

**PROFITABILITY AND GROWTH OF REGIONAL RURAL
BANKS (RRBS) IN INDIA**
(WITH REFERENCE TO THE PROFIT MAKING RRBS)

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ABSTRACT

The banking system in a country plays a pivotal role in the monetary system and economic development. The reforms and regulation of the banks should be taken in an appropriate time to phase with the changes take place in and around the country. As part of the financial sector reforms, prudential norms should be prescribed for banks, financial institutions and non-bank financial companies to maintain a healthy and sound financial position which not only provides a transparency of operations. The year 1975 saw yet another credit institution creation i.e., Regional Rural Banks, which emerged as an important financial institution for meeting the rural credit requirement. It is always argued that the RRBs have not been able to earn much profit in view of their policy of restricting their operation to target groups in spite of that the RRBs made a remarkable performance. Regional Rural Banks shortly known as RRBs along with Co-operative and Scheduled Commercial Banks constitute the 'multi-agency' approach adopted in rural financing. The growth pattern of the RRBs has been analyzed for the selected variables and findings are drawn by adopting the Compound Annual Growth Rate Technique (CAGR).

Keywords: Regional Rural Banks; Financial sector reforms; Multi-agency approach; Compound Annual Growth Rate Techniques.

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1. INTRODUCTION

The banking system in a country plays a pivotal role in the monetary system and economic development. The reforms and regulation of the banks should be taken in an appropriate time to phase with the changes take place in and around the country. As part of the financial sector reforms, prudential norms should be prescribed for banks, financial institutions and non-bank financial companies to maintain a healthy and sound financial position which not only provides a transparency of operations but would also bring about a qualitative changes in their approach in handling growing competition and for a better comparison in understanding the financial position of a banks. The year 1975 saw yet another credit institution creation i.e., Regional Rural Banks, which emerged as an important financial institution for meeting the rural credit requirement. Regional Rural Banks shortly known as RRBs along with Co-operative and Scheduled Commercial Banks constitute the 'multi-agency' approach adopted in rural financing.

2. STATEMENT OF THE PROBLEM

The most serious problem faced by the RRBs is their economic non-viability, i.e., insufficiency of interest revenue and transaction costs incurred by it. Any programme in banking sector an enduring phenomenon only when the financial health of the same is sound. RRBs though operate with a rural focus are primarily scheduled commercial banks with a commercial orientation hence there is need to establish its financial viability through its operation. It is always argued that the RRBs have not been able to earn much profit in view of their policy of restricting their operation to target groups in spite of that the RRBs made a remarkable performance and also for the other regions. Hence the research is intended to study the growth and progress of RRBs among the 'Profit making RRBs.

3. REVIEW OF LITERATURE

The empirical studies conducted by various authors are analyzed below:

P. Sinha Roy (1994)	A case studies of eight RRBs in West Bengal. He observed the conditions of RRBs and the study revealed that in spite of shortcomings like declining in C-D ratios and most of the RRBs incurring losses. The RRBS have rendered immeasurable service to the rural economy of the state.
Naidu and Naidu (1998)	An impact of the Rayalaseema Grameena bank on income, profit and employment in different categories of beneficiaries. They observed that a higher increase in income occurred for paddy followed by groundnut and jowar. Same trend was observed in the case of dying and weaving in which the income was more in the latter case due to good market. The increase was less in the case of agricultural labourers as they could not afford to employ outside labourers.
Sonara (1998)	The evaluation and growth of RRBs in Gujarat in comparison with the RRBs at all India level. The study made an elaborate discussion on mobilization of financial resources, lending operation. Credit-deposit ratio and recovery performance of selected RRBs of Gujarat.
Hossain and Uddin (1998)	The operational performance of Bangladesh Grameen Bank, between the periods 1983-1994. They observed that the though the bank was able make a marginal profit the operational profitability relative to working fund, earning assets, common equity and volume of business was very low and sometimes negative. Here they found that by controlling the non-interest expenses effectively and efficiently the bank could improve the operational profitability.
V. K. Ramachandran and Madhura Swaminathan (2001)	Rural Banking Policy in India discussed various issues in rural financing in India. They observed that every borrower is screened by the lender for his or her creditworthiness and lender shave a sharp-eyed assessment of the borrower's income and wage-earning capacity when they lend money. As a consequence, there has been a proliferation of different types of loans with respect to the terms and conditions attached to each loan.
K.C. Sharma et al. (2001)	The increasing competition in the banking world under the ongoing financial reforms process also propelled RRBs to make vigorous recovery efforts to ensure their survival and growth. The introduction of prudential norms in 1995-96 and further tightening of the norms in the subsequent years led to greater accountability on the part of the management and staff of RRBs.
Hosamani (2002),	In his book presented the performance of RRBs by examining the Malaprabha Gramena Bank in Karnataka. In this case he observed that gross ratio and operating ratios were unfavorable for earning profit.
Tapas Kumar Chkrabarthi (2003)	Some Evidence of effect of Rural Credit During Last three decades' noted that Dr. H.T. Patrick in mid 1960s, advocated a distinction between the 'demand-following approach' and the 'supply-leading approach' to financial development, in other words, the causal

	relationship between finance (credit) and growth (income/output).
Sanjay Sinha, et al. (2003)	Profitability is very strongly correlated with proactive and well-judged management, and it is in only two of the five RRBs surveyed that these qualities were observed. Programmes of capacity building and motivation among managers are likely to generate high returns.
Biswa Swarup Misra (2003)	To get a deeper insight, all the RRBs were categorized either as profit making or loss making ones. It was found that the RRBs, over the years have made impressive strides on various business indicators.
V.K. Ramachandran and Madhura Swaminathan (2004)	Macroeconomic Lessons for Africa' said that the Regional Rural Banks, were created in the 1970s exclusively to serve the credit needs of rural India, and specifically those individuals, social groups and regions most excluded by the formal system of credit.
Sukanya Bose (2004)	The three phases of Regional Rural Banking in India – the inception and expansion phase (1976-1990) which saw rapid growth of the RRBs activities; the reform phase (1991-2003) which raised the profitability of these banks at the cost of massive rural disintermediation, particularly of the targeted borrower categories; and the most recent phase of stock taking and perhaps some repositioning to strike a balance in the conundrum of 'viability versus outreach'.
A.P. Pati (2005)	The poor recovery of rural loans and growing operating expenditure are the main stumbling blocks for their growth in profitability. The presence of huge NPA and their management has been the biggest headache of Indian banking system. He also suggested measures for restructuring, branch autonomy, controlling operating cost and improving loan recovery position.
Abdul Hadi and Kanak Kanti Bagchi (2006)	They study the problems of resource mobilization, recovery position of RRBs utility of credit, causes of overdue. They found that most of the RRBs in West Bengal, barring some chronically weak banks have performed reasonably well during the study period. All RRBs have improved their performance due to the policy measures initiated, though it was observed that the gross ratios and operating ratios of some banks were not significant for earning profit.
Shyam Charan Acharya and Ashok kumar Mohanty (2006)	The study focused of various issues like structural growth, the trend and resource mobilization drive of credit deployment, recovery position, productivity and profitability of RRBs in the state. They also presented the position of RRBs in the state with that of the nation.
NABARD (2007)	It is being observed that the earlier studies were conducted on the different aspects of the Regional Rural Banks and the factors affecting their performance either at state level or regional level. The present study is framed in such a way to cover all the RRBs in India during the turnaround phase through CRAMEL ratio analysis.

4. OBJECTIVES OF THE STUDY

The following objectives are framed for the study.

1. To present the factors determining the financial performance and profitability of Regional Rural Banks with reference to the profit making RRBs.
2. To examine the progress and growth of profit making RRBs in India.

PROFILE OF PROFIT MAKING RRBs

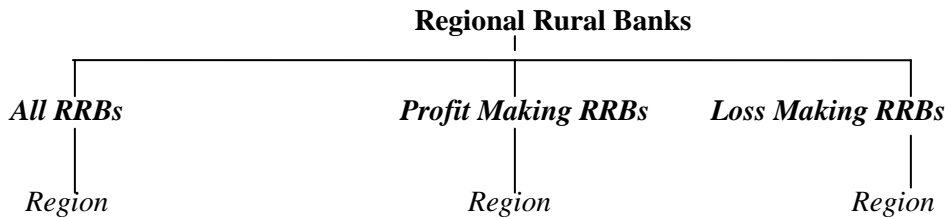
List of Number of Profit making RRBs.							
YEAR	NORTH	NORTH-EAST	EAST	CENTRAL	WEST	SOUTH	TOTAL
1997-98	16	7	17	40	14	31	125
1998-99	18	5	18	52	15	32	140
1999-00	23	8	23	56	18	33	161
2000-01	24	7	31	56	18	34	170
2001-02	25	7	28	58	16	33	167
2002-03	24	7	23	57	15	32	158
2003-04	24	8	23	57	18	33	163
2004-05	25	6	24	59	17	34	165
2005-06	15	5	17	45	9	20	111
2006-07	14	5	9	29	9	15	81

5. METHODOLOGY

The present paper will attempt to study and examine the progress and growth of Regional Rural Banks in India with special attention to 'Profit making RRBs'. For the present study the period was ideally selected to cover the turnaround phase which covers a period of ten financial years from 1997-98 to 2006-07 with the help of the same the progress and growth is evaluated. The study is analytical and descriptive in nature since each and every unit of the population is considered for analysis and interpretation. Hence all Regional Rural Banks existed during the study period among the 'Profit making RRBs' are considered. Data and information are secondary in nature and they are collected from various issues of NABARD, RBI, selected books, articles reports and other publications.

The collected data are grouped as given in the Table - 1 and they are examined to study the profitability and growth of Regional Rural Banks in India especially the 'Profit making RRBs'.

Figure-1



6. ANALYSIS AND INTERPRETATION

6.1 CRAMEL - RATIO ANALYSIS OF RRBs

The present study is on the Regional Rural Banks in India coming under the study period from 1997-98 to 2006-07. In order to assess the performance of the RRBs, CRAMEL technique was applied on the financial figures and observations are made. The acronym “CRAMEL” refers to the six components of the banks efficiency namely Capital adequacy, Resource deployment, Asset quality, Management efficiency, Earning quality and Liquidity. CRAMEL is basically a ratio-based model for evaluating the performance of banks. The forth coming pages throw lights on the CRAMEL – Ratios analysis of profit making Regional Rural Banks. The ratios are determined and presented in percentage to understand the factors determining the financial performance of RRBs coming under the study period.

6.2 MEASURING THE EXTENT OF FACTORS INFLUENCING BANK PROFITABILITY

The following factors have been adopted in the multivariate technique.

Factor	Ratio
	CAPITAL ADEQUACY RATIOS
X ₁	ADVANCES TO TOTAL ASSETS
X ₂	DEBT TO EQUITY
	RESOURCES DEPLOYMENT RATIOS
X ₃	INVESTMENT TO TOTAL ASSETS
X ₄	OTHER ASSETS TO TOTAL ASSETS
X ₅	CREDIT TO DEPOSIT
X ₆	INVESTMENT TO DEPOSIT
X ₇	CREDIT AND INVESTMENT TO DEPOSIT
X ₈	FIXED ASSETS TO TOTAL ASSETS
X ₉	FIXED ASSETS TO NET WORTH

	ASSETS QUALITY RATIOS
X ₁₀	RETURNS ON ADVANCES
X ₁₁	INTEREST INCOME TO TOTAL ASSETS
X ₁₂	OTHER LIABILITIES TO TOTAL ASSETS
X ₁₃	NETWORTH TO CAPITAL EMPLOYED
	MANAGEMENT EFFICIENCY RATIOS
X ₁₄	RETURN ON NET WORTH
X ₁₅	WAGE BILL TO TOTAL INCOME
X ₁₆	OPERATING EXPENSES TO TOTAL EXPENSES
X ₁₇	INTEREST EXPENDED TO INTEREST EARNED
X ₁₈	INTEREST EXPENDED TO TOTAL EXPENSES
X ₁₉	EQUITY PAID UP TO CAPITAL EMPLOYED
	EARNING QUALITY RATIOS
X ₂₀	SPREAD TO WORKING FUND
X ₂₁	BURDEN TO WORKING FUND
X ₂₂	OPERATING PROFIT TO TOTAL ASSETS
Y	RETURN ON TOTAL ASSETS
X ₂₃	INTEREST INCOME TO TOTAL INCOME
X ₂₄	NON INTEREST INCOME TO WORKING FUND
X ₂₅	NON OPERATING EXPENSES TO TOTAL ASSETS
X ₂₆	RETURN ON CAPITAL EMPLOYED
X ₂₇	EQUITY PAID UP TO NET WORTH
	LIQUIDITY RATIOS
X ₂₈	DEPOSIT TO TOTAL ASSETS
X ₂₉	LIQUID ASSETS TO TOTAL ASSETS
X ₃₀	PROVISION AND CONTINGENCIES TO TOTAL ASSETS
X ₃₁	CASH TO DEPOSITS
X ₃₂	INVESTMENTS TO ADVANCES
X ₃₃	INTEREST COVERAGE

Out of the above-denoted factors, the variable Y is dependent variable and the variables X₁ to X₃₃ are independent variables.

6.3 TOOLS AND TECHNIQUES ADOPTED

The profitability of the RRBs is measured using the selected ratios under CRAMEL analysis and the growth pattern of the RRBs has been analyzed by adopting Correlation and the Compound Annual Growth Rate Technique (CAGR).

6.4 CORRELATION ANALYSIS

Correlation analysis attempts to study the relationship that exists between two variables. The correlation co-efficient of the selected independent variables with the bank profitability has been worked out in order to identify the most important variable, which have relationship with the dependent variable. Also, the correlation co-efficient among the different variables has been worked out so as to arrive at a correlation matrix, which incorporates correlation co-efficient of all the selected variables with the dependent variable, as well as correlation coefficients among different independent variables. The calculated correlation co-efficient values were compared with a critical value of simple correlation co-efficient available in the statistical tables (Fisher and Yates) for its significance.



Table-1
CORRELATION ANALYSIS BETWEEN SELECTED VARIABLES WITH THE RATIO OF RETURN ON TOTAL ASSETS FOR PROFIT MAKING RRBs

	North		North East		Central		East		West		South		All Regions	
	r	p-value	r	p-value	r	p-value	r	p-value	r	p-value	r	p-value	r	p-value
X ₁	-.375	.143	-.420	.114	-.921	.000**	-.530	.058	-.793	.003**	-.576	.041*	-.875	.000**
X ₂	.145	.344	.597	.034*	-.204	.285	.355	.157	.342	.167	-.319	.184	-.323	.181
X ₃	.415	.117	-.320	.184	-.518	.062	-.041	.455	-.379	.140	-.022	.476	-.193	.297
X ₄	.111	.380	.540	.053	.682	.015*	.391	.132	.653	.020*	.145	.345	.734	.008**
X ₅	-.445	.099	-.283	.214	-.933	.000**	-.566	.044*	-.458	.092	-.642	.023*	-.896	.000**
X ₆	.425	.111	.007	.492	-.504	.069	-.085	.408	-.184	.306	-.035	.462	-.183	.307
X ₇	-.108	.383	-.254	.239	-.773	.004**	-.457	.092	-.448	.097	-.447	.098	-.672	.017*
X ₈	.079	.415	-.587	.037*	-.808	.002**	-.475	.083	-.659	.019*	-.449	.096	-.776	.004**
X ₉	-.259	.235	-.905	.000**	-.797	.003**	-.365	.150	-.850	.001**	-.456	.093	-.480	.080
X ₁₀	.520	.062	-.131	.359	.958	.000**	.740	.007**	.893	.000**	.693	.013*	.912	.000**
X ₁₁	.342	.167	.588	.037*	.912	.000**	.740	.007**	.884	.000**	.696	.013*	.875	.000**
X ₁₂	.003	.496	.805	.002**	.638	.024*	.071	.422	.724	.009**	.456	.093	.651	.021*
X ₁₃	.314	.188	.211	.279	-.156	.333	.676	.016*	-.388	.134	-.130	.360	-.091	.402
X ₁₄	.425	.110	.896	.000**	.949	.000**	.897	.000**	.879	.000**	.758	.006**	.897	.000**
X ₁₅	-.385	.136	-.194	.296	-.978	.000**	-.625	.027*	-.783	.004**	-.395	.129	-.873	.000**
X ₁₆	-.349	.162	-.564	.045*	-.960	.000**	-.667	.018*	-.894	.000**	-.715	.010**	-.915	.000**
X ₁₇	.370	.146	-.401	.125	.908	.000**	.668	.017*	.720	.009**	.474	.083	.890	.000**
X ₁₈	.235	.256	-.226	.265	.918	.000**	.659	.019*	.810	.002**	.451	.095	.842	.001**
X ₁₉	.330	.176	-.021	.477	.176	.313	.423	.112	.063	.432	.280	.217	.349	.162
X ₂₀	.290	.208	.599	.034*	.874	.000**	.279	.217	.764	.005**	.816	.002**	.704	.011*
X ₂₁	-.383	.137	-.569	.043*	.005	.494	-.318	.185	.366	.149	.304	.197	.097	.394
X ₂₂	.619	.028*	.903	.000**	.947	.000**	.773	.004**	.894	.000**	.683	.015*	.826	.002**
X ₂₃	-.648	.021*	-.660	.019*	.345	.164	-.281	.216	.153	.336	.096	.396	.089	.403
X ₂₄	.763	.005**	.796	.003**	.026	.472	.584	.038	.033	.464	.246	.246	.261	.233
X ₂₅	-.362	.152	-.396	.129	-.764	.005**	-.458	.092	-.415	.116	-.474	.083	-.714	.010**
X ₂₆	.993	.000**	.978	.000**	.992	.000**	.959	.000**	.513	.065	.827	.002**	.942	.000**
X ₂₇	.003	.496	-.126	.365	.195	.294	.185	.304	.377	.142	.280	.217	.342	.167
X ₂₈	.251	.242	-.865	.001**	-.468	.086	.342	.167	-.682	.015*	-.060	.435	-.252	.242
X ₂₉	.037	.460	.310	.192	.719	.010**	.399	.126	.555	.048*	.374	.144	.593	.035*
X ₃₀	-.465	.088	-.146	.344	-.649	.021*	-.319	.184	.162	.327	-.475	.083	-.615	.029*
X ₃₁	.039	.457	-.769	.005**	-.710	.011*	.013	.486	-.362	.152	-.751	.006**	-.663	.018*
X ₃₂	.817	.002**	.140	.350	.192	.298	.452	.095	.037	.459	.152	.337	.527	.059
X ₃₃	.216	.275	.992	.000**	.617	.029*	.594	.035*	.098	.394	.060	.434	-.126	.365

**Correlation is significant at the 0.01 level (p<0.01) *Correlation is significant at the 0.05 level (p<0.05)

Table-1 demonstrates the correlation coefficient matrices of the selected variables with the dependent variable, i.e., return on total assets of 'Profit making RRBs' for the periods from 1997-98 to 2006-07. In Northern region of RRBs, four variables namely X_{22} (Operating profit to total assets), X_{24} (Interest income to total income), X_{26} (Non operating expenses to total assets) and X_{33} (Interest coverage) have significant positive correlation with bank profitability and the coefficient are .619,.763,.993 and .817 respectively and remaining one variable namely X_{23} (Return on total assets) has significant but negative correlation with profitability and the coefficient are -.648. It obvious from the above table that the North Eastern region of RRBs, nine variables namely X_2 (Debt to equity), X_{11} (Interest income to total assets), X_{12} (Other liabilities to total assets), X_{14} (Return on net worth), X_{20} (Spread to working fund), X_{22} (Operating profit to total assets), X_{24} (Interest income to total income), X_{26} (Non operating expenses to total assets) and X_{33} (Interest coverage) have significant positive correlation with bank profitability and the coefficient are .597, .588, .805, .896, .599, .903, .796, .978 .992 respectively and remaining seven variables namely X_8 (Fixed assets to total assets), X_9 (Fixed assets to net worth), X_{16} (Operating expenses to total expenses), X_{21} (Burden to working fund) X_{23} (Return on total assets), X_{28} (Deposit to total assets),and X_{31} (Cash to deposit) have significant but negative correlation with profitability and the coefficient are -.587,-.905,-.564,0.569, -.660, -.865 and -.769. In Central region of RRBs, it can be seen by table – that twelve variables namely X_4 (Other assets to total assets), X_{10} (Return on advances), X_{11} (Interest income to total assets), X_{12} (Other liabilities to total assets), X_{14} (Return on net worth), X_{17} (Interest expended to interest earned), X_{18} (Interest expended to total expenses), X_{20} (Spread to working fund), X_{22} (Operating profit total assets), X_{26} (Non operating expenses to total assets), X_{29} (Liquid assets to total assets) and X_{33} (Interest coverage) have significant positive correlation with profitability of the bank and the coefficient are .682, .958, .912, .638, .949, .908, .918, .874, .947, .992, .719, .617 respectively and remaining ten variables namely X_1 (Advances to total assets), X_5 (Credit to deposit), X_7 (Credit and investment to deposit), X_8 (Fixed assets to total assets), X_9 (Fixed assets to net worth), X_{15} (Wage bill to total income), X_{16} (Operating expenses to total expenses), X_{25} (Non interest income to working fund), X_{30} (Provision and contingencies to total assets),and X_{31} (Cash to deposit), has significant but negative correlation with profitability and the coefficient are -.921, -.933, -.773, -.808, -.797, -.978, -.960, -.764, -.649 and -.710. In Eastern region of RRBs, ten variables namely X_{10} (Return on advances), X_{11} (Interest income to

total assets), X_{13} (Net worth to capital employed), X_{14} (Return on net worth), X_{17} (Interest expended to interest earned), X_{18} (Interest expended to total expenses), X_{22} (Operating profit to total assets), X_{24} (Interest income to total income), X_{26} (Non operating expenses to total assets) and X_{33} (Interest coverage) have significant positive correlation with profitability of the bank and the coefficient are .740, .740, .676, .897, .668, .659, .773, .584, .959 and .594 respectively and remaining three variables namely X_5 (Credit to deposit), X_{15} (Wage bill to total income) and X_{16} (operating expenses to total expenses), has significant but negative correlation with profitability and the coefficient are -.566, -.625 and -.667. In West region of RRBs, it can be seen by table that nine variables namely X_4 (Other assets to total assets), X_{10} (Return on advances), X_{11} (Interest income to total assets), X_{12} (Other liabilities to total assets), X_{14} (Return on net worth), X_{17} (Interest expended to interest earned), X_{18} (Interest expended to total expenses), X_{20} (Spread to working fund), X_{22} (Operating profit to total assets), and X_{28} (Deposit to total assets) have significant positive correlation with bank profitability and the coefficient are .653, .893, .884, .724, .879, .720, .810, .764 and .894 respectively and remaining two variables namely X_1 (Advances to total assets), X_8 (Fixed assets to total assets), X_9 (Fixed assets to net worth), X_{15} (Wage bill to total income), X_{16} (Operating expenses to total expenses), and X_{28} (Deposit to total assets), has significant but negative correlation with profitability and the coefficient are -.793, -.659, -.850, -.783, -.894 and -.682. The above table shows that the Southern region of RRBs, – that six variables namely X_{10} (Return on advances), X_{11} (Interest income total assets), X_{14} (Return on net worth), X_{20} (Spread to working fund), X_{22} (Operating profit to total assets) and X_{26} (Non operating expenses to total assets), have significant positive correlation with bank profitability and the coefficient are .693, .696, .758, .816, .683 and .827 respectively and remaining four variables namely X_1 (Advances to total assets), X_5 (Credit to deposit), X_{16} (Operating expenses to total expenses), and X_{31} (Cash to deposit), has significant but negative correlation with profitability and the coefficient are -.576, -.642, -.715 and -.751. It can be seen by the above table of Eastern region of RRBs, that twelve variables namely X_4 (Other assets to total assets), X_{10} (Return on advances), X_{11} (Interest income to total assets), X_{12} (Other liabilities to total assets), X_{14} (Return on net worth), X_{17} (Interest expended to interest earned), X_{18} (Interest expended to total expenses), X_{20} (Spread to working fund), X_{22} (Operating profit to total assets), X_{26} (Non operating expenses to total assets), X_{29} (Liquid assets to total assets), and X_{32} (Investment to advances) have significant positive correlation with bank profitability and

the coefficient are .734, .912, .875, .651, .897, .890, .842, .704, .826, .942, .593 and .527 respectively remaining eight variables namely X_1 (Advances to total assets), X_5 (Credit to deposit), X_7 (Credit and investment to deposit), X_8 (Fixed assets to total assets), X_{15} (Wage bill to total income), X_{16} (Operating expenses to total expenses), X_{25} (non interest income to working fund), X_{30} (Provision and contingencies to total assets), and X_{31} (Cash to deposit), has significant but negative correlation with profitability and the coefficient are -.875, -.896, -.672, -.776, -.873, -.915, -.714, -.615 and -.663 respectively.

6.5 TREND AND GROWTH OF RRBs.

The Compound annual growth rate technique and linear trend method are adopted. In the case of Compound annual growth rate method totally twenty one variables are selected and the growth rate was determined for the respective regions of RRBs coming under 'Profit making RRBs', 'Loss making RRBs' and 'All RRBs'.

6.6 COMPOUND GROWTH RATE METHOD

The following financial factors are considered for the growth position of RRBs with respect to 'Profit making RRBs', 'Loss making RRBs' and 'All RRBs' which also displays the growth and trend pattern at regional level. The growth pattern of RRBs is analyzed with the help of the Compound Growth Rate method and Linear Trend Method.

Table-2
COMPOUND ANNUAL GROWTH RATE OF SELECTED VARIABLES OF PROFIT MAKING RRBs
DURING THE PERIOD 1997-98 to 2006-07 (Rs. in Crores)

S.NO.	VARIABLES	REGION						
		North	North East	Central	East	West	South	All regions
1	Net worth	29.155	14.969	19.215	12.545	16.526	24.560	21.189
2	Deposits	20.922	22.025	17.479	15.065	20.853	19.546	18.522
3	Borrowings	14.460	19.318	13.282	20.854	7.845	15.498	15.047
4	Total assets	20.127	20.308	17.01	14.811	18.545	18.935	17.914
5	Other liabilities	7.459	9.808	12.147	8.303	11.311	17.705	12.489

6	Interest income	15.221	8.075	11.656	11.216	14.286	13.852	13.139
7	Liquid assets	14.902	18.732	14.368	9.301	15.484	9.958	13.196
8	Investments	23.11	20.445	17.602	14.458	20.859	24.748	19.348
9	Loans & advances	25.734	28.121	23.078	21.978	21.713	21.566	22.784
10	Fixed assets	44.808	22.028	56.089	-	-	23.002	32.975
11	Other assets	6.409	8.581	4.375	7.331	5.150	16.543	8.382
12	Total income	15.509	15.841	12.121	11.593	14.677	14.194	13.449
13	Other income	24.621	5.671	23.774	16.652	27.652	19.667	19.867
14	Expenditure (P&C)	13.963	17.502	12.209	10.748	15.047	12.975	12.864
15	Interest expended	11.414	16.653	9.148	8.576	12.604	11.578	10.596
16	Provision and contingencies	64.664	-26.844	33.897	26.424	23.465	32.1	35.427
17	Operating expenses	19.268	19.112	17.649	15.274	19.801	15.649	17.123
18	Wage bill	17.331	15.897	15.251	14.229	17.979	12.561	14.804
19	Operating profit	22.627	5.361	11.734	19.298	12.983	18.744	16.101
20	Net profit	17.786	-7.413	6.715	15.384	11.403	14.209	11.467

Table-2 presents the compound annual growth rate of selected variables of 'Profit making RRBs'. It is observed that the Net worth was highest in Northern region of profit making RRBs at 29.155 per cent and followed by Southern region at 24.56 per cent and the East region at 12.545. The compound annual growth rate shows that, the Deposit is highest in Northern region of 'Profit making RRBs' at 20.922 per cent. It is lowest in Eastern region of RRBs at 15.065 per cent. The compound annual growth rate shows that, the Borrowings is highest in Eastern region at 20.854 per cent. It is lowest in Western region at 7.845. The CAGR shows that, the total assets value is highest in North Eastern region of 'Profit making RRBs at 20.308 per cent. It is lowest in Eastern region at 14.811 per cent. It is clear that annual compound growth rate of other liabilities is highest in Southern region of 'Profit making RRBs' at 17.705 per cent. It is lowest in Northern region at 7.459 per cent. The CAGR shows that, the Interest income is highest in Northern region

of 'Profit making RRBs' at 15.221. It is lowest in North Eastern at 8.075 per cent. The compound annual growth rate shows that, the Liquid asset is highest in North Eastern region of 'Profit making RRBs' at 18.732 per cent and it is lowest in East region at 9.301 per cent. The CAGR shows that, the Investments are highest in South regions of profit making RRBs at 24.748 per cent. It is lowest in Eastern region of RRBs at 14.458 per cent. The CAGR shows that, the Loans and advances are highest in North Eastern region at 28.121 per cent. It is lowest in Southern region at 21.566 per cent. It is clear that the annual compound growth rate of fixed assets is highest in Central region of profit making RRBs at 56.089 per cent. It is lowest in North Eastern region at 22.028 per cent. The CAGR shows that, the other assets are highest in Southern region of 'Profit making RRBs' at 16.543. It is lowest in Central at 4.375 per cent. It is understood from the CAGR that, the total income is highest in North Eastern region of 'Profit making RRBs' at 15.841 per cent. It is lowest in Eastern region of RRBs at 11.593 per cent. The CAGR showed that, the other income is highest in Western region of 'Profit making RRBs' at 27.652 per cent. It is lowest in North Eastern region at 5.671 per cent. The CAGR confirmed that, the Expenditure (excluding P&C) is highest in North eastern region at 17.502 per cent. It is lowest in Eastern region at 10.748per cent. The compound annual growth rate shows that, the Interest expanded is highest in Northern region of profit making RRBs at 16.653 per cent. It is lowest in Eastern region of RRBs at 8.576 per cent. The CAGR illustrate that, the Provision and contingencies are highest in Northern region at 64.664 per cent. It is lowest in North Eastern region of RRBs at -26.844 per cent. It is clear that annual compound growth rate of operating expenses is 19.801 per cent which is highest in Western region of 'Profit making RRBs'. It is lowest in Eastern region at 15.274 per cent. The compound annual growth rate shows that, the Wage bill is highest in Western region of 'Profit making RRBs' at 17.979 per cent. It is lowest in Southern region of RRBs at 12.561 per cent. The compound annual growth rate shows that, the Operating profit is highest in Northern region of at 22.627 per cent. It is lowest in North Eastern region of RRBs at 5.361 per cent. It is clear that annual compound growth rate of Net profit is highest in Northern region at 17.786 per cent. It is lowest in North Eastern region at - 7.413 per cent.

Table-3
TREND ANALYSIS BY LEAST SQUARES METHODS FOR THE PREDICTION OF
BORROWINGS FOR THE YEAR OF 1997-98 AND 2014-2015

YEAR	Profit making RRBs						
	North	North east	Central	East	West	South	All regions
1997-98	361.018	52.909	1009.85	483.145	171.091	662.89	2740.91
1998-99	422.703	80.018	1127.31	528.424	187.648	798.98	3145.08
1999-00	484.388	107.127	1244.76	573.703	204.206	935.07	3549.26
2000-01	546.073	134.236	1362.22	618.982	220.764	1071.16	3953.44
2001-02	607.758	161.345	1479.67	664.261	237.321	1207.25	4357.61
2002-03	669.442	188.455	1597.13	709.539	253.879	1343.35	4761.79
2003-04	731.127	215.564	1714.58	754.818	270.436	1479.44	5165.96
2004-05	792.812	242.673	1832.04	800.097	286.994	1615.53	5570.14
2005-06	854.497	269.782	1949.49	845.376	303.552	1751.62	5974.32
2006-07	916.182	296.891	2066.95	890.655	320.109	1887.71	6378.49
2014-15	1409.66	513.764	3006.58	1252.88	452.570	2976.44	9611.90
MAPE	14.22	18.695	10.9	30.5	23.39	5.03	12
MAD	78.81	16.920	144.7	169.1	47.63	66.29	456
MSD	9116.42	409.142	31786.8	34991.2	3026.28	8520.74	306364

It is clear from the Table-3 that the trend movement for the year 2006-07 where the Total Income will be highest in all regions in 'Profit making RRBs' with 6378.49 and the MAPE, MAD and MSD are 12.0 and 456.0 respectively. It is followed by Central region of RRBs with 2066.95 and the MAPE, MAD and MSD of 10.9, 144.7 and 31786.8 respectively. The total income projected at the lowest in North Eastern region of RRBs with 296.891 and the MAPE, MAD and MSD of 18.695 16.92 and 409.142 respectively. The trend movement for the total income for the year 2014-15 likely to be highest in all regions in 'Profit making RRBs' with 9611.9 and it is followed by Central region with 3006.58. The total income will be lowest in Western region of RRBs where it is estimated at 452.57. i.e., lowest in North eastern region of RRBs with 489.024.

Table-4
TREND ANALYSIS BY LEAST SQUARES METHODS FOR THE PREDICTION OF DEPOSIT
FOR THE YEAR OF 1997-98 AND 2014-2015

YEAR	Profit making RRBs						
	North	North East	Central	East	West	South	All Regions
1997-98	1813.3	250.93	6117.0	3450.53	888.53	2656.0	15176.3
1998-99	2732.4	618.39	8162.6	4157.19	1182.99	4086.6	20940.1
1999-00	3651.4	985.85	10208.1	4863.85	1477.45	5517.2	26703.9
2000-01	4570.4	1353.31	12253.7	5570.51	1771.91	6947.7	32467.6
2001-02	5489.5	1720.77	14299.3	6277.17	2066.37	8378.3	38231.4

2002-03	6408.5	2088.23	16344.9	6983.83	2360.83	9808.9	43995.2
2003-04	7327.6	2455.69	18390.5	7690.49	2655.29	11239.5	49759.0
2004-05	8246.6	2823.15	20436.1	8397.15	2949.75	12670.0	55522.7
2005-06	9165.6	3190.61	22481.6	9103.81	3244.21	14100.6	61286.5
2006-07	10084.7	3558.07	24527.2	9810.47	3538.67	15531.2	67050.3
2014-15	17437.0	6497.76	40891.9	15463.8	5894.36	26975.7	113160
MAPE	4.0	24.5	3.0	20.0	13.3	7.0	3.0
MAD	277	187.9	446	994	264.9	564	1250
MSD	140055	48293.4	344778	1366485	94444.9	533235	2038817

It is revealed from the Table-4 that the trend movement of deposits for the year 2006-07 will be highest in all regions among 'Profit making RRBs i.e. 67050.3. The MAPE, MAD and MSD of the all region will be 3.0, 1250.0 and 2038817 respectively. It is followed by Central regions of RRBs with 24527.2 for the same period. The MAPE, MAD and MSD for Central region are 3.0, 446.0 and 344778 respectively. The deposit will be lowest in Western region of RRBs at 3538.67 with the MAPE and MAD of 13.3 and 264.9 respectively. The trend movement for the year 2014-15 the deposit will be highest in all regions in 'Profit making RRBs' with 113160 and followed by Central region of RRBs with 40891.9. The total deposits will be lowest in Western region of RRBs with 5894.36 for the same period.

Table-5
TREND ANALYSIS BY LEAST SQUARES METHODS FOR THE PREDICTION OF INTEREST EXPENDED FOR THE YEAR OF 1997-98 AND 2014 – 2015

YEAR	Profit making RRBs						
	North	North east	Central	East	West	South	All regions
1997-98	258.745	30.545	627.018	332.018	106.673	421.727	1776.73
1998-99	279.158	45.291	667.236	351.036	113.145	471.455	1927.32
1999-00	299.570	60.036	707.455	370.055	119.618	521.182	2077.92
2000-01	319.982	74.782	747.673	389.073	126.091	570.909	2228.51
2001-02	340.394	89.527	787.891	408.091	132.564	620.636	2379.10
2002-03	360.806	104.273	828.109	427.109	139.036	670.364	2529.70
2003-04	381.218	119.018	868.327	446.127	145.509	720.091	2680.29
2004-05	401.630	133.764	908.545	465.145	151.982	769.818	2830.88
2005-06	422.042	148.509	948.764	484.164	158.455	819.545	2981.48
2006-07	442.455	163.255	988.982	503.182	164.927	869.273	3132.07
2014-15	605.752	281.218	1310.73	655.327	216.709	1267.09	4336.82
MAPE	18.95	24.237	14.6	35.6	25.62	10.53	17

MAD	56.92	11.720	103.7	119.7	27.24	62.11	364
MSD	4427.04	189.505	14869.2	17769.9	1113.52	5058.84	169636

It is clear from the Table-5 that the trend movement for the year 2006-07 the Interest Expended will be highest in all regions among the 'Profit making RRBs' with an estimated value of 3132.07 and with the MAPE and MAD of 17.0 and 364.0 respectively. It is followed by Central region of RRBs with an estimated value of 988.98 and with the MAPE and MAD of 14.6 and 103.7 respectively. The Interest Expended is likely to be the lowest in North Eastern region of RRBs where the value predicted value stood at 163.255 and with the MAPE and MAD is 24.237 and 11.72 respectively. The trend movement for the year 2014-15 shows that the total income will be highest in all regions among the 'Profit making RRBs' with an estimated value of 4336.82 and followed by Southern region of RRBs with 1267.09. The total is likely to be lowest in Western region of RRBs with an estimated value of 216.709.

Table-6
TREND ANALYSIS BY LEAST SQUARES METHODS FOR THE PREDICTION OF LOANS AND ADVANCES FOR THE YEAR OF 1997-98 AND 2014 – 2015

YEAR	Profit making RRBs						
	North	North east	Central	East	West	South	All regions
1997-98	250.62	-97.67	825.3	634.65	385.24	1311.1	3309.2
1998-99	799.70	71.65	1852.8	1065.11	539.21	2707.5	7036.0
1999-00	1348.79	240.98	2880.4	1495.56	693.18	4103.9	10762.9
2000-01	1897.87	410.31	3908.0	1926.02	847.15	5500.3	14489.7
2001-02	2446.96	579.64	4935.6	2356.47	1001.12	6896.7	18216.5
2002-03	2996.04	748.96	5963.2	2786.93	1155.08	8293.1	21943.3
2003-04	3545.13	918.29	6990.8	3217.38	1309.05	9689.5	25670.1
2004-05	4094.21	1087.62	8018.4	3647.84	1463.02	11085.9	29396.9
2005-06	4643.30	1256.95	9046.0	4078.29	1616.99	12482.3	33123.8
2006-07	5192.38	1426.27	10073.5	4508.75	1770.96	13878.7	36850.6
2014-15	9585.06	2780.89	18294.2	7952.38	3002.72	25049.8	66665.1
MAPE	18	33.4	16	8.4	11.3	16	14
MAD	360	133.8	676	162.9	119.5	965	2133
MSD	187196	25354.5	592714	36901.9	24002.1	1397230	6725249

It is clear from the Table-6 that the trend movement for the year 2006-07, the Loans and Advances is estimated at the highest value in All region of 'Profit making RRBs' by 36850.6 with the MAPE and MAD of 14.0 and 2133.0 respectively followed by Southern region of RRBs with 13878.7 and the MAPE and MAD value of 16.0 and 965.0 respectively. The Loans and Advances will be lowest in Western region of RRBs at 1426.27 and with the MAPE and MAD of 33.4 and 133.8 respectively. The trend movement for the year 2014-15, the Loans and Advances will be highest in all regions in 'Profit making RRBs' by 66665.1 and followed by Central region of RRBs with 25049.8. The total will be lowest in North Eastern region of RRBs with 2780.89.

7. FINDINGS, SUGGESTIONS AND CONCLUSION

In the present field of interest of the researcher with the set of objectives to study the profitability and growth of the Regional Rural Banks the following suggestions are made with the help of the findings and other observations that shall help RRBs at the regional level to have an insight into their financial statement and also to make suitable reforms. Rural banking is vital to the Indian social fabric for the simple and cogent reason that it is through such type of banking that the country finds ample opportunities to upgrade the fate of the rural poor hence they can be made as an integral part of the national mainstream by creating new opportunities for rural financing and exploiting the existing ones, which may ultimately, lead to the path of better socio-economic transformation of the country.

The RRBs should lay greater emphasis and continue with its efforts on directed credit, regulated interest rate structure and focus on profitability. Brining in transparency in the bank's balance sheet, preparing itself to face competition and effective use of managerial resource will definitely improve the performance of RRBs. It should also depend less on Government support and suffice in managerial efficiency to with stand the pressure in rural credit disbursement process. Better customer service and use of updated technology will pave the way for organizational competence. It should also take earnest effort to reduce the transaction cost and avoid the political interference.

In the wake of economic liberalization now underway in India, the banking sector in general and Regional Rural Banks in particular are experiencing sweeping changes. Although RRBs have played a predominate role in supplementing the efforts of the Government in eradicating poverty

by dispensing credit under Government sponsored programmes, the erosion in profitability and the poor sustainability is causing much concern. The structural consolidation of RRBs has resulted in the formation of new RRBs, which are financially stronger and bigger in size in terms of business volume and outreach which will enable them to take advantages of the economies of scale and reduce their operational costs. With the advantage of local feel and familiarity, RRBs should capitalize the better position to achieve the objectives of rural development and financial inclusion.

The role played by the Indian banking system after the independence has brought in decisive changes in the monetary system of the country. The role of Regional Rural Banks in the betterment of socio-economic movement of the rural society which is functionally diverse and geographically widespread deserves for recognition. Time has come to make the rural banking system successful and the beneficiaries should not be skeptical about the purpose of its existence. The Regional Rural Bank should have strict regimen to follow and the results with a marginal error always appreciated. However the duress on the RRBs while setting the standards shall not be an impediment in delivering its responsibilities towards the rural society. The acumen by the sponsoring banks and the RRBs itself on the financial figures and selection of schemes for the beneficiaries should be appropriate in order to sustain the efficiency. The judicious mix in capital configuration and extending hand by the sponsoring banks in attaining the operational efficiency is the need of the hour. The seldom profit of the Loss making RRBs in worrying some and they should live up to their expectations. However the ray of hope is getting brighter over the period of years, thanks to the recommendations made by various committees for identifying the weaknesses of RRBs and the reforms taken by the Reserve Bank of India. It is evident from the fact that the number of loss making RRBs on the declining trend. It is further noticed that among the RRBs the Southern region has a remarkable performance during the study period. The thoughtful observation of the results of various aspects of the financial health is definitely a testimony of the performance of RRBs during the study period. Bearing in mind the role played by the RRBs in the Indian banking system it should be allowed to spread its wings and roots further to benefit the rural society.

It is found that among the 'Profit making RRBs' the Northern region registered with a highest CAGR in Net worth, Deposit, Interest income, Fixed assets, Provision and contingencies and Operating profit. However the result was lowest in the case of other liabilities. It is found that the North Eastern region was with a highest CAGR in Total assets, Liquid assets, Total income, Expenditure excluding Provision and Contingencies and Interest expended however the result was on the other side in the case of Interest income, other income, provision and contingencies, Operating income and Net profit. It is bring into being that the Central region was with a lowest CAGR in Total assets and other assets. It is found that the Eastern region was with the highest CAGR in Borrowings. But the result was low in the case of Net worth, Deposit, Liquid assets, Investments, Total income, Expenditure (Excluding provision and contingencies), Interest expended and Operating expenses. It is established that the Western region was with the highest CAGR in Other income, Operating expenses and Wage bill. But result was lowest in the case of Borrowings. The Southern region recorded a highest CAGR in Investments and Other assets. However the CAGR was at the lowest point in the case of Loans and advances and Wage bill. It is also found that the CAGR was at highest level for 'All region' in the case of other liabilities.

The role played by the Indian banking system after the independence has brought in decisive changes in the monetary system of the country. The role of Regional Rural Banks in the betterment of socio- economic movement of the rural society which is functionally diverse and geographically widespread deserves for recognition. Time has come to make the rural banking system successful and the beneficiaries not skeptical about the purpose of its existence. It is evident from the analysis that the 'Profit making RRBs' made a significant contribution for the overall growth of Regional Rural Banks in India.

REFERENCES

- Aggarwal, B.P., Commercial Banking in India, Classical Publishing Company, New Delhi, 1982.
- Agraval R. K., Evaluation of the working of Regional Rural Banks, Mittal Publications, New Delhi. 1991.
- Chopra, Kiran., Managing Profits, Profitability and Productivity in Public Sector Banking, ABS Publication, Jalandhar, 1987.
- Datta, S.K., Service Conditions and Discipline Code in Regional Rural Banks, 1991.
- Gupta.S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, 1996.
- Gupta.M.C., Profitability Analysis., An Empirical Approach, Pointer Publisher, Jaipur, 1989.
- Gupta.S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, 1996.
- Hugar.S.S.(Ed), Trend and Challenges to Indian Banking, Deep and Deep publications, New Delhi, 1993.
- Mosley, Paul.. "India-Regional Rural Banks" in Hulme and Mosley, Finance Against Poverty, Vol.1, Routledge Publication, London, 1996.
- Rao, Subba P., Principles and Practice of Bank Management, Himalaya Publishing House, New Delhi, 1988.
- Sarap, K., Interlinked Agrarian Markets in Rural India, Sage Publication India Pvt. Ltd., New Delhi. 1991.
- Sonara, C.K., Regional Rural Banks in India, Anmol Publication Pvt. Ltd., New Delhi, 1998.
- Tomar, A. K. and Prakash, J.A.I., Role of Regional Rural Bank in Economic Development, Mahit Publication, New Delhi, 1996.
- Bhole, L.M., and Bhavani, R. V., "Grameen Bank of Bangladesh: A Model for Financing Rural Development", International Journal of Development Banking, Vol. 13, Bombay, January.1995.
- Chippa, M.L., "Rural Banking Development Pattern of SCBs in India", Prajnan, 1980.
- Dadhich, C.L., and Srivastava, B.P, "RRBs Subsuming the Self to Survive", The Economic Times, , Mumbai. 28 April 1994.
- Dubey, J.P., "RRBs Loans must be need-based", The Financial Express, Mumbai, 9 December 1993,

- Kabra, K.N., “Regional Rural Banks: Fine Tuning to the Specifics”, Kurukshetra, July,1996.
- Kalia, S.K., “How Viable is Rural Credit?”, Observer of Business and Politics, CMIE, Bombay, 3 February 1995.
- Patel, A.R., “Regional Rural Banks, Making Them Viable”, Kurukshetra, July,1996.
- Thingalaya, N. K., “RRBs have a Crucial Role to Play”, Business line, Sep. 6, 1995.
- A Study on the Viability of RRBs (1981), RBI Bulletin, March 1981.
- Annual Report on Trend and Progress of Banking in India, Published by RBI.
- Annual Reports of NABARD.
- Expert Committee on Rural Credit, ECRC, Report of the Expert Committee on Rural Credit, NABARD, Mumbai, July, 2001.
- GOI, Narashimham Committee Report, New Delhi, 1975.
- Government of India, Report of the Working Group on Rural Banks, (Mr.M.Narashimham Report), New Delhi,1975.
- Working Group of Regional Rural Banks (Mr. S.M.Kelkar Report), New Delhi.
- Government of India (1987): Report of the Committee on Agricultural Credit Review Committee, (A.M.Khusro), New Delhi.
- Government of India (1998): Report of the Committee on the Financial System (M. Narasimham, 2nd phase). New Delhi.
- Government of India (2000) : Report of the Committee on Working Group of Regional Rural Banks (Dr.A.K.Agarwal), New Delhi.
- www.nabard.org
- www.rbi.org.in