Performance Evaluation of RRBS in India

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Abstract: This research paper worked on measuring performance of regional rural banks of India. Regional Rural Banks are the banking organizations being operated in different states of India. They have been created to serve the rural areas with banking and financial services. This research aim is that to analyze the financial performance of RRBs before amalgamations and after amalgamations. This study is gathered from secondary sources that are from the published annual reports of RBI for the financial year ended 2007 to 2019. Finally analyzed financial performance of RRBs at post and pre amalgamation scenario measuring based on the spread ratio, burden ratio and profitability ratio. The spread ratio has shown significance performance in terms of pre- amalgamation period and post-amalgamation period. As spread ratio comprises of Interest income earned and interest income expensed divided by total assets. The other financial indicators such as no. of RRBs, branches, district coverage, deposits and advances have shown growth but it is not significant growth.

Keywords- Regional Rural Banks, Spread Ratio, Burden Ratio, Profitability Ratio

INTRODUCTION

Regional Rural Banks are the banking organizations being operated in different states of India. They have been created to serve the rural areas with banking and financial services. However, RRB's may have branches set up for urban operations and their area of operation may include urban areas too. Regional Rural Banks were established under the provisions of an Ordinance passed on 26 September 1975 and the RRB Act.1976 to provide sufficient banking and credit facility for agriculture and other rural sectors. These were set up on the recommendations of The Narasimham Working Group during the tenure of Indira Gandhi's government with a view to include rural areas into economic mainstream since that time about 70% of the Indian Population was of Rural Orientation.

Priority Sector Lending is an important role given by the Reserve Bank of India (RBI) to the banks for providing a specified portion of the bank lending to few specific sectors like agriculture or small-scale industries. This is essentially meant for an all- round development of the economy as opposed to focusing only on the financial sector.

LITERATURE REVIEW

Robson William B. P., Bergevin Philippe (2012): This study argues that Canada's federal government, which began issuing real-return bonds (RRBs) in 1991, should issue more RRBs of more types than it currently plans to do. Issuing more RRBs would not only better satisfy existing demand from investors; it has the potential to spur the development of other price-indexed instruments. Experience elsewhere suggests that more federal RRBs could encourage other entities to issue price-indexed debt, and would let intermediaries provide such products as inflation-linked annuities, thus providing more Canadian savers with protection against intentional or accidental inflation.

Jasvir S. Sura (2008): The study shows that the overall position of RRBs in India is not quite encouraging. The poor credit- deposit ratio is still making dent on the improvable functioning of RRBs. Since the RRB is supposed to be a bank for poor people, its presence in all the states of country especially in underdeveloped States can make things better. The government should spread the branches of RRBs at grass root level to provide such banking service to the needy rural people. Moreover, it is the responsibility of the bank management and the sponsored bank to take corrective measures to raise the credit-deposit ratio of the bank that would make RRBs relevant in the rural India.

The Committee on Financial Systems, (1991) (Narasimham Committee): The study has shown stress on the poor financial health of the RRBs to the exclusion of every other performance indicator. 172 of the 196 RRBs were recorded unprofitable with an aggregate loan recovery performance of 40.8 percent. (June 1993). The low equity base of these banks (paid up capital of Rs. 25 lakhs) did not cover for the loan losses of most RRBs. In the case of a few RRBs, there had also been an erosion of public deposits, besides capital. In order to impart viability to the operations of RRBs, the Narasimham Committee suggested that the RRBs should be permitted to engage in all types of banking business and should not be forced to restrict their operations to the target groups, a proposal which was readily accepted. This recommendation marked a major turning point in the functioning of RRBs.

NABARD (1986) published "A study on RRBs viability" which was conducted by **Agriculture Finance Corporation in 1986** on behalf of NABARD: The study revealed that viability of RRBs was essentially dependent upon the fund management strategy, margin between resources mobility and their deployment and on the control exercised on current and future costs with advances. The proportion of the establishment costs to total cost and expansion of branches were the critical factors, which affected their viability. The study further concluded that RRBs incurred losses due to defects in their systems as such, there was need to rectify these and make them viable. The main suggestions of the study included improvement in the infrastructure facilities and opening of branches by commercial banks in such areas where RRBs were already in function.

Kanika Krishna and Nancy Sahni (2012) published **"Financial performance evaluation of RRB'S in India"** The main objective was to study the growth-pattern and financial performance of Regional Rural Banks in India. The study conducted was descriptive in nature and data was collected from published annual reports of RBI and NABARD for the period 2006-2012. The study has witnessed positive impact on the financial performance of RRB's due to amalgamation and various other factors.

RESEARCH OBJECTIVES

- To evaluate the performance of RRBs in term of spread, burden, profitability, priority, and non-priority sector over the study period.
- To analyze the performance of RRBs before amalgamations and after amalgamations.

RESEARCH METHODOLOGY

This research study used descriptive researches design. The study has been taken up for the period 2006-2019. This study is gathered from secondary sources that are from the published annual reports of RBI for the financial year ended 2007 to 2019. The aim of the study is to analysis the financial performance Evaluation of Regional Rural banks in India so to achieve this various tools used as as ratios, Growth percentage, line and bar chart and paired t-test with help of statistical tools package Excel. Also constructed hypothesis for the accomplish study objectives.

HYPOTHESIS FOR PAIRED T-TEST

Certain differences have been found during the pre-amalgamation period and post-amalgamation period in the spread, burden, and profitability ratios of RRBs. In order to see whether the differences between them are significant or not following hypothesis has been taken:

HS0: There is no significant difference in performance between pre-amalgamation period and post-amalgamation period in spread ratio.

HS1: There is significant difference in performance between pre-amalgamation period and post-amalgamation period in spread ratio.

HB0: There is no significant difference in performance between pre-amalgamation period and post-amalgamation period in burden ratio.

HB1: There is significant difference in performance between pre-amalgamation period and post-amalgamation period in burden ratio.

HP0: There is no significant difference in performance between Pre-Amalgamation period and Post-Amalgamation period in Profitability ratio.

HP1: There is significant difference in performance between pre-amalgamation period and post-amalgamation period in Profitability ratio.

DATA ANALYSIS AND INTERPRETATION

SPREAD RATIO OF RRBS

Years	Interest Earned / Total Assets	Growth%	Interest Expanded / Total Assets	Growth%	Spread / Total Assets	Growth
Pre-Amalgamation						
2005-06	9.30	-	6.05	-	3.25	-
2006-07	9.31	0.11	5.98	-1.08	3.33	2.46
2007-08	9.14	-1.83	5.86	-2.01	3.28	-1.50
2008-09	8.63	-5.58	5.5	-6.14	3.13	-4.57
2009-10	7.89	-8.57	4.79	-12.91	3.1	-0.96
2010-11	7.29	-7.60	4.06	-15.24	3.23	4.19
2011-12	6.82	-6.45	3.64	-10.34	3.18	-1.55
Post-Amalgamation						
2012-13	6.73	-1.32	3.51	-3.57	3.22	1.26
2013-14	6.98	3.71	3.8	8.26	3.18	-1.24
2014-15	7.02	0.57	4.05	6.58	2.97	-6.60
2015-16	7.03	0.14	4.01	-0.99	3.02	2.02
2016-17	7.07	0.57	4	-0.25	3.07	1.65
2017-18	7.79	10.24	4.62	15.46	3.18	3.58
2018-19	7.11	-8.82	4.28	-7.36	2.83	-11.00

Table-1 **Sources**: Authors Compilation

From the above table of Interest earned and interest expense of spread ratio we can see that the period before amalgamation of RRBs was worse rather earning income they were expending more like in the year 2006 the ratio was 9.30 of interest earning and it reaches up to 6.30 in the year 2012-13 where interest expense ratio also falls but it relatively slow than interest earned.

But the whole picture change when amalgamation period starts the interest earned ratio started to grow the highest growth achieve was in the year of 2018 where the ratio was 7.79 and in 2019 it was 7.13, whereas interest expense does not change much after amalgamation it constantly in between 4 to 5 ratio.

BURDEN RATIO OF RRBS

Year	Non-Interest Income / Total Assets	Growth%	Non-Interest Expenses / Total Assets	Growth%	Burden / Total Assets	Growth%
Pre-Amalgamation						
2005-06	0.50	-	2.49	-	1.99	-
2006-07	0.48	-4.26	2.35	-5.64	1.87	-5.99
2007-08	0.65	35.42	2.57	9.36	1.92	2.67
2008-09	0.69	6.15	2.67	3.89	1.98	3.13
2009-10	0.99	43.48	2.6	-2.62	1.61	-18.69
2010-11	0.59	-40.40	2.53	-2.69	1.94	20.50
2011-12	0.48	-18.64	2.63	3.95	2.15	10.82
Post-Amalgamation						
2012-13	0.51	6.25	2.56	-2.66	2.05	-4.65
2013-14	0.53	3.92	2.23	-12.89	1.7	-17.07
2014-15	0.54	1.89	2.1	-5.83	1.56	-8.24
2015-16	0.48	-11.11	1.93	-8.10	1.45	-7.05
2016-17	0.46	-4.17	2.28	18.13	1.82	25.52
2017-18	0.45	-1.39	2.27	-0.52	1.81	-0.31
2018-19	0.44	-4.08	1.96	-13.67	1.52	-16.07

Table-2: Burden Ratio of RRBs **Sources**: Authors Compilation

From the above chart of burden ratio that is the earning and expenses of non-interest income and expenses, the non-interest income of RRBs during the period of 2006-2012 was merely same it's near about 0.5 to 1 ratio where the highest growth was achieved in the year 2008-09 it reached up to 0.99 and the story continues after amalgamation also where there is no significant impact of amalgamation on non-interest income earned.

If we talk about the non-interest expenses the chart says something else that to non-interest income earned, the non-interest expenses was 2.49 in the year 2006 and it was constantly increasing and it reached to 2.67 in 2009 the highest ratio during the study period it was the period of before amalgamation and after amalgamation the non-interest expenses falls downs significantly it was fall up to 1.93 in the year 2016 and started rise again but in last year it was 1.96 so there is an impact of amalgamation.

PROFITABILITY RATIO

Years	Operating Profit / Total Assets	Growth %	Net Profit / Total Assets	Growth%
Pre-Amalgamation				
2005-06	1.27	-	1.01	-
2006-07	1.47	15.75	1.21	19.80
2007-08	1.36	-7.48	1.07	-11.57
2008-09	1.1	-19.12	0.8	-25.23
2009-10	1.5	36.36	1.1	37.50
2010-11	1.3	-13.33	1	-9.09
2011-12	0.89	-31.54	0.57	-43.00
Post-Amalgamation				
2012-13	1.16	30.34	0.56	-1.75
2013-14	1.74	50.00	1.11	98.21
2014-15	1.80	3.45	0.9	-18.92
2015-16	1.70	-5.56	1.1	22.22
2016-17	1.30	-23.53	0.9	-18.18
2017-18	1.40	7.69	0.8	-11.11
2018-19	1.40	0.00	0.8	0.00

Table-3 – Profitability Ratio **Sources**: Authors Compilation

From the above chart, we can say that the profitability ratio, which includes operating profit and net profit there, is lot of difficulties in an operating profit ratio of RRBs during a study period. In the year 2006 it was 1.27 and it rises to 1.46 in the next year and it falls down in next 2 years and in the year 2010 it marks its highest growth of 1.50 ratios while in 2012 its lowest ratio was seen with 0.89 ratios and after amalgamation it was started with a growth and in 2015 the growth reached to 1.80 and after it the operating profit ratio falls down till 2019.

If we interpret about the net profit ratio than both the operating profit and net profit are neck to neck in the first 3 years of study. While the net profit is rapidly falls in the next years. In addition, there is not much impact of amalgamation on the net profit as the taxes were increasing and the performance of RRBs was also not up to the mark that's. Thus, profitability ratios are not in the favor of RRBs performance.

LENDING IN PRIORITY AND NON-PRIORITY SECTOR

(Figures in Cr.)

Years	Priority Sector	Non-Priority Sector	Years	Priority Sector	Non-Priority Sector
Pre-Amalgamation			**Post-Amalgamation**		
2005-06	5460	5896	**2006-07**	39695	8799
2006-07	6226.88	6881.96	**2007-08**	49650	10101
2007-08	4594	5977	**2008-09**	57528	11502
2008-09	10261	11897	**2009-10**	68660	14902
2009-10	11722	14393	**2010-11**	82643	17655
2010-11	16710	16161	**2011-12**	97400	23100
2011-12	32453	7259	**2012-13**	114300	25300

Table-4: Lending In Priority and Non-Priority Sector

Sources: Authors Compilation

From the above chart of time period of Pre-Amalgamation the lending of money in the two sectors that is Priority and Non- priority sector, we can see that in the starting years the lending money was head to head where as in the 2008 to 2010 the non- priority sector lending more than that of priority. While in the last year of pre-amalgamation period, the lending in priority sector is 4 times to that of non-priority sector.

From the above chart, we can say that after the Amalgamation the priority sector is working as per its name.as in each year the lending money was increasing in priority sector where as the lending money in non-priority sector was very low relatively to priority sector. The lending money in non-priority sector was also constantly increasing.

FINANCIAL PERFORMANCE OF RRBS

Year	Total Income	Total Expense	Operating Profit / Loss	Net Profit / Loss	Total Assets	Operating Profit Ratio	Net Profit Ratio
Pre-Amalgamation							
2005-06	4158.18	3728.21	536.96	429.27	42425	1.27	1.01
2006-07	4756.31	4167.27	715.43	589.04	48569	1.47	1.21
2007-08	5564.19	4956.31	774.08	607.88	56804	1.36	1.07
2008-09	5931	5407	714	524	63614	1.1	0.8
2009-10	6244	5475	1055	769	70278	1.5	1.1
2010-11	6137	5387	1009	750	77866	1.3	1
2011-12	5599	5089	787	510	88652	0.89	0.57
Post-Amalgamation							
2012-13	7653	7057	1232	596	105768	1.16	0.56
2013-14	9195	7766	2154	1374	123541	1.74	1.11
2014-15	11251	9882	2627	1369	145824	1.8	0.9
2015-16	13835	11951	2913	1884	184093	1.7	1.1
2016-17	16220	14232	2703	1988	215359	1.3	0.9
2017-18	20100	18100	3300	2000	242500	1.4	0.8
2018-19	20800	18600	3600	2200	275800	1.4	0.8

Table-5: Financial Performance of RRBS

Sources: Authors Compilation

Volume-5, Issue-II, December 2019 ISSN: 2454-8421

The primary objective of any business is to generate profit where as the main source of earning is to earn income so from the above chart we can say that the total income and total expenses of RRBs in the starting years of the study where very close as the earning and income are the same. However, after the amalgamation the scenario has not change much though there was an improvement in terms of earning total income in the last 3 years of study period that is from 2016 to 2019.

PERFORMANCE INDICATOR OF RRBS

Year	Number of RRBs	Number of District	Number of Branches	Deposits	Advances
Pre-Amalgamation					
2005-06	196	457	14301	31306	12663
2006-07	196	484	14311	38277.78	15815.8
2007-08	196	511	14390	44539.15	18629.55
2008-09	196	516	14433	50098	22158
2009-10	196	518	14445	56350	26113.86
2010-11	196	523	14484	62143	32870.03
2011-12	96	525	14494	71328.83	39712.57
Post-Amalgamation					
2012-13	96	534	14520	832143.55	48492.59
2013-14	91	594	14761	99093.46	58984.27
2014-15	86	616	15181	120189.9	67802.92
2015-16	82	618	15480	145034.95	82819.1
2016-17	82	620	15938	174041.94	101039.3
2017-18	82	618	16914	187351.37	120550.66
2018-19	64	635	17856	211458	2345200

Table-6: Performance Indicator of RRBS

Sources: Authors Compilation

From the above chart, we can say that the deposits and advances were in the right path as the deposits were constantly increases so because of this the bank has to give more interest to the account holders, as the deposits are high advances were also increasing positively. So, that the bank was able to earn interest from the lending money. Thus, it was a win-win situation for RRBs.

The period after amalgamation shows a very negative trend that in 2012 the deposits are very high and the advances were very low and after 2012 the deposits and advances were moving in a negative trend as both the deposits and advances were decreasing in the years of 2013 to 2019 so deposits are low then it will result in low in advances and thus there is no scope of earning income on lending money as advances were low. As compared to pre-amalgamation period, yes, the amount of deposits and advances has been increased but after 2012, it started to fall.

PAIRED T-TEST

Particulars	Paired Differences			95% Confidence Interval of Difference			
	Mean	SD	SE	Lower	upper	t-value	P-value
Interest Income earned	-1.236	1.252	0.473	-2.394	-0.078	-2.61	0.04
Interest Expense	-1.086	1.275	0.482	-2.266	0.093	-2.25	0.065
Spread	-0.1478	0.1322	0.05	-0.2701	-0.0256	-2.96	0.025
Non-Interest Income earned	-0.1388	0.1941	0.0734	-0.3183	0.0408	-1.89	0.107
Non-Interest Expense	-0.359	0.29	0.11	-0.627	-0.09	-3.27	0.017
Burden	-0.221	0.305	0.115	-0.503	0.061	-1.92	0.103
Operating Profit	0.203	0.31	0.117	-0.057	0.517	1.96	0.098
Net Profit	-0.0843	0.2629	0.0994	-0.3274	0.1588	-0.85	0.429

Table-7: Paired T-Test

Sources: Authors Compilation

In the combination of interest earned and interest, expense that is spread ratio its p-value is 0.025 which is smaller than 0.05 which means null hypothesis is rejected. Alternative hypothesis is accepted so, there is significant difference between pre- amalgamation period and post-amalgamation period in terms of spread ratio.

The burden ratio means the non-interest income earned and non-interest expense the p-value is 0.103, which means the null hypothesis is accepted and therefore there is no significant difference between pre-amalgamation and post-amalgamation period.

The result shows that the p-value of operating profit is 0.098 which is greater than 0.05 and thus HP0 is accepted means there is no significance difference between pre- amalgamation and post-amalgamation period of operating ratio. The net profit of RRBs of pre and post amalgamation period also gives the strong evidence (p-value 0.429) that there is no significant difference between pre and post amalgamation period of net profit.

RESULT AND CONCLUSION

In this research, study finally analyzed financial performance of RRBs at post and pre amalgamation scenario measuring based on the spread ratio, burden ratio and profitability ratio. The spread ratio has shown significance performance in terms of pre-amalgamation period and post-amalgamation period. As spread ratio comprises of Interest income earned and interest income expensed divided by total assets. The lending in priority sector and increased in deposits has been clearly seen in the above chart and as a result spread ratio has shown significance growth. The p-value of spread ratio is 0.025, which is smaller than 0.05, which lead us to reject the null hypothesis.

The other two ratios have not shown any significance difference, as the p-values of burden ratio and profitability ratio are 0.103 and 0.429 respectively, which lead us to accept the null hypothesis. The reason behind for this is that too much emphasis on priority sector which badly affect on lending in non-priority sector as interest rates are higher in non-priority sector to that of priority sector. The other financial indicators such as no. of RRBs, branches, district coverage, deposits and advances have shown growth but it is not significant growth.

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