MITIGATING CREDIT RISK UNDER NABARD'S SHG BANK LINKAGE PROGRAM

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ABSTRACT

Under NABARD's Self Help Group Bank Linkage Program credit is being provided to huge number of Self Help Groups. With increase in loan disbursement Non-performing assets are also increasing. As development initiative like this requires long term viability mitigating credit risk is must for banks engaged in extending credit under this program. With changing times Non-performing assets pattern and trend changes and require strategies relevant with current scenario. For this purpose paper studies the pattern and trend in Non-performing Assets in different agencies empirically for five years and found out that CoBs NPA percentage is significantly different than Commercial and RRBs. Credit risk mitigation strategies for effective credit and NPA management under the program are also suggested.

KEYWORDS: Non Performing Assets, SHG Bank Linkage Program, Credit Risk, NPA

1. INTRODUCTION

Under NABARD's SHG Bank Linkage Program (SHG-BL Program) banks are extending credit to poor without collateral. Peer Pressure is used as a tool to recover loans. Peer pressure is created by lending on the basis of group savings, mutual lending and maintenance of books. Even after prudent lending NPA Management is always a crucial part of banking operations. Banks through various measures try to keep the NPA under control. But due to internal reasons like credit policies, improper appraisal of credit score or external factors like compulsory lending, economic shocks, and natural calamities etc. loan portfolio comes under stress. Therefore, studying NPA and its management through risk mitigation strategies are must for banks. This will help ensure in long term interest of banks under micro lending schemes.

2. REVIEW OF LITERATURE

As per (Das M. , 2011) that regions with higher NPAs will not be able to keep pace with development process. Higher NPAs will lead to restriction by banks in future loaning in those regions. Study

suggested that better credit management practices will help reduce negative impact of NPA and help in more balanced growth.

(Aluni & Ray, 2015) suggested that financial inclusion objective of government's SHG lending program will become ineffective without proper credit management strategies. Government should promote good financial health of SHG lending institutes through incentive or through proper regulatory measures. As without it motivation of banks and field/ bank managers will diminish because it's always considered their fault.

As per (Singh & Singh, 2017) studied Bihar State for assessing impact of Microfinance Institutions. Loans to poor have a positive impact in their life and government support was also highlighted. Scheme is working impressively in Bihar State. Analysis showed no significant growth in NPA during period of study. NPAs were either constant or are decreasing. NPA stability or decrease are result of implementation of proper credit management structure.

As Per (Mishra & Udupa, 2018) with increase in outstanding credit NPA also increases. This increase in NPA has negative impact on working funds. Management of NPA and overdue is necessary for continuous credit rotation. Strict credit policy is required and will help in better management of NPA. Despite challenges but some banks have kept their NPA less than five percent and net NPA less than two percent. Wide variation in NPA percentage across banks and regions was highlighted.

As per (Randhawa & Kaur, 2020) SHG- BL Program can improve economic prosperity through effective utilization of funds. For this political uncertainty on loan waiver should be reduced, proper mentoring should be provided, effective grading system for credit analysis should be adopted. Along with these loans must be provided as per their productive needs and income generation.

As per (Sinha & Navin, 2021) to reduce worrisome gross NPA amount in some regions immediate intervention is required. Pumping financial resources without proper training or capacity building results in defaults by poor clients either due to lack of knowledge about how to use these resources in productive way or in some cases even default willfully. Study highlighted that defaults by poor reduces their chances of getting loans in future. This can be reduced by providing them training and good governance in maintenance of groups. NPA can be managed by continuous loan tracking and use of information technology solutions.

After analysis (Chawla & Sharma, 2022) found that SHG-BLP plays important role in providing credit options to poor. This reduces their dependency on money lenders for borrowing. Using ten-year data on loan recovery and NPA study concludes that NPA is a matter of concern for lending agencies. All

lending agencies are equally affected as NPA and recovery rate differences among them are not significant.

As per (Muduli & Sharma, 2022) used spatial analysis for NPA study. Lower outstanding loans and less savings leads to higher NPA. Higher NPA leads to lower future lending. This leads to uneven economic development of SHG-BL program. Banks will lend more in regions with lower NPA and will reduce their exposure in regions with higher NPA. For effective credit management scope of lending must be widen, savings must be promoted, physical and financial infrastructure must be improved. NPA policies must be sincerely implemented and should be monitored regularly.

According to (Deuskar, 2023) NPA increased has increased in 2021-22. But after that its moderating. Proper implementation of rules and regulations pertaining Credit distribution is necessary for keeping NPA in comfortable range. Study highlighted need of risk mitigation strategy requirement for CoBs operating under SHG-BLP.

As per (Gobbilla & Nandini, 2025) credit risk management had a positive impact on credit management. Study conducted for performance during five years for Axis Bank. For statistical analysis of Axis bank's annual reports, financial statements and other resources are used. Importance of risk mitigation strategies is highlighted for maintaining quality of assets.

3. RESEARCH GAP

Importance of risk mitigation is clear from review of literature. For successful continuation of SHG-BL Program NPA must be diligently monitored. There are various studies on role/impact of SHG-BL Program. Descriptive studies for NPA are also available. But scope is there for empirical study of NPA trends for recent years. This paper focuses on that opportunity.

4. RESEARCH QUESTIONS

1. What is the overall trend of NPA in lending agencies in SHG-BL program?
2. What is the trend of NPA in Commercial Banks (CBs), Regional Rural Banks (RRBs) and Cooperative Banks (CoBs)?
3. Do different agencies show different patterns of NPA?
4. What are the strategies to Mitigate credit risk arises out of NPAs?

5. HYPOTHESIS

Null Hypothesis: There is no significant difference between NPA percentages across agencies.
Alternate Hypothesis: There is significant difference between NPA percentages across agencies

6. RESEARCH METHODOLOGY

In this study five-year data from 2019-20 to 2023-24 is empirically analyzed to find out growth and trend of loan outstanding, Gross NPA and NPA percentages through descriptive statistics, Correlation, ANOVA, and Tukey HSD results for the NPA percentage data in different agencies stated above.

7. DESCRIPTIVE STATISTICS

Table 1: Loan Outstanding

Year	2019-20	2020-21	2021-22	2022-23	2023-24
CBs	71.22	59.79	102.65	129.24	182.87
RRBs	30.32	35.92	39.49	48.22	63.71
CoBs	6.54	7.58	8.91	10.61	13.07
Total	**108.08**	**103.29**	**151.05**	**188.07**	**259.65**

Source: Yearly NABARD's Status of Microfinance Reports (2019-20 to 2023-24)

Table 1 highlights CBs loan outstanding amount moved upward with good pace but along with fluctuations. It declined once from Rs. 71.22 lakh lakhs in 2019-20 to Rs. 59.79 lakh lakhs in 2020-21, but then increased significantly to Rs. 182.87 lakh lakhs till 2023-24. RRBs shows steady growth in loan outstanding every year. It increased from Rs. 30.32 lakh lakhs to Rs. 63.73 lakh lakhs between 2019-20 and 2023-24. CoBs loan outstanding also exhibit consistent growth as loan outstanding increased from Rs. 6.54 lakh lakhs in 2019-20 to Rs. 13.06 lakh in 2023-24.
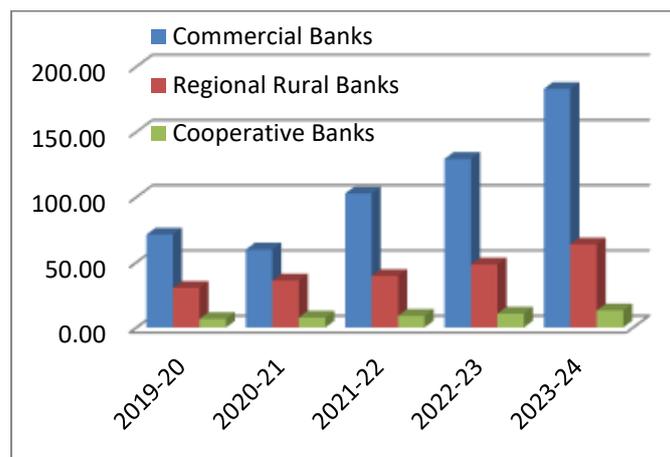
Figure 1: Agency wise Loan Outstanding (Rs. in lakh lakhs)

Figure 1 show RRBs and CBs are the major player in extending credit with CBs lending more than 70 percent of total loan portfolio. Nevertheless, importance of RRBs and smaller player like CoBs is also

important with their presence in semi-urban and far-flung rural areas. The client base of these banks is majorly from rural background and has small loan ticket size. This show they are lending to economically weaker section of society.

Table 2: Gross NPA Amount

	2019-20	2020-21	2021-22	2022-23	2023-24
CBs	3.60	3.03	3.32	3.40	3.67
RRBs	1.33	1.43	1.24	1.19	1.03
CoBs	0.39	0.42	1.18	0.65	0.61
Total	5.32	4.88	5.74	5.24	5.31

Source: Yearly NABARD's Status of Microfinance Reports (2019-20 to 2023-24)

Table 2 shows that the NPA amount for CBs remains in a narrow band, showing slight variations. It was Rs. 3.60 lakhs in 2019-20 which decreases to Rs. 3.03 lakhs in 2020-21, then rises again gradually to reach Rs. 3.67 lakhs in 2023-24. The NPA amount for RRBs displays a slight declining trend over the period. It decreased from Rs. 1.33 lakh lakhs in 2019-20 to Rs. 1.03 lakh lakhs in 2023-24 even when loan outstanding portfolio increased two-fold.
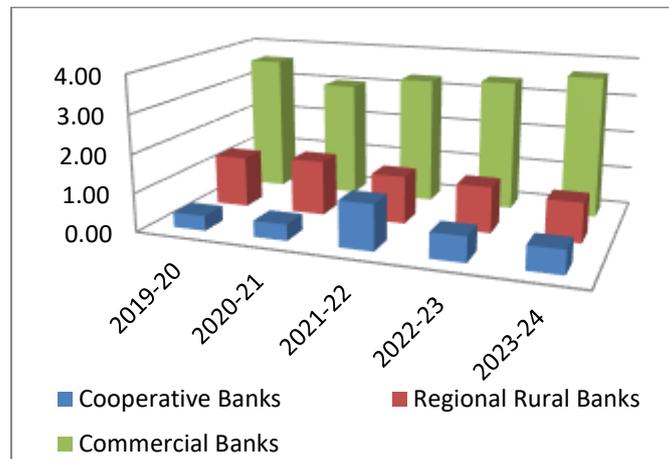

Figure 2: NPA Amount (Rs. in lakh lakhs)

The Gross NPA amount shows volatility in CoBs. It increased heavily in 2021-22 to Rs. 1.18 lakh lakhs, but declined to Rs. 0.61 lakh in 2023-24. CBs with largest loan portfolio have highest gross NPA amount. But to conclude whether CBs asset quality is poor than other banks require further analysis.

Table 3: NPA Percentages

Year	2019-20	2020-21	2021-22	2022-23	2023-24
CBs	5.06	5.07	3.23	2.63	2.01
RRBs	4.37	3.99	3.14	2.48	1.62
CoBs	5.99	5.55	13.29	6.15	4.70
Total	4.92	4.73	3.80	2.79	2.05

Table 3 shows very positive trend in CBs NPA reduction. From 5.06% in 2019-20 and 5.07% 2020-21, it sharply declines to 2.01% in 2023-24. This indicates improved credit discipline and better recovery mechanisms as loan outstanding during the same period shown upward trend. RRBs show consistent improvement in asset quality. NPA reduced from 4.37% in 2019-20 to 1.62% 2023-24. RRBs NPA percentage improvement are best among all agencies studied. CoBs show the most instability in NPA percentage. In 2019-20 it is at 5.99% then reducing slightly to 5.55% in 2020-21, and spiking sharply to 13.29% in 2021-22. Then it improves gradually to 4.70% till 2023-24. The peak in 2021-22 indicates a significant stress event for cooperative institutions.
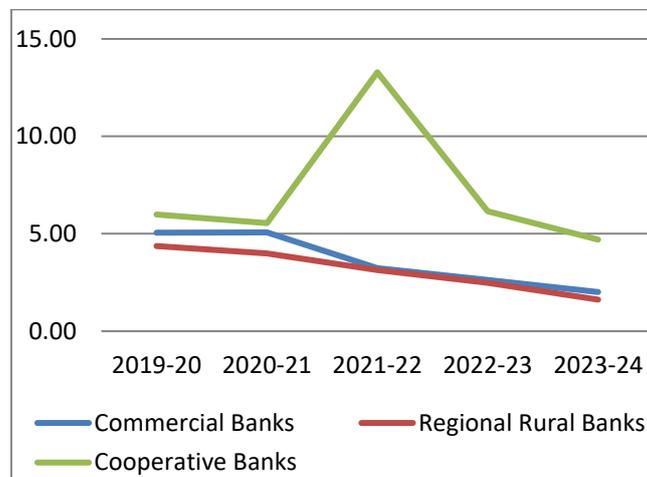
Figure 3: Agency wise NPA Percentage

Figure 3 shows that CBs and RRBs are moving in same direction. But even after having one tenth loan portfolio in comparison to CBs, CoBs have higher percent of NPA. This shows improper management of NPA in those banks.

Overall Trends (All Banks Combined) period of 2019-20 to 2023-24
Loan Outstanding rose steadily from Rs. 108.08 lakh lakhs to Rs. 259.66 lakh lakhs, indicating expanding credit outreach. All banks shown growth but CBs are contributing the largest share in

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lending and growth in lending. Gross NPA Amount remains range bound between Rs. 4.88 lakh lakhs – Rs. 5.74 lakh lakhs, with no major spike. CBs have the highest NPA amount due to a larger loan base. CoBs show high volatility in NPA amount during the period. NPA Percentage shows continuous improvement from 4.92% in 2019-20 to 2.05% in 2023-24. This suggests stronger credit monitoring and improved repayment culture over the five-year period. All banks show improvement by 2023-24. CoBs shows a spike in 2021-22 before stabilizing.

7. DATA ANALYSIS

Below are the Correlation, ANOVA, and Tukey HSD results for the NPA % data, along with interpretations.

Table 4: Correlation Analysis of NPA percentages across agencies

	CBs	**RRBs**	**CoBs**
CBs	1.00	0.973	-0.074
RRBs	0.973	1.00	0.103
CoBs	-0.074	0.103	1.00

Table 5: Correlation and Interpretation

	Correlation	**Interpretation**	**Implication**
CBs vs RRB	(r = 0.973) Very strong positive correlation	Their NPA percentages move together across years.	CBs and RRBs show similar improvement trend in NPA %, whereas CoBs behave very differently (more volatile).
CBs vs CoBs	(r = –0.074) Near-zero, slightly negative correlation	No meaningful linear relationship.	
RRB vs CoBs	(r = 0.103) Very weak positive correlation	Again, almost no linear relationship.	

Table 6: One-Way ANOVA for NPA % (by Bank Type)

F-statistic	p-value	Interpretation
4.694	0.031	Since $p < 0.05$, we conclude that at least one bank type has significantly different NPA % compared to the others.

Tukey HSD Post-Hoc Test: AS NPA percentages are significantly different this justifies performing Tukey HSD to identify which pairs differ.

Table 7: Summary of Tukey Post-Hoc Findings

Difference between	Whether Statistically different	Interpretation
Cooperative vs Commercial	Significant difference	CoBs have much higher and more volatile NPA Percentages than commercial banks.
Cooperative vs RRBs	Significant difference	CoBs differ strongly from RRBs as well.
Commercial vs RRBs	NOT significantly different	Their NPA % levels are statistically similar over 2019–24.

This confirms that CoBs behave very differently than Commercial and RRBs and have much higher and unstable NPA percentages (especially spike in 2021–22). RRBs and CBs show similar improvement during the period and difference between them is not significant. ANOVA confirms real differences between agencies and Tukey identifies that CoBs drive that difference. CoBs likely

suffered operational, monitoring, or repayment issues during 2021–22 (when their NPA percent shot up to 13.29%). Policy interventions or credit discipline measures improved Commercial and RRBs NPA performance consistently.

8. RESULTS

Hypothesis that there is no significant difference between NPA percentages across agencies is rejected as ANOVA test shown significant differences between NPA percentages between banks and Tukey post-hoc test shown significant difference of mean NPA percentages of CoBs with Commercial and RRBs

9. CONCLUSION

Agency wise analysis show that CoBs behave very differently than Commercial and RRBs. They have much higher and unstable NPA percentages (especially spike in 2021–22). RRBs and CBs have similar improvement in NPA during the period. Finally, study concludes that RRBs and CBs follow similar improving NPA patterns but significant difference exist between them and CoBs with improvement required in latter on NPA percentage issue.

10. RECOMMENDATION

Agency wise NPA management analysis shown that CBs and RRBs shown better NPA management and are moving forward simultaneously. But CoBs needs attention as it shows significantly poor NPA management situation. It is recommended that policies must be structured and implemented according the limitations and requirements of different regions and agencies and must be continuously monitored for early detection of any anomalies. Following strategies are suggested for effective credit risk management:

1. Ensuring proper group dynamics, group meetings and up to date maintenance of books.
2. Analyzing data about income, existing debt, cash flow pattern, saving habits and participation before granting loans.
3. AI provides alternative sources of data about income, spending patterns, repayments, mobile usage. They must be utilized along with traditional sources for comprehensive analysis.
4. Proper appraisal of projects.
5. Post lending monitoring of regular meetings, attendance, transactions, conflicts, saving contributions, multiple borrowing along with periodic field visits will help identify anomalies in early stages and will help in NPA prevention.
6. Training and Capacity building programs will also help in effective credit management by banks.

7. Standard lending procedure, internal bank audit, transparency, record keeping, structured follow ups, timely decisions during natural disasters and economic shocks will serve the purpose to the great extent.

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