



# Balancing Financial Sustainability and Social Objectives: A Comparative Study of Regional Rural Banks In Northeast India

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## ARTICLE INFO

## ABSTRACT

Regional Rural Banks (RRBs) in Northeast India are pivotal in fostering financial inclusion and rural development in one of the country's most geographically isolated and socio-economically diverse regions. This paper attempts to conduct a comparative analysis of RRBs across Northeast India, evaluating their strengths, challenges, and prospects. The study evaluates the financial performance of these banks of Northeast region using a three-year dataset sourced from financial statements of RRBs, annual reports from NABARD and RBI, and key statistical records. The key metrics such as organizational expansion, workforce size, branch/employee productivity, credit-deposit (CD) ratio, capital-to-risk weighted assets ratio (CRAR), non-performing assets (NPA), profit and loss were analyzed. According to the study, grassroots connectivity and customized financial services are their main advantages, allowing them to assist marginalized communities, micro businesses, and agricultural activities. However, the RRBs confront a number of obstacles, such as inadequate infrastructure, inefficient operations, lack of technological acceptance etc. Despite these hurdles, the study also highlights emerging prospects. However, the findings of the study show how important it is for RRBs to maintain adequate CRAR levels and take proactive steps to reduce credit risks and non-performing assets (NPAs) in order to protect their long-term viability and financial stability in this demographic region.

**Keywords:** *Productivity, CRAR, CD ratio, profit and loss, NPA, recovery performance*

## INTRODUCTION

India is a highly populated and predominantly rural country, especially in the context of developing countries. The economy of the nation depends heavily on these rural areas. Over 4% of India's total population, live in the North-East, this includes Assam Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The region has hilly terrain, dense forests, and a predominantly agricultural economy. Due to its challenging topography and limited infrastructure, access to formal financial services has historically been challenging in these states. Regional Rural banks were established to provide institutional credit to the agricultural and other allied activities to rural people. These banks help make India a leader in financial inclusion initiatives. With more than 21,856 branches and serving 28.3 crore depositors and 2.6 crore borrowers, these bank contribute significantly to closing the gap between urban and rural finance, which is in line with global development goals, including the Sustainable Development Goals (SDGs) of the United Nations, especially SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth). In contrast to microfinance models like Grameen Bank of Bangladesh, which primarily focus on microcredit, RRBs provide a wider range of services, including savings accounts, government scheme disbursements (e.g., MGNREGA wages), and digital banking, making them a blend of traditional banking and rural credit systems. However, their dependence on sponsor banks and government funding limits operational autonomy, unlike the self-sustaining cooperative models in Europe or Japan. Furthermore, despite having a large network, RRBs' outreach per branch is less effective than that of microfinance networks in nations like Bangladesh or Indonesia, where more localized, smaller units are able to penetrate the market. In the Northeast, seven RRBs were established, namely

**Table: 1 Name of regional rural banks in Northeast India**

State	Name of RRB	Sponsor Bank	No.of Districts	No.of Branches	No.of Employees
Arunachal Pradesh	Arunachal Pradesh Rural Bank	State Bank of India	14	32	115
Assam	Assam Gramin Vikash Bank	Punjab Bank	33	467	1859
Manipur	Manipur Rural Bank	Punjab Bank	10	27	115
Meghalaya	Meghalaya Rural Bank	State Bank of India	11	90	402
Mizoram	Mizoram Rural Bank	State Bank of India	11	102	477
Nagaland	Nagaland Rural Bank	State Bank of India	5	11	43
Tripura	Tripura Gramin Bank	State Bank of India	8	148	860

Source: Key Statistics and Financial Statements of RRB (2022-23)(various issues)

The above table 1 reveals the varying degrees of rural banking penetration in Northeast India through RRBs as on 2023. It should be noted that presently, the bank covers the entire northeastern area through its network of 877 branches operating across 92 districts. The branch network of RRBs in Northeast India reflects a higher per capita density than the national average, driven by the need to serve a sparse population across challenging terrain. However, with geographic and demographic constraints—such as hilly landscapes, poor infrastructure, and limited economic activity—reduce the operational efficiency of these branches compared to those in flatter, more populated regions. These branches are essential to Northeast India's rural development and financial inclusion, as the bank has introduced several government-sponsored and customer-centric programmes such as the Prime Minister's Employment Generation Programme (PMEGP), Kisan Credit Card (KCC), Apon Ghar Scheme, Swami Vivekananda Youth Empowerment (SVAYEM) Yojana, PM Street Vendors Atma Nirbhar Nidhi (PMSVANIDHI), and the Pradhan Mantri Awas Yojana (PMAY). These initiatives have enabled the banks to reach diverse customer groups, including farmers, small entrepreneurs, street vendors, and youth seeking self-employment. The bank has also expanded its focus on financial inclusion through basic savings accounts and the establishment of Rural Self-Employment Training Institutes (RSETIs), which play a key role in developing skills and promoting entrepreneurship among rural populations. The bank's active participation in social security schemes such as the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and the Pradhan Mantri Suraksha Bima Yojana (PMSBY) has further enhanced its reputation as a people-oriented institution. These programs provide financial protection to low-income households, thereby fostering long-term customer trust and loyalty. The expansion of these innovative, inclusive, and socially responsible financial products will ensure that the bank remains a key driver of growth, empowerment, and prosperity in the northeast region.

### RESEARCH GAP

Despite there is extensive research on Regional Rural Banks (RRBs) in India, there remains a significant gap in comparative studies focusing specifically on the RRBs of Northeast India. Most existing research either examines RRBs at a national level or concentrates on more economically developed regions, thereby overlooking the unique socio-economic, geographical, and infrastructural challenges faced by RRBs in the Northeast. This study aims to fill these gaps by conducting a comprehensive comparative analysis of RRBs in Northeast India, evaluating their strengths, challenges, and future prospects in a region that is critical to India's financial inclusion goals.

### SIGNIFICANCE OF THE STUDY

Agriculture is a matter of livelihood and food security, with nearly 60 percent of the population depending on it. Hence, the role of banks in the enhancement of agriculture productivity, expansion of rural credit, and poverty eradication assumes high priority. Efficiency studies throw light on the proper utilization of inputs and give a direction on minimisation of cost and allocation of resources. Such studies help the organization to formulate policies to improve their level of output by cost minimization. Thus, a study is required to be conducted to know the banks' efficiency levels in promoting rural development. The challenges and prospects of RRB depend on a complex interaction of many variables, so there is an urgent need to examine the growth and performance of RRBs in the north eastern part towards the country's socioeconomic development. Such studies are highly significant today; because, in the competitive market, efficient organizations can easily face

challenges. The RRBs in this part would be able to challenge the competition only if they are efficient. Thus, the research establishes the truth and suggests measures to deal with the problem.

## REVIEW OF LITERATURE

There are very few literatures available for the comparative study of the Northeastern states of RRB. Therefore, the current study found the gap and tried to see the comparative picture of RRBs in different states of the Northeast. According to (A Amarendra Reddy 2006) Rural banks showed significant economies of scale in terms of assets and number of branches under each bank for the period of 1996 to 2006. Total factor productivity growth of rural banks was higher in profitability than in service provision during liberalisation. Banks located in economically developed as well as low banking density regions exhibited significantly higher productivity growth. (Chidambaram 2007) in his article reviewed that RRBs in India had made significant progress in their basic operations and in profit making also during the period from 2003 to 2005. He pointed out that as a result of amalgamation RRBs were then able to provide better customer services with better infrastructure and policies of experienced staff. He further emphasized on the need to change in the attitude of bank officials of the RRBs. (Ahmed, J.U. 2014) in his article, Productivity was measured in terms of labour, branch, return on assets (ROA), return on investments (ROI), profits as percentage of business volume etc., in order to examine the innovativeness of Meghalaya Rural Bank (MRB). Study observed that the MRB is utilizing efficiently the resources that they mobilized. The analysis identified wide variations in the productivity, which might have adverse effect on profitability of the bank under study. The study inferred that the wicked nature of clientele resulted in lower productivity of banks. (Geeta R.S. 2016) in her study finds that the performance of Pragathi Gramina Bank of Bellary in Karnataka is successful in meeting its objectives and conveys a message to the government to take additional needful support to these regional banks to make them more viable and successful in meeting the needs of rural credit in the coming years. (Taral Patel and Nisarg Shah 2016) in their article titled "A study on performance evaluation of RRBs of India" analysed the financial performance of RRBs and to evaluate the performance of RRBs in terms of profitability, priority and non-priority sector over the study period. They have concluded their research study finally analysing the financial performance of RRBs at post and pre amalgamation scenario measuring based on the spread ratio, burden ratio and profitability ratio. Syed Mohammad and Narayana Reddy (2017) in their article titled "Indian Regional Rural Banks' Growth and Performance" analysed the key performance indicators of Regional Rural Banks in India. They have concluded that there is also a wide gap in Cash to Deposits ratio between the RRBs and Commercial Banks. Hence it is recommended to make consistent efforts to augment the C-D ratio of RRBs on par with Commercial Banks. Jitendra Kumar V.P. and Malik D.P.(2019) in their article titled "Growth and Performance of RRBs in India" examined the growth and performance of RRBs in India. They have concluded that the number of RRBs in India has decreased due to amalgamation process and the number of districts covered by RRBs increased yearly. This paper investigates the financial performance of RRBs in terms of investment to credit, Cash Deposits ratio, investment to deposit ratio, profitability ratio etc. The related literature review provides insight into various aspects of performance provided by the Regional Rural Bank in India. Studies have been undertaken on aspects like structural growth, CD ratio, CRAR ratio, bank productivity, recovery performance etc. As per the nature and scope of the studies, only the major works that illustrate the performance of the RRBs were reviewed.

## OBJECTIVES OF THE STUDY

The following are the objectives of the study:

- To assess the productivity of RRBs based on the branch and employees.
- To analyse the profitability and capital adequacy of the regional banks of Northeast.
- To compare and rank the operations of regional rural banks of Northeast for three consecutive years i.e. 2021 to 2023

## TESTING OF HYPOTHESIS

(H<sub>0</sub>): There is no significant increase in profitability over the 3 years of each Northeastern states (slope  $\leq 0$ ).

(H<sub>1</sub>): There is a significant increase in profitability over the 3 years of each Northeastern states (slope  $> 0$ ).

## RESEARCH METHODOLOGY

Using a descriptive research methodology, the study examines that the Regional rural bank of Northeast have sustainable and financial viability out of all geographical constraints. The procedure of collecting data includes obtaining secondary data from reliable sources, including publications from the Reserve Bank of India, government reports, and annual report of NABARD. Three years data has been collected to offer detailed information on important metrics such the CD ratio, CRAR, recovery status, NPA etc. The study uses graphical representations to show trends and changes in financial performance measures in order to give a clear and thorough analysis.

## RESULTS AND DISCUSSIONS

An important source of funds for a bank is the mobilization of deposits. Deposits are the foundation upon which banks grow and thrive. It is a unique item distinguishing a bank from other financial and business institutions. In the bank's operational activities, it provides the funds for bank loans and presents the ultimate source of bank profits and growth. It plays a key role in promoting banking habits among the people. The larger the size of deposits that a bank could mobilize, the better its position is to extend loans to the needy sections of society. The size of deposits also depends upon the interest rate; if the interest rate is high, the number of accounts deposits will be greater. The mobilization of deposits by banks serves as the basis of capital formation and facilitates economic development. The status of deposits and advances during the period of 2020-21 to 2022-23 of RRB in NER can be summarised as below

**Table 2. Deposits and Advances of RRB (Northeast) (in lakhs)**

Name of RRB	2020-21			2021-22			2022-23					
	Deposits Rank		Advances Rank	Deposits Rank		Advances Rank	Deposits Rank		Advances Rank			
APRB	89252.95	5	18860	5	109362	5	24717.93	5	125529.5	5	35632.99	5
AGVB	1150999	1	379736.9	1	1181802	1	434111.3	1	1238824	1	532872.4	1
MRB	38077.32	6	17598.14	6	43298.46	6	20646.09	6	47738.18	6	27246.62	6
Manipur MRB	268809.2	4	77326.14	4	326559.3	4	87846.03	4	360418.3	4	101344.4	4
Meghalaya MRB	415487	3	205213.6	2	422022.6	3	251030.2	3	496987.8	3	269738.1	3
Mizoram NRB	11670.4	7	3208.93	7	12308.25	7	4224.41	7	13544.31	7	5200.87	7
TGB	756957	2	270414.5	3	771834.4	2	281243.4	2	802255.6	2	324936.4	2

Source: Key Statistics and Financial Statements of RRB (2021,22,23)(various issues)

The above-mentioned data indicates that in terms of deposits, regional rural bank in the state of Assam (AGVB) holds the highest in rank with deposits of 1150999, 1181802, 123882 lakhs, followed by Tripura Rural Bank and Mizoram Rural Bank. From the analysis, it has been found that Nagaland rural Bank (NRB) stood lowest in the rank with deposits of (11670.4, 12308.25, 13544.31) lakhs followed by Manipur Rural Bank and APRB. As per the 2011 Census of India, Assam's population stood at 31.205 million, while Nagaland's was 1.979 million. Nagaland's smaller geographical expanse of 16,579 square kilometers partly explains its lower deposits relative to Assam. But in present changing economic scenario, productivity has been assumed as a crucial significance for the profitability and viability of these banks. The high productivity indicates that a bank does a high volume of transactions. Lower productivity increases relative operational cost and often becomes the cause of losses as intermediary returns are directly related to the quantum of productivity. The productivity analysis of employees and branches in the northeastern states is shown in the table below.

**Table 3: Per branch and Employee productivity (lakhs)**

YEAR	2020-21				2021-22				2022-23			
State	Per branch productivity	Rank	Per employee productivity	Rank	Per branch productivity	Rank	Per employee productivity	Rank	Per branch productivity	Rank	Per employee productivity	Rank
APRB	3523.71	4	1020.89	3	4357.87	4	1324.45	2	5069.11	4	1410.53	2
AGVB	3371.52	5	963.88	4	3580.07	5	936.78	5	3926.27	5	986.32	5
MRB	2193.73	6	594.13	6	2519.69	6	642.27	6	2843.26	6	667.55	6
Manipur												
MRB	3922.17	3	924.07	5	4680.56	3	1029.95	4	5208.22	3	1166.02	4
Meghalaya												
MRB	6974.16	1	1410.68	1	6798.58	2	1405.12	1	7707.42	1	1648.13	1
Mizoram												
NRB	1495.65	7	467.39	7	1660.54	7	405.01	7	1709.33	7	437.27	7
TGB	6941.7	2	1227.44	2	7067.64	1	1265.72	3	7616.16	2	1310.69	3
Mean	4060.38		798.23		4380.71		1001.33		4868.54		1089.50	

Source: Key Statistics and Financial Statements of RRB (various issues)

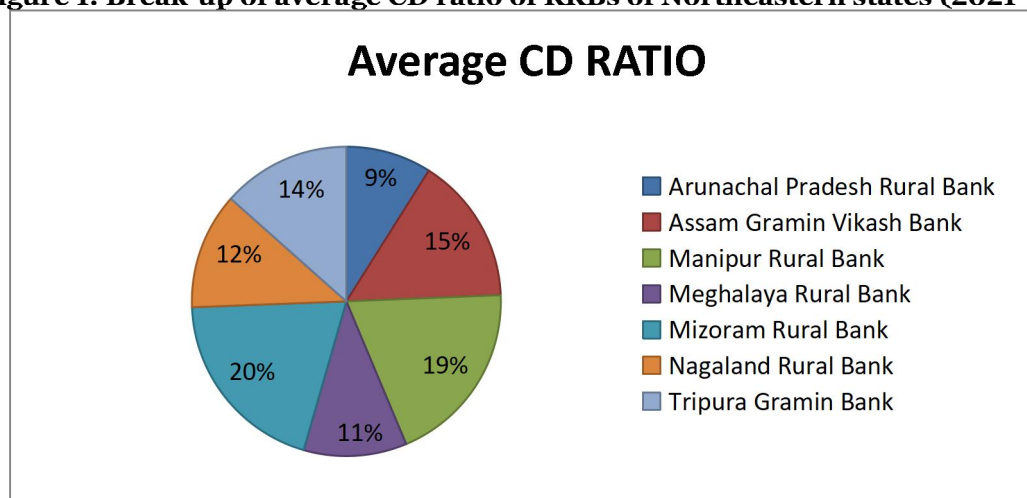
The high branch productivity of Mizoram Rural Bank (Rs 7,707.42 lakhs per branch) in 2023 indicates its strong operational efficiency, possibly driven by factors such as better infrastructure or higher demand for banking services in the state, followed by TGB (Rs.7616.16 lakhs), Meghalaya Rural Bank (Rs. 5208.22 lakhs), Arunachal Pradesh Rural Bank (Rs. 5069.11 Lakhs). Again in terms of per-employee productivity, Mizoram Rural Bank stood highest with 1648.13 lakhs, followed by Arunachal Rural Bank with 1410.53 lakhs. It is evident from the table that there has been continuous growth in branch productivity and per-employee productivity in the state of Mizoram. The CD ratio of the bank also is an essential indicator of a bank's lending activity and ability to transform deposits into loans. In the Indian banking context, a CD ratio between 60% and 80% is often considered healthy for most banks. A higher CD ratio indicates that a bank is lending a larger portion of its deposits. Conversely, a lower CD ratio suggests that a bank is more conservative in its lending approach and may have a higher proportion of its deposits held in reserve or invested in low-risk assets. The following table shows the CD ratio of different types of regional rural banks.

**Table: 4 CD ratio**

RRB	2020-21 CD	Rank	2021-22 CD	Rank	2022-23 CD	Rank
APRB	22.39	7	23.53	7	29.22	7
AGVB	38.26	3	42.68	3	48.01	3
MRB (Manipur)	49.79	1	51.3	2	60.81	1
MRB (Meghalaya)	31.32	5	29	6	30.05	6
MRB (Mizoram)	49.39	2	59.48	1	58.18	2
NRB	28.16	6	34.91	5	38.82	5
TGB	35.72	4	36.44	4	40.5	4

Source: Key Statistics and Financial Statements of RRB 2021,22,23 (various issues)

**Figure 1: Break-up of average CD ratio of RRBs of Northeastern states (2021-23)**



The CD ratio analysis shows a general trend of increasing lending activity among RRBs from 2020-21 to 2022-23, with most banks utilizing a larger share of deposits for loans. However, Manipur holds highest in 2022-23 i.e. 60.81 which is ideal ratio for any banks operating in India and APRB holds lowest CD ratio 22.39 in 2021. This uneven credit access across regions implies that differences in demand, economic conditions, or bank strategies. The average CD Ratio of entire Northeastern states shows Mizoram holds highest position and Arunachal Pradesh holds lowest position. Although these banks are accepting depositing and advances loan in an efficient manner, but at present biggest problem of these RRBs are rising of NPA. The following table shows Gross NPA of different northeastern states.

**Table: 5 Gross NPA (in lakhs)**

Name of RRB	2020-21		2021-22		2022-23	
	GROSS NPA	RANK	GROSS NPA	RANK	GROSS NPA	RANK
APRB	5.61	6	3.86	6	2.81	6
AGVB	33.46	1	27.74	1	19.68	1
MRB (Manipur)	28.69	2	17.55	2	10.86	2
MRB (Meghalaya)	11.02	3	7.63	3	6.44	3
MRB (Mizoram)	6.07	5	5.29	5	5.44	4
NRB	2.06	7	1.92	7	1.21	7
TGB	8.25	4	6.78	4	5.1	5

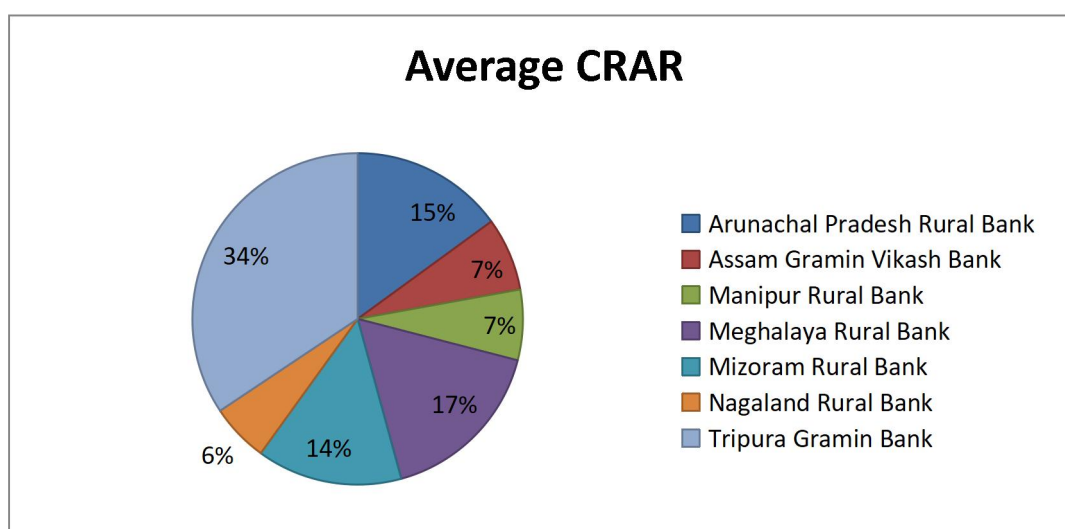
Source: Key Statistics and Financial Statements of RRB 2021,22,23 (various issues)

From the table 5, it can be analysed that the Assam Gramin Vikash Bank (AGVB) has consistently recorded the highest gross Non-Performing Assets (NPAs) among all Regional Rural Banks (RRBs) for three consecutive years, with values of 33.46, 27.74, and 19.68 lakhs, respectively while Nagaland Rural Bank has the lowest gross non-performing assets (NPA) figures, at 2.06 lakhs, 1.92 lakhs, and 1.21 lakhs for the same time. These banks' high NPA ratios may have a negative impact on their capital to risk-weighted assets ratio (CRAR) and profitability. Since 2013, RRBs have been subject to the RBI's rule that all banks, including RRBs, should maintain a minimum CRAR of 9%. Strong CRAR ensures that they can manage risks, sustain lending, and maintain trust while advancing financial inclusion and rural development. The CRAR ratio is typically expressed as a percentage and is calculated as follows:  $CRAR \text{ Ratio} = (\text{Tier I Capital} + \text{Tier II Capital}) / \text{Risk-Weighted Assets}$ . The following table shows CRAR of different RRBs.

**Table 6: CRAR (%)**

Name of RRB	2020-21		2021-22		202-23	
	CRAR	Rank	CRAR	Rank	CRAR	Rank
APRB	10.57	3	12.19	3	13.37	3
AGVB	1.83	6	7.59	6	7.82	6
MRB (Manipur)	2.37	5	7.24	7	6.93	7
MRB (Meghalaya)	13.9	2	12.71	2	13.69	2
MRB (Mizoram)	9.48	4	11.53	4	13.26	4
NRB	-2.93	7	8.25	5	8.37	5
TGB	26.79	1	29.18	1	26.77	1

Source: Key Statistics and Financial Statements of RRB 2021,22,23 (various issues)

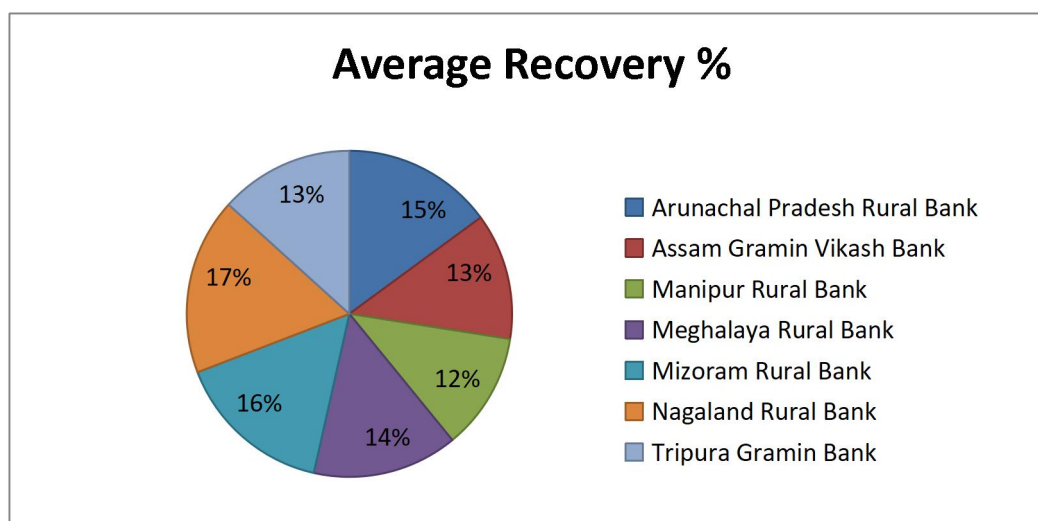


According to the above table, Tripura Gramin Bank has the highest CRAR of any RRB in the state, with rates of 26.79%, 29.18%, and 26.77% during the last three years. Meghalaya Rural Bank comes in second with 13.9%, 12.71%, and 13.69%. Every bank is required to maintain a capital adequacy ratio of 9% in accordance with RBI requirements. According to the analysis, Assam, Manipur, and Nagaland have CRAR values below 9%. On an average the higher CRAR is for Tripura Gramin bank and lowest for Nagaland Rural Bank. The smaller capital buffer in relation to its risk exposure can affect the financial health of the bank. However, the financial health of a bank can also be greatly impacted by gross non-performing assets. The bank may have to make provisions to cover possible losses on non-performing loans, which might have an effect on profits. Additionally, it lessens the bank's capacity to make additional loans and may result in a decline in the bank's capital adequacy. These banks have always struggled to attain a 100% loan recovery rate in any of the years since their inception. The recovery performance of RRBs is detailed in the following table.

**Table 7: Recovery Performance (in %)**

Name of RRB	2020-21 Recovery	Rank	2021-22 Recovery	Rank	2022-23 Recovery	Rank
APRB	59.50	7	88.41	2	91.07	2
AGVB	66.91	6	66.39	6	67.21	6
MRB (Manipur)	70.12	5	61.23	7	54.48	7
MRB (Meghalaya)	74.48	3	76.42	4	79.91	4
MRB (Mizoram)	82.78	2	81.65	3	85.99	3
NRB	95.86	1	89.36	1	94.98	1
TGB	72.82	4	67.32	5	72.82	5

Source: Key Statistics and Financial Statements of RRB 2021,22,23 (various issues)



The data reveals that recovery performance RRBs of Northeastern States from 2020-21 to 2022-23. Nagaland Rural Bank leads with continuous excellence with 95.86, 89.36, 94.98% while Arunachal Pradesh Rural Bank has the most significant improvement from 59.50% to 91.07%. While Meghalaya shows steady growth, and Tripura maintains moderate stability. However, Manipur's decline is a warning sign, and Assam's instability points to untapped potential. The average recovery percentage of among all the RRBs for 3 years, Nagaland rural Bank performance is better. These trends highlight the importance of effective recovery strategies and the need for tailored interventions to address underperformance, ensuring the financial health of all banks in Northeastern states. In today's challenging market conditions, profits of the banks are the main indicator to ensure their sustainability and expansion. As a vital part of the financial system, it is essential in Northeastern states to generate adequate income, which reflects the effective use of their financial resources and highlights their operational effectiveness as well as it also contributes to the national economy's profit. The following table highlights the profit and loss of the RRBs of northeastern states.

**Table: 8 Profit/Loss making RRBs (lakhs)**

Name of RRB	2020-21 Net P/L	Rank	2021-22 Net P/L	Rank	2022-23 Net P/L	Rank
APRB	602.33	3	1233.41	4	2055.42	3
AGVB	(-11432.16)	7	1.61	5	(-13795.82)	7
MRB (Manipur)	(-514.79)	6	(-352.25)	7	(-23.15)	6
MRB (Meghalaya)	94.16	4	2262.97	3	3775.55	2
MRB (Mizoram)	3855.16	2	4943.78	2	6519.09	1
NRB	(-194.73)	5	(-98.66)	6	43.47	5
TGB	20003.12	1	14313.92	1	362.34	4

Source: Key Statistics and Financial Statements of RRB 2021,22,23 (various issues)

It is evident from the table that, in 2020-21, Tripura Rural Bank recorded the highest net profit among all Regional Rural Banks (RRBs), amounting to 20,003.12 lakhs. However, this profit steadily declined to 362.34 lakhs by 2022-23, lowering its ranking to fourth. Over the same time period, Mizoram Rural Bank's net profit increased significantly, rising from 3,855.16 lakhs to 6,519.09 lakhs, driving it to the top place in 2022-2023. On the other hand, AGVB and Manipur Rural Bank experienced financial difficulties in 2022-2023, reporting net losses of -13,795.82 lakhs and -23.15 lakhs, respectively. These losses were largely due to high non-performing assets (NPA), which strained their financial health, significant pension liabilities, adding to their expenses, and A 250 basis point increase in the repo rate during FY 2022-23. This repo rate hike reduced the market value of investment portfolios, particularly affecting RRBs with low credit-deposit (CD) ratios. This depreciation occurred because of the inverse relationship between bond prices and yields, leading to mark-to-market (MTM) losses as these banks had to account for the diminished value of their securities (such as SLR securities under AFS and HFT categories).

### Testing of hypothesis

Null Hypothesis (H<sub>0</sub>): There is no significant increase in profitability over the 3 years of each Northeastern states (slope  $\leq 0$ ).

Alternative Hypothesis (H<sub>1</sub>): There is a significant increase in profitability over the 3 years each Northeastern states (slope  $> 0$ ).

The table presents regression results for seven regional rural banks of northeastern states showing the relationship between an independent variable (presumably "year") and a dependent variable (possibly a performance metric like profit or revenue). The columns include unstandardized coefficients (B and Std. Error), standardized coefficients (Beta), t-values, significance levels (Sig.), and a qualitative description of the relationship.

**Table: 9 Descriptive statistics**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Relationship
	B	Std. Error	Beta			
APRB	726.545	55.117	.997	13.182	.048	Positive relation
AGVB	-1181.830	7283.620	-.160	-.162	.898	Strong negative relation
MRB (Manipur)	245.820	48.082	.981	5.113	.123	Positive relation
MRB (Meghalaya)	1840.695	189.437	.995	9.717	.065	Strong Positive relation
MRB (Mizoram)	1331.965	140.495	.994	9.480	.067	Strong Positive relation
NRB	119.100	13.296	.994	8.957	.071	Strong Positive relation
TGB	-9820.390	2385.144	-.972	-4.117	.152	Strong Negative relation

Source: compiled by researcher through SPSS

From the analysis it can be found that the majority of the northeastern states (APRB, MRB (Meghalaya), MRB (Mizoram), NRB, and MRB (Manipur)) show positive relationships between the variables, with APRB standing out for its statistically significant upward trend. MRB (Meghalaya), MRB (Mizoram), and NRB also display strong positive trends that are close to significance, suggesting potential for confirmation with further analysis. In contrast, TGB and AGVB exhibit negative relationships, but neither is statistically reliable due to high p-values. These findings emphasize the need to balance the strength of a relationship with its statistical significance when interpreting regression results.

### CONCLUSION AND POLICY IMPLICATIONS

Thus, RRBs in Northeast India have unique strengths, such as government support and a rural focus. In comparison to models such as Grameen Bank of Bangladesh or fintech-driven systems in Kenya, they perform well internationally in terms of their mandate for financial inclusion, but they lag behind in terms of digital adoption. The threats for these banks include competition from bigger banks, economic unpredictability Cyber security risks etc, while opportunities for expansion include digital transformation, government initiatives etc. these banks may strengthen their involvement in rural development and financial inclusion by taking inspiration from global models and utilizing their advantages. The government should provide subsidies or financial incentives to RRBs that expand their services to remote and underserved areas. These steps can encourage banks to emphasize financial inclusion without compromising profitability by balancing the high operational costs of outreach. To get over geographical restrictions, policymakers should encourage the use of digital solutions like agent-based models and mobile banking. Investments in digital infrastructure and rural digital literacy programs are critical to support the transition. Investing in training programs for these bank staff can enhance their ability to serve rural communities efficiently. Moreover the bank should collaborate with local organizations, NGOs, and microfinance institutions to leverage their networks and expertise. These partnerships can help extend outreach to remote areas while sharing costs and risks, enhancing the banks' ability to serve dispersed populations of rural areas effectively.

### SCOPE FOR FUTURE RESEARCH

Future research could explore the role of technology in mitigating the profitability-outreach trade-off. Investigating the adoption and impact of mobile banking, fintech solutions, or agent-based banking models could reveal strategies to reduce operational costs while enhancing service delivery in remote, hilly areas of Northeast India. Examining the effectiveness of policy measures—such as targeted subsidies, regulatory adjustments, or public-private partnerships—could provide insights into how government support might help RRBs achieve both profitability and outreach goals more sustainably. Comparative research with RRBs in other regions of India or in geographically and demographically similar contexts globally could identify best practices and highlight unique challenges specific to Northeast India, offering a broader perspective on operational strategies. Moreover, qualitative or survey-based methodologies can be adopted to understand the financial behaviors, needs, and challenges of rural communities in Northeast India. Such studies would enable Regional Rural Banks (RRBs) to design customer-centric solutions that align with local realities, improving the relevance and accessibility of their services. Integrating these dimensions would not only refine service delivery but also position RRBs as catalysts for equitable and environmentally conscious progress in the region.

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