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A Study on the profitability of Regional Rural Bank (RRB) As A Whole In India

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Abstract:

Regional Rural Bank (RRB) is operating across India since it's inception in 1976. RRB was introduced for economic development of rural areas of India. The present study is an attempt to examine the profitability of the RRB for a period ranging 2003-04 to 2016-17.Secondary data is used from the published Annual Reports of RRB for the study period. Select parameters i.e. interest income, non-interest income (other income), total income, interest paid, other operating expense, wages bill, total operating expense, provisions and contingencies, total expenditure, operating profit, net profit are used to examine the profitability of RRB. While examining the profitability of RRB select profitability ratios i.e. interest earned ratio, interest paid ratio, non interest earned ratio, operating profit ratio, net profit ratio are also taken into account. The study reveals that, during the study period the profitability of RRB is not appreciably improved.

Key word: Profitability socioeconomic, annual report, interest income, interest paid, net profit

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Introduction:

The steps taken by Government of India in 1975 towards economic development of the rural parts of the country has given birth of Regional Rural Bank (RRB) through promulgation of RRB Act 1976. In the entire North East eight RRBs are operating in different states by different name. In the beginning there were 196 RRBs but after amalgamation there are 57 RRBs now in India. RRBsare dedicated to amelioration of the socioeconomic condition of the rural people of India. In the period of last 40 years changes in the policy of the bank has taken place.Therefore, a study is required to examine the status of theprofitabilityof RRB as a whole in India.

Review of Literature:

Ahmed (1992) has conducted a study with an objective to evaluate the performance and profitability of RRB in India. The study concluded that profitabilityperformance of RRB is not improved.**Desai (1983)** has conducted a study with an objective of assessing the profitability performance through credit deploymentin the light of agricultural credit and deposit mobilization by RRB in India. The study revealed that, profitability performance through deposit mobilization and credit deployment in the rural area are not sound. **Uddin (2003)** has conducted a study with an objective to find out the profitability performance of Regional Rural Bank in Uttarakhand. The study has revealed that profitability performance of RRB in Uttarakhand is improved through proper deposit mobilization, credit deployment and branch expansion.**SinhaRoy (1994)** has conducted a study on profitability performance of Regional Rural Banks in West Bengal. The study revealed that, Regional Rural Bank have rendered a commendable service in the rural economy of West Bengal through mobilizing rural savings doing an efficient credit deploymentand successful recovery with a good overall profitability performance.**Geetha(2016)** has conducted a study to measure profitability performance of Regional Rural Banks in Shimoga district. The study has concluded that, profitability performance of Krishna PragatiGramina Bank is not appreciable.

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Research Objective: To examine the profitability of RRB as a whole in India during the study period.

Research Question:

Does the profitability of RRB as a whole in India improved during the study period?

Research Design: The present research is an empirical and explanatory type study.

Research Methodology:

The present study aimed to examine the profitabilityof Regional Rural Bank as a whole in India for a period of 14 years from 2003-04 to 2016-17. Secondary data has been used to attain the objective. Data has been collected from the published Annual Reports of RRB. The parameters used to analyzethe profitability are interest income, non-interest income (other income); interest paid, other operating expense, wage bill, provisions and contingencies, total operating expense, total expenditure, operating profit, net profit etc. Apart from these parameters profitability ratios i.e. interest earned ratio, interest paid ratio, non-interest earned ratio, operating profit ratio, net profit ratio are also taken into account for analysis.To analyze the collected data for the above mentioned parameters, selected statistical measures i.e. mean, standard deviation, and compound annual growth rate (CAGR), annual growth rate(AGR), average annual growth rate(AAGR) have been used.

To witness the performance on profitabilityduring the study period semi average method and the straight line trend equation with respect to time has been used for annual growth rate of selected parameters under study. Formulae used in this study are as follows.

- $Annual\ Growth\ Rate = \frac{Current\ Year\ Value - Previous\ Year\ Value}{Previous\ Year\ Value} x100$
- $CAGR = \left(\frac{Amount\ at\ the\ end\ of\ study\ period}{Amount\ at\ the\ begining\ of\ study\ period}\right)^{\frac{1}{n}} - 1$

  Where, n = number of years

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- $AAGR = \frac{Sum\ of\ annual\ growth\ rates}{Number\ of\ years}$

Limitations:

- The study uses only 14 years data for analysis to arrive at the findings.
- To analyse the data the study uses limited statistical tools and techniques and methods.
- The study uses published secondary data and there are chances of inherent error in the compiled statement itself.

Scope of the study: Thepurpose of the study is to examine the status ofprofitabilityof RRB in India for the period 2003-04 to 2016-17. The scope of the investigation has been confined to Indian territory jurisdiction of Regional Rural Bank.

Data analysis and discussion: Bank is collecting money as deposit through deposit mobilization and invests money through credit deployment. The interest rate for the deposit is lower than the interest charged for the lending. The difference of these two interest rates is the earning of the bank. Apart from this bank earns through other sources like annual service charge, commission, fees etc. as non-interest income. To run the banking business bank has it's operating expense including interest of borrowing and taxes. If we deduct operating expense from the gross income we get operating profit. If provisions and contingencies are subtracted from the operating profit we get the net profit of the bank. Table-1 depicts the data related to select parameters related to income, expenditure and profit of RRBs in India. The observations are as follows. In comparison to the beginning year to the end year, the interest income, other income, and total income has increased 6.35 times, 5.09 times, 6.21 times respectively .The CAGR of interest income, other income, total income are 14%, 12% and 14 % respectively. In comparison to the beginning year to the end year the interest expend, other operating expenses, wage bill, total operating expenses, provisions and contingencies, total expenditure has increased 6.78 times, 8.72 times, 4.44 times, 5.19 times, 14.68 times, 6.66 times respectively. The CAGR of the interest expend, other operating expenses, wage bill, total operating expenses, provisions and total expenditureis 15%, 17%, 11%, 12%, 21%, 15% respectively during the study

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period.In comparison to the beginning year to the end year the operating profit and net profit has increased 6.16 times and 2.99 times respectively during the study period. The CAGR of operating profit and net profit of RRBs during the study period are 14% and 8% respectively. From the above analysis it is evident that during the study period compound annual growth rate of total income and interest income is same. CAGR of other operating expense is higher than total operating expense. This is implied that there is less growth in the wage bill but there is more growth in other operating expenses during the study period. CAGR of Interest expense is higher than the CAGR of interest earned which is certainly not a good sign of the profitability of RRBs in India. A highest CAGR (21%) for provisions and contingencies followed by other operating expense (17%) is noticed during the study period.The CAGR of total expenditure is higher than the CAGR of total income during the study period which is not a good sign of profitability. CAGR of operating profit is higher than the CAGR of net profit during the study period.

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Table -1
Income Expenditure Profit analysis of RRBs in India(Rs.in crore)

Years	Interest income	Other income	Total Income	Interest expended	Other operating expenses	Wages bill	Total Operating Expenses	Provisions and contingencies	Total Expenditure	Operating Profit	Net Profit
2003-04	5538	706	6244	3360	321	1508	1829	286	5475	1055	769
2004-05	5676	461	6137	3161	441	1526	1967	259	5387	1009	750
2005-06	5222	377	5599	2784	447	1581	2028	278	5090	787	509
2006-07	7123	540	7663	3716	654	2051	2705	617	7038	1242	625
2007-08	8739	667	9406	4757	736	2054	2790	832	8379	1859	1027
2008-09	10579	810	11389	6100	874	2291	3165	788	10053	2124	1336
2009-10	12945	890	13835	7375	871	2676	3547	1029	11951	2913	1884
2010-11	15200	1000	16200	8600	1100	3800	4900	1000	14500	2700	1700
2011-12	18900	1100	20000	11200	1500	4000	5500	1450	18150	3300	1850
2012-13	19600	1200	20800	11800	1500	3900	5400	1430	18630	3600	2170
2013-14	25491	1521	27012	15600	1949	4768	6717	1998	24315	4695	2697
2014-15	29395.5	1810.5	31206	18650	2374.5	5834	8208.5	2049	28907.5	4347.5	2298.5
2015-16	33300	2100	35400	21700	2800	6900	9700	2100	33500	4000	1900
2016-17	35200	3600	38800	22800	2800	6700	9500	4200	36500	6500	2300
Sum	232908.50	16782.50	249691.00	141603.00	18367.50	49589.00	67956.50	18316.00	227875.50	40131.50	21815.50
Average	**16636.32**	**1198.75**	**17835.07**	**10114.50**	**1311.96**	**3542.07**	**4854.04**	**1308.29**	**16276.82**	**2866.54**	**1558.25**
CAGR	**0.14**	**0.12**	**0.14**	**0.15**	**0.17**	**0.11**	**0.12**	**0.21**	**0.15**	**0.14**	**0.08**
SD	10583.87	856.25	11368.63	7045.89	864.63	1905.64	2765.46	1052.62	10768.75	1665.05	716.67

Source: Compiled and computed from Annual Reports(2003-04 to 2016-17) of RRB

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Table -2 explains the annual growth rates of total income, total operating expense, total expenditure, operating profit and net profit of RRBs in India. The observations are as follows. In comparison to the beginning year annual growth rate of total income has increased 8.36 times at the end year. The average annual growth rate of total income of RRB is 15.74%. There is a standard deviation of 12.60% for the annual growth rate of total income of RRB. In comparison to the beginning year annual growth rate of total income, total operating expense, total expenditure, operating profit, net profit has increased 8.36 times, 6.44 times, 6.56 times,15.33 times, 9.52 times respectively at the end year. The average annual growth rate of total income, total operating expense, total expenditure, operating profit and net profit of RRB are 15.74%, 14.15%, 16.34%, 18%, and 11.78% respectively. There is standard deviation of annual growth rate of 12.60,12.73, 12.45, 27.78, 26.62 for total income, total operating expense, total expenditure, operating profit, net profit respectively.

Table -2
Annual growth rate of total income, total operating expense total expenditure, operating profit, net profits of RRBs in India.

Years	Annual growth rate of total income (%)	Annual growth rate of total operating expenses (%)	Annual growth rate of total expenditure (%)	Annual growth rate of operating profit (%)	Annual growth rate of net profit (%)
2004-05	-1.71	7.55	-1.61	-4.36	-2.47
2005-06	-8.77	3.10	-5.51	-22.00	-32.13
2006-07	36.86	33.38	38.27	57.81	22.79
2007-08	22.75	3.14	19.05	49.68	64.32
2008-09	21.08	13.44	19.98	14.25	30.09
2009-10	21.48	12.07	18.88	37.15	41.02
2010-11	17.09	38.14	21.33	-7.31	-9.77
2011-12	23.46	12.24	25.17	22.22	8.82
2012-13	4.00	-1.82	2.64	9.09	17.30
2013-14	29.87	24.39	30.52	30.42	24.29
2014-15	15.53	22.20	18.89	-7.40	-14.78
2015-16	13.44	18.17	15.89	-7.99	-17.34
2016-17	9.60	-2.06	8.96	62.50	21.05
AAGR	**15.74**	**14.15**	**16.34**	**18.00**	**11.78**
SD	12.60	12.73	12.45	27.78	26.62

Source : Compiled and computed from Annual Reports of RRB

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Table-3 shows the semi average of operating profit and net profit of RRB during the study period. It is observed that, the semi average of operating profit and net profit of RRB is improved during the study period. It is inferred that semi average of the operating profit and net profit of RRB during the study period is improved.

Table-3
Semi average of operating profit and Net profit of RRB

Parameters	Average during (2004-2010)	Average during (2011-2017)	Result
Operating Profit (Rs.in crore)	1569.86	4163.21	Improved
Net Profit (Rs.in Crore)	985.71	2130.79	Improved

Source :Compiled and computed from various annual reports of RRB(2004-2017)

Table-4 shows the semi average of annual growth rate of operating profit and net profit of RRB during the study period. It is observed that, semi average of annual growth rate of operating profit and net profit of RRB is reduced during the study period.

Table-4
Semi average of annual growth rate of operating profit and net profit of RRB

Parameters	Average during 2004-2010	Average during 2011-2017	Result
Annual growth rate of Operating Profit of RRB (%)	22.09	14.50	Reduced
Annual Growth rate of Net Profit of RRB (%)	20.60	4.23	Reduced

Source: Compiled and computed from various annual reports of RRB (2004-2017).

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Table- 5 shows the comparison of straight line trend equation of annual growth rate of operating profit and net profit for RRBs in India. It is observed that, trend equation of annual growth rate of operating profit of RRB has a positive regression coefficient with a positively rising upward trend. From the value of R^2 it is evident that, 0.96% variation of the operating profit is explained by the variation of the time variable(x). It is also observed that annual growth rate of net profit of RRB has a negative regression coefficient with a downward trend. From the value of R^2 it is evident that, 0.83% variation of the net profit is explained by the variation of the time variable(x).

Table-5
Straightline trend equation with respect to time for the annual growth rate of operating profit and net profit of RRB

Parameters	Straight line trend equation with respect to time	R^2	Regression Coefficient(β)	Direction of Trend
AGR-Operating Profit	$y = 13.108 + 0.6995x$	0.0096	Positive	Upwards
AGR-Net profit	$y = 16.131 - 0.621x$	0.0083	Negative	Downwards

Source : Compiled and computed from published annual reports of RRB(2004-2017)

Table-6 shows the select profitability ratios of RRB during the study period. The following profitability ratios i.e. interest earned ratio, interest paid ratio, non-interest earned ratio, operating profit ratio and net profit ratio are taken into account for the analysis.The interest earned ratio is declined 12.81% during the study period. *This implies that, per volume of business less interest is earned. In another way, with the increasing volume of business during the study period interest earned is not increased proportionately which is not good for the profitability of the bank.* The CAGR of interest earned ratio is (-) 1% which is not a good sign of profitability. The interest paid ratio is declined7.38% during the study period. *This implies that, per unit volume of business less interest is paid. It isa good sign of profitability of RRB. More the interest paid ratio more the risk for the business.*The CAGR of interest paid ratio during the study period is (-) 1% which is a good sign of profitability.

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The non-interest earned ratio is declined 30.23% during the study period. *This is inferred that, per volume of business the non-interest income earned by the bank is reduced during the study period. Itis obvious that, more the earning of non-interest income more is the chance of profitability. This is because the cost involved in non-interest income is much less than the cost involved in interest income. Since the non interest income ratio is declined during the study period, we can say it is not a good sign of profitability of the bank.* The CAGR of the non-interest income ratio during the study period is (-) 3%.

The operating profit ratio is declined 13.33% during the study period. *This is inferred that per volume of total business the operating profit earned by the bank is reduced during the study period. It is obvious that, more the earning of operating profit more is the chance of profitability. This is because the cost involved in operation can be controlled by many ways like manipulation of labour, raw materials, technologies, power etc. but other cost involved like tax and duties hardly be controlled. Since the operating profit ratio is declined during the study period, we can say it is not a good sign of profitability of the bank.* The CAGR of the operating profit ratio during the study period is (-) 1%.

The net profit ratio is declined 54.54% during the study period. *This is inferred that per volume of total revenue the net profit earned by the bank is reduced during the study period. It is obvious that, more the earning of net profits more is the chance of profitability. This is because the total cost involved is deducted to calculate the net profit and thereafter no deduction of cost is involved. Since the net profit ratio is declined during the study period, we can say it is not a good sign of profitability for the bank.* The CAGR of the net profit ratio during the study period is (-) 5 %.

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Table-6

Select profitability ratio of RRBs in India

Years	Interest earned ratio	Interest paid ratio	Non interest earned ratio	Operating profit ratio	Net Profit ratio
2003-04	6.71	4.07	0.86	1.5	1.1
2004-05	6.04	3.36	0.49	1.3	1
2005-06	4.75	2.53	0.34	0.89	0.57
2006-07	5.45	2.85	0.41	1.16	0.56
2007-08	5.36	2.59	0.51	1.74	1.11
2008-09	5.62	3.08	0.43	1.8	0.9
2009-10	5.77	3.29	0.40	1.7	1.1
2010-11	5.84	3.30	0.38	1.3	0.9
2011-12	6.37	3.78	0.37	1.4	0.8
2012-13	5.70	3.43	0.35	1.4	0.8
2013-14	6.44	3.94	0.38	0.63	0.10
2014-15	6.19	4.11	1.14	0.07	0.08
2015-16	6.54	4.26	0.41	0.6	0.5
2016-17	5.85	3.79	0.60	1.3	0.5
SD	**0.53**	**0.56**	**0.23**	**0.33**	**0.24**
AVERAGE	**5.90**	**3.46**	**0.51**	**1.32**	**0.78**
CAGR	**-0.01**	**-0.01**	**-0.03**	**-0.01**	**-0.05**

Source: Compiled and computed from various annual reports of RRB (2004-2017).

Table-7 shows the straight line trend equation with respect to time for select profitability ratios of RRB. Trend equation of interest earned ratio of RRB has a positive regression coefficient with a positively rising upward trend line during the study period. From the value of R^2 it is evident that, 5.8% variation of the interest earn ratio is explained by the variation of the time variable(x).With higher interest earn ratio more interest is earned per volume of business. *This is inferred that, interest earn ratio of RRB has a positively growing trend during the study period which is a good sign of profitability.*Trend equation of interest paid ratio of RRB has a positive regression coefficient with a positively rising upward trend line during the study period. From the value of R^2 it is evident that,

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13.23% variation of the interest paid ratio is explained by the variation of the time variable(x).If interest paid ratio is small less interest is paid per volume of business. *This is inferred that, interest paid ratio of RRB has a positively growing trend during the study period which isnot a good sign of profitability.*Trend equation of non-interest earned ratio of RRB has a positive regression coefficient with a positively rising upward trend line. From the value of R^2 it is evident that, 2.85% variation of the non-interest earned ratio is explained by the variation of the time variable(x). *This is inferred that, non-interest earned ratio of RRB has a positively growing trend during the study period which is a good sign of profitability.*

Trend equation of operating profit ratio of RRB has a negative regression coefficient with a downward trend line. From the value of R^2 it is evident that, 21.19 % variation of the operating profit ratio is explained by the variation of the time variable(x). This is inferred that operating profit ratio of RRB has a downward trend during the study period. Trend equation of net profit ratio of RRB has a negative regression coefficient with a downward trend line. From the value of R^2 it is evident that, 37.79% variation of the net profit ratio is explained by the variation of the time variable(x). *This is inferred that, net profit ratio of RRB has a downward trend during the study period.*

Table-7
Straightline trend equation with respect to time for various profitability ratios of RRB

Parameters	Straight line trend equations with respect to time for RRB	R^2	Regression coefficient (β)	Direction of the trend
Interest earned ratio	y = 5.5014 + 0.1403x	0.058	Positive	Upward
Interest paid ratio	y = 2.828 + 0.136x	0.1323	Positive	Upward
Non-interest earned ratio	y = 0.4703 + 0.01x	0.0285	Positive	Upward
Operating profit ratio	y = 1.6073 - 0.0543x	0.2119	Negative	Downward
Net profit ratio	y = 1.0945 - 0.0505x	0.3779	Negative	Downward

Source: Compiled and computed from various annual reports of TGB and RRB (2004-2017).

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Findings: The statistical analysis of the study reveals that the profitability of Regional Rural Banks in India have not been improved in terms of operating profit and net profit during the study period. The major findings are as follows.

- CAGR of interest expend is more than the CAGR of interest earned of RRBs during the study period.
- CAGR of total expenditure is greater than the CAGR of total income of RRBs during the study period.
- AAGR of total expenditure (18%) is more than the AAGR of total income (15.74%) of RRBs during the study period.
- CAGR of provisions and contingencies of RRB is recorded highest (21%) during the study period.
- The semi average of operating profit and net profit during the study period is improved.
- The semi average of annual growth rate of operating profit and net profit is reduced during the study period.
- The average operating profit of RRB during the study period is Rs.2866.54 crore with AAGR and CAGR 18% and 14% respectively and standard deviation of Rs.1665.05 crore.
- The average net profit of RRB during the study period is Rs.1558.25 crore with AAGR and CAGR 11.78% and 8% respectively and standard deviation of Rs.735.03 crore.
- The CAGR of interest earned ratio, interest paid ratio, non interest earned ratio, operating profit ratio, net profit ratio is (-)1%, (-)1%, (-)3%, (-)1%, (-)5% respectively.
- The annual growth rate of operating profit of RRB has regression coefficient β is (-) 0.6995 and coefficient of determination 0.96% with a negative trend during the study period.
- The annual growth rate of net profit of RRB has regression coefficient β is (-) 0.621 and coefficient of determination 0.83% with negative trend during the study period.
- The interest earned ratio, interest paid ratio, non-interest earned ratio has regression coefficient β is 0.1403, 0.136, 0.01repectively and coefficient of determination 5.8%, 13.23%,

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2.85% respectively with a positive trend. On the other hand regression coefficient β of operating profit ratio and net profit ratio is (-) 0.0543 and (-) 0.0505 respectively and coefficient of determination 21.19% and 37.79 % respectively has a negative trend during the study period.

Conclusion: After analyzing 14 years data related to profitability of RRBs in India, we have arrived at the conclusion to say that the profitability of RRB is not suitably improved during the study period.

Suggestion:RRB has to control it's operating cost to minimize operating expense. RRB has to improve profitability by improving productivity through deposit mobilization and credit deployment. Bank has to improve the operating profit ratio and net profit ratio which is showing negative trend during the study period.

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