management practices of these banks.
2. Table 2- All six DCCBs show a general increase in both profit and NPA over the six-year period. The variability in NPA is higher compared to profit across all banks, suggesting a more unstable trend in the management of NPAs. PDCCB shows the highest variability in profit, whereas EDCCB shows the highest variability in NPA. The increasing trend in NPAs is a concerning factor as it can indicate worsening asset quality despite the rise in profits.
3. **Table-3, WDCCB and EDCCB** show the most significant variability and upward trends over the years. **NDCCB and GDCCB** have more stable and downward trends, particularly NDCCB. **PDCCB and KDCCB** demonstrate notable fluctuations, with PDCCB peaking in certain years before declining. These trends can be used to analyze the performance and changes in each DCCB over the years, helping in strategic planning and resource allocation.
4. The table-4 provides the correlation between mean Non-Performing Assets (NPA) and mean profit for different banks over the period from 2015-16 to 2021-22. **Positive Correlations:** Nellore and Krishna show positive correlations, with Nellore having a strong positive correlation. **Negative Correlations:** Prakasam and East Godavari show moderate negative correlations, indicating that higher NPAs generally correspond to lower profits. **Data Anomalies:** Guntur and West Godavari have correlation values that are not within the possible range for correlation coefficients, suggesting data or calculation errors. This analysis can help understand the relationship between NPAs and profitability for these banks and may indicate areas where data accuracy needs to be reviewed.
5. Table -5, the % Gross NPA as a percentage of deposits for each DCCB from 2015-16 to 2020-21, highlighting the upward trend across the board. **KDCCB** shows the highest increase and the highest values over the years, indicating significant challenges with NPAs relative to its deposits. **NDCCB** shows the lowest values but still an upward trend, indicating a growing NPA issue. The consistency in the upward trend across all DCCBs suggests a widespread issue with NPAs increasing over the years.
6. In summary, while GDCCB and NDCCB are leading in terms of average ROI, they also exhibit significant variability. On the other hand, EDCCB provides more stable returns, albeit at a lower rate. This information can be useful for stakeholders assessing the performance and risk associated with these banks
7. In summary, KDCCB stands out with the highest average ROA but with considerable volatility, while EDCCB is the most stable with consistently low returns. This information is valuable for assessing the performance and stability of these banks over the specified period.

Suggestions:

Based on the findings outlined in the provided summaries, here are some suggestions to address the highlighted issues and improve the performance and stability of the District Central Cooperative Banks (DCCBs) in the Coastal Region.

1. Implement more robust risk management frameworks to better predict, monitor, and mitigate NPAs. Regular stress testing and scenario analysis can help banks prepare for potential risks. Enhance the credit assessment and approval processes to ensure that loans are granted based on stringent criteria. This can help reduce the occurrence of NPAs.
2. Banks should enhance credit controls and monitor loan performance to reduce non-performing assets, while diversifying revenue sources like investing in less hazardous assets or offering fee-based services.
3. To reduce non-performing assets (NPAs), strengthen debt recovery procedures, increase collection efforts, and consider legal action. Promote deposit growth through improved customer service and attractive deposit plans.
4. Banks with high ROI fluctuation should adopt a balanced investment strategy, combining stable and high-yielding assets, and regularly examine and modify their investment portfolio to minimize unpredictability.
5. To improve operational stability and efficiency in a bank with a high ROA, consider smart investments, better asset utilization, and cost control, while benchmarking against stable performers can identify areas for development.

Conclusion

The analysis of the District Central Cooperative Banks (DCCBs) in the Coastal Region reveals key insights into their financial health and performance trends over a six-year period. The findings indicate significant variability in Gross Non-Performing Assets (NPAs), profitability, and overall stability among the banks. Several critical observations and recommendations have been made to address these issues and enhance the performance and stability of these banks. In summary, addressing the highlighted issues through targeted strategies and best practices can significantly improve the financial health and stability of the DCCBs in the Coastal Region. By implementing the suggested recommendations, these banks can achieve more sustainable growth, better manage risks, and provide enhanced value to their stakeholders.

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