

Pre-Merger Performance Evaluation of Andhra Pradesh Grameena Vikas Bank: A Multidimensional Analysis of Financial Strength, Efficiency and Outreach

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ABSTRACT

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This study examines, six major parameters such as Outreach and Network, Financial Strength, Asset Quality, Deposit Mobilization, Credit Deployment and Productivity & Efficiency have been used to measure the pre-merger performance of Andhra Pradesh Grameena Vikas Bank (APGVB) – one of RRBs. Drawing on data from 2015–16 through 2023–24, the analysis identifies trends in performance areas, including what is working and what needs to be addressed. The findings reflect improvement in reserves, capital and deposit mobilisation while asset quality and recovery of loans continue to be a cause for concern. The paper offers appropriate policy and management implication to enhance efficiency and sustainability of RRBs after post-merger.

Keywords: Regional Rural Banks, Pre-Merger Analysis, Asset Quality, Deposit Mobilization, Financial Strength, Rural Development

1. Introduction

Regional Rural Banks (RRBs) have become a tool of financial inclusion and rural development in India, by providing banking service to unbanked areas. From their inception, RRBs were intended to serve as an intermediary on behalf of the commercial banking system and rural credit needs in general concerning agriculture, small scale industries and other rural occupation. The banking system has evolved through substantial policy and structural changes over the years leading to the consolidation of RRBs with a view to strengthen them on sound financial footing, greater productivity and provision of better service.

Consolidation of RRBs will result in robust and competitive structure which is able to meet the increased financial requirement of these regions. Still, it is essential to evaluate performance in advance of these mergers and acquisitions, to discern strengths and weaknesses and plausible upscaling measures. A well-documented pre-merger examination process assists policymakers and bank management in assessing the financial condition, risk management practices, and operational soundness of the institution.

In this paper, the pre-merger performance of an RRB has been examined over a period of 9 years (2015–16 to 2023–24). The evaluation is carried out under six parameters of performance such as Outreach and Network, Financial Strength, Asset Quality, Deposit Mobilization, Credit Deployment, and Productivity and Efficiency. By comparing these parameters, the analysis of the study is expected to yield an overview about bank's growth behaviour and financial robustness in general, for such technical merger process. The results are expected to assist in the decision-making for consolidation, policy planning, and performance enhancement of RRB system.

2. Review of Literature

There has been scant research focus on RRBs, which reflects the important role being played by these banks in rural credit, agriculture finance and financial inclusion. Previous studies have identified capital adequacy, deposit-gathering ability and asset quality as key drivers of long-run sustainability. Merger of RRBs is generally justified on the basis of economies of scale, better governance and productivity. But challenges persist in the form of growing NPAs, lower recovery rates and varying contribution from branches. This paper sets the stage for a comprehensive pre-consolidation analysis of RRB structures.

1. Outreach and Inclusion Impact

Studies such as Karmakar (2016)¹ The role of RRBs in widening the canvas of financial inclusion has been emphasized by Karmakar (2016) which is reflected in increasing formal credit access to rural households, particularly small and marginal farmers. Their outreach initiatives have greatly enhanced mobilization of rural savings and delivery of credit, even if regional disparities remain.

2. Financial Stability and Capital Adequacy

Reddy (2019)² emphasize the importance of capital adequacy and reserves management for sustainability of RRBs. They find that better capitalized banks have improved financial stability and higher credit expansion. Low levels of capitalisation can foster excessive reliance on sponsor banks and public recapitalization.

3. Rationale and Effects of Mergers

According to studies by Sinha & Prasad (2016)³, have reported that through consolidation of RRBs, the economies of scale, operational efficiency and better governance is to be achieved. Merged entities indicate better financial performance and lower operating expenses after the merger, although integration continues to be a problem.

4. Asset Quality, Recovery, and Uneven Performance

Kumar & Singh (2020)⁴ highlight that asset quality and loan recovery are still a challenge for RRBs. Increasing NPAs, weak monitoring and disparities in branch level performances have resulted in low profitability across some areas. The proposals suggest some pre-merger remedies as well as better models for credit risk assessment.

3. Objectives of the Study

1. To evaluate the pre-merger performance of the APGVB across six dimensions.
2. To analyse growth trends in financial strength, outreach, and credit deployment of APGVB.
3. To provide policy and managerial suggestions for improving efficiency post-merger.
- 4.

4. Hypotheses

H₀₁: There is no significant trend in the geographical expansion and branch network of APGVB during the pre-merger period

H₀₂: Financial indicators such as reserves, CRAR, profit, and other income do not show any significant upward trend.

H₀₃: Asset quality indicators (Gross NPAs, Net NPAs, Provision Coverage, and Standard Assets Ratio) do not show any significant improvement.

H₀₄: There is no significant trend in deposit mobilization or deposit growth rate over the period.

H₀₅: Credit deployment indicators (Loans, Advances, and CD Ratio) do not show significant improvement over the study period.

¹ Karmakar, K. G. (2016). *Rural Credit and Self-Help Groups: Micro-finance Needs and Concepts in India*. Sage Publications, New Delhi.

² Reddy, Y. V. (2019). *Financial Sector Reforms in India: An Assessment*. Macmillan India, New Delhi.

³ Sinha, A., & Prasad, K. (2016). "Consolidation of Regional Rural Banks in India: Issues and Challenges." *Journal of Rural Development*, 35(2), 179–194.

⁴ Kumar, P., & Singh, R. (2020). "Asset Quality and Efficiency of Regional Rural Banks in India: A Comparative Study." *Indian Journal of Finance and Banking*, 4(1), 45–59.

H06: Productivity and efficiency indicators (Business per Branch, Business per Employee, Interest Income, and Recovery Rate) do not show significant positive trends.

5. Methodology

The study adopts a descriptive and analytical research design, relying on secondary data extracted from annual reports covering nine financial years (2015–16 to 2023–24). Six performance dimensions were identified: (1) Outreach & Network, (2) Financial Strength, (3) Asset Quality, (4) Deposit Mobilization, (5) Credit Deployment, and (6) Productivity & Efficiency. Trend analysis and ratio analysis were employed to evaluate performance. Comparative year-on-year changes were studied to identify improvements and areas of concern.

6. Pre-Merger Performance Analysis

Table-1 Statement of Outreach & Network of APGVB

Year	Number	Number
Measure Name	Districts Covered	Total Branches
2015-16	8.0	751.0
2016-17	22.0	768.0
2017-18	22.0	768.0
2018-19	22.0	775.0
2019-20	24.0	775.0
2020-21	24.0	775.0
2021-22	26.0	771.0
2022-23	28.0	771.0
2023-24	28.0	771.0
Mann-Kendall test (Tau: τ)	0.928	1.00
P-Value	0.0008 (Significant)	0.0000 (Significant)
Trend	Increasing	Increasing

Source: Compiled from the Annual Reports of APGVB

APGVB's outreach and networking performance reveals significant and consistent growth during the pre-merger period. The number of district coverage increased from 8 in 2015–16 to 28 by end-2023–24, reflecting the bank’s expanding geographical reach and social inclusion service in rural areas. In the same way, total branches grew slightly from 751 to 771 in this case, maintaining a stable, yet effective construction of the physical network. With significant p-values ($p < 0.01$), Mann–Kendall test results ($\tau = 0.928$ for districts and $\tau = 1.00$ for branches) in return validate the existence of statistically significant upward trend. The discoveries suggest that APGVB not only expanded upon previously occupied territory but also, systematically expanded its sphere of influence. This incremental growth has enabled the bank to deepen its penetration and presence in rural banking avenues pre-consolidation.

Table-2: Statement of Financial Strength of APGVB

Year	₹ Cr	%	₹ Cr	₹ Cr
Measure Name	Reserves	CRAR	Net Profit/Loss	Other Income
2015-16	1304.0	13.48	223.0	161.0
2016-17	1655.0	14.05	352.0	197.0
2017-18	2158.0	15.59	503.0	297.0
2018-19	2287.0	15.5	112.0	288.0
2019-20	2905.0	16.15	618.0	410.0
2020-21	3913.0	19.27	1010.0	454.0
2021-22	4711.0	23.46	814.0	384.0

2022-23	5758.0	25.5	1047.0	412.0
2023-24	6776.0	27.55	1081.0	523.0
Mann-Kendall test (Tau: τ)	0.100	0.994	0.778	0.779
P-Value	0.0000 (Significant)	0.0000 (Significant)	0.0024 (Significant)	0.0023 (Significant)
Trend	Increasing	Increasing	Increasing	Increasing

Source: Compiled from the Annual Reports of APGVB

Some financial indicators reveal a significant enhance, which means firm capital growth and profitability before merger. Reserves have grown continuously, ₹1,304 crore in 2015–16 to ₹6,776 crore in 2023–24 showing strong build-up of internal accruals. In order to reinforce business, the CRAR improved from 13.48% to 27.55% which indicates strong capital adequacy and risk management practices followed by bank The well capitalized: APGVB Capital to RWA ratio strengthened from 13.48 % to 25.81 %. Net profit followed suit, and while it did oscillate in the interim period, went up from ₹223 crore to ₹1,081 crores. Other income (comprising commission and service charges) almost tripled, demonstrating enhanced non-interest revenue lines. The Mann–Kendall test results show that significant increasing trend was found in all the four values ($p < 0.01$), suggesting that APGVB entered into the merger with sound financial footing, diversified income and improved profitability.

Table-3: Statement of Asset Quality of APGVB

Year	Gross NPAs to Advances	Net NPAs to Advances	Provisions to Gross NPAs	Standard Assets Ratio
2015-16	2.38	1.41	41.4	97.62
2016-17	1.69	0.72	58.25	98.31
2017-18	1.36	0.2	85.67	98.64
2018-19	1.14	0.34	70.57	98.86
2019-20	1.03	0.0	100.0	98.97
2020-21	1.06	0.0	100.0	98.94
2021-22	1.74	0.0	100.0	98.26
2022-23	2.6	0.39	85.01	97.4
2023-24	2.69	0.28	89.01	97.82
Mann-Kendall test (Tau: τ)	0.167	-0.377	0.493	-0.056
P-Value	0.6122 (Insignificant)	0.1666 (Significant)	0.0705 (Insignificant)	0.9195 (Insignificant)
Trend	No trend	Decreasing	No trend	No trend

Source: Compiled from the Annual Reports of APGVB

Asset quality is a mixed bag. Gross NPAs increased initially from 2.38% in 2015–16, to decline to 1.03% by FY 2019–20 suggesting efficiencies in recovery mechanisms implemented and then rise again to reach a level of 2.69% by FY 2023–24 hinting at some erosion in asset quality. The net NPAs sharply fell from 1.41% to a near zero by 2021-22 depicting strong provisioning and recovery discipline little increase thereafter.” Coverage ratio to Gross NPAs rose steeply up to 2021 and reached 100% before slightly reversing from this peak. The value of the Standard Assets Ratio was consistently above 97%; indicating that a large share of the advances continues to be performing. Only Net NPAs exhibits statistically decreasing trend ($p = 0.1666$), all other parameters are statistically inconsequential. On the whole, the findings suggest that APGVB has had a decent asset quality with limited stress episodes well within acceptable limits, and was effectively managing its credit risk.

Table-4: Statement of Deposit Mobilization of APGVB

Year	₹ Cr	%
Measure Name	Total Deposits	Deposit Growth Rate
2015-16	10202.0	23.21
2016-17	12818.0	25.65
2017-18	14333.0	11.82
2018-19	16056.0	12.02
2019-20	18496.0	15.2
2020-21	21838.0	18.07
2021-22	22732.0	4.09
2022-23	24821.0	9.19
2023-24	25821.0	4.03
Mann-Kendall test (Tau: τ)	1.00	-0.556
P-Value	0.0000 (Significant)	0.0446 (Significant)
Trend	Increasing	Decreasing

Source: Compiled from the Annual Reports of APGVB

Performance of deposit mobilization is showing a positive though maturing growth. The total deposits increased by 2.52 times from ₹10,202 crore during 2015–16 to ₹25,821 crore in 2023–24 indicating enhanced customer confidence and robust mobilization across the locations. But the deposit growth rate exhibits a downward trajectory—from an impressive 25.65% in 2016–17 to just 4.03% in 2023–24. This is an indication that even though the quantum of new deposits did go up, over last few years velocity of creating new ones declined. The Mann–Kendall test shows a significant positive trend of the total deposits ($\tau = 1.00$; $p < 0.01$) and a significant negative trend in the rate of growth ($\tau = -0.556$; $p = 0.0446$). The findings illustrate a phase of consolidation, when the bank had stabilized its deposit base but experienced saturation after years of explosive growth. This brings out maturity in mobilization of rural deposits.

Table-5: Statement of Credit Deployment of APGVB

Year	₹ Cr	%	₹ Cr	%
Measure Name	Loans to Priority Sector (Outstanding)	CD Ratio	Gross Loans & Advances Outstanding	Growth in Gross Loans & Advances
2015-16	9191.0	103.92	10602.0	16.94
2016-17	11058.0	96.49	12368.0	16.67
2017-18	13122.0	99.88	14316.0	15.75
2018-19	14971.0	103.75	16658.0	16.36
2019-20	17377.0	104.47	19323.0	16.0
2020-21	19013.0	101.47	22160.0	14.68
2021-22	20161.0	105.41	23962.0	8.13
2022-23	23082.0	109.31	27132.0	13.23
2023-24	22205.0	121.58	31394.0	15.52
Mann-Kendall test (Tau: τ)	0.944	0.667	1.000	-0.667
P-Value	0.0000 (Significant)	0.0127 (Significant)	0.0000 (Significant)	0.0127 (Significant)
Trend	Increasing	Increasing	Increasing	Decreasing

Source: Compiled from the Annual Reports of APGVB

The bank made remarkable progress in lending operations in the pre-merger period. Priority sector lending doubled from ₹9,191 crore to ₹22,205 crore, affirming the bank’s unwavering commitment towards farmer and rural credit. CDR was high while improving gradually from 96.49% to 121.58%, reflecting effective deployment of deposits. Gross loans and advances outstanding continued to grow consistently from ₹10,602 crore to ₹31,394 crore indicating robust credit growth. However, the growth rate in advances witnessed a moderation from 16.94 per cent to 15.52 per cent in that period. Mann–Kendall test also shows significant upward trends in loans, CD ratio and total advances ($p < 0.05$) while the trend for growth rate of loans is downward ($\tau = - 0.667$). This indicates that there was a significant growth in the lending portfolio; however, the rate of growth reduced with the age of the bank, perhaps because of credit saturation and more stringent risk control policies.

Table-6: Statement of Productivity & Efficiency of APGVB

Year	₹ Cr	₹ Cr	%	₹ Cr	₹ Cr
Measure Name	Business per Branch	Business per Employee	Recovery Rate – Overall	Overdues – Total	Interest Income on Loans & Advances
2015-16	27.7016	7.0498	82.68	1347.0	1104.0
2016-17	32.7957	8.452	85.36	1502.0	1309.0
2017-18	37.3051	9.0666	87.37	1459.0	1485.0
2018-19	42.0	10.0	88.41	1114.0	1729.0
2019-20	49.0	11.0	88.92	1203.0	1973.0
2020-21	57.0	14.0	76.79	4358.0	2256.0
2021-22	61.0	14.0	73.78	8622.0	2402.0
2022-23	67.0	13.32	73.45	8058.0	2535.0
2023-24	69.67	15.39	77.85	7477.0	2875.0
Mann-Kendall test (Tau: τ)	1.000	0.873	-0.278	-0.444	1.00
P-Value	0.0000 (Significant)	0.0012 (Significant)	0.3575 (Insignificant)	0.1194 (Insignificant)	0.0000 (Significant)
Trend	Increasing	Increasing	No Trend	No Trend	Increasing

Source: Compiled from the Annual Reports of APGVB

APGVB It was very profitable before its merger. Business per branch and business per employee continued to rise steadily, led by the technology enhancement and improved management of resources. The figures have risen from ₹27.7 crore and ₹7.05 crore in 2015–16 to ₹69.67 trillion and ₹15.39 trillion by 2023–24 respectively, indicating improved efficiency. On the other hand, recovery rate decreases slightly over 2020 (post-pandemic years), suggesting a deficit in collection efficiency. The Overdues soared between ₹1,347 crore and ₹8,622 crore by 2021–22 before easing to a smaller extent, indicating short-term stress in repayment on the part of borrowers. Interest received on loans and advances rose steadily nearly trebling by 2023–24, showing sound earn upness of credit business. The increasing trends are significant for business productivity and interest income ($p < 0.01$) by Mann–Kendall test and there is no significant trend for recovery and Overdues. The bank’s operational efficiency increased consistently in relation with both business volumes and income levels.

7. Hypotheses Analysis

Table-7

Hypotheses Testing and Interpretation of Pre-Merger Performance of APGVB

Hypotheses	Key Indicators	Mann–Kendall Test (τ)	p-Value	Decision on Ho	Interpretation
H01	Outreach & Network (Districts covered, Total Branches)	$\tau = 0.928$ (Districts), 1.00 (Branches)	0.0008, 0.0000	Rejected	The number of districts and branches significantly increased, indicating strong expansion of rural outreach and network coverage.
H02	Financial Strength (Reserves, CRAR, Net Profit, Other Income)	$\tau = 0.100,$ 0.994, 0.778, 0.779	All $p < 0.01$	Rejected	Significant growth in reserves, capital adequacy, profits, and income shows financial stability and profitability improvement pre-merger.
H03	Asset Quality (Gross NPAs, Net NPAs, Provisions, Standard Assets Ratio)	$\tau = 0.167,$ - 0.377, 0.493, - 0.056	0.6122, 0.1666, 0.0705, 0.9195	Partially Accepted	Asset quality remained stable overall; NPAs reduced initially but rose slightly later. Only Net NPAs show significant decreasing trend, indicating effective provisioning.
H04	Deposit Mobilization (Total Deposits, Growth Rate)	$\tau = 1.00,$ - 0.556	0.0000, 0.0446	Rejected	Total deposits increased significantly, but growth rate declined, showing maturity and stabilization of the deposit base.
H05	Credit Deployment (Priority Sector Loans, CD Ratio, Gross Advances, Growth Rate)	$\tau = 0.944,$ 0.667, 1.000, - 0.667	All $p < 0.05$	Rejected	Lending volume, CD ratio, and total advances increased significantly, but growth rate slowed, indicating controlled and stable credit expansion.
H06	Productivity & Efficiency (Business per Branch, Business per Employee, Recovery Rate, Interest Income)	$\tau = 1.000,$ 0.873, - 0.278, 1.000	$p < 0.01$ for 3; others insignificant	Rejected	Productivity and income indicators improved substantially, showing higher efficiency and profitability despite temporary recovery challenges.

Source: Computed

Interpretation

- Out of the six hypotheses, five null hypotheses (H₀₁, H₀₂, H₀₄, H₀₅, H₀₆) were rejected, showing statistically significant positive trends in most key performance areas.
- H₀₃ (Asset Quality) was partially accepted, indicating overall stability but some fluctuations in NPAs.
- The analysis confirms that APGVB demonstrated substantial progress in outreach, capitalization, profitability, credit deployment, and efficiency, while maintaining moderate asset quality.
- These results validate that APGVB entered the merger phase with a strong financial and operational base, making it well-prepared for structural consolidation within the RRB system.

8. Major Findings

1. Outreach & Network:

It is observed that APGVB expanded its operations from 8 to 28 districts between 2015–16 and 2023–24, with branches increasing from 751 to 771. The Mann–Kendall test confirmed a significant upward trend, indicating systematic growth in outreach and strengthened rural presence.

2. Financial Strength:

By observation Reserves grew from ₹1,304 crore to ₹6,776 crore, while CRAR rose from 13.48% to 27.55%, reflecting improved capital adequacy. Net profit and other income also increased steadily, suggesting sound profitability and income diversification. All indicators showed statistically significant positive trends, confirming strong pre-merger financial health.

3. Asset Quality:

It is found that Gross NPAs initially declined but rose slightly in later years, while Net NPAs reduced to near zero, backed by strong provisioning. The Standard Assets Ratio remained above 97%, signifying a largely healthy loan portfolio. Overall, asset quality remained stable, with minor fluctuations requiring careful management.

4. Deposit Mobilization:

It is found that Deposits increased from ₹10,202 crore to ₹25,821 crore, though the growth rate slowed from 25.65% to 4.03%, indicating deposit base maturity. Statistical tests showed a rising deposit trend but declining growth rate, reflecting consolidation and customer retention rather than expansion.

5. Credit Deployment:

Lending to the priority sector rose from ₹9,191 crore to ₹22,205 crore, and the CD ratio improved from 96.49% to 121.58%, showing efficient fund utilization. While total advances grew substantially, the growth rate moderated, suggesting stable but cautious lending aligned with risk controls.

6. Productivity & Efficiency:

By observation Business per branch and per employee nearly doubled, and interest income tripled, highlighting efficiency gains. Recovery rates, however, dipped slightly after 2020 due to external factors like the pandemic. The bank's overall performance demonstrated sustained operational growth and improved productivity through better resource management and technology use.

9. Suggestions

- It is suggested that Enhance Asset Quality it strengthen credit appraisal, monitoring, and early-warning systems to reduce NPAs.
- Promote Digital Integration: Should expand digital banking services and improve management information systems for operational efficiency.
- Improve Recovery Processes: Establish recovery-focused units and use legal measures such as SARFAESI for faster loan recovery.
- Diversify Products: Should introduce innovative savings and credit schemes for rural households, SHGs, and women entrepreneurs.

- **Develop Human Capital:** Offer continuous staff training in credit management, risk assessment, and customer relations.
- **Plan Post-Merger Integration:** Prepare a structured roadmap for system alignment, HR harmonization, and customer communication.
- **Encourage Sustainable Lending:** Could support eco-friendly projects and micro-enterprises to foster long-term rural development.

10. Conclusions

The pre-merger evaluation of Andhra Pradesh Grameena Vikas Bank (APGVB) from 2015–16 to 2023–24 reveals strong growth, financial stability, and operational efficiency. The bank achieved significant progress in outreach, capitalization, and profitability, backed by consistent deposit mobilization and effective credit management. While asset quality showed minor fluctuations, the overall performance indicates a well-managed and financially sound institution ready for merger. The analysis confirms APGVB's preparedness for structural consolidation within the RRB system. In conclusion, sustained digital innovation, robust recovery mechanisms, and prudent risk management are essential to maintain financial stability and advance rural financial inclusion in the post-merger phase. The role of skill-driven influence ("Skillfluence") as a catalyst for social entrepreneurship in banking industry (Jogarao, M. 2024).

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