

**ANALYSIS OF OPERATIONAL EFFICIENCY  
OF REGIONAL RURAL BANKS  
IN RAJASTHAN**

**A THESIS**

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**Economics**

*(Faculty of Social Sciences)*

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**2017**

## Certificate

*It is certified that the Thesis entitled “Analysis of Operational Efficiency of Regional Rural Banks in Rajasthan” which is being submitted by Mrs. Neelam Goenka to the University of Kota, Kota for the award of Doctor of Philosophy in Economics, is a record of the results of investigations and original work carried out by herself under my supervision and guidance. Literary presentation is satisfactory and thesis is in a form suitable for publication. Work evinces the capacity of the candidate for critical examination and independent judgment.*

*To the best of my knowledge neither the thesis nor the original work contained therein has been submitted to this university or any other institution for a degree or diploma or fellowship. Mrs. Goenka has put in at least 200 days of attendance every year.*

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## Declaration

I, *Mrs. Neelam Goenka*, hereby declare that the research work presented in this Thesis entitled **“Analysis of Operational Efficiency of Regional Rural Banks in Rajasthan”** is my original work carried out for the award of the degree of **Doctor of Philosophy** in Economics under the guidance and supervision of **Dr. Aruna Kaushik**, Lecturer in Economics, Government Arts Girls College, Kota, Rajasthan. Analysis presented in the thesis is based on my reading and understanding of the original text. Other sources like books, articles, reports and websites which I have made use of, have been duly acknowledged at the respective places in the thesis.

I, further, declare that no part of this work has been previously submitted to this University or any other institution for any degree or award.

**Date:**

*(Neelam Goenka)*

**Place: Kota**

## *Preface*

Regional Rural Banks were established in 1975 with a basic objective to ensure sufficient institutional credit for agriculture and other rural sectors. Various reform measures introduced by the Government of India in consultation with the RBI and NABARD in the years from 1994-95 to 2005-06 have resulted in improvements in respect of their key performance indicators like number of branches, capital composition, deposits, loans and advances and profitability also. Further, GOI initiated the process of structural consolidation of RRBs in September 2005 by amalgamating these banks, sponsor bank-wise and across sponsor banks, following the recommendations of Vyas Committee II (2004).

Analysis of operational efficiency of RRBs, in the present scenario is having a great importance especially in respect of the RRBs of a poor state like Rajasthan where nearly 70 percent of the population resides in rural areas and depends on agricultural and allied activities directly and indirectly. As the efficient functioning of these banks is very essential for upliftment of rural people, their strengths and weaknesses are needed to be explored so that appropriate corrective measures can be taken for the improvements in the functioning of the RRBs to make them operationally efficient, financially viable and socially relevant institutions.

Present thesis is a modest attempt to analyze the operational efficiency of Regional Rural Banks in Rajasthan in the light of their original objectives and process of continuous restructuring especially in the era of their structural consolidation.

The study covers the period of 14 years from 2000-01 to 2013-14 and studies all the RRBs working in the State of Rajasthan during this period. RRBs have been studied individually to fulfill the main objective of the study. The study is primarily based on secondary data. Overall growth and performance of RRBs at all India level and at State level in Rajasthan has been analyzed on the basis of their basic operations and performance indicators. Operational efficiency of individual RRBs in Rajasthan has been analyzed by making a comparative analysis between pre and

post amalgamation periods as well as between RRBs. Five dimensions of operational efficiency viz. operational growth, profitability, productivity, asset quality and viability and technical efficiency have been analyzed. An attempt has also been made to identify the factors which determine the operational efficiency of RRBs in Rajasthan. It is hoped that present work would prove very useful to the researchers and students of this field and also to the policy makers, planners and bankers.

**( Neelam Goenka)**

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I extend my sincere thanks to various officials of regional offices of NABARD and RBI in Jaipur, selected RRBs and other institutions who spared their valuable time during my personal visits to their banks and helped me by providing required data and information. I am also thankful to the library staff of regional offices of NABARD and RBI in Jaipur; Central Library, University of Kota, Kota; Central Library, VMOU, Kota; Central Library, University of Rajasthan, Jaipur; Central Library, Jawahar Lal Nehru University, New Delhi; Central Library, Institute of Development Studies, Jaipur; and libraries of Government College, Kota and JDB Government Girls College, Kota for their valuable co-operation and support in collecting the required information. I am also indebted to all the writers of various books, reports, research papers and articles etc., whose works provided me the perspective that was essential for the present study.

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**( Neelam Goenka)**

## *List of Abbreviations*

ABAGB	Alwar Bharatpur Anchlik Gramin Bank
AKGB	Aravali Kshetriya Gramin Bank
ATM	Automated Teller Machine
AWS	Average Weighted Score
BAKGB	Bhilwara Ajmer Kshetriya Gramin Bank
BCC	Banker, Charnes and Cooper
BCKGB	Bundi Chittorgarh Kshetriya Gramin Bank
BD	Bank Diversification
BKGB	Bikaner Kshetriya Gramin Bank
BOB	Bank of Baroda
BRGB	Baroda Rajasthan Gramin Bank
BRKGB	Baroda Rajasthan Kshetriya Gramin Bank
CAR	Capital Adequacy
CBI	Central Bank of India
CBS	Core Banking Solutions
CCR	Charnes, Cooper and Rhodes
CD ratio	Credit- Deposit ratio
CIR	Cost to Income Ratio
CR	Credit Risk
CRS	Constant Returns to Scale
CV	Coefficient of Variation
DAPs	Development Action Plans
DBKGB	Dungarpur Banswara Kshetriya Gramin Bank
DEA	Data Envelopment Analysis
DMUs	Decision Making Units
EM	Expense Management
GOI	Government of India
GR	Growth Rate
HKGB	Hadoti Kshetriya Gramin Bank
ICICI	Industrial Credit and Investment Corporation of India

ID Ratio	Investment-Deposit Ratio
IRD P	Integrated Rural Development Programme
IRS	Increasing Returns to Scale
JNAGB	Jaipur Nagaur Anchlik Gramin Bank
JTGB	Jaipur Thar Gramin Bank
LIQ	Liquidity
LNGSDP	Natural Log of Gross State Domestic Product
LNTA	Natural Log of Total Assets
M_Share	Market Share
MAGB	Mewar Anchlik Gramin Bank
MGB	Marudhara Gramin Bank
MGB	Marwar Gramin Bank
MGBGB	Marwar Ganganagar Bikaner Gramin Bank
MKGB	Marudhar Kshetriya Gramin Bank
NABARD	National Bank for Agricultural and Rural Development
NPAs	Non Performing Assets
PNB	Punjab National Bank
PSA	Priority Sector Advances
RBI	Reserve Bank of India
RGB	Rajasthan Gramin Bank
ROA	Return On Assets
RRB	Regional Rural Bank
SBBJ	State Bank of Bikaner and Jaipur
SC	Scheduled Cast
SGB	Shekhawati Gramin Bank
SHG	Self Help Group
SKGB	Sriganganagar Kshetriya Gramin Bank
SLR	Statutory Liquidity Ratio
ST	Scheduled Tribe
TAGB	Thar Anchlik Gramin Bank
UCO Bank	Urban Cooperative Bank
VRS	Variable Returns to Scale

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*Chapter - 1*  
*Introduction*

# Chapter -1

## Introduction

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### 1.1 Prologue

In the fast changing world, operational efficiency is a pre-requisite for soundness of any financial institution. Operational inefficiency results in erosion of financial resources which, in turn, affects the financial viability of an organization, thereby, adversely affecting the public confidence. For a commercial bank, this affects the magnitude of deposits mobilized, its lending capacity, operational viability etc.

Banking system is fundamental to any developing economy. Without an efficient banking system, no business activity can be carried out. Through effective banking, disparities among rich and poor and also between various regions can be reduced. The banking sector plays an important role in mobilization and allocation of resources and thus helps in achieving broader socio-economic objectives through expanding the banking services by reaching the vast unbanked and under-banked population of the country.

As Mahatma Gandhi said “Real India lies in villages” and village economy is the backbone of Indian economy. Around 70 percent of Indian population lives in villages, still agricultural sector contributes just nearly 17% in GDP of the nation. This shows the backwardness of rural sector in India which is a result of poor credit inflow and strong network of local moneylenders. However, agricultural sector is the largest foreign exchange earner to India. In India, the way to sustainable economic growth goes through a vibrant agricultural and rural economy. This can be achieved only by structural changes in the socio-economic condition of rural sector in order to improve the living standards of low income working population of these areas and to make their development process self sustained. To fulfill this objective, various plans and programs have been formulated and implemented by the Government of India since the beginning of first five year plan in 1951. But, these programs failed

to achieve the desired objectives due to backward economic scenario of rural sector and lack of adequate credit to the rural poor in those areas.

Rural sector in India has been facing the problem of inadequate supply of institutional credit. Moreover, the distribution of institutional credit has been unequal in respect of region, class, caste and gender in these areas. The major source of credit to rural households, particularly to low income working households has been the informal sector. Informal sector advances loans at very high rates of interest. Terms and conditions attached to such loans have also been very exploitative for the rural poor. Therefore, the main objective of rural credit policy in our country, since the commencement of first five year plan, has been to expand the role of institutional credit agencies in the field of rural credit.

Before nationalization, commercial banks in India used to operate mainly in urban areas whereas rural and semi-urban areas were being neglected by these banks. As the credit requirements of agricultural sector were growing rapidly, it was felt that co-operatives alone would not be able to fulfill the demand for institutional credit in rural areas. Therefore, the multi-agency approach to the rural credit was adopted and 14 major banks were nationalized in 1969 and six more in 1980. The nationalized commercial banks were required to extend credit to rural areas on a priority basis. RBI established minimum guidelines for these banks to expand their branch network in rural areas especially for the rural poor. In spite of all these sincere efforts, Banking Commission in 1972, felt the need of having specialized banking institutions to cater to the credit needs of rural poor.

Consequently, Government of India constituted the Working Group on Rural Banks in July 1975 and by following the recommendations of the Group, Regional Rural Banks were established in India in October 1975 with a basic objective of providing credit only to the weaker sections of the rural areas such as, small and marginal farmers, agricultural laborers, share-croppers, rural artisans, small entrepreneurs and self-employed persons and other rural residents of small means at very soft lending rates. In 1976, the formal "Regional Rural Banks Act, 1976" was promulgated. These banks were set up as state sponsored, regional based, rural

oriented commercial banks which would have local feel and familiarity with the rural problems, professional attitude, ability to mobilize deposits and access to the central money markets and the modernized outlook of commercial banks. RRBs are jointly owned by Government of India, the concerned State Governments and sponsor banks and the issued capital of a RRB is shared by the three owners in the proportion of 50:15:35 respectively. RRBs work under the control of two national level institutions; the National Agricultural Bank and Rural Development (NABARD) and the Reserve Bank of India (RBI).

From a modest beginning then made on an experimental basis, the RRBs have now come to occupy an important place in the Indian Banking System. These banks have showed a remarkable performance in meeting their social objectives and in taking the banking services to the doorsteps of rural masses. The rural focus of RRBs is proved with the fact that rural and semi urban branches constitute more than 97% of their total branch network as on 31<sup>st</sup> March 2014. This phenomenal growth of branch network has made it possible for RRBs to spread their banking operations in the unbanked areas. But, the financial viability and operational efficiency of the RRBs has been a matter of great concern since the 1980s, just after five years of their existence. Further, “In the wake of introduction of Financial Sector Reforms in 1991-92, the commercial viability of RRBs emerged as the most crucial factor in deciding about their desired role due to their limited business flexibility with hardly any scope of expansion, diversification, smaller size of loans with higher exposure to risk-prone advances and professional inefficiency in financial development”.<sup>1</sup>

The concept of operational efficiency is of recent origin. It is related with the need of performing a task in a planned and coordinated manner so that the organizational efficiency is achieved and profitability of the organization as a whole is increased. It signifies the quality of skill and degree of success attained in the management and performance of various activities of an organization. This concept when applied to banking industry is interpreted in terms of efficiency of its various operations like cost-effectiveness, funds management, customer services, priority sector lending, mobilization of deposits etc.

In order to improve viability and operational efficiency of RRBs and to strengthen them, Narsimham Committee (1991) recommended to allow RRBs to take all types of banking business like issue of guarantees, demand drafts, issue of traveler's cheques, locker facilities and foreign exchange business too with the prior approval of concerned authorities. They were also been authorized to extend credit to non-target group borrowers up to 60 percent of their fresh lending and for various non-priority sector purposes up to 10 percent of their fresh lending. Besides these initiatives, RRBs were advised to prepare Development Action Plans (DAPs) covering a period of five years in order to attain long-term viability. The Government of India, in consultation with the RBI and NABARD, initiated recapitalization of RRBs in 1994-95 as a part of comprehensive restructuring program to clean their balance sheets. The sponsor banks were given greater freedom and responsibility to support and guide RRBs. To improve financial viability, a new set of prudential norms of income recognition and asset classification were introduced in RRBs also. RRBs were required to make full provisioning against their huge non-performing assets. Investment portfolios of RRBs were also broadened to improve the profitability. Branch licensing policy for RRBs is the same as for commercial banks and they have also been permitted to merge or close down their unviable branches or relocate them to better locations such as agricultural produce markets. All these reform measures enabled RRBs to compete with commercial banks in the field of rural credit in the country.

Further, Government of India initiated the process of structural consolidation of RRBs in 2005-06, as per the recommendations of Advisory Committee on Flow of Credit to Agriculture and Related Activities (Vyas Committee-II, 2004). In order to improve the operational viability of RRBs and to take the advantages of economies of scale the process of amalgamation of RRBs (sponsor bank-wise within a state) was initiated on September 12, 2005. It was envisaged that new entities would be benefitted by having a larger area of operation and enhanced credit exposure limits and would provide better customer services due to better infrastructure, computerized branches, experienced work force, common publicity and marketing efforts etc. The banks would be able to diversify their banking operations in a better way and the process of amalgamation would help in overall

strengthening of the weak RRBs.<sup>2</sup> As a result of this amalgamation process, number of RRBs reduced from 196 in March 2005 to 82 in March 2012 during Phase I and further to 57 in March 2014 during Phase II. As on 31<sup>st</sup> March 2014, there were 57 RRBs working in India having a total of 19082 branches covering 642 districts throughout the country.

In Rajasthan, before amalgamation a total of 14 RRBs were working but this number reduced to 6 as on 31<sup>st</sup> March 2012 during phase I and further to 3 as on 31<sup>st</sup> March 2014 during phase II. These 3 RRBs are having 1236 branches covering all the districts of Rajasthan.

Further, analysis of the available data regarding the overall performance of RRBs reveals that rural and semi-urban branches constitute around 97 percent of the total branches of RRBs as on 31<sup>st</sup> March 2014, while this ratio was just 59 percent and 52 percent in case of nationalized banks and private sector commercial banks respectively. Thus, RRBs continue to be a significant contributor in the rural financial architecture of the country.<sup>3</sup> However, there may be many areas where performance of RRBs is still needed to be evaluated. Operational efficiency of these banks is needed to be analyzed and assessed in the light of their original objectives and process of continuous restructuring especially in the era of their structural consolidation.

### **Regional Rural Banks in Rajasthan**

In Rajasthan, first RRB was established on 2<sup>nd</sup> October 1975 as one of the first five RRBs in the country. According to its geographical area of operation, the bank was named Jaipur Nagaur Anchlik Gramin Bank (sponsored by UCO bank) with its head office at Jaipur. In 1976, two more RRBs Marwar Gramin Bank and Shekhawati Gramin Bank were opened. By the end of 1985, the number of RRBs increased to 14, when last and 14<sup>th</sup> RRB, Bikaner Kshetriya Gramin Bank was established. Till the initiation of amalgamation there were 14 RRBs working in Rajasthan with a network of 1013 branches covering all the districts of the State (as on 31<sup>st</sup> March 2005). Due to the phase I of amalgamation began on 24<sup>th</sup> January, 2006 in Rajasthan number of RRBs reduced to 6 in June 2006 having four amalgamated RRBs and two standalone RRBs. During phase II, this number further

brought down to only 3 RRBs (2 amalgamated and 1 standalone RRB) in the state of Rajasthan as on 31<sup>st</sup> March 2014. 94.7 percent of the total branches of these three RRBs are operating in rural and semi-urban areas of the state.

## **1.2 Need of the Study**

The economy of the state of Rajasthan is mainly characterized by over-dependence on agriculture, lack of socio-economic infrastructure and inadequate exploitation of vast natural resources. In view of the large incidence of rural poverty in the state, establishment of RRBs had a great importance as these banks were created to cater exclusively to the credit needs of the rural poor, particularly among the economically and socially marginalized sections in the rural areas. Since their inception in 1975, RRBs in Rajasthan have been playing a key role in the Socio-economic development by penetrating every corner of the state. However, in response to the financial sector reforms initiated in 1991-92 and further the process of amalgamation began in 2005, the structure and the way of operations of these banks has changed significantly. In this context, the operational efficiency and commercial viability of these banks has emerged as the most crucial factors in deciding about their desired role in emerging economic scenario.<sup>4</sup> Thus, it has become imperative to review the operational efficiency of RRBs particularly in the State of Rajasthan.

Efficiency study of RRBs is needed in order to evaluate the process of amalgamation and other reform measures and to locate the sources of inefficiencies. Further, necessary policy measures can be suggested on the basis of the findings as the efficient operation of these banks is very essential to achieve one of the major policy objectives of the Government of India that is to eradicate rural poverty.

## **1.3 Review of Literature**

The literature available regarding the measurement of operational efficiency and its various aspects like productivity, profitability etc. in banking sector specially in respect of RRBs is little limited. Available literature is in the form of reports of various committees, commissions and working groups established by the Union

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Government, NABARD and Reserve Bank of India, the research studies, articles of researchers, bank officials and economists which are being reviewed here.

Divatia and Venkatchalam (1980) studied operational efficiency and profitability of Public Sector banks for 15 public sector banks covering the period of 8 years (1969-76). They measured operational efficiency by adopting three indicators: productivity, local and regional objectives and operating cost and profitability. They used ranking method for the study and concluded that efficiency in terms of profitability had decreased during the study period.<sup>5</sup>

Patel and Shete (1980) of the National Institute of Banking Management made a valuable analysis of performance and prospects of RRBs. They also provided a comparative picture of performance in terms of deposit mobilisation, branch expansion and credit deployment of the co-operative banks, commercial banks and RRBs in a specified area.<sup>6</sup>

Wadhva (1980) conducted a study of working of two RRBs operating in Haryana and Rajasthan in 1977. The study found that RRBs were not able to meet the targets set by Government of India regarding disbursement of credit. The study observed that limited scope of direct lending, absence of effective linkages with primary co-operative societies and lack of adequate support from government in expanding business had been the reasons behind the poor performance of these banks. The study also found that RRBs were suffering from complicated procedural formalities.<sup>7</sup>

Bhargava (1982) studied Jaipur Nagaur Anchlik Gramin Bank (JNAGB) of Rajasthan to evaluate the impact of its ongoing schemes on loans and advances to the rural poor. The survey was done in Nagaur district for the period 1978-80. He concluded that most of these schemes had failed to achieve their objectives.<sup>8</sup>

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 funds management strategy, margin between resource mobility and their deployment and

on the control exercised on current and future costs with advances. The study concluded that RRBs incurred losses due to defects in their systems.<sup>9</sup>

Shah (1987) attempted to study the factors influencing costs, earning and efficiency of banking services at branch level by taking 141 rural and 80 urban branches of the Bank of Baroda zone of Gujarat state. The relationship between size and cost at branch level was examined. He concluded on the basis of regression analysis that size and costs were negatively related. He also concluded that economies of scale in rural branches were more than urban branches and also rural branches were more operationally efficient in comparison to urban branches.<sup>10</sup>

Bapana (1989) examined the organization and working of four regional rural banks in Rajasthan in the year 1980. On the basis of secondary data the study emphasized upon the different aspects such as organization, management, financial resources, loans and advances, credit-deposit ratio, recovery performance and profitability of RRBs. The author concluded that RRBs were suffering from many structural drawbacks and were economically unviable institutions. Study further revealed that the RRBs had shown satisfactory performance in respect of branch expansion, deposit mobilization, and in meeting all the goals under the government sponsored programmes during the period. Mounting over-dues, very low spread ratio and high burden ratio were recognized as major weaknesses of RRBs in Rajasthan.<sup>11</sup>

Aydogan (1990) in his study carried extensive statistical analysis of Turkish Banking System in order to highlight its financial characteristics, efficiency and financial structure. Capital adequacy, provisions for non-performing loans and equity participations and fixed assets were found to be the significant explanatory variables. Several risk measures were also computed and with the help of multiple regression model, foreign exchange risk was found to be positively related to profitability. The study further found statistically that the entry of Foreign and Turkish Banks into the Turkish Banking System did not improve competition remarkably.<sup>12</sup>

Kalkundrikar (1990) in his book analyzed the role of RRBs in economic development taking case studies of two RRBs in Karnataka. The study found out that the banks failed to redress the intra-regional and inter-district imbalances in economic development. He suggested that RRBs should have designed their schemes in such a way that these imbalances could be reduced. The study emphasized that the RRBs needed to change the pattern of working and adopt more dynamic schemes and policies.<sup>13</sup>

Kumar (1990) studied the position of RRBs in the rural credit structure of Bihar in a comprehensive manner. Additionally, Vaishali Kshetriya Gramin Bank (VKGB) of Muzaffarpur district was studied for the period 1979-1985. The performance of VKGB in terms of credit-deposit ratio, branch expansion, and deposit mobilization was analyzed. It showed an unhappy picture of the performance of RRBs in Bihar in general.<sup>14</sup>

Vyas (1991) studied financial performance of RRBs in Rajasthan and their contribution in implementing government sponsored special programmes. The financial performance of RRBs was evaluated in terms of quick ratio, credit-deposit ratio, profit to proprietor's capital ratio and working capital analysis. This study concluded that RRBs were effective tools of economic development in rural areas.<sup>15</sup>

Agarwal (1991) evaluated the working of RRBs by taking Prathma Bank (an RRB) of Uttar Pradesh as a unit of study. Prathma Bank was evaluated in terms of branch expansion, deposit mobilization and advances for the period 1976-84. Operational results and profitability were also measured by two methods – first, difference between total income and total expenditure and second by spread. Both the methods showed declining trend of profitability in Prathma Bank over the period of study.<sup>16</sup>

Upadhyay (1992) attempted to measure operational efficiency and productivity in all the 14 RRBs in Rajasthan by a set of six indicators for the period 1986-1990. The five indicators were expressed in percentage terms, in which, priority sector advances were taken as percent of total advances, then as percent of total deposits, direct agricultural advances, IRDP advances, weaker sections

advances respectively. Sixth indicator taken was total income as percent of other advances. This study concluded on the basis of efficiency index prepared by the author that BKGB, BCKGB, DBKGB were the most efficient RRBs in Rajasthan. This study had limitation in terms of less number of indicators used for measuring operational efficiency concept.<sup>17</sup>

Singh (1992) measured operational efficiency of Shekhawati Gramin Bank (SGB) of Rajasthan (a PNB, RRB) for the period 1986-90. For efficiency, three areas were touched upon viz. financial efficiency (credit deployment, financial strength and profitability); service efficiency (customer service efficiency, managerial efficiency, recovery efficiency); and working capital management. Relevant ratios were calculated and a field survey was also conducted. The study concluded that the SGB had maintained a low level of operational efficiency. A comparison of efficiency of the SGB with four other RRBs of Rajasthan was also made on the basis of some selected parameters and it was concluded that more or less all RRBs were on the same level.<sup>18</sup>

Gupta (1993) attempted to make an analytical study of financial management of Alwar Bharatpur Anchalik Gramin bank (a PNB, RRB) of Rajasthan. The study examined the profitability of ABAGB by two types of ratios; based on capital and based on equities for the period 1981-90. This study concluded that the bank had contributed a lot for rural development but from the profitability point of view it showed unsatisfactory results.<sup>19</sup>

Kumar Raj (1993) carried out a study on the topic "Growth and Performance of RRBs in Haryana". On the basis of the study, it was found that there was an enormous increase in deposits and outstanding advances. The researcher felt the need of increasing the share capital and to ensure efficient use of distribution channels to finance the beneficiaries.<sup>20</sup>

Parian (1995) evaluated the performance of Shekhawati Gramin Bank (SGB) of Rajasthan for the period 1976-1992. This study examined the financial viability of the SGB in terms of branch expansion, deposit mobilization, credit deployment and its working results. The study concluded that in general, the RRBs were suffering

from structural deficiencies. They were economically weak and financially unviable institutions.<sup>21</sup>

Hundekar (1995) evaluated productivity and profitability of rural banks with a case of Bijapur Gramin Bank (BGB) of Karnataka state for the period 1986-1991. Productivity was analyzed in terms of deposit mobilization, deposit growth, market share, credit management, recovery performance and performance under annual action plans. Operating cost effectiveness and profitability of working funds was also measured. Author concluded that bank was in a very poor situation over the period due to increasing operating costs.<sup>22</sup>

Allen and Rai (1996) estimated a global cost function for international banks to test for both input and output inefficiencies covering a period from 1988 to 1992. The study observed that for banks in 15 countries, the prevalence of input X-inefficiencies far outweighs that of output inefficiencies (as measured by economies of scale and scope). Study further concluded that large banks in separated banking countries had the largest measure of input inefficiency amounting to 27.5 percent of total costs as well as significant level of diseconomies of scale.<sup>23</sup>

A.K. Jai Prakash (1996) conducted a study with the objective of analyzing the role of RRBs in economic development and revealed that RRBs had been playing a vital role in the field of rural development. Moreover, RRBs were more efficient in disbursement of loans to the rural borrowers as compared to the commercial banks. Support from the state governments, local participation, and proper supervision of loans and opening urban branches were some steps recommended to make RRBs efficient in future.<sup>24</sup>

Patel (2001) in his article stated that rural credit structure in India had improved significantly in respect of credit disbursement, recovery position and non-performing assets. However, he emphasized on the need of preparing an appropriate policy paper by the Central Government in consultation with RBI, NABARD, IDBI, concerned Ministries and State Governments so as to make a strategy to implement plans and programs in order to ensure proper support to area based development projects by these credit institutions.<sup>25</sup>

The Report of the Expert Committee on Rural Credit (2001) under the chairmanship of Shri V. S. Vyas appreciated the working and involvement of RRBs in providing credit support to non-farm activities in comparison to the co-operatives and commercial banks. It was opined in the report that the sponsor banks should ensure necessary autonomy for RRBs in their credit and other portfolio management system. The committee recommended that no new Local Area Banks (LABs) other than those converted from RRBs or sponsored by non-government or voluntary agencies needed to be set up in the private sector.<sup>26</sup>

Thingalaya (2001) in his book examined the working and performance of Regional Rural Banks at all India level during the period 1990-2000. On the basis of secondary data collected from the annual reports of all 196 RRBs at that time, the study observed that around 100 RRBs had been developed as viable and effective credit institutions via structural and functional changes. The study opined that the role and responsibilities of Gramin Banks needed to be redefined so as to improve their performance.<sup>27</sup>

Hosamani (2002) in his book entitled, "Performance of Regional Rural Banks" evaluated the performance of Malprabha Gramin Bank in Karnataka by using special analytical techniques like exponential growth functions, principal component analysis, capital adequacy analysis, break-even analysis, scaling techniques etc. He observed that the gross ratio and operating ratio were unfavorable for earning profits. He emphasized on the need of reducing the operating expenditure and to increase the non-interest income. The author further suggested the RRB to initiate NRI transactions, strengthen its capital base and issue shares to the employees for increasing their active participation for better growth and performance of the bank.<sup>28</sup>

Malhotra (2002) in his article, "Regional Rural Banks: The Forgotten Case in Financial Sector Reforms" pointed out that if tangible reforms were not infused in RRBs to make them vibrant, these institutions might fail to achieve the very objective for which they were established. He further emphasized on the need for revolution in RRBs reforms.<sup>29</sup>

Malhotra (2002) in his study “Performance of India’s Regional Rural Banks (RRBs): Effect of the Umbilical Cord” examined the issue whether location matters for the performance of RRBs. He evaluated the impact of 22 different parameters on the overall functioning of RRBs for the year 2000 and concluded that geographical location of RRBs did not affect their performance adversely. He further found out that “it is the specific nourishment which each RRB receives from its sponsor bank is cardinal to its performance”. It means umbilical cord (sponsor bank) affected the performance of RRBs. Though, the financial health of the sponsor bank was not taken into consideration directly.<sup>30</sup>

Kher (2003) attempted to examine the rural credit structure of India and Gujarat state and the role played by the RRBs. The study was confined only to the specific areas like loans and advances made by the RRBs especially to the priority sector and non-priority sectors for the period of 6 years starting from 2002-03 to 2008-09. With the use of percentage and growth rate the study concluded that the disbursement of short terms loans for crops constituted a higher growth rate than that of term loans. Further, it was emphasized that agricultural sector needed to be encouraged by providing larger amount of term loans.<sup>31</sup>

Sinha *et al.* (2003) in their working paper attempted to assess how far the apparent tension between coverage (especially of poor clients) and financial viability was a real one in respect of Regional Rural Banks in India. The study sampled a total of 5 RRBs, three in a healthy financial condition and two less so, one of which was located in a remote area. The study suggested that there was no binding tension between the two. The study further observed that the product design along with operating efficiency was the key factor in the ability of RRBs to achieve both outreach and viability objectives. Study established that profitability was very strongly correlated with proactive and well-judged management.<sup>32</sup>

Uddin (2003) in his study, “Regional Rural Banks and Development” critically examined the working and performance of RRBs in Uttaranchal by analyzing branch expansion, deposit mobilization and profitability aspects of these banks. He further assessed the role of RRBs on rural economy of the state and tried

to find out the various constraints responsible for slow growth and progress of these banks.<sup>33</sup>

Bhatt and Thorat (2004) provided a penetrating analysis as to how constraints in the institutional dimension have seriously impaired the governance of the RRBs. They argued that perverse institutional arrangements that gave rise to incompatible incentive structures for key stakeholders such as political leaders, policy makers, bank staff and clients had acted as constraints on their performance. The lackluster performance of RRBs during the last two decades, according to the authors, could be attributed to the lack of their commercial orientation.<sup>34</sup>

Chavan (2004) attempted to examine the growth and regional distribution of rural banking over the period 1975-2002. The paper revealed that the gains made by historical under-privileged regions of east, north-east and central part of India during the period of social and development banking were reversed in the 1990s. Cutbacks in rural branches and rural credit-deposit ratios were the steepest in the eastern and north eastern states of India. Further, policies of financial liberalization had unmistakably worsened regional inequalities in rural banking in India.<sup>35</sup>

Rathore (2004) in his book evaluated the performance of Avadh Gramin Bank, Lucknow particularly during the period 1991-92 to 2002-03 in order to identify its weaknesses in its organization, resources mobilization, credit extension, costs, profitability, customer-service with the use of ratio analysis, trend analysis and funds flow analysis. Study concluded that Avadh Gramin Bank was characterized by shrinking deposits growth, lower C-D Ratio, low recovery of advances and high NPAs. He suggested that the bank could improve its performance by making special plans and by fixing their targets at the higher level.<sup>36</sup>

Bose (2005) in his study, "Regional Rural Bank: The Past and the Present Debate" briefly reviewed the three phases of Regional Rural Banks in India. The Author found out that inception and expansion phase (1976-1990) saw rapid growth of the RRBs' activities; the reform phase (1991-2002/3) 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”. Author emphasized that the purpose of ownership reforms of the RRBs must have been the same as for the other aspects of RRB policy which was to foster a bank-led equitable rural growth.<sup>37</sup>

Pati (2005) conducted a micro-level study both at corporate and branch levels to review the financial viability and profitability of RRBs in North-East region and in Assam taking Subansiri Gaonlia Bank (SGB), operating in the administrative district of North Lakhimpur, in particular. On the basis of secondary data for a period of 10 years (1991-92 to 2000-01) and personal interviews with the bank officials of SGB the study found that SGB was suffering from high operating costs, poor recovery position and presence of huge NPAs. In branch level analysis with the help of correlation and regression analysis for the period from 1993-94 to 2000-01 the study concluded that out of 16 branches of SGB only one branch had performed very well. The study suggested to link branch manager’s career enhancement with their performance.<sup>38</sup>

Sarma (2005) in his article stated that an amalgamation of Regional Rural Banks was not sufficient to improve their efficiency. It would just enlarge their area of operation and business opportunities. He observed that people tend to deposit their savings with sponsor banks due to lazy banking activities in RRBs. He emphasized to change in the mindset and working pattern of the employees and the management of these banks.<sup>39</sup>

Thingalaya (2005) in his research paper, “A Banking Roadmap for Rural Maharashtra”, presented the alternative plans for restructuring of the Regional Rural Banks. The study suggested that RRBs sponsored by the same sponsor bank should be amalgamated so as to have only three RRBs in place of ten in the state of Maharashtra. The author further suggested one alternative plan of amalgamating the rural branches of the commercial banks with the RRBs in order to consolidate the rural banking structure in the state. However, it would require consensus in policy formulation at the national level.<sup>40</sup>

Acharya and Mohanty (2006) in their study provided an in-depth analysis of the operations of RRBs at all India level and in the state of Orissa, in the era of financial sector reforms. The study analysed the history of the various committees on RRBs, the liberalized policy measures exclusively for the RRBs in the wake of Financial Sector Reforms and the impact of these measures on the growth and performance of these banks over the years. With the use of secondary data study involved the application of accounting and statistical tools like ratios, percentages, arithmetic averages, and trends etc. The study concluded that the RRBs had experienced far-reaching changes in their operations since the introduction of the banking sector reforms and their performance had improved both in quantitative as well as in qualitative terms.<sup>41</sup>

Hadi and Bagchi (2006) evaluated the performance of RRBs in India in general and in West Bengal in particular. By analyzing relevant secondary data the study revealed that RRBs had been more or less successful in expanding outreach of institutional credit in rural areas. Authors also analyzed the recovery performance and problems of loan repayment of RRBs in West Bengal and in case of selected branches of Murshidabad Gramin Bank. The study found out that poor recovery of loans of RRBs were caused by improper identification of borrowers, defective loaning policies, weak monitoring, and ineffective follow-up etc.<sup>42</sup>

Kaye, Tasi (2006) in his book entitled “Role of Regional Rural Banks in Rural Development” studied the role of Arunachal Pradesh Rural Bank (APRB) finance on income generation, asset creation and employment generation in rural areas. For this purpose he conducted a field survey of 200 beneficiaries of whole operational area of the bank. He observed that the APRB finance had helped the rural people in increasing their annual income, acquisition of assets, generating additional employment but the mis-utilization and diversion of loan amount by the beneficiaries towards the unproductive and unspecified purposes affected the repayment of the loans.<sup>43</sup>

Mishra (2006) conducted a study to evaluate the performance of RRBs in India by following a deductive approach. First, the extent of the problem of the loss

making RRBs was studied to investigate if the problem was confined to some particular sponsor banks or states. Subsequently, an attempt was made to enquire the factors that influence the performance of RRBs and role played by the sponsor banks. The exploratory analysis revealed that the problem of loss making RRBs was neither confined to some specific states nor to a group of sponsor banks. Given the linkage between the RRBs and their sponsor banks, the study also attempted to infer whether or not the umbilical cord hypothesis was operational. The study emphasized that all the stakeholders in general, and the sponsor banks in particular, should pay more attention so as to transform loss making RRBs into profitable institutions.<sup>44</sup>

Reddy (2006) in this article, “Productivity Growth in Regional Rural Banks” examined the total factor productivity, technical and scale efficiency changes in Regional Rural Banks by using the data from 192 banks for the period from 1996 to 2002. He observed that rural banks had remarkable economics of scale in terms of assets and number of branches per bank. He further revealed that productivity growth remained significantly higher in the banks located in comparatively economically developed areas.<sup>45</sup>

Chidambaram (2007) in his article reviewed that RRBs in India had made significant progress in their basic operations and in profit making also during the period from 2003 to 2005. He pointed out that as a result of amalgamation RRBs were then able to provide better customer services with better infrastructure and policies of experienced staff. He further emphasized on the need to change in the attitude of bank officials of the RRBs.<sup>46</sup>

Lu *et al.* (2007) in their study applied CCR model of DEA and the slack variable analysis to evaluate the operating efficiency of domestic banks in Taiwan from 1998 to 2004. Interest expenses, fixed assets, deposits and number of employees were used as input variables and interest income, non-interest income, investments and loans were used as output variables. The study found that the ratio of NPAs to Gross Loans of higher efficiency group was significantly lower than that of the lower efficiency group. Study suggested banks to improve non-interest

income and investments in each year and to adjust all the variables in order to enhance their overall operating efficiency.<sup>47</sup>

Kumar and Gulati (2008) attempted to measure the extent of technical, pure technical and scale efficiencies in 27 Public Sector Banks operating in India in the year 2004-05. Using DEA, the study revealed that Public Sector Banks operated at 88.5 percent level of overall technical efficiency. The study further found that decreasing returns to scale had been the predominant form of scale inefficiency in Public Sector Banking Industry. Logistic regression analysis further resulted that the exposure of the banks to off-balance sheet activities had a strong and positive impact on overall technical efficiency of banks.<sup>48</sup>

Khankhoje and Sathaye (2008) in his paper investigated whether the restructuring of regional rural banks in India, undertaken in 1993-94, had helped improve their production efficiency. Production efficiency had been measured using a non-parametric technique of Data Envelopment Analysis (DEA). Efficiency scores were calculated for the years from 1990 to 2002 taking interest income and non-interest income as outputs and interest expenses and non-interest expenses as inputs. Scores were compared for before and after the restructuring year (1993-94). The study concluded that efficiency of rural banks had significantly improved after restructuring. The study suggested to continue the policy of restructuring of these banks.<sup>49</sup>

Sufian and Chong (2008) in their research paper aimed to investigate the determinants of profitability of Philippines banks during the period from 1990 to 2005. Using multivariate regression analysis the study found that all the bank specific factors like size, credit risk, overhead expenses, non-interest income and capitalization included in the model had a statistically significant impact on the profitability of Philippines banks. However, external variables like economic growth, growth in the money supply and the level of stock market capitalization did not significantly explain the variations in the profitability of Philippines banks. Inflation had a negative impact on bank profitability.<sup>50</sup>

Dhaliwal (2010) attempted to examine the various aspects of functioning of RRBs and to highlight the problems of rural poor dealing with the banks in the state of Punjab. The study was based on both primary and secondary data covering all the RRBs of Punjab for the period 1994-95 to 2005-06. With the help of various statistical tools like average, ratio analysis, exponential growth rate, co-efficient of variation, chi-square test etc. study concluded that RRBs in Punjab performed better than those at all India level in respect of recovery performance, Gross NPAs, Profitability and Productivity. Further, it suggested to increase branch network and equip them with adequate infrastructural facilities and also to employ more staff to improve their functioning.<sup>51</sup>

Ibrahim (2010) in his research paper investigated whether the merger or amalgamation of regional rural banks in India had helped to improve their performance. The study used secondary data for the period from 2001-02 to the year 2008-09 on specific areas such as branches, coverage, deposits, credits and investments etc. of RRBs in India. With the use of various statistical tools like t-test and ANOVA, it was concluded that RRBs in India showed a remarkable performance in the post-merger period. The study further suggested that the process of merger should not proceed beyond the level of sponsor bank in each state.<sup>52</sup>

Ishwara (2011) attempted to investigate the performance of RRBs in India from 1980 to 2009. He examined the impact of the transformation of RRBs. To fulfill this objective study concentrated on financial results of these banks before and after amalgamation using descriptive statistics. The study observed that net profits of RRBs increased by 200 percent and business by 100 percent after amalgamation. The study further concluded that NPA management had been improved in RRBs after amalgamation and number of loss making RRBs was also reducing gradually.<sup>53</sup>

Mohanti *et al.* (2011) in their research paper aimed to assess the growth pattern and the present performance of RRBs in India and to study the factors that influenced the performance of these banks. The study concluded that Indian rural banking sector had been transforming with a high level of technology, diversity and sophistication in products and services and improved efficiency in RRBs over the

period of study. With the help of regression analysis, study further found that parameters like investment, credit and other income of respective sponsor banks had insignificant impact on profitability of rural sector banks. The study opined that merging RRBs with sponsor banks would defeat the entire objective of RRBs.<sup>54</sup>

Mohindra and Kaur (2011) attempted to empirically examine the total factor productivity changes of regional rural banks using a balanced panel dataset of 50 observations during the post reform period spanning from 1991-92 to 2006-07. A non-parametric Malmquist Productivity Index was applied to calculate productivity. Total factor productivity was decomposed into technical efficiency and technological change and technical efficiency change was further decomposed into pure technical efficiency change and scale efficiency change. Total factor productivity change (TFPCH) in RRBs averaged at 1.3 percent during 1991-92 to 2006-07. The highest growth rate was observed in case of Malwa Gramin Bank and Kshetriya Kisan Gramin Bank which was 5.7 percent and 3.8 percent respectively. The change in scale efficiency shown increasing trend of 0.3 percent.<sup>55</sup>

Prasad and Chari (2011) conducted a study to evaluate the factors influencing the efficiency of the banks considering 23 ratios related to Capital Adequacy, Asset Quality, Management Efficiency, Earnings, Profitability and Liquidity. Pearson's co-efficient of correlation was also employed. The study revealed that debt-equity ratio, NNPA's/TA and NNPA's/NA, OP/AWF, ROA and NIM influenced the deposits, assets and advances of banks. Management and Liquidity were not found to influence the output constructs; deposits, assets and advances.<sup>56</sup>

Reddy and Prasad (2011) studied and discussed the financial performance of selected Regional Rural Banks during post reorganization period (2006-2010). To measure the financial soundness of selected sample banks, CAMEL model was adopted. The study concluded that Andhra Pragati Grameen Bank excelled over Saphthagiri Grameena Bank in protecting the interests of the creditors and quality of earnings while Saphthagiri Grameen Bank proved to be good in asset quality

perspective and profit per employee perspective. But two sample banks did not differ significantly in liquidity position during the study period.<sup>57</sup>

Subbarayudu and Reddy (2011) in their research study “Regional Rural Banks and Rural Development” focussed on rural finance by Rural Banks, particularly the Rayalaseema Grameen Bank (RGB) in Kadapa, Andhra Pradesh. By using both primary and secondary data study observed that beneficiaries encountered a lot of problems including delay in sanctioning and disbursement of loans, rigid terms and conditions, poor cooperation from the bank officials, inadequate technical and legal assistance etc. Study also identified the problems faced by the bank officials like, political interference, willful defaulters etc. and suggested that RGB had to concentrate more on the upliftment of the weaker sections of the society.<sup>58</sup>

Nair and Thirumal (2012) in their study examined the progress and growth pattern of regional rural banks in India with special reference to the profit making RRBs for a period of 10 years from 1997-98 to 2006-07. The study was descriptive and analytical in nature and made use of secondary data. Selected ratios under CRAMEL method were used to measure the profitability of RRBs. Correlation and compound annual growth rate were used to know the growth pattern. The study observed that amongst the RRBs the Southern region had a remarkable performance during the study period. The study emphasized that judicious mix in capital configuration and extending hand by the sponsoring banks in attaining the operational efficiency were the need of time.<sup>59</sup>

Ahmed, Bhandari and Ahmed (2013) examined the profitability performance of Meghalaya Rural Bank (MRB) in the context of the performance of RRBs as a whole. Considering all 58 branches for the period from 2000-01 to 2010-11 the study established the relationship between volume of business and profitability and tried to identify the determinants of profitability of MRB with the help of regression analysis. It was concluded that profitability of MRB was explained about 99 percent by priority sector lending, credit deposit ratio, operating expenses, spread, deposits and NPAs.<sup>60</sup>

Almazari (2013) examined that relationship between Capital Adequacy and Profitability in nine Saudi Banks taking ROA and ROE as the indicators of profitability. The study covered the period from 2007-2011. Using multiple linear regression technique study revealed that there was a meaningful relationship between capital adequacy, cost-income ratio and bank size with profitability. The study found a negative relationship between capital adequacy and profitability. It was also found that Saudi Banks efficiency as measured by the Cost-Income Ratio was negatively related to bank profitability.<sup>61</sup>

Bhandarnayake and Jayasinghe (2013) attempted to identify the influence of Bank-specific and environmental factors as well as the ownership types of banks in explaining bank efficiency selecting 14 licensed commercial banks in Sri Lanka for the period from 2001 to 2011. Two efficiency measures ROA and NIM were employed. Parameters were estimated using random effect panel data approach. The study found that operating environmental factors were significant in respect of NIM as efficiency measure and bank specific factors were more important in explaining the efficiency when measured as ROA.<sup>62</sup>

Karim and Alam (2013) aimed to measure the performance of selected private sector banks listed on both Dhaka Stock Exchange and Chittagong Stock Exchange in Bangladesh using annual time series data from 2008 to 2012. On the basis of financial ratios three multiple regression models were framed having ROA, Tobin's Q and Economic Value Added (EVA) as dependent variables respectively and four identical explanatory variables; bank size, credit risk, operational efficiency and asset management. From the three regression models, model having ROA as the dependent variable was found to be the strongest as it explained 90 percent of the variation in ROA. Further, in this model all variables except OE were found to have impact on ROA.<sup>63</sup>

Makandar (2013) investigated the effects of amalgamation on the financial performance of Regional Rural Banks in India. The study compared the pre-merger and post-merger financial performance of KVGB and PGB which were amalgamated in 2005 on the basis of employee productivity and branch productivity. Ratio

analysis and t-test were applied to examine the impact of amalgamation. The study found that the productivity performance in selected RRBs had improved marginally after amalgamation.<sup>64</sup>

Navi (2013) attempted to examine the impact of rural banking on farmers in Belgaum district by studying a sample of 90 farmers and 12 workers of the regional rural banks. With the use of statistical tools like frequencies, percentage and bar graphs the study clearly stated that higher rate of interest on loans would reduce the loan borrowing ability of the farmers. In addition, high interest rates would affect adversely the development or growth of farming or business in Belgaum.<sup>65</sup>

Reddy and Padmawati (2013) evaluated the growth and performance of Regional Rural Banks in India during 2001 to 2012 with an objective to examine the commercial viability of these banks. This study concluded correlation co-efficient between branch and deposits, deposits and credit and credit and branches accounted for 0.9 and were significant at both 5 percent and 1 percent levels of significance, which implied that the resource mobilization especially in rural areas and credit allocation of RRBs during the period was significant.<sup>66</sup>

Soni and Kapre (2013) in their research paper, "A study on Current Status of Regional Rural Banks in India", analyzed the current status with financial performance of RRBs in India as on 31<sup>st</sup> March, 2011. This study was diagnostic and exploratory in nature and followed an analytical research design of key performance indicators. Study concluded that the RRBs were providing the strongest banking network. However, Government should take some effective remedial steps to make Rural Banks viable. Study further suggested RRBs to concentrate on speedy and secure banking services to retain existing customers and attract potential customers.<sup>67</sup>

Ahmed, J.U. (2014) in his article, attempted to study the productivity performance of Meghalaya Rural Bank (MRB) in particular. Productivity was measured in terms of labor, branch, return on assets (ROA), return on investments (ROI), profits as percent of business volume etc, in order to examine the innovativeness of MRB. Study observed that the MRB is utilizing efficiently the

resources that they mobilized. The analysis identified wide variations in the productivity, which might have adverse effect on profitability of the bank under study. The study inferred that the wicked nature of clientele resulted in lower productivity of banks.<sup>68</sup>

Ahmed, Mudasir (2014) in his study evaluated the performance of three regional rural banks that were operating in the state of Jammu and Kashmir. They were, Jammu Rural Bank, Ellaquai Dehati Bank and Kamraj Rural Bank. The performance of these banks had been analyzed with reference to deposit mobilization, credit provided, credit to deposit ratio and productivity per employee and per branch. The study concluded that all 3 selected RRBs had done commendable job in rural country side of J&K. However, JRB could be placed on the top among others. Study further, realized that the merger of RRBs would prove much profitable.<sup>69</sup>

Chatterjee *et al.* (2014) attempted to examine the impact of branch level efficiency, total factor productivity growth and priority sector lending of RRBs on their profitability and further to determine the factors that significantly influence the efficiency of these banks in three selected backward districts of West Bengal. Malmquist Productivity Index and DEA were applied to fulfill the purpose of study. Study revealed that profitability was positively related with efficiency, total factor productivity growth, share of priority sector advances and level of subsidy. Study further showed that efficiency was positively and significantly influenced by the number of officers as percentage of total staff and bank size. Revenue diversification had a positive but insignificant impact on efficiency.<sup>70</sup>

Frederick (2014) attempted to establish the impact of key internal and external factors that affected the performance of Domestic Commercial Banks in Uganda for the period from 2000 to 2011. Using linear multiple regression analysis the study concluded that management efficiency measured by operating expenses to total income, asset quality, capital adequacy, interest income and inflation were the significant factors which affected the performance of domestic commercial banks in Uganda over the period of study.<sup>71</sup>

Hussain (2014) analyzed cost to income ratio of commercial banks operating in India with the objective to explore a benchmark cost to income ratio (CIR) which could be used to differentiate banks for their operational efficiency. Impact of size and ownership features of banks on their CIR had also been analyzed. The study revealed that banks operating in India operate under competitive CIR ratio well in line with the international operational efficiency standards. It was also found that size and ownership characteristics influenced strongly in determining the operational efficiency of banks operating in India.<sup>72</sup>

Jain and Choudhary (2014) aimed to examine the efficiency of a Public Sector Bank (SBBJ) during 2009-2013 by utilizing Data Envelopment Analysis (DEA) which is a non-parametric approach. A non-parametric statistical test Kruskal-Wallis was also applied to compare the efficiency across rural and urban branches of the selected bank in Udaipur district of the state of Rajasthan. Study concluded that both rural and urban branches efficiencies were statistically different across each geographical region. Using Mann-Whitney U test study concluded that there was no significant difference between efficiency of rural and urban branches of SBBJ in Udaipur District.<sup>73</sup>

Jariwala and Noronha (2014) made a comparative analysis of RRBs in India during pre and post amalgamation periods on the basis of their key performance indicators such as capital composition, deposits, investments, sector-wise loan disbursement, priority sector advances, NPAs and Net Worth. Authors used t-test in order to examine the difference in their performance due to amalgamation. Study concluded that there had been a significant increase in capital funds, deposits, priority sector advances etc. due to amalgamation. Further, after amalgamation both Gross NPAs and Net NPAs of RRBs had been reduced. Net worth of the RRBs had also increased due to continuous reduction in accumulated losses after amalgamation.<sup>74</sup>

Jindal (2014) analyzed the operational efficiency of 26 public sector banks in India for a period of 21 years; from 1990-91 to 2011-12. On the basis of secondary data study concluded that nationalized banks performed better than the others in

respect of various growth and performance parameters, productivity and profitability. Analysis of technical efficiency using DEA revealed that under CRS assumption; mean technical efficiency was 79.1 percent in 1991-92 which increased to 90.8 percent in 2011-12. By using DEA-VRS assumption the study showed that on an average, the main source of inefficiency was caused by inappropriate scale of operations.<sup>75</sup>

Mohindra (2014) carried a study in order to examine the impact of banking sector reforms on the performance of RRBs, particularly on their productivity and efficiency using ratio analysis. Regional Rural Banks showed negative profit during the beginning of first generation reform period began in 1991-92 but showed positive profits during second generation reforms period began in 1996-97. The ratio analysis showed that the banking sector reforms had provided the platform to the regional rural banks to achieve targets of rural development and financial inclusion.<sup>76</sup>

Rao and Rao (2014) in their article concentrated on Andhra Pradesh Gramin Vikas Bank (APGVB) which was of utmost importance in Andhra Pradesh state to provide financial support to agriculture. Performance of this bank was evaluated in various identified potential areas. By analyzing the secondary data for the period from 2005-06 to 2011-12 the study revealed that there was a consistent improvement in all the thrust areas of the bank. Study suggested APGVB to increase the number of branches in order to increase its network and to facilitate the small and medium farmers.<sup>77</sup>

Singla (2014) examined the efficiency of public, private and foreign owned scheduled commercial banks operating in India between 2000 and 2010 using 2-stage DEA model and Tobit Regression Model. The study revealed that average annual efficiency scores were highest in public sector banks. Study further observed that in Indian banking system, large banks had an edge over the small operators in industry and therefore they were efficient. Study established that Indian banking sector was still earning profits through traditional activities only. Findings provided

a clear picture of Indian banking system and silver lining of big players in the industry over the other small ones.<sup>78</sup>

Soni and Kapre (2014) attempted to analyze the financial performance of RRBs in India during the period 2006-07 to 2010-11. On the basis of key performance indicators such as number of bank branches, deposits, loans, investments and growth rate index it concluded that RRBs played a key role and were important vehicle of credit delivery in rural areas but their commercial viability had been questioned due to their limited business flexibility, smaller size of loans and high risk in loans and advances. Authors suggested rural banks to remove lack of transparency in their operations and to concentrate on speedy, qualitative and secure banking services.<sup>79</sup>

Suresh (2014) attempted to study and analyse the banking business performance and productivity of the RRBs for the period from 2001 to 2013. Using secondary data and various statistical tools like average, standard deviation, coefficient of variation, compound growth rate, correlation, t-test, F-test and ANOVA, study concluded that RRBs were competing with other banks with their limited resources and restrictions.<sup>80</sup>

Fanai and Singh (2015) attempted to evaluate the financial performance of Mizoram Rural Bank during 2002 to 2014. The study considered profitability as the index of operational efficiency of a bank. With the use of secondary data the study analyzed the profitability of Mizoram Rural Bank by ratio analysis, test of financial strengths and working results of the bank. It was concluded that the level of operational efficiency of the bank had been increasing every year. But the bank still has a long way to go for future in order to achieve their objectives.<sup>81</sup>

Mawutor and Fred (2015) examined the efficiency and profitability of banks operating in Ghana by taking listed banks for the period from 2006 to 2011. For this purpose panel data approach using regression analysis was employed. Taking profitability, measured as ROA as dependent variable, study revealed that 60.74 percent ( $R^2$ ) of the variation in the profitability of selected banks was explained by the independent variables such as liquidity, leverage, productivity, credit risk and the

size of the bank. However, size was not found to be a significant determinant individually.<sup>82</sup>

Olarewaju and Obalade (2015) aimed to evaluate the operational efficiency of Deposit Money Banks in Nigeria in order to identify its major determinants. The study included 6 banks for a period from 2004 to 2013. The six variables were selected representing inputs and outputs of banks to evaluate the operational efficiency of banks. Using panel data regression technique, fixed effect model and tests the study revealed that price of labor, total loans and total deposits were having negative impact on bank's operational efficiency. Study suggested banks to invest in more sophisticated piece of technology in order to reduce their staff cost.<sup>83</sup>

Thakur and Gupta (2015) in their research paper tried to highlight the factors which needed to be addressed for their effective implementation in order to contribute for a developed economy. They attempted to examine the reasons behind the courses of differential performances of RRBs in some selected regions. The study suggested that RRBs must reach out to the needy through micro-credit and self-help groups and Government should take firm action against the defaulters instead of making popular announcements like waiving of loans.<sup>84</sup>

Geetha (2016) attempted to evaluate progress and financial performance of Krishna Pragathi Gramin Bank in Shivamogga district with the help of key performance indicators of four branches. Study concluded that the performance of Krishna Pragati Gramin Bank was appreciable. It was suggested that the Government should provide additional needful support to RRBs to make them more viable and successful in meeting the needs of rural credit in future.<sup>85</sup>

Thus, the review of earlier literature relating to measurement of operational efficiency in RRBs reveals that there is still a lot of scope to assess operational efficiency of RRBs particularly in the state of Rajasthan in order to examine the effect of the process of restructuring launched by Govt. of India. Efficiency study of Regional rural banks would be helpful in locating sources of inefficiencies and enable policy makers to initiate suitable strategic measures given their importance in achieving national objective of alleviation of rural poverty.

## **1.4 Objectives of the Study**

The study is primarily aimed to analyze to how the RRBs could succeed in augmenting the process of amalgamation and other reform measures in the field of rural credit and to identify the important factors that influence the operational efficiency and profitability of RRBs particularly in the state of Rajasthan so that necessary improvements can be made by these banks upon such parameters in order to further enhance the operational efficiency of these institutions and make them more effective instrument in the field of rural credit. The specific objectives of this study are:

- 1) To analyze the growth and performance of Regional Rural Banks in India as well as in Rajasthan in terms of physical and financial indicators.
- 2) To analyze operational efficiency of Regional Rural Banks in Rajasthan on the basis of various dimensions of their performance.
- 3) To investigate whether the amalgamation of Regional Rural Banks in India undertaken in 2005-2006 has helped to improve their operational efficiency taking RRBs of Rajasthan in particular.
- 4) To identify the factors which influence the operational efficiency of RRBs in Rajasthan.
- 5) To make important suggestions to improve the efficiency of RRBs based of the major findings of the study.

## **1.5 Methodology and Design**

### **1.5.1 Scope and Coverage**

The present study has been undertaken to analyze and evaluate the operational efficiency of Regional Rural Banks, particularly in the State of Rajasthan. The study covers a period of 14 years, from 2000-01 to 2013-14. As we know that there were a total of 14 RRBs working in Rajasthan before the process of amalgamation began in January 2006 in Rajasthan. This number reduced to 6 during phase I of amalgamation. Till March 2012, 6 RRBs (4 amalgamated and 2 standalone RRBs) were working in the state of Rajasthan. Further, this number reduced to 3 RRBs (2 amalgamated and 1 standalone RRB).

The study covers all the RRBs working in Rajasthan during the period of study. While evaluating the operational efficiency of individual RRBs in Rajasthan, study uses data for 14 RRBs during the period from 2000-01 to 2004-05 (pre-amalgamation period), for 6 RRBs during the period from 2005-06 to 2011-12 (post-amalgamation period phase I) and for 3 RRBs during the period from 2012-13 to 2013-14 (post-amalgamation period phase II).

Names of RRBs in Rajasthan in each period are given below:

**Pre-Amalgamation Period (2000-2001 to 2004-05)**

- 1) Alwar Bharatpur Anchlik Gramin Bank (ABAGB) sponsored by Punjab National Bank (PNB)
- 2) Shekhawati Gramin Bank (SGB) sponsored by Punjab National Bank (PNB).
- 3) Jaipur Nagaur Anchlik Gramin Bank (JNAGB) sponsored by United Commercial Bank (UCO Bank)
- 4) Thar Anchlik Gramin Bank (TAGB) sponsored by United Commercial Bank (UCO Bank)
- 5) Aravali Kshetriya Gramin Bank (AKGB) sponsored by Bank of Baroda (BOB)
- 6) Bhilwara Ajmer Kshetriya Gramin Bank (BAKGB) Sponsored by Bank of Baroda (BOB)
- 7) Bundi Chittorgarh Kshetriya Gramin Bank (BCKGB) sponsored by Bank of Baroda (BOB)
- 8) Dungarpur Banswara Kshetriya Gramin Bank (DBKGB) Sponsored by Bank of Baroda (BOB)
- 9) Marudhar Kshetriya Gramin Bank (MKGB) sponsored by Bank of Baroda (BOB)
- 10) Bikaner Kshetriya Gramin Bank (BKGB) sponsored by State Bank of Bikaner and Jaipur (SBBJ)
- 11) Marwar Gramin Bank (MGB) sponsored by State Bank of Bikaner and Jaipur (SBBJ)
- 12) Sriganganagar Kshetriya Gramin Bank (SKGB) sponsored by State Bank of Bikaner and Jaipur (SBBJ)

- 13) Mewar Anchlik Gramin Bank (MAGB) sponsored by ICICI Bank (previously Bank of Rajasthan)
- 14) Hadoti Kshetriya Gramin Bank (HKGB) sponsored by Central Bank of India (CBI)

#### **Post- Amalgamation Period (Phase I)**

- 1) Rajasthan Gramin Bank (RGB) sponsored by Punjab National Bank (PNB)
- 2) Jaipur Thar Gramin Bank (JTGB) sponsored by United Commercial Bank (UCO Bank)
- 3) Baroda Rajasthan Gramin Bank (BRGB) sponsored by Bank of Baroda (BOB)
- 4) Marwar Ganganagar Bikaner Gramin Bank (MGBGB) sponsored by State Bank of Bikaner and Jaipur.
- 5) Mewar Anchlik Gramin Bank (MAGB) sponsored by ICICI Bank.
- 6) Hadoti Kshetriya Gramin Bank (HKGB) sponsored by Central Bank of India (CBI)

MGBGB came into existence during 2006-07 by amalgamating BKGB and SKGB. But for the present analysis during 2005-06, the combined performance of the two RRBs has been considered.

#### **Post-Amalgamation Period (Phase II)**

- 1) Baroda Rajasthan Kshetriya Gramin Bank (BRKGB) sponsored by Bank of Baroda (BOB).
- 2) Marudhara Gramin Bank (MGB) sponsored by State Bank of Bikaner and Jaipur (SBBJ)
- 3) Mewar Anchlik Gramin Bank (MAGB) sponsored by ICICI Bank.

#### **1.5.2 Data Collection**

Present study is primarily based on secondary data. The relevant secondary data have been gathered mainly from various NABARD publications such as Statistics on RRBs, Financial Statements of RRBs, and Reviews of the Performances of RRBs etc. collected from Regional Office of NABARD, Jaipur and Head Office of NABARD, Mumbai. Annual reports of individual RRBs were

collected from their respective head offices. Data base of Reserve Bank of India (RBI) such as, Statistical Tables Relating to Banks in India, Quarterly Statistics on Deposits and Credits of Scheduled Commercial Banks, Report on Trend and progress of Banking in India etc. (available on [www.rbi.org.in](http://www.rbi.org.in)) have also been referred as per requirement. Committee reports on RRBs, Economic Reviews of Rajasthan, and Statistical Abstracts have also been used to endorse the analysis. The theoretical background of the present study has been prepared with the help of various research papers, books and journals related to the subject available on different websites and in libraries consulted during the course of study.

### **1.5.3 Data Analysis**

The study attempts to analyze the overall growth and performance of RRBs at all India level and at State level in Rajasthan on the basis of various parameters of their operations such as branch expansion, growth of capital funds, resource mobilization, credit deployment, priority sector and non-priority sector advances, CD ratio, recovery performance, non-performing assets and working results etc. Further, in order to evaluate the operational efficiency of individual RRBs in Rajasthan for the period of study and to make a comparative analysis between pre-amalgamation and post-amalgamation periods as well as among the RRBs, five dimensions of operational efficiency has been selected. In first dimension operational efficiency of individual RRBs has been analyzed in terms of growth of capital funds, growth of borrowings, growth of deposits, growth of loans and advances and growth of investments. In second dimension, profitability of RRBs in Rajasthan has been analyzed on the basis of following eight ratios:-

- 1) Financial Return
- 2) Financial Cost
- 3) Financial Margin
- 4) Operating Cost
- 5) Miscellaneous Income
- 6) Gross Margin
- 7) Risk Cost
- 8) Net Margin.

In third dimension, productivity analysis of RRBs has been made under three categories, viz. employee productivity, branch productivity and financial productivity.

Indicators used for employee productivity are:

- 1) Deposits per Employee
- 2) Advances per Employee
- 3) Business per Employee
- 4) Total Income per Employee
- 5) Total Expenditure per Employee
- 6) Net Profit per Employee

Indicators used for branch productivity are:

1. Deposits per Branch
2. Advances per Branch
3. Business per Branch
4. Total Income per Branch
5. Total Expenditure per Branch
6. Net Profit per Branch

Indicators used for financial productivity are:

- 1) Return of Advances
- 2) Return of Investments
- 3) Cost of Deposits
- 4) Credit Deposit Ratio.
- 5) Investment Deposit Ratio

In fourth dimension, asset quality and viability position of RRBs has been analyzed on the basis of credit risk ratio, ratio of accumulated losses to total assets and coverage ratio. In fifth and last dimension of the operational efficiency, technical efficiency of Regional Rural Banks in Rajasthan has been measured and analyzed by using CCR and BCC models of Data Envelopment Analysis (DEA). In order to investigate the factors which determine the operational efficiency of RRBs in Rajasthan multiple linear regression technique has been used.

### 1.5.4 Statistical Tools and Techniques

Various statistical tools and techniques used to analyze data and draw conclusions have been described below:

(a) **Simple Growth Rate:--** Simple growth rates have been calculated to analyze the overall growth and performance of RRBs at all India level and all Rajasthan level by following the given formula;

$$g = \frac{(Y_t - Y_{t-1}) \times 100}{(Y_{t-1})}$$

Where

g	=	Simple growth rate
$Y_t$	=	Value of variable in current year
$Y_{t-1}$	=	Value of variable in previous year

Simple growth rate provides the percentage growth of variable over the previous year.

(b) **Compound Annual Growth Rate:--** To compute the compound annual rate of growth, following exponential trend equation has been fitted.

$$Y = ab^t$$

Where Y= value of the variable for which the rate of growth is being calculated.

t = time

a & b are the estimates where  $b = 1 + g/100$

In the logarithmic form the equation is written as:

$$\log Y = \log a + t \log b$$

Further, two normal equations based on the above equation are:

$$\Sigma \log Y = n \log a + \log b \Sigma t \dots\dots\dots 1$$

$$\Sigma t \log Y = \log a \Sigma t + \log b \Sigma t^2 \dots\dots\dots 2$$

By estimating this log linear relationship with the help of least square method we get the value of log b and compound annual growth rate (g) can be derived by the following relation:

$$g = [\text{antilog}(\log b) - 1] \times 100$$

While evaluating the operational efficiency of individual RRBs in Rajasthan, compound annual growth rates in respect of all the variables considered, have been calculated separately for the three periods.

(c) **Coefficient of Variation:** In order to examine the consistency of the growth of various variables, coefficient of variation has been calculated. The formula used is:

$$\text{Coefficient of Variation (CV)} = \frac{\text{Standard Deviation}}{\text{Mean}} \times 100$$

$$\text{or } \frac{\sigma}{\bar{X}} \times 100$$

here  $\sigma$  = Standard Deviation  
 $\bar{X}$  = Mean

Consistency is inversely related with the value of coefficient of variation. If the coefficient of variation is higher, lesser will be the consistency of the growth of that variable and low magnitude of coefficient of variation reflects higher consistency.

(d) **Ratio Analysis:-** Various productivity, profitability, asset quality and viability ratios which has been discussed earlier has been used to evaluate the operational efficiency of RRBs in Rajasthan.

(e) **Data Envelopment Analysis:-** Data Envelopment Analysis (DEA) is a non-parametric technique to measure the relative efficiency of a set of similar units, usually referred to as decision making units (DMUs). This technique was first introduced by Charnes, Cooper and Rhodes in 1978. DEA has emerged as a very potent technique to measure the relative efficiency of banks as it is capable of handling multiple inputs and outputs without requiring any formal specification of production function. Moreover, it does not require prior knowledge of the functional form of the frontier, error and inefficiency structures. In DEA analysis, best practice bank is identified and other banks are analyzed on the basis of their comparative efficiency scores. DEA also identifies the possible peers or role models. It does not try to associate a bank's performance with statistical averages. In the present

analysis, both CCR model (under the assumption of CRS) and BCC model (under the assumption of VRS) have been used to calculate technical, pure technical, and scale efficiency scores for individual RRBs in Rajasthan.

**(f) Econometric Analysis:-** In order to investigate the factors which determine the operational efficiency of RRBs in Rajasthan, multiple linear regression technique has been used. Pearson correlation coefficient has also been used to examine the correlation between the study variables at 5 percent level of significance. Some other statistical tools like coefficient of determination ( $R^2$ ), F-test and t-test, Analysis of variance (ANOVA) and Durbin-Watson statistic have also been used to analyze and interpret the data and to draw conclusions in the present study. Co-efficient of determination has been used to assess the overall well-being of the regression model. To know the statistical significance of the whole model or the simultaneous statistical significance of the independent variables included in the model, F-test has been used. Further to know the significance of the effect of independent variables partially on the dependent variables, t-test has been used. D-W test has been used to test for the first order autocorrelation.

## 1.6 Chapter Scheme

The Present study has been organized into 6 chapters:

**Chapter-1: Introduction**

**Chapter-2: Growth of Regional Rural Banks in India and Two Decades of Reforms**

**Chapter-3: Trend and Progress of Regional Rural Banks in Rajasthan**

**Chapter-4: Operational Efficiency of Regional Rural Banks in Rajasthan**

**Section-A: Conceptual Framework**

**Section-B: Empirical Results**

**Chapter-5: Factors Determining Operational Efficiency of Regional Rural Banks in Rajasthan: A Regression Analysis.**

**Chapter-6: Conclusions and Suggestions.**

## **1.7 Limitations of the Study**

Present study is likely to have following limitations:

- 1) The study is based on secondary data as given in various publications of NABARD and RBI. The limitations of using secondary data may affect the results of the present study.
- 2) For pre-amalgamation period (2000-2001 to 2004-05), data was not available regarding certain parameters for individual RRBs such as, priority sector advances, purpose-wise break-up of advances, average working funds etc. Therefore, analysis of these aspects could not be made for that period.
- 3) Present study concentrates only on the quantitative aspects of operational efficiency of RRBs in Rajasthan. Qualitative aspects of performance such as customer satisfaction, behavior of bank staff and opinion of rural people about the bank have not been considered which may be important in determining the operational efficiency of these banks.
- 4) As the study is limited mainly to the state of Rajasthan, generalizations cannot be made for other states and regions of the country.

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*Chapter - 2*

*Growth of Regional Rural Banks in  
India and Two Decades of Reforms*

## **Chapter -2**

### **Growth of Regional Rural Banks in India and Two Decades of Reforms**

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Regional Rural Banks are the youngest members of the family of rural credit institutions set up in India. They have been set up specially to meet the credit requirements of the weaker sections of the rural society whose problems came into focus during mid-seventies when our Ex-Prime Minister Mrs. Indira Gandhi announced the economic programme which mainly aimed at creating alternative agencies to provide institutional credit to landless laborers, rural artisans and small marginal farmers to liquidate rural indebtedness of these people. The intention was to create a situation for meeting the production and consumption credit needs of the weaker section of the rural areas as the traditional sources of credit would demand an unreasonable high rate of interest on loans to cover the risks of non-repayment. Thus, Government of India felt that new institutions should be established on the basis of attitudinal and operational ethos entirely different from those obtained in the public sector banking system.<sup>1</sup>

#### **2.1 Genesis of Regional Rural Banks in India**

To understand the rationale behind the need for setting up of another financial agency in the field of rural credit we have to go back to the late seventies. In the context of the encouraging results of green revolution and increased adoption of modern techniques in the field of agriculture, the demand for investments in agriculture had been steadily going up and there was a general feeling amongst the planning circle that cooperatives alone could not face the risk of meeting the credit requirements of agriculturists. It was the emergence of this feeling that led to acceptance of the principal of multi-agency approach to agricultural finance. Social control over commercial banks in 1967 and nationalization of 14 major banks in 1969 were the logical developments in this direction.

The entry of the commercial banks in a big way in the field of agricultural credit in seventies could be considered as a milestone in the history of rural banking in India. However, in spite of the sincere efforts of the commercial banks in

agricultural finance and phenomenal expansion of their rural branch network, it was noticed that the main objective of assisting the really needy small and marginal farmers and other weaker sections of the rural community was not being achieved to the desired extent because of two reasons. Firstly, the working of commercial banks was characterized by their high cost of operations. Secondly, the attitude of staff of the commercial banks was highly urban oriented, which acted as a barrier between them and their clientele that is the rural people. It was also observed that instead of providing more credit to the agricultural sector, they were spending their efforts in mobilization of rural savings for the purpose of channelizing them into urban and metropolitan areas to earn more profits. The process went on continuously in the seventies so much that RBI was compelled to intervene and it specified that at least 60% of the deposits mobilized in rural and semi-urban areas must be deployed in these areas only by the end of March 1979. It was against this background that the need for establishing region based rural financial agency emerged. The banking commission had already, expressed the view in 1972 that in country like India with widely diverse physical, regional and economic conditions, no single pattern of financial institutions could be expected to meet the credit needs of rural people and to deal with the problem of agricultural investments. The commission had therefore, recommended the establishment of a chain of "Rural Banks" in addition to the regular branches of commercial banks already functioning in rural areas to handle the credit requirements of those areas.

### **2.1.1 Working Group on Rural Banks, 1975**

The Government of India thus accepted the idea of establishment of rural banks as part of the New Economic Programme. In order to further rationalize and operationalize this idea, the Government of India constituted the Working Group on Rural Banks on 1<sup>st</sup> July, 1975 under the chairmanship of Mr. M. Narasimham, the then Secretary of the RBI on deputation with the Government of India as Additional Secretary in the Ministry of Finance. The Group submitted its report on 30<sup>th</sup> July, 1975.

The working group deeply examined the question of setting up of rural banks and observed that the institutional structure then existing (in 1975) would not be able

to fulfill the needs of the rural credit even after offering certain modifications in its structure and functioning. The need of the time was an institution which would combine the better features of both the cooperatives and commercial banking systems while avoiding their inherent weaknesses. This new institution should be a combination of rural touch and local feel or a familiarity with rural problems which the cooperatives possess in the large degree, with modern business organization, commercial discipline, ability to mobilize resources and access to the central money market which the commercial banks have.<sup>2</sup>

It, therefore, recommended the setting up of a few state sponsored, regionally based, rural oriented and low cost commercial banks in certain selected areas on an experimental basis in the beginning. The group made it very clear that the proposed institutions were intended to supplement and not to supplant the other institutional credit agencies in the field of rural credit.<sup>3</sup> It was conceived that these institutions would help in reducing regional imbalances by mobilizing resources and simultaneously deploying them in the same regions.

### **2.1.2 The Regional Rural Banks Act, 1976**

The Government of India accepted the recommendations of the Working Group with certain modifications and the Regional Rural Banks were established on 2<sup>nd</sup> October 1975 under a presidential ordinance promulgated in September 1975 which was subsequently replaced by the Regional Rural Banks Act, 1976. Thus, this multi- agency credit system for agriculture and rural development came into existence in India in the form of Regional Rural Banks. The RRBs have been identified as scheduled banks under the Reserve Bank of India Act, 1934 and are authorized to conduct banking business as defined in the Banking Regulation Act, 1949. The RRBs were required to undertake the business of providing credit facilities to the poorer sections of rural society, generally referred as the “Target Group”. The first five RRBs were set up in four states in Haryana, West Bengal, Rajasthan with one each and two in Uttar Pradesh.

### **2.1.3 Objectives of RRBs**

According to the preamble of Regional Rural Banks Act, 1976, the main objective of Regional Rural Banks was to develop the rural economy by providing credit and other facilities, for the purpose of development of agriculture, trade, commerce, industry and other productive activities in the rural areas, particularly to the small and marginal farmers, agricultural laborers, rural artisans and small entrepreneurs.<sup>4</sup> The basic objective of these financial institutions was to bring about progress with social justice to the rural poor, to fulfill the national objective of development with stability and social justice.<sup>5</sup> In other words, RRBs were aimed as institutional device for taking banking services to the door steps of the rural masses and reducing their dependence on money lenders and also to help the financially poor for the consumption needs. In order to achieve the aforesaid main objective, the following operational objectives were conceived:-<sup>6</sup>

- To provide a specialized agency which would concentrate its efforts entirely on the extension of credit facilities to small farmers and other small borrowers in the rural areas at a relatively very low cost.
- To provide employment to rural educated youth who are properly oriented to look after the needs of the rural community.
- To gradually replace the usurious money lender is very significant objective of channeling credit through the RRBs and to reduce the dependence on village money lender.
- To bridge the credit gaps in rural areas.
- To mitigate poverty through generation of surplus income and through better planned productive activities by providing finance to the people below poverty line. It enables the RRBs to remove the curse of poverty in rural areas.
- The objective of rural banking policy is mainly to evolve an institutional arrangement to mobilize the savings of the people even in small amounts and thus to inculcate the habit of saving among the rural masses.
- The RRBs were considered to be a suitable institution to provide needed credit at their door-steps on reasonable terms and conditions so that the

weaker sections of people in rural areas could raise their total productivity and their standard of living.

- It was hoped that the RRBs would find their role more rewarding by integrating and coordinating their credit activities with need for economic and social rural development.

In addition to the banking facilities, RRBs also provide some non-banking facilities to the rural population such as constructing and maintaining warehouses on their own, supplying agricultural inputs and acquiring agricultural and other equipments for leasing it out, providing assistance in the marketing of agricultural and other products, etc.

#### **2.1.4 Sponsorship and Management**

Each RRB was to be sponsored by a scheduled commercial bank. A new RRB could be set up at the initiative taken by the Sponsor Banks in consultation with the concerned State Government and the Government of India and under license from the RBI. The Sponsor Bank provides assistance to the RRBs in several ways. The management of affairs and business of an RRB lies in a board of directors consisting of 9 members (including chairman). The chairman of the RRB is appointed by the Government of India on the recommendation of the Sponsor Bank. Authorised capital of each RRB is Rs 5 crore, divided into five lakhs fully paid up shares of Rs. 100 each. The issued capital is Rs. 25 lakhs which would be subscribed by the Government of India, sponsor bank and the concerned State Government in the proportion of 50:35:15 respectively. Over a period of time, the issued capital of each of the RRBs has been increased to Rs. 100 lakhs, contributed by the same share holders in the same proportion.

According to the norms, RRBs were to be set up mainly in under-banked and unbanked areas of the country. They were supposed to function in remote rural areas which lack in basic facilities like education, medical help, transport and communication. It was also notified that RRBs would cover a compact area of not more than two or three districts where the weaker sections of the population were predominant and which had sufficient potential for agricultural development.<sup>7</sup>

### **2.1.5 Operational Problems of RRBs**

The establishment of Regional Rural Banks began a new era in the field of rural banking. They were originally conceived as low cost institutions having rural ethos, local feel and familiarity and focus on rural poor. These essential features and the institutional structure of RRBs made it difficult for these banks to break-even right from the beginning. Recognizing these limitations, Narsimham Committee, which had recommended the setting up of RRBs, clearly stated that RRBs would be bound to make losses in initial years and that initial loss of these banks would be a price worth paying given the benefits sought to be achieved through these institutions.<sup>8</sup>

Over the years it was found that rural credit had been associated with poor recovery and high cost of servicing. The RRBs, because of the predominance of rural sector in their operational area, have been seriously affected by this problem. The large volume of NPAs and high operational expenses have generated heavy accumulated losses for these banks. Particularly during the era of liberalization, criticism has been raised over their viability.

There have been many reasons for losses in RRBs like government imposed ceiling on the interest rate. But given the institutional structure of the Regional Rural Banks and the mandatory role of financing the weaker sections at concessional rates, it was felt that the implementation of high interest rates was clearly not possible.<sup>9</sup> Besides this, the lack of incentives among bank staff to engage in intensive loan collection and the unwillingness of State Governments to assist in recovery procedures further boosted loan losses in the RRBs. In addition to the high risk associated with lending, the high cost of administration also constrained the Regional Rural Banks' financial viability. For example, many bank branches were often forced to remain open even if those areas had little potential for entrepreneurial activities.

Further, cost of operation of RRBs has been high on account of the increase in the salary scales of the employees in line with the salary structure of the employees of commercial banks. In most cases these banks have not been located at

the right place also. Where RRBs are operating, sponsoring banks are also running their branches at the same places.

To summarize, the Internal Working Group on RRBs in its report has identified the following major shortcomings in the working of RRBs:-<sup>10</sup>

1. Limited Area of Operation.
2. Narrow Clientele Base.
3. Under Capitalised Deposits are very large as compared to their capital base.
4. Small Organisational Structure.
5. Low Recovery and large Non-Performing Assets.
6. High Cost Structure.
7. Perceived as Specialized Rural Bank.
8. Inadequate Financial Management.
9. Unskilled and Ageing Staff Structure.
10. Heavy Dependence on Sponsor Banks.
11. Lack of Professionalism in Management.
12. Erosion of Deposits.

## **2.2 Restructuring of Regional Rural Banks**

The Government of India established the Regional Rural Banks by accepting the recommendations of the Working Group on Rural Banks appointed in July 1975 under the chairmanship of Mr. M. Narsimham. Since then the Government of India, the RBI and later on, NABARD have set up various Expert Committees and Groups from time to time to evaluate the various aspects of performance of these banks over the years. These all have documented very clearly the various problems faced by these banks and have made significant recommendations to remedy the situation. Consequently, the role of RRBs has undergone considerable changes with the passage of time.<sup>11</sup> A review committee on RRBs, 1978 constituted on 23<sup>rd</sup> June 1977 by the RBI under the chairmanship of M.L. Dantwala, was the first to evaluate the performance of RRBs. The committee felt that the existing credit institution even after necessary restructuring and modifications cannot be expected to meet the varied and growing needs for rural credit.<sup>12</sup> Hence, the committee justified the establishment of RRBs with certain modifications. The Steering Committee

constituted in December 1976 under the chairmanship of the Deputy Governor, RBI, gave the desired directions for the overall operations of RRBs to make them as effective link in the supply of rural credit. In the same year, the RBI appointed a Working Group under the chairmanship of Mr. P.N. Khanna to suggest simplified operational and accounting procedures for RRBs. In February 1980, the RBI appointed a committee on Control over Branches of RRBs with R. Sundaravaradam as convenor to suggest appropriate guidelines for uniform system and procedures in order to ensure effective control over the branches of the RRBs. The Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (CRAFICARD)<sup>13</sup> appointed by the RBI under the chairmanship of V. Sivaraman, examined the role of RRBs in the rural credit system. The Committee which submitted its report in 1981, recommended for the transfer of rural credit business of CBs to the RRBs, enhancement of the paid up share capital of the RRBs and for continuance of various facilities provided by the RBI as well as sponsor banks to them. The Committee also suggested for the control, regulation and promotional responsibility of RRBs to be transferred to the newly proposed National Bank of Agriculture and Rural Development (NABARD). The Government of India appointed a Working Group on RRBs under the chairmanship of S.M. Kelkar<sup>14</sup>, which made its report in 1986 after assessing the performance of RRBs over the decade 1975-84. It recommended the provision of amalgamation of RRBs in consultation with NABARD, concerned State Government and Sponsor Banks after taking into consideration public interest, development of the areas and interest of the RRBs concerned. This provision was incorporated into the Regional Rural Banks act, 1976 by the Regional Rural Bank (Amendment) act, 1987. The Committee, however, suggested that RRBs should continue working according to the originally set guidelines and maintain the image of the RRB as poor man's bank. Thus, the Dantwala Committee (1978), CRAFICARD (1981) and the Kelkar Working Group (1986) were of the view that, in spite of serious organizational deficiencies and loss of viability, RRBs should continue their existence as the important part of multi-agency approach and cater exclusively to weaker sections.

The Agricultural Credit Review Committee<sup>15</sup> under the chairmanship of A.M. Khusro, in its report, published in 1989, made a detailed review (chapter IV)

of the operations and performance of RRBs during 1975-1986. The Committee came to the conclusion that RRBs as a system had no justifiable cause for continuance and recommended their merger with sponsor banks. The Committee on the Financial System under the chairmanship of M. Narsimham<sup>16</sup> while making recommendations of financial sector reforms in 1991 had some changed perceptions on the role of RRBs in future. It proposed for allowing RRBs to engage in all types of banking business in line with the commercial banks so as to improve their viability. The Committee left the option open to the RRBs and the Sponsor Banks to decide whether the RRBs should retain their identity or go for the merger. The RBI constituted a three-member Committee headed by M.C. Bhandari<sup>17</sup> in April 1994 to lead the process of restructuring and to lay down the norms for identification of RRBs to be taken up in the first phase of restructuring. Another Committee, constituted in 1995-96 and headed by K. Basu<sup>18</sup> observed that mere recapitalizing the RRBs will achieve nothing and very strong supportive action must be taken to ensure the viability of these institutions. In July 1997, the RBI set up an Expert Group on Policy Issues of RRBs under the chairmanship of N.K. Thingalaya<sup>19</sup> to make periodical advice to RBI on the issues of the RRBs and to monitor the progress in this regard on an ongoing basis. The Government of India, the RBI and the NABARD have actively been involved to work out policies on the basis of the recommendations of these Committees and Working Groups to enable RRBs to become financially viable on one hand and to meet the rural credit needs on the other.

### **2.3 Regional Rural Banks and the New Economic Policy**

The new economic policy initiated by the Government of India in 1991 had far reaching impacts on the banking sector in India. These financial sector reforms had given emphasis on the banks to improve the quality of their customer services and also the range of services offered by them. So far as RRBs are concerned, even till 1992, they were operating with certain restrictions on their business and operations and management which seriously affected their viability. Some of these deficiencies were directed credit to target group of beneficiaries having zero risk bearing capacity, centrally administered interest rate structure, limited and remote area of operation, poor recovery position, high cost of recovery, etc. Besides, after

the implementation of National Industrial Tribunal (NIT) Award providing remuneration package to the staff of RRBs in 1987, their financial burden increased substantially. As a result, the most of the RRBs accumulated heavy losses that seriously affected their financial health and viability. Therefore, the Narsimham Committee (1991) while preparing the recommendations for financial sector reforms suggested that RRBs should be permitted to engage in all types of banking business as commercial banks do. Consequently, the Government of India, the RBI and NABARD announced certain liberalised policy measures exclusively for RRBs to help them achieve the sustainable position and to provide them greater flexibility in their operations so that they can improve their efficiency and attain viability. The major policy measures are discussed below:-<sup>20</sup>

- (a) There has been complete deregulation of the interest rates allowing the RRBs to fix their own interest rates on advances and deposits made by them. The proportion of Non-Target Group (NTG) lending increased from 40 percent to 60 percent of the RRBs fresh lending from 1<sup>st</sup> January 1994. The RRBs were allowed to conduct non-fund business also such as to purchase and issue demand drafts /cheques, to provide locker facilities, to issue guarantee on behalf of the customer, etc. From 1<sup>st</sup> April 1997, the RRBs were brought under the same priority sector discipline as Commercial Banks were.
- (b) Investment portfolios of the RRBs were broadened to improve their profitability. They could now invest their Non-SLR surplus resources in UTI listed schemes, fixed deposits of profit making term lending institutions, bonds of nationalized banks and profit making public sector institutions, Non-Convertible Debentures (NCD) of reputed blue-chip companies, etc. However, the RBI directed that the investment of Non-SLR surplus should not exceed 50 percent of the refinance availed by the RRBs from the NABARD and sponsor banks. The Government of India advocated a more active role for the sponsor banks in the investment activities of their sponsored RRBs at least till the RRBs develop the essential technical efficiency in investment management.
- (c) The issued capital of all the RRBs was enhanced to Rs. 1 crore from Rs. 25 lakhs by the Government of India since 1995-96. The Government of India

initiated the recapitalisation programme in 1994-95 for the purpose of strengthening of RRBs. The additional share capital of the RRBs selected for restructuring was shared by the Government of India, Sponsor Banks and the concerned State Governments in the proportion of 50:35:15 respectively. This amount was to be released to RRBs for development in their business only.

- (d) RRBs were allowed to open new branches and relocate their loss making branches with some conditions within their service area. NABARD initiated a comprehensive package of measures to revise the operations of RRBs through the concept of Development Action Plan (DAP) for business improvement and viability attainment. It, further, introduced the Memorandum Of Understanding (MOU) between RRBs and sponsor banks to guide, control and facilitate DAP implementation. The DAPs were basically aimed at achieving break-even level (BEL) to attain current viability in the short-run and sustainable viability in the long run by wiping out accumulated losses and making sufficient provisions against bad debts. The annual MOU was a commitment from RRBs every year and was conceived as an instrument for implementation of the DAPs to achieve the set objectives and targeted business levels.
- (e) The RBI introduced income recognition and asset classification norms from the year 1995-96 and provisioning norms from the year 1996-97, Accordingly, the RRBs too were required to recognize income in respect of their Non-Performing Assets (NPAs) only on cash basis and they have to classify their assets into four categories, Standard, Sub-Standard, Doubtful and Loss Assets on the basis of the performance of the assets. RRBs were advised to make provisions as per the assets classification. The objective was to bring transparency in the operations of RRBs by identifying their strengths and weaknesses.
- (f) The areas of control over RRBs were defined, while entire managerial and operational responsibility were given to sponsor banks, the supervisory and regulatory matters of RRBs were to continue to remain with the RBI/NABARD.

The reform measures brought significant changes, both quantitative and qualitative in the working of RRBs in the country.

## **2.4 Amalgamation of Regional Rural Banks in India**

After nearly 25 years of existence and even after one decade of financial sector reforms the Regional Rural Banks were facing many constraints demanding a strong and serious consideration on the part of the policy makers for their strengthening. In order to reposition the Regional Rural Banks as effective instruments within the existing legal framework a number of options were being explored of which merger or amalgamation got significant consideration in the beginning of 21<sup>st</sup> Century. The matter of consolidation of the Regional Rural Banks in order to raise their viability and profitability was discussed many times but without any policy outcome. The Expert Group on Regional Rural Banks in 1997 (Thingalaya Committee) suggested that very weak RRBs should be viewed separately and possibility of their liquidation be recognized. They might be merged with neighboring Regional Rural Banks. The Expert Committee on Rural Credit, 2001 (Vyas Committee I)<sup>21</sup> was of the opinion that the sponsor banks should ensure necessary autonomy for Regional Rural Banks in their credit and other portfolio management system. Another Committee under the chairmanship of Shri Chalapathy Rao in 2003 (Chalapathy Rao Committee)<sup>22</sup> recommended that the entire system of Regional Rural Banks may be consolidated while retaining the advantages of regional character of these institutions. As part of the process, some sponsor banks may become free from the responsibility. Other approved financial institutions in addition to the commercial banks may also be included as the sponsoring institutions. The Committee proposed that the Government should reduce the number of Regional Rural Banks to around 40 from the present 196. Option for mergers could be merger of RRBs by following one sponsor bank approach or they could be amalgamated with their sponsor banks.

The Advisory Committee on Flow of Credit to Agriculture and Related Activities under the chairmanship of Shri V.S. Vyas [Vyas Committee II (June 2004)]<sup>23</sup> forwarded a more logical solution. After weighing the various options for amalgamation, it decided that it could not consider "the option of merger with the

sponsor bank, as it would go against the rationale of third channel for rural credit with a clear rural focus and regional orientation". Instead, it recommended merger of Regional Rural Banks so as to create a Zonal Bank for RRBs in the North-East and Rural Banks at state level for the rest of the country. These banks would work on a standalone basis and the sponsor banks plus NABARD would contribute to the equity.

Following this, an Internal Working Group on RRBs<sup>24</sup> was set up in the Reserve Bank of India to examine various alternatives available within the existing legal framework for strengthening of RRBs. The Group in its report, submitted in June 2005, observed large variations in the number of districts covered and the branch network of RRBs. While 47 RRBs covered only one district each, 111 RRBs covered 2-3 districts, 29 RRBs covered 4-5 districts and 9 operated in 6-9 districts. Similarly 72 RRBs had upto 50 branches, 87 RRBs 51-100 branches, 21 RRBs 101-150 branches and 16 had more than 150 branches. As many as 6 sponsor banks had only one RRB sponsored by them while 11 sponsor banks had 2-4 sponsored RRBs, 3 Sponsor banks had upto 10 RRBs and 8 sponsor banks had more than 10 RRBs sponsored by them in various states. Of these, 2 sponsor banks had more than 20 RRBs. In order to improve the operational viability of RRBs and to take advantages of the economies of scale (by reducing transaction costs) the route of amalgamation of RRBs, was suggested taking in to account the views of various stake holders. The merged entities would have a larger area of operation and the merger process would help in strengthening some of the weak RRBs. Eliminating the option of merger of RRBs with sponsor banks, a two phase restructuring was suggested:

- I. Amalgamation between RRBs of the same sponsor banks in the same state and
- II. Amalgamation of RRBs sponsored by different banks in the same state.

The Group noted that merger of RRBs with the sponsor bank is not provided for in the RRBs Act, 1976, and such merger would go against the spirit of setting up to RRBs as local entities and for providing credit primarily to weaker sections. But to overcome the operational problems, reduce expenditure, enhance operational efficiency, etc, the Reserve Bank of India decided in August 2004 that all RRBs

sponsored by a bank and operating in one state should be amalgamated into single entity. This decision was more relevant in the fast changing environment in banking with introduction of more and more new financial products necessitating RRBs to grow bigger. Moreover, in the changed scenario, computerization and volume were considered key to success for these entities which is feasible and viable only when RRBs are big in size. The amalgamated entities and the existing RRBs that have accumulated losses can be capitalized to wipe out the losses and satisfy the minimum capital requirement. The additional capital can be subscribed in the same proportion as the issued capital by the different stake holders, provided in the RRBs Act, 1976. The Group observed that the RRBs could be advised to maintain a desirable level of capital adequacy. However, it was felt that while RRBs are required to maintain Capital to Risk Weighted Ratio (CRAR), the ratio might not be as high as that of commercial banks and might be initially kept as 5 percent as about 100 RRBs were falling short of 5 percent CRAR.

Following the recommendations of Internal Working Group, the Government of India initiated the first phase of amalgamation of RRBs sponsor bank wise at state level to overcome the deficiencies prevailing in RRBs and making them viable and profitable units. The process of amalgamation of RRBs sponsor bank wise at the state level started on 12<sup>th</sup> September 2005 with the issue of notification in respect of formation of 9 amalgamated entities. As on 31 March 2005, 196 RRBs were operating in 26 states across 523 districts (525 in 2005-06) with a network of 14,484 branches (14,489 in 2005-06). RRBs had a large branch network in dry rural areas.

As a result of first phase of consolidation between September 2005 and March 2010, total number of RRBs in India was reduced from 196 to 82. This included 46 amalgamated RRBs and 36 standalone RRBs. In the second phase of amalgamation which began in October, 2012 by amalgamation of RRBs across sponsor banks within a state to have just one RRB in medium-sized states and 2 or 3 RRBs in large states, the number of RRBs has further reduced to 57 RRBs as on 31<sup>st</sup> March 2014 having 19,082 branches operating in 642 districts in 26 states and UT of Puducherry. (However, as on 1<sup>st</sup> April 2014, the number of RRBs is only 56).

Presently, as per the report of June 2014, Government of India has put on hold further amalgamation of RRBs. Government of India has directed to the sponsor banks that no fresh proposal of amalgamation of RRBs should be taken up. Therefore, at present, the focus for RRBs will be on improving their performance including their profitability.

## **2.5 Recent Policy Initiatives**

Recently, GOI has taken up some policy initiatives<sup>25</sup> in order to strengthen them financially as well as technically and to make them more effective institutions in the field of rural credit. These are:-

### **2.5.1 Recapitalization of RRBs**

Dr. K.K. Chakrabarty Committee reviewed the financial position of all RRBs in 2010 and recommended for recapitalization of 40 out of 82 RRBs for strengthening their CRAR to the level of 9 percent by 31<sup>st</sup> March, 2012. Accepting the recommendations of the Committee, the Government of India along with other share holders decided to recapitalize the RRBs by infusing funds to the extent of 2200 crore, with proportion of share holding being 50:35:15 for Government of India, Sponsor Banks and State Governments respectively. As on 31 March 2014, an amount of 2173.43 crore has been released to 38 RRBs in 20 States. The released amount includes Government of India's contribution of Rs. 1086.70 crore, State Governments' contribution of Rs. 326.04 crore and sponsor banks' contribution of Rs. 760.69 crore. The recapitalization is complete in respect of 38 RRBs (five each in Odisha and Rajasthan, three each in Madhya Pradesh and West Bengal, two each in Uttarakhand, Jharkhand, Chhattisgarh, Bihar, Maharashtra and Jammu & Kashmir and one each in Assam, Arunachal Pradesh, Nagaland, Tripura, Mizoram, Karnataka, Tamil Nadu, Gujarat, Manipur and UT of Puducherry. Government of Uttar Pradesh has not released any amount in respect of two RRBs identified by the Committee.

### **2.5.2 Appointment of Chairman of RRBs**

As per the guidelines issued by Government of India for selection of the chairman of RRBs, the sponsor bank will have a selection committee with representatives from RBI, NABARD, sponsor bank and an external expert. The

recommendation of this committee will be subject to approval by the Board of the Sponsor Bank for appointment of chairman of RRBs.

### **2.5.3 Financial Inclusion**

As a strategy towards broader financial inclusion, the RRBs have been asked to set up 25% branches in unbanked regions. RRBs have opened 947 new branches during 2012-13 and 428 branches during 2013-14. As a result, total number of branches reached to 19082 in March 2014. The RRBs have been allocated 22000 villages and other places where opening of brick and mortar branch is not considered viable, the banks are allowed to start ultra small branches (USBs) and when a USB reaches the desired level of business, it can be upgraded into regular bank branch. As per RBI guidelines, RRBs have contributed strongly for financial inclusion in rural areas by opening large number of "No frills" accounts and by financing through General Credit Cards (GCC).

### **2.5.4 Technology Innovation**

RRBs are being migrated towards Core Banking Solutions (CBS) for effectiveness and to increase customer base. At present over 20 RRBs are under this platform.

### **2.5.5 Human Resource Policy for RRBs**

As directed by Government of India, a committee was constituted in NABARD to revisit the existing human resource policy for assessment of man power/staffing pattern, skill development needs of RRBs in the event of implementation of CBS and other technological upgradation. The committee finalised the RRB-wise road map and time frame for implementation of technology adoption by all RRBs.

### **2.5.6 Fixing of Inter-Se Seniority of RRBs in Post-Amalgamation Period**

NABARD constituted a committee with members of 11 new sponsor banks of amalgamated RRBs to fix the norms for inter-se seniority of RRBs. After approval from Government of India, the guidelines on fixation of inter-se seniority of RRB staff in the post-amalgamation period has been issued to all concerned in November, 2013.

### **2.5.7 Revised Rate of Interest on Refinance**

NABARD has revised the rate of interest on refinance provided to banks for investment credit with effect from 7th January, 2014. The refinance rate has been reduced by 20 basis points and the revised rate of interest on refinance for a period of five years for RRBs will be 9.70%.

Thus, the restructuring has been an ongoing process in the context of RRBs. However, consolidation of RRBs can be counted as a milestone in improving the performance of RRBs in India.

### **2.5.8 The Regional Rural Banks (Amendments) Act 2015**

Government has enacted Regional Rural Banks (Amendment) Act, 2015. This Act amends Regional Rural Banks Act, 1976 and is aimed to strengthen the Regional Rural Banks (RRBs) by helping them to mobilize resources from financial market. This Act has come into effect from 4<sup>th</sup> February 2016.

Key facts about Regional Rural Banks (Amendment) Act, 2015 are:-<sup>26</sup>

- **Authorised capital:** This Amendment Act increases the authorised capital of each Regional Rural Bank (RRB) from Rs. 5 crore to Rs. 2000 crore divided into Rs. 200 crore of fully paid share of Rs. 10 each. As per the parent Act the Rs. 5 crore share capital of RRBs is split into 5 lakh shares of Rs. 100 each.
- **Issued capital:** It also provides that the authorised capital issued by any RRB shall not be reduced below Rs. 1 crore and shares in all cases to be fully paid up shares of Rs. 10 each.
- **Shareholding:** The Act allows RRBs to raise capital from sources other than the central and state governments and sponsor banks. Here, the combined shareholding of the central government and the sponsor bank cannot be less than 51%.
- **Board of directors:** The Act adds provision that any person who is a director of an RRB is not eligible to be on the Board of Directors of another RRB. It

also mentions that directors will be elected by shareholders based on the total amount of equity share capital issued to such shareholders.

- **Tenure of directors:** The Act raises the tenure of directors to 3 years from existing 2 years. The Act also states that no director can hold office for a total period exceeding six years.

After this historical background, we will discuss the overall growth and performance of RRBs in India during the period of study on the basis of key performance indicators.

## **2.6 Overall Growth and Performance of Regional Rural Banks in India**

2<sup>nd</sup> October 1975, was an important turning point in the history of rural banking in India, when a new member was added in the form of RRBs and since then RRBs have become an important component of the multi-agency credit system for agriculture and rural development. Keeping in line with the commitment of the Government to uplift the rural population, the banks came into existence to contribute their share in the achievement of the desired goals by providing financial assistance and raising the people above the poverty line.

The analysis of the growth and performance of the RRBs at all India level has been made on the basis of certain indicators like structural growth and branch expansion, resource mobilization, mobilization of deposits, credit deployment, recovery performance and their working results. Structural growth of the RRBs in terms of their geographical reach and coverage is being discussed since their inception, in 1975. The growth and performance of RRBs on the basis of financial indicators has been analysed from 2000-2001 to 2013-2014.

### **2.6.1 Structural Growth of Regional Rural Banks**

The Government of India established six RRBs; two in Uttar Pradesh and one each in Haryana, Rajasthan, West Bengal and Bihar during the year 1975 by covering 12 districts with 17 branches. By December 1987, the number of RRBs increased to 196 and covered 363 districts in the country which formed around 80

percent of the total districts of the country. Uttar Pradesh, Madhya Pradesh, Bihar, Rajasthan, Andhra Pradesh and Karnataka had at least 13 Regional Rural Banks each. They accounted for 68 percent of the total RRBs and about 70 percent of total branches operating as on December 1986. The number of RRBs established was relatively small in the developed states like Tamil Nadu, Maharashtra, Gujarat, Haryana and Punjab. One RRBs each in Tripura, Meghalaya, Manipur, Nagaland, Mizoram, and Arunachal Pradesh covered the entire state.

**Table 2.1: Structural Growth of Regional Rural Banks in India  
(Since their inception in 1975)**

Year	No. of RRBs	No. of Districts Covered	No. of Branches
December 1975	6	12	17
December 1978	51	102	1753
December 1981	107	182	4795
December 1987	196	363	13353
March 1999	196	486	14498
March 2000	196	484	14301
March 2001	196	484	14468
March 2002	196	511	14486
March 2003	196	516	14462
March 2004	196	518	14484
March 2005	196	523	14433
March 2006	133	525	14494
March 2007	96	534	14520
March 2008	91	594	14761
March 2009	86	616	15181
March 2010	82	619	15480
March 2011	82	620	16001
March 2012	82	638	16909
March 2013	64	635	17861
March 2014	57	642	19082

Source: Various statistical reports on Regional Rural Banks, NABARD, Mumbai

The Structural growth of RRBs in India which is viewed basically in the form of establishment of RRBs, their branch expansion and total districts covered by them, is displayed in Table-2.1. It is evident from the table that only six RRBs were established by the end of 1975. This number had advanced to 107 in 1981 and reached to 196 in 1987 and there was no further increment in the number of RRBs till the end of March 2005.

During the first phase of consolidation, which began in September 2005 following the recommendations of Vyas Committee II, RRBs of the same sponsor banks within a state were amalgamated. The process brought down their number to 82 as at the end of March 2010. The current phase of consolidation which began in October 2012 by amalgamation of RRBs across sponsor banks within a state has further reduced their number to 57 RRBs as on March 2014.

Although the number of RRBs has decreased over the years, the branch network has continued to rise. At the end of 1987, there were 13353 branches operating in the country covering 363 districts. This number increased to 14498 in March 1999 covering 486 districts throughout the country. The growth of new branches of RRBs slowed down after 1987. Even due to the amalgamation of old branches their number reduced after 1999 and it was 14301 in March, 2000.

During the period of 14 years from April 2000 to March 2014, 4781 new branches have been opened in order to cover more number of districts though the number of RRBs has been reduced after the consolidation process. The number of districts covered by the RRBs in the country has increased from 484 in March 2000 to 642 in March 2014. It indicates that an additional 158 number of districts have been covered by setting up of new branches in various uncovered and under-banked districts of the country.

As at the end of March 2014, 57 RRBs are working in India being sponsored by 25 commercial banks and 1 State Cooperative bank, covering 642 districts, and having 19082 numbers of branches functioning in 26 states and U.T. of Puducherry. The branches are comprised of 98 metropolitan branches, 1142 urban branches, 3413 semi urban and 14429 rural branches.

## 2.6.2 State-wise/Area-wise Distribution of RRBs

State-wise and area-wise distribution of RRBs has been given in Table 2.2. It is evident from the table that out of 57 RRB as on 31<sup>st</sup> March, 2014 the highest number of RRBs are in Uttar Pradesh (7 RRBs). Andhra Pradesh is at the second

**Table 2.2: State-wise and Area-wise Break up of Branches of RRBs in India**  
(as on 31th March, 2014)

Name of State	No. of RRBs	No. of Branches					No. of Districts Covered
		Rural	Semi Urban	Urban	Metro politan	Total	
Andhra Pradesh	5	1217	381	144	18	1760	23
Arunachal Pradesh	1	21	4	2	0	27	8
Assam	2	341	96	16	0	453	27
Bihar	3	1545	245	69	0	1859	38
Chhattisgarh	1	488	57	37	0	582	27
Gujarat	3	410	123	47	13	593	33
Haryana	1	410	89	43	0	542	21
Himachal Pradesh	1	178	9	1	0	188	12
Jammu & Kashmir	2	271	46	21	0	338	26
Jharkhand	2	392	39	11	0	442	24
Karnataka	3	1184	205	147	11	1547	30
Kerala	1	75	430	30	0	535	14
Madhya Pradesh	3	819	282	96	4	1201	51
Maharashtra	2	444	182	52	2	680	33
Manipur	1	19	8	1	0	28	9
Meghalaya	1	70	17	4	0	91	11
Mizoram	1	46	13	16	0	75	8
Nagaland	1	6	4	0	0	10	5
Odisha	2	807	99	45	0	951	30
Puducherry	1	17	6	9	0	32	2
Punjab	3	271	49	20	0	340	24
Rajasthan	3	959	213	64	0	1236	36
Tamil Nadu	2	230	167	20	0	417	31
Tripura	1	97	31	10	0	138	8
Uttar Pradesh	7	3127	453	191	48	3819	80
Uttaranchal	1	212	34	14	0	260	13
West Bengal	3	773	131	32	2	938	18
<b>All India Total</b>	<b>57</b>	<b>14429</b>	<b>3413</b>	<b>1142</b>	<b>98</b>	<b>19082</b>	<b>642</b>

Source: Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai.

position with 5 RRBs. 12 states including one U.T. of Puducherry are having only one RRB each. However, the services of RRBs are not available in the states like Delhi, Goa, Sikkim and in all the Union Territories except Puducherry. If we analyse their area-wise position, it is clear from the Table 2.2 that Uttar Pradesh is having maximum number of rural branches that comes 21 percent of total rural branches of RRBs in India. Rajasthan is having 841 rural, 203 semi-urban and 57 urban branches. Only 7 states are having metropolitan branches.<sup>27</sup>

Thus, the structural growth of RRBs in all respects, namely in terms of number of RRBs, districts covered, expansion of branches was substantial in the beginning. However, the consolidation of the existing set up of the structure of RRBs and giving more emphasis on the functional growth have become the guiding principles after amalgamation process.

### **2.6.3 Resources of Regional Rural Banks**

The total resources of RRBs are comprised of owned funds, deposits and borrowings. Table 2.3 shows the resource position of RRBs in India for the period from 2000-01 to 2013-14. The owned funds of RRBs, consisting of share capital, share capital deposits and reserves and surpluses have registered an increase in absolute terms from Rs. 346705.00 lakhs in 2000-01 to Rs. 2217222.73 lakhs in 2013-14 but in terms of percentage share to the total resources of RRBs it has been decreased from 7.57 percent to 7.11 percent during the period of study. The deposits account for nearly 80 percent of total resources and constituted the major resource component of RRBs in India throughout the period of study. The borrowings of RRBs from NABARD, sponsor banks, SIDBI and others have increased from Rs. 406400 lakhs in 2000-01 to Rs 5023009.68 lakhs in 2013-2014 and in terms of percentage share also it increased significantly from 8.87 percent to 16.10 percent during the period of study. The total resources of RRBs have grown from Rs. 4580292.00 lakhs in 2000-01 to Rs. 31189651.60 lakhs in 2013-14 at an average annual rate of 15.95 percent.

Table 2.3: Resources of RRBs in India

(Rs. in lakhs)

Year	Owned Funds			Total Owned Funds	Deposits	Borrowings	Total Resources	Growth %
	Share Capital	Share Capital Deposit	Reserve & Surplus					
2000-01	19574.00	200993.00	126138.00	346705.00 (7.57)	3827187.00 (83.56)	406400.00 (8.87)	4580292.00 (100.00)	-
2001-02	19581.25	208062.44	178239.79	405883.48 (7.64)	4453915.09 (83.84)	452437.08 (8.52)	5312235.65 (100.00)	15.98
2002-03	19582.00	211273.77	235740.96	466596.73 (7.83)	5009833.52 (84.11)	479869.16 (8.06)	5956299.41 (100.00)	12.12
2003-04	19585.00	218844.00	305353.00	543782.00 (8.19)	5635008.00 (84.90)	458700.00 (6.91)	6637490.00 (100.00)	11.44
2004-05	19592.50	216682.13	381851.73	618126.36 (8.37)	6214300.00 (84.15)	552400.00 (7.48)	7384826.36 (100.00)	11.26
2005-06	19600.00	218003.14	427055.91	664659.05 (7.79)	7132883.39 (83.64)	730259.31 (8.56)	8527801.75 (100.00)	15.48
2006-07	19600.00	218843.26	490154.24	728597.50 (7.27)	8314355.36 (82.97)	977579.62 (9.76)	10020532.48 (100.00)	17.50
2007-08	19700.00	283253.05	570305.64	873258.69 (7.32)	9909346.41 (83.05)	1149400.45 (9.63)	11932005.55 (100.00)	19.08
2008-09	19700.00	395929.72	675398.92	1091028.64 (7.59)	12018890.16 (83.56)	1273464.25 (8.85)	14383383.05 (100.00)	20.54
2009-10	19700.00	398490.50	806525.52	1224716.02 (6.96)	14503494.56 (82.38)	1877006.47 (10.66)	17605217.05 (100.00)	22.40
2010-11	19700.00	407634.00	956557.96	1383891.96 (6.70)	16623234.10 (80.48)	2649080.50 (12.82)	20656206.56 (100.00)	17.33
2011-12	19700.00	500201.49	1126299.26	1646200.75 (7.06)	18633601.19 (79.94)	3028883.59 (12.99)	23308685.53 (100.00)	12.84
2012-13	19700.00	600116.48	1324725.51	1944541.99 (7.23)	21148795.64 (78.62)	3807321.92 (14.15)	26900659.55 (100.00)	15.41
2013-14	19700.00	616987.47	1580535.26	2217222.73 (7.11)	23949419.19 (76.79)	5023009.68 (16.10)	31189651.60 (100.00)	15.94
<b>Avg. Annual Growth Rate</b>								15.95

Note : -Figures in parentheses represent the percentage of total resources.

Source :- Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai

### 2.6.4 Deposit Mobilization

Mobilization of deposits is one of the major activities of the RRBs. It determines the working and viability of these banks upto a great extent. Deposits are the major source of funds for these banks. Mobilization of deposits by RRBs also acts as a tool for promoting saving and banking habits among the people of rural areas. But the RRBs have to work very hard to mobilize the deposits. They have to make special efforts for this purpose.

**Table 2.4: Growth of Deposits in RRBs in India Since Inception**

(Rs. in lakhs)				
Year	Total Deposits	Growth %	Average Deposits per RRB	Average Deposits per Branch
December 1975	20.00	-	3.33	1.18
December 1980	19983.00	19963.00	235.09	6.09
December 1985	128582.00	108.69	683.95	10.20
March 1990	415052.00	44.56	2117.61	28.74
March 1995	1115001.00	33.73	5688.78	76.85
March 2000	3220434.00	37.77	16430.79	225.19
March 2001	3827187.00	18.84	19526.46	267.39
March 2002	4453915.00	16.38	22724.06	309.50
March 2003	5009834.00	12.48	25560.38	347.11
March 2004	5635008.00	12.48	28750.04	390.07
March 2005	6214300.00	10.28	31705.61	430.56
March 2006	7132883.39	14.78	53630.70	492.13
March 2007	8314355.36	16.56	86607.87	572.61
March 2008	9909346.41	19.18	108893.92	671.32
March 2009	12018890.16	21.29	139754.54	791.71
March 2010	14503494.56	20.67	176871.88	936.92
March 2011	16623234.10	14.62	202722.37	1038.89
March 2012	18633607.19	12.09	227239.11	1101.99
March 2013	21148795.64	13.50	330449.93	1184.08
March 2014	23949419.19	13.24	420165.25	1255.08
<b>Avg. Annual Growth Rate (March 2001 to March 2014)</b>	-	15.46	-	-

Source: Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai.

Deposits mobilized by the RRBs largely depend upon the saving capacity and saving habits of the people of the area in which the bank is operating. It also depends on the potential of the area concerned and business policy of the RBI. Besides these, the banking habits among the public and the rate of interest offered by the bank also play a key role in mobilizing the deposits. RRBs have performed well in respect of deposit mobilization. There has been a continuous increase not only in terms of total deposit but in terms of per RRB and per branch deposits also. Data on deposit mobilization by RRBs in India, since the year they were established, are presented in Table 2.4. The total deposits mobilized increased to Rs. 128582.00 lakhs in December 1985 from mere Rs. 20.00 lakhs in December 1975. The growth was 6429 times during this period because of the establishment of more and more RRBs every year. From March 1995 there had been an impressive growth in mobilizing the deposits. Total deposits have reached to Rs. 23949419.19 lakhs in March 2014 from Rs. 3827187.00 lakhs in March 2001 recording an average annual growth rate of 15.46 percent during the period of study. The average deposit per RRB and per branch increased from Rs. 5688.78 lakhs and Rs. 76.85 lakhs as on March 1995 to Rs. 420165.25 lakhs and Rs. 1255.08 lakhs respectively as on March 2014. Reduction in the number of RRBs has also been a reason behind the vast increase in the amount of per RRB deposits. These data indicate that the RRBs have achieved significantly in mobilization of savings in rural areas both in quantitative and qualitative terms.

### **2.6.5 Category-wise Deposits**

Regional Rural Banks accept deposits under three categories which are; current deposit accounts, saving deposit accounts and term or fixed deposit accounts. Current deposits are the cheapest source of funds to any bank but they require a large amount of liquidity. Generally, business class people operate these types of accounts. Saving deposits are mainly to promote the saving habits of the people and for this purpose a nominal interest is paid on these deposits. Fixed or term deposits are not payable on demand but after the expiry of a fixed period. Comparatively higher rate of interest is paid on such deposits. So the term deposits are considered the costliest for the banks. The only advantage to the bank on such deposits is that they can lend these funds for long terms. However, saving and fixed deposits are the most popular among the rural people. Table-2.5 shows the mobilization of deposits by RRBs in India by their types from March 2001 to March 2014. At the end of March 2001 amount of total deposits of RRBs in India was Rs. 3827186.00 lakhs, of

which the amount of current deposits was Rs. 172004.00 lakhs, saving deposits was Rs. 1484304.00 lakhs and term deposits was Rs. 2170878.00 lakhs which increased to Rs. 1123710.55 lakhs, Rs. 12101779.97 lakhs and Rs. 10723928.67 lakhs respectively for three types of deposits as at the end of March 2014.

The term deposits which constituted 56.72 percent of total deposits of RRBs in India in March 2001, reduced to 44.78 percent in March 2014. Saving deposits which formed 38.78 percent of total deposits, have increased to 50.53 percent during the same period. Share of current deposits remained almost constant at around 4.5 percent during the study period. The decrease in the share of term deposits has somehow helped in reducing the servicing cost of deposits which further increased the profitability of these banks.

**Table 2.5: Category-wise Deposits in RRBs in India**

(Rs. in lakhs)				
Year	Current Deposits	Saving Deposits	Term Deposits	Total Deposits
2000-01	172004.00	1484304.00	2170878.00	3827186.00
	(4.49)	(38.78)	(56.72)	(100.00)
2001-02	191531.00	1786808.00	2475576.00	4453915.00
	(4.30)	(40.12)	(55.58)	(100.00)
2002-03	224635.00	2096800.00	2688399.00	5009834.00
	(4.48)	(41.85)	(53.66)	(100.00)
2003-04	268405.00	2779262.00	2587336.00	5635003.00
	(4.76)	(49.32)	(45.92)	(100.00)
2004-05	325726.00	3073951.00	2814623.00	6214300.00
	(5.24)	(49.47)	(45.29)	(100.00)
2005-06	395330.00	3823302.00	2914251.00	7132883.00
	(5.54)	(53.60)	(40.86)	(100.00)
2006-07	478547.63	4611156.93	3224650.80	8314355.36
	(5.76)	(55.46)	(38.78)	(100.00)
2007-08	571602.52	5336994.51	4000749.38	9909346.41
	(5.77)	(53.86)	(40.37)	(100.00)
2008-09	643177.73	6367537.38	5008175.05	12018890.16
	(5.35)	(52.98)	(41.67)	(100.00)
2009-10	806537.25	7590600.38	6106356.93	14503494.56
	(5.56)	(52.34)	(42.10)	(100.00)
2010-11	919031.08	9113632.42	6590570.60	16623234.10
	(5.53)	(54.82)	(39.65)	(100.00)
2011-12	1036397.91	9861668.35	7735540.93	18633607.19
	(5.56)	(52.92)	(41.51)	(100.00)
2012-13	1098263.42	10932251.55	9118280.67	21148795.64
	(5.19)	(51.69)	(43.11)	(100.00)
2013-14	1123710.55	12101779.97	10723928.67	23949419.19
	(4.69)	(50.53)	(44.78)	(100.00)

Note: Figures in parentheses represent the percentage to total deposits

Source: Various Statistical Reports of Regional Rural Banks, NABARD, Mumbai.

### 2.6.6 Credit Deployment

Deployment of credit is the important and crucial part of the banking business. The important objective of the RRBs is to touch the door steps of each and every neglected section of the society in disbursement of loans. Their advances are primarily confined to the needs of weaker sections.

**Table 2.6: Growth of Loans and Advances (o/s) in RRBs in India since Inception**

(Rs. in lakhs)

Year	Total Outstanding Advances	Growth %	Average Advances(o/s) per RRB	Average Advances(o/s) per Branch
December 1975	10.00	-	1.67	0.59
December 1980	24338.00	48656.00	286.33	7.42
December 1985	140767.00	95.68	748.76	11.17
March 1990	355404.00	30.50	1813.29	24.61
March 1995	629096.00	15.40	3209.67	43.36
March 2000	1318424.50	21.91	6726.66	92.13
March 2001	1581630.46	19.96	8069.54	110.50
March 2002	1862922.47	17.78	9504.70	129.46
March 2003	2215784.83	18.94	11305.03	153.52
March 2004	2611385.86	17.85	13323.40	180.77
March 2005	3287002.91	25.87	16770.42	227.74
March 2006	3971257.21	20.82	29859.08	273.99
March 2007	4849259.39	22.11	50513.12	333.97
March 2008	5898426.61	21.64	64817.87	399.60
March 2009	6780209.62	14.95	78839.65	446.62
March 2010	8281910.28	22.15	100998.91	535.01
March 2011	9891743.10	19.44	120631.01	618.20
March 2012	11638496.62	17.66	141932.89	688.30
March 2013	13707758.99	17.78	214183.73	767.47
March 2014	15940658.11	16.29	279660.67	835.38
<b>Avg. Annual Growth Rate (March 2001 to March 2014)</b>	-	19.52	-	-

Source: Various Statistical Reports of Regional Rural Banks, NABARD, Mumbai.

M.L. Dantwala (1977) suggested that 60 percent of the loans issued by the RRBs should be allocated compulsorily for the benefits of small farmers, rural artisans and other rural poor. In respect of remaining 40 percent, there should be a suitable ceiling on each individual loan. The RRBs generally provide three types of loans; short term, medium term and long term loans. They grant direct advance in the form of crop loans, agricultural loans, loans for allied activities, loans for rural artisans, village and cottage industries, self-employed persons and consumption loans. RRBs also make indirect advances which are given through agencies such as Farmers' Service Societies, Farmers' Club, Primary Agricultural Societies and Self Help Groups etc. The position of outstanding advances of RRBs in India since the year they were established is given in Table 2.6. It is evident from the table that total outstanding advances have registered a tremendous growth from mere Rs. 10 lakhs in December 1975 to Rs. 15940658.11 lakhs in March 2014. There has been a significant rise in total outstanding advances of RRBs during the study Period (2000-01 to 2013-14) also, showing an average annual growth rate of 19.52 percent per annum. The trend shows that during the period from March 2001, growth rate of advances fluctuated every year. The similar trend can be seen in average advances per RRB and average advances per branch. The average advances per RRB have increased from Rs. 1.67 lakhs in December 1975 to Rs. 8069.54 lakhs in March 2001 and Rs 279660.67 lakhs in March 2014. The average outstanding advances per branch increased from Rs. 0.59 lakhs in December 1975 to Rs.110.50 lakhs in March 2001 and to Rs. 835.38 lakhs in March 2014.

### **2.6.7 Priority and Non-Priority Sector Advances (o/s)**

The total loans and advances of RRBs are divided mainly into two categories; priority sector and non-priority sector. The priority sector includes short term crop loans, terms loans to agriculture, rural artisans, small-scale industries, small business men, retail traders, SHG, etc. Table- 2.7 gives the data regarding the priority sector and non-priority sector outstanding advances by RRBs in India for the period of study. The table reveals that the proportion of priority sector advances in total advances was around 74.21 percent in March 2001 which increased to 81.57 percent in March 2013. Share of non-priority advances has reduced to 18.43 percent

**Table 2.7: Priority and Non-Priority Sector Advances (o/s) in RRBs in India**

(Rs. in lakhs)					
Year	Priority Sector Advances	Growth %	Non-priority Sector Advances	Growth %	Total Advances
2000-01	1173596.92	-	408033.54	-	1581630.46
	(74.21)		(25.79)		(100)
2001-02	1376937.52	17.33	485984.95	19.10	1862922.47
	(73.91)		(26.09)		(100)
2002-03	1662522.07	20.74	553262.76	13.84	2215784.83
	(75.03)		(24.97)		(100)
2003-04	2047021.94	23.13	564363.92	2.01	2611385.86
	(78.39)		(21.61)		(100)
2004-05	2607652.66	27.39	679350.25	20.37	3287002.90
	(79.33)		(20.67)		(100)
2005-06	3217724.80	23.40	753532.41	10.92	3971257.21
	(81.03)		(18.97)		(100)
2006-07	3985208.24	23.85	864051.15	14.67	4849259.39
	(82.18)		(17.82)		(100)
2007-08	4889413.17	22.69	1009013.44	16.78	5898426.61
	(82.89)		(17.11)		(100)
2008-09	5655524.76	15.67	1124684.86	11.46	6780209.62
	(83.41)		(16.59)		(100)
2009-10	6882358.89	21.69	1399551.39	24.44	8281910.28
	(83.10)		(16.90)		(100)
2010-11	8264232.58	20.08	1627510.52	16.29	9891743.10
	(83.55)		(16.45)		(100)
2011-12	9554185.65	15.61	2084310.97	28.07	11638496.62
	(82.09)		(17.91)		(100)
2012-13	11181172.47	17.03	2526586.52	21.22	13707758.99
	(81.57)		(18.43)		(100)
2013-14	13021500.00*	16.46	2908700.00*	15.12	15940658.11
					(100)
Average Annual Growth %		20.39		16.48	

\*provisional

Note: Figures in parentheses represent the percentage of total outstanding advances.

Source: Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai.

in March 2013. Table 2.8 reveals the purpose-wise break up of outstanding advances of RRBs during 2000-01 to 2013-14. It is evident from the table that the proportion of outstanding advances to agriculture (short term crop loans and term loans to agriculture) has been the highest forming about 44 percent of the total outstanding advances of RRBs. The second important area in the RRBs credit structure is retail trade. It means RRBs are working mainly achieving the basic objectives set for them. Besides, advances to the Self Help Groups has also become an important component of the advances to the non-farm sector achieving a share of around 5 to 6 percent during past few years.

Table 2.8: Purpose-wise Break up of Loans and Advances (o/s) in RRBs in India

(Rs. in lakhs)

Year	Priority Sector							Non Priority Sector	Total Outstanding Advances
	Short Term Crop Loans	Term Loans (Agriculture/ Allied)	Rural Artisans	Small Scale Industries	Retail Trade	SHGs	Others		
2000-01	369233.61 (23.34)	355723.84 (22.50)	56805.65 (3.59)	25314.64 (1.60)	278090.45 (17.59)	-	88428.72 (5.59)	408033.54 (25.79)	1581630.46 (100)
2001-02	488267.74 (26.20)	352186.95 (18.91)	67115.80 (3.60)	22483.48 (1.21)	298447.39 (16.02)	19092.08 (1.03)	129344.08 (6.94)	485984.95 (26.09)	1862922.47 (100)
2002-03	649481.72 (29.31)	376583.65 (17.00)	69463.33 (3.14)	33061.32 (1.49)	326425.11 (14.73)	39505.69 (1.78)	168001.25 (7.58)	553262.76 (24.97)	2215784.83 (100)
2003-04	766364.65 (29.35)	405778.75 (15.54)	71461.48 (2.74)	43271.16 (1.66)	360664.15 (13.81)	66509.38 (2.54)	332971.87 (12.75)	564363.92 (21.61)	2611385.86 (100)
2004-05	1097988.36 (33.4)	572951.65 (17.43)	71258.43 (2.17)	57950.11 (1.76)	436422.16 (13.28)	97995.38 (2.98)	273086.57 (8.31)	679350.25 (20.67)	3287002.91 (100)
2005-06	1387723.99 (34.94)	763243.91 (19.22)	74792.85 (1.88)	75664.28 (1.91)	345175.20 (8.69)	143654.14 (3.62)	427470.43 (10.76)	753532.41 (18.97)	3971257.21 (100)
2006-07	1870691.93 (38.58)	874497.02 (18.03)	73632.22 (1.52)	87968.55 (1.81)	367678.53 (7.58)	208983.86 (4.31)	501756.13 (10.35)	864051.15 (17.82)	4849259.39 (100)
2007-08	2274821.11 (38.57)	1046756.41 (17.75)	67065.36 (1.14)	122694.42 (2.08)	453091.84 (7.68)	291069.87 (4.93)	633914.16 (10.75)	1009013.44 (17.11)	5898426.61 (100)
2008-09	2665207.39 (39.31)	1071535.02 (15.80)	77156.98 (1.14)	165604.73 (2.44)	469021.49 (6.92)	402017.85 (5.93)	80498.13 (1.19)	1124684.86 (16.59)	6780209.62 (100)
2009-10	3366251.98 (40.65)	1261933.48 (15.24)	80985.82 (0.98)	159799.35 (1.93)	523403.01 (6.32)	475648.70 (5.74)	1014337.05 (12.25)	1399551.39 (16.90)	8281910.28 (100)
2010-11	4066273.03 (41.11)	1440459.37 (14.56)	88136.25 (0.89)	262517.56 (2.65)	508154.94 (5.14)	535118.51 (5.41)	1363572.92 (13.78)	1627510.52 (16.45)	9891743.10 (100)
2011-12	4657950.78 (40.02)	1724371.88 (14.82)	101823.19 (0.87)	348404.38 (2.99)	576993.46 (4.96)	654867.36 (5.63)	1489774.60 (12.80)	2084310.97 (17.91)	11638496.62 (100)
2012-13	5525511.09 (40.31)	1940562.40 (14.16)	108260.04 (0.79)	408052.13 (2.98)	557516.47 (4.07)	785043.64 (5.73)	1856266.70 (13.54)	2526586.52 (8.43)	13707758.99 (100)
2013-14	6826700.00*	2195200.00*	NA	NA	NA	NA	NA	2908700.00*	15940658.11

\*Provisional, Note : -Figures in parentheses represent the percentage of total outstanding advances

Source : Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai.

### 2.6.8 Credit Deposit Ratio

An increasing credit deposit ratio of the RRBs enables them to meet the credit requirements of the rural areas so that the rate of growth in rural areas is accelerated. RRBs are specialized institutions for rural poor. Credit from the RRBs mainly help the poor sections of the society for whom credit from all other financial institutions and banks is usually beyond reach. RRBs' credit thus, goes to reduce the inequality in income between rural and urban areas on the one hand and between the rich and the poor on the other.<sup>28</sup>

**Table 2.9: Credit Deposit Ratio of RRBs in India**

(Rs. in Lakhs)			
Year	Credit ( Advances o/s)	Deposit	C/D Ratio
2000-01	1581630.46	3827187.00	41.33
2001-02	1862922.47	4453915.00	41.83
2002-03	2215784.83	5009834.00	44.23
2003-04	2611385.86	5635008.00	46.34
2004-05	3287002.91	6214300.00	52.89
2005-06	3971257.21	7132883.39	55.68
2006-07	4849259.39	8314355.36	58.32
2007-08	5898426.61	9909346.41	59.52
2008-09	6780209.62	12018890.16	56.41
2009-10	8281910.28	14503495.56	57.10
2010-11	9891743.10	16623234.10	59.51
2011-12	11638496.62	18633607.19	62.46
2012-13	13707758.99	21148795.64	64.82
2013-14	15940658.11	23949419.19	66.56

Source: Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai.

Table 2.9 shows the position of credit deposit ratio of the RRBs in India. Credit deposit ratio was registered 41.33 percent in 2000-01 and showed an increasing trend throughout the study period. In most of the years it remained more than 50 percent and reached the highest level of 66.56 percent so far in 2013-14. It shows that RRBs has deployed credit to the expected levels. But still scope is there to extend more credit to the rural people.

### 2.6.9 Recovery Performance

The success and prosperity of a bank depends upon the recovery of its loans. A higher degree of recovery leads a bank on the path of development as it enlarges the lending operation of a bank through recycling of funds and improves its profitability. Thus, an effective recovery of loans is essential for RRBs. Reserve Bank of India issued guidelines in March 1996 on prudential norms for RRBs. As per these guidelines, it was made mandatory for the RRBs to classify their loan portfolio on the basis of their recovery performance and make necessary provisions as per these norms. These guidelines were issued to ensure transparency in accounts and to improve quality of the loan portfolios of RRBs.<sup>29</sup>

**Table 2.10: Recovery Performance and Overdues of RRBs in India**

(Rs. in lakhs)

Year	Demand	Collection	Overdues	% of Recovery to Demand
June 2000	802635	547359	255276	68.20
June 2001	961793	678953	282840	70.59
June 2002	1156982	827434	329548	71.52
June 2003	1321700	973900	350800	73.33
June 2004	1765600	1371300	394300	77.67
June 2005	1973017	1575518	397499	79.85
June 2006	2407158	1920967	486191	79.80
June 2007	3026878	2446912	579966	80.84
June 2008	3872487	3014703	857784	77.85
June 2009	4455544	3568401	887143	80.09
June 2010	5210140	4229686	980454	81.18
June 2011	6392274	5215785	1176489	81.60
June 2012	7461250	6056565	1404685	81.17
June 2013	9505529	7783111	1722417	81.89

Source: Various Statistical Reports on Regional Rural Banks, NABARD, Mumbai

Recovery of advances has been a matter of great concern for the health of any financial institution including RRBs. Poor recovery rate has always been a major reason for the weak position of the RRBs. But repeated emphasis given by RBI & NABARD and continuous efforts of the RRBs themselves, by educating the borrowers for timely repayment of loans, have started giving positive results since late nineties. Table 2.10 shows the recovery performance of RRBs in India from

June 2000 to June 2013. In June 2000, the loans recovered as a proportion of the loans due for repayment were around 68.20 percent and it increased to 81.89 percent in June 2013. The percentage of recovery has been increasing steadily throughout the period of study except in June 2008 when it decreased marginally. In June 2013, 9 RRBs had recovery of more than 90 percent, 19 RRBs had 60 to 80 percent recovery and only one RRB had recovery of less than 60 percent.

#### **2.6.10 Non Performing Assets (NPAs) in RRBs**

An asset becomes non-performing when it fails to generate income for the bank. Non-performing assets can be understood as a burden on the banks. The success of a bank depends upon the management of NPAs so they have to be kept within the tolerance level. An advance is classified as an NPA where in the case of:-<sup>30</sup>

- (i) Term Loan, the interest and/or installment of principal remain overdue for a period of more than 90 days,
- (ii) Overdraft / Cash Credit, the amount remain out of order,
- (iii) Bills purchased and discounted, the bills remain out of order for a period of more than 90 days,
- (iv) Advance granted for agricultural purposes, interest and/or installment of principal remain overdue for two harvest seasons in case of short duration crops and for one harvest season in case of long duration crops, but for a period not exceeding two half years and
- (v) Other accounts, any amount to be received remains overdue for a period of more than 90 days.

The level of NPAs of RRBs in India has been presented in Table 2.11. They have been analysed in the form of Gross NPAs amount, percentage of gross NPAs to gross advances outstanding Table reveals that gross NPAs of RRBs in India has increased during the study period in absolute terms but in percentage form they have reduced from 18.83 percent in 2000-01 to 8.53 percent in 2004-05. After the amalgamation of RRBs they further reduced from 7.28 percent in 2005-06 to 3.75 percent in 2010-11 but again it began to increase and went to 6.09 percent in 2013-14. Growth rates of gross NPA % were negative till 2009-10 but remained positive thereafter.

**Table 2.11: NPA Position of RRBs in India**

(Rs. in lakhs)			
Year	Gross NPAs	Gross NPAs to Gross Advances Outstanding (%)	Growth %
2001	297832.65	18.83	-
2002	306696.27	16.46	-12.59
2003	319974.76	14.44	-12.27
2004	329866.20	12.63	-12.53
2005	280434.65	8.53	-32.46
2006	289046.53	7.28	-14.65
2007	317801.27	6.55	-10.03
2008	356633.56	6.05	-7.63
2009	280971.46	4.14	-31.57
2010	308481.43	3.72	-10.14
2011	371196.43	3.75	0.81
2012	585912.05	5.03	34.13
2013	833003.20	6.08	20.87
2014	970757.20	6.09	0.16

Source: Various statistical reports on Regional Rural Banks, NABARD, Mumbai

### 2.6.11 Working Results -Profitability Position of RRBs

Working results are the most important parameters in evaluating the viability of RRBs. Generally it is measured in terms of profit earned by them and amount of accumulated losses. Table 2.12 presents overall working results of RRBs in India from 2000-01 to 2013-14. The amount of Net Profit/Loss (i.e. Gross Profit - Loss Amount) earned by all the RRBs were Rs. 60061.69 lakhs in March 2001. It increased to Rs. 74810.95 lakhs in 2004-05. In the very first year of amalgamation it decreased slightly to Rs. 61713.01 lakhs in 2005-06 but since then it increased continuously and reached to Rs. 269406.55 lakhs in 2013-14. Number of loss making RRBs which was 26 out of 196 RRBs in 2000-01, increased to 40 in 2002-03 and then reduced to 30 in 2004-05. During the amalgamation period the number of loss making RRBs reduced significantly and during 2013-14 out of 57 RRBs working in India, not even a single RRB was running in losses. Number of RRBs having accumulated losses has also reduced upto a great extent. It was 116 out of

196 RRBs in 2000-01, reduced to 83 out of 196 in 2004-05 and further reduced significantly during the amalgamation period from 58 out of 133 RRBs in 2005-06 to only 8 out of 57 RRBs in 2013-14. The amount of accumulated losses of RRBs have also been very high and a prime cause of attention for the RRBs but due to the continuous process of restructuring it reduced throughout the period of study except in 2006-07. The total amount of accumulated losses which was Rs.279259.00 lakhs in 2000-01 and declined to Rs. 94845.96 lakhs in 2013-14 and registered a negative growth rate of (-)13.37 percent in 2013-14 over the previous year. The reduction was very significant after 2008-09 when the negative growth rate entered in 2 digits. This shows that the process of restructuring specially the process of amalgamation of RRBs in India has been very helpful in improving their working results.

**Table 2.12: Working Results of RRBs in India**

(Rs. in lakhs)

Year	Net Profit/Loss (Gross Profit-Loss Amount)	No. of Loss making RRBs	No. of Profit Making RRBs	Total No. of RRBs	No. of RRBs having Accumulated Losses	Amount of Accumulated Losses	Growth % Accumulated Losses
2000-01	60061.69	26	170	196	116	279259.00	
2001-02	60787.22	29	167	196	10	269406.00	-3.53
2002-03	51929.12	40	156	196	97	275225.00	2.16
2003-04	76868.23	33	163	196	90	272535.00	-0.98
2004-05	74810.95	30	166	196	83	271501.00	-0.38
2005-06	61713.01	22	111	133	58	263685.00	-2.88
2006-07	62515.16	15	81	96	40	275949.12	4.65
2007-08	102698.76	8	82	91	28	262422.16	-4.90
2008-09	133550.18	6	80	86	30	229997.94	-12.36
2009-10	188393.20	3	79	82	27	177506.21	-22.82
2010-11	171454.52	7	75	82	23	153238.56	-13.67
2011-12	185728.82	3	79	82	22	133256.97	-13.04
2012-13	227265.54	1	63	64	11	109063.75	-18.16
2013-14	269406.55	0	57	57	8	94845.96	-13.04

Source: Various statistical reports on Regional Rural Banks, NABARD, Mumbai

Thus, Regional Rural Banks have become the important part of the multi-agency credit delivery system to the agricultural and rural sector. As they are the grass-root level institutions in this field, they are expected to play an increasingly important role in achieving the goal of financial inclusion also. But to fulfill these objectives it is necessary that they function in a highly professional manner by adopting the technological progress. A number of policy measures have been taken by Government of India, to improve the performance and financial health of RRBs during past two decades. Recapitalisation and interest subvention, core banking solutions, diversification of their banking operations were some important initiatives but the process of restructuring by amalgamating these RRBs, sponsor bank wise and across sponsor banks from 2005-06 has been proved as a milestone in the history of RRBs as it resulted in significant improvements in the working of RRBs in India. Amalgamation has helped the RRBs to achieve economies of scale and to maintain better managerial control. RRBs have shown significant improvements on part of their major performance parameters also.

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*Chapter - 3*

*Trend and Progress of Regional  
Rural Banks in Rajasthan*

## **Chapter-3**

### **Trend and Progress of Regional Rural Banks in Rajasthan**

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Regional Rural Banks, now about four decades old, have taken deep roots and become an inseparable organ of the rural credit structure in India. The Narasimham Committee conceptualized the creation of RRBs in 1975 with a view to provide regionally oriented rural banks which would combine the local feel and familiarity of rural problems, realities and aspiration which are the characteristics of co-operatives at one hand and professionalism and large resource base of commercial banks on the other hand. The RRBs were supposed to evolve as specialised rural financial institutions for developing the rural economy by providing credit to small and marginal farmers, agricultural laborers, rural artisans and small entrepreneurs.<sup>1</sup> Over the last 40 years, RRBs have become an important instrument in rural development and in war against rural poverty. They have played crucial role in providing institutional credit in rural areas not only in terms of geographical coverage, clientele outreach and business volume but they have also contributed in developing the rural economy of the country. The present chapter attempts to study the trend and growth of Regional Rural Banks in Rajasthan beginning with an introduction to the profile of the state which includes physical and demographic features of the state and also the position of economic development in the state. Further, this chapter reviews the performance of the RRBs in Rajasthan in terms of structural development, resource mobilisation, credit deployment and other key parameters. This chapter attempts to make a macro level analysis of the performance of the RRBs in Rajasthan.

#### **3.1 A Profile of the State of Rajasthan**

Rajasthan, the largest state in India, was formed on 30 March, 1949 with Jaipur as the state capital. Once known as the Land of the Kings, the state still retains the glory and richness of those times with its marvelous monuments, colorful traditions and customs. It covers most of the area of the Great Indian Desert (Thar Desert) with one edge paralleling the Sutlej-Indus River Valley along with its border with Pakistan.<sup>2</sup>

### **3.1.1 Physical Features**

The State of Rajasthan is situated in north-west of the country between 23<sup>0</sup> 3' and 30<sup>0</sup> 12' north latitudes and 69<sup>0</sup> 30' and 78<sup>0</sup> 17' east longitudes. It borders Pakistan to the west, the Indian state of Gujarat to the south-west, Uttar Pradesh and Haryana to the north-east and Punjab to the north. The total area of the state is 3.42 lakh sq. kms and it ranks first among all the states of India comprising of 10.41 percent of total geographical area of the country. The shape of the State is rhomboid and stretches length-wise 869 kms. from west to east and 826 kms. from north to south. The southern part of the state is about 225 km. from Rann of Kutch and 400 km. from the Arabian Sea. Jaipur, the capital city, lies in the east-central part of the state.<sup>3</sup> Rajasthan is known for its vast stretch of barren lands, sun bleached surface, rocks and rolling sand dunes. Recurring drought and scarcity conditions have been jointing the economy of the state and retarding the process of growth. Rajasthan falls in the tropical region and its soils range from sandy to sandy loam. Of course, there are some fertile plains and plateaus besides forest-clad hills. The Aravalli Range of hills intersects the state end to end by a line running from north-east to south-west. The area of the north-west of the Aravalli Range is arid to semi-arid whereas that of south-east has more or less assured rain fall. The arid and semi-arid area accounts for three-fifth of the total area of the state as against two-fifth of the area lying to the south east of the Aravalli Range. Therefore, 55 percent of the total area, spread over 1.88 lakh sq. kms. and inhabited by about one third of the state's population, lies in the heart of the Great Indian Desert forming a geographic region of chronic under-development and an easy prey to drought and scarcity.<sup>4</sup>

Physiographically, the state is divided into 4 major regions<sup>5</sup>:-

- (I) The Western Desert with barren hills, rocky plains and sandy plains.
- (II) The Aravalli Hills running south-west to north-east starting from Gujarat and ending to Delhi.
- (III) The Eastern Plains with rich alluvial soils and
- (IV) The South-Eastern Plateau.

The Luni, Banas, Chambal, Beas are the major river system of the state.

### 3.1.2 Demographic Trends

As per the 2011 census, the total population of the State is 6.85 crore registering 21.3 percent decadal growth rate against the all India decadal growth rate of 17.7 percent. In fact, the population growth rate of Rajasthan has always been higher than that of the country. Nearly 75 percent of the total population of the state lives in rural areas and the density of population are 200 persons per square kilometer. Regarding total population, Rajasthan stands 8<sup>th</sup> in India (excluding union territories). Sex ratio (female per 1000 males) is 928 where as the child sex ratio (0-6 year) is 888 per 1000 male children. The percentage of the scheduled caste and scheduled tribe population are about 17.8 percent and 13.5 percent respectively. Literacy rate in the state is 66.1 percent, for male it is 79.2 percent and for female it is 52.1 percent.<sup>6</sup>

**Table 3.1: Rajasthan at a Glance (as on 31<sup>st</sup> March 2014)**

S.No.	Particulars	Year	Rajasthan	India
1	Total Geographical Area	2011	3.42 lakh km <sup>2</sup>	32.87 lakh km <sup>2</sup>
2	Total Number of Districts	2011	33	640
3	Total Population	2011	6.85 crore	121.05 crore
4	Decadal Growth Rate	2001-11	21.30%	17.70%
5	Percentage of Rural Population	2011	75.13%	68.84%
6	Percentage of Urban Population	2011	24.87%	31.16%
7	Density of Population	2011	200	382
8	Sex Ratio (females per 1000 males)	2011	928	943
9	Child Sex Ratio (0-6 years)	2011	888	919
10	Literacy Rate	2011	66.10%	73.00%
11	Literacy Rate (female)	2011	52.10%	64.60%
12	Literacy Rate (Male)	2011	79.20%	80.90%
13	Work Participation Rate	2011	43.60%	39.80%
14	Percentage of Cultivable Area to Total Area	2012-13	51.01%	60.30%
15	Percentage of Forest Area to Total Area	2012-13	8.02%	24.01%
16	Scheduled Caste Population ( %)	2011	17.80%	16.60%
17	Scheduled Tribe Population ( %)	2011	13.50%	8.60%
18	Work Participation Rate (Rural)	2011	47.30%	41.80%
19	Work Participation Rate (Urban)	2011	32.30%	35.30%

Source : Economic Review 2014-15, Directorate of Economics and Statistics, Rajasthan, Jaipur

### **3.1.3 Economic Profile**

The economy of the state is primarily agricultural and pastoral. The state has nine agro-climatic zones and variety of soils that support cultivation of various crops. Agriculture in Rajasthan is primarily rain-fed and the period of monsoon is short. Due to unstable weather conditions, farmers have to depend on both rain-fed and ground water agriculture. Although, several remarkable efforts have been made in the state for the development of agriculture it still continues to depend upon the mercy of the monsoon in most parts of the state. In spite of all these facts agriculture is the prime source of income of the rural people of the state. Around 62 percent of the total population of Rajasthan is engaged in agriculture and it contributes around 25 percent of the state income. The total reporting area of the state during the year 2012-13 is 342.67 lakh hectares. Out of this, 51.01 percent area is under Net area sown (174.79 lakh hectares), 8.02 percent under forest, 12.48 percent area is under non-agricultural, barren and uncultivable land, 11.36 percent area is under fallow land and 17.13 percent area is under other uncultivated land. In recent years, Rajasthan has done remarkably well in terms of agricultural production and yield from different agricultural crops. Rajasthan is among the largest producers of edible oils in India and the second largest producer of oil seeds and gram. Rajasthan is also the biggest wool-producing state in India and the main opium producer and consumer. The other major crops of the state are wheat, barley, pulses, sugarcane, cotton, tobacco, mustard, etc. There are mainly two crop seasons-kharif and rabi.<sup>7</sup>

Industries in Rajasthan are mainly mineral based, agriculture based and textiles. Rajasthan is the second largest producer of polyester fiber in India. The Pali and Bhilwara districts produce more cloth than Bhiwandi. Several prominent chemical and engineering companies are located in the city of Kota, in southern Rajasthan. The state is eminent in quarrying and mining in India. Rajasthan is the second largest producer of cement in India. Also the Department of Industries is working for the development of industries and handicrafts in the state and providing necessary guidance, assistance and facilities for industrial activities. At present, 36 District Industries Centers and 7 sub-centers are working for providing input and other facilities to entrepreneurs. Industrial development may prove to be the biggest poverty alleviation program to achieve not only the economic prosperity but to

ensure social upliftment. Certainly, development of industries is the fundamental pre-requisite for economic growth of the state and for this purpose, the state government is planning to extend industrial sector with greater emphasis on skill development and encouragement to Micro, Small and Medium Enterprises through introducing new industrial policies and schemes. The focus is on development of key sectors like, Biotechnology, Food Processing and Agro-based industries, Chemicals, Leather, Textiles, Solar Energy and Auto-mobile to accelerate industrial growth in the state.

#### **3.1.4 Infrastructural facilities**

Extensive and efficient infrastructural network is a major requirement for sustainable and inclusive economic growth. Development of high class infrastructure holds the key of overall development. Infrastructure is really the backbone of any economy. It also reflects the level of socio-economic development of any state.<sup>8</sup> Infrastructure of a state is measured in terms of facilities like transport, communication, health, medical services, family welfare, education, supply of electricity, banking and insurance etc. Government of Rajasthan has also taken up several initiatives for the growth and development of infrastructure in the state. Table 3.2 shows the level of infrastructural development in the state in comparison to that of India in terms of many socio-economic indicators. It is evident from the table that the state is lagging far behind in terms of many basic infrastructural facilities like road length, villages electrified, Railways, medical facilities, banking facilities, post and telephone connections etc. As far as per capita consumption of electricity is concerned it is 981.9 kwh. in 2012-13 in Rajasthan as against the per capita consumption of 914.4 kwh. in India. The analysis of the data given in Table 3.2 shows that still there has been inadequate development on the part of infrastructural facilities and socio-economic indicators in the state and it shows the comparatively backward position of the state.

**Table 3.2: Position of Infrastructural Facilities in Rajasthan**

S.N.	Facilities	Year	Rajasthan	India
1	Per Capita Consumption of Electricity (kwh.)	2012-13	981.90	914.40
2	Number of Motor Vehicles per lakh of population	31.03.13	14693	14332
3	Total Road Length per hundred sq. km. of area (km.)	31.03.13	77.00	133.00
4	Total Road Length per lakh of population	31.3.2011	351.67	381.57
5	Villages Electrified	Jun-13	38786	560993
6	Railway Route Length per one thousand sq. km. of area (km.)	31.03.2012	17.00	20.00
7	Railway Route Length per one thousand population	31.03.2012	0.08	0.05
8	Highway Length per sq. km.	31.03.2012	0.021	0.023
9	State Highway Length per sq. km.	31.03.2012	0.031	0.05
10	Telephones per 100 population	31.03.2014	75.48	74.54
11	Average number of Persons served by Post Offices	2011-12	6673	7803
12	Average Population served per Govt. Hospital	01.01.2014	22288	61744
13	Average Population served per Govt. Hospital Bed	01.01.2014	1502	1946
14	No. of Bank offices per lakh of population	Jun-14	8.30	9.70
15	Per Capita Bank Deposit (Rs.)	Jun-14	29122.00	65226.00
16	Per Capita Bank Credit (Rs.)	Jun-14	25008.00	49497.00

Sources:

- (1) Economic Review 2015-16, Directorate of Economics and Statistics, Rajasthan, Jaipur
- (2) Some facts about Rajasthan (2015), Directorate of Economics and Statistics, Rajasthan, Jaipur
- (3) Infrastructure Statistics, 2014
- (4) Directorate General of State Health Services

### **3.1.5 Banking Facilities in Rajasthan**

Adequate credit and banking facilities are necessary for accelerating the process of development in a poor state like Rajasthan. After the establishment of the State Bank of India in 1955 an attempt was made for monetization of the state. This process further accelerated in 1969 when 14 major commercial banks were nationalized. At the time of nationalization of these banks, there were only 364 bank offices in the state out of a total of 8262 in the country. It constituted only 4.4 percent of the total bank offices in the country.<sup>10</sup> By the end of September 2014, the number of bank offices increased to 5915 including 1262 branches of the Regional Rural Banks. It constituted 4.92 percent of the total bank branches in the country. The emphasis has been given on opening of new branches in the rural and semi-urban areas and particularly in the districts where average population per bank office was less than the national average. Although, there have been about 16 times increase in the absolute number, the percentage share remains more or less the same as all the states showed a remarkable increase in the number of bank offices after nationalization. Bank credit has been an important tool to improve the livelihood of rural masses and overall development of the state. Various credit based programmes like Swarn Jayanti Shahari Rojgaar Yojna, Prime Minister Employment Generation Programme and various schemes for development of SC/ST and other poverty alleviation programmes are being implemented for the development of weaker sections of the society with active participation of banks. Banks, including the Regional Rural Banks, have supported in implementing the various rural development programmes by providing credit and other facilities to the weaker sections of the society. Government of India and State Government are now focusing on financial inclusion of people in rural and urban areas particularly to very low income groups.<sup>11</sup>

The overall performance of the banking sector in Rajasthan and place of Regional Rural Banks in this banking scenario has been depicted in Table 3.3. Table shows that both the total deposits and total bank advances have increased during the year 2014 over the previous year. The gross deposits of all scheduled commercial banks have increased by 12.71 percent in Rajasthan while it increased by 12.29 percent at all India level during the same period. The credit deposit ratio for all

scheduled commercial banks was 85.87 percent in Rajasthan and 75.89 percent at all India level in September 2014 whereas it was 91.52 percent in Rajasthan and 77.83 percent at all India level in September 2013. Total advances in Rajasthan have increased by 5.76 percent during the period while at all India level it increased by 9.49 percent. Share of Regional Rural Banks in gross bank deposits and gross bank advances in the state was 6.83 percent and 5.95 percent respectively as against of 6.87 percent and 5.68 percent in the previous year for these two parameters.

**Table 3.3: RRBs' Place in Banking Scenario of Rajasthan**

S.N.		Regional Rural Banks		All Scheduled Commercial Banks	
		Rajasthan	India	Rajasthan	India
1	No. of Banks offices				
	a) September 2013	1169 (21.74)	17356 (15.92)	5378	108994
	b) September 2014	1262 (21.34)	18684 (15.53)	5915	120344
2	Total Deposits (Rs. in Crore)				
	a) September 2013	12663 (6.87)	210124 (2.91)	184259	7226367
	b) September 2014	14189 (6.83)	144926 (1.79)	207684	8114296
3	Total Advances (Rs. in Crore)				
	a) September 2013	9571 (5.68)	234746 (4.17)	168641	5624112
	b) September 2014	10616 (5.95)	161874 (2.63)	178347	6157566

Note : Figures in parentheses represent percentage to the total of all Scheduled Commercial Banks.

Source : Economic Review 2014-15, Directorate of Economics and Statistics, Rajasthan, Jaipur.

### 3.1.6 Administrative Set-up

The state of Rajasthan is divided into 7 divisions 33 districts within. These are :-

- 1) Jaipur : Jaipur, Alwar, Jhunjhunu, Sikar, Dausa
- 2) Udaipur : Udaipur, Banswara, Chittorgarh, Pratapgarh, Dungarpur, Rajsamand
- 3) Ajmer : Ajmer, Bhilwara, Nagaur, Tonk
- 4) Jodhpur : Barmer, Jaisalmer, Jalore, Jodhpur, Pali, Sirohi

- 5) Bikaner : Bikaner, Churu, Sri Ganganagar, Hanumangarh
- 6) Kota : Kota, Baran, Bundi, Jhalawar
- 7) Bharatpur : Bharatpur, Dholpur, Karauli, Sawai Madhopur

Rajasthan is having a single legislative chamber-- The Legislative Assembly. Rajasthan was pioneer state in introduction of the three tier system of Panchayati Raj in the country. Presently 33 Zila Parishads, 295 Panchayat Samities and 9900 Gram Panchayats are in existence in the state. The Panchayat system works as the agency for implementing various development programmes in the state. For a systematic and integrated development of the urban areas three Development Authorities and 15 Urban Improvement Trusts are working in the state. 184 urban local bodies and 297 urban settlements are also working in the state of Rajasthan.<sup>9</sup>

### **3.2 Background and Progress of Regional Rural Banks in Rajasthan before Amalgamation**

The economy of Rajasthan has been characterised by high magnitude of poverty especially in rural areas, high density of population in rural areas, dominance of agriculture and allied activities etc. It shows that more emphasis should be given on the development of rural areas of the state. Bank credit has been recognised as an important tool for upliftment of the rural masses. In an economically backward state like Rajasthan, more credit extension by commercial banks has not been able to meet the emerging credit requirements of the rural areas. In this context, the inception of RRBs had a great importance for the state. These banks were expected to operate mainly in rural areas and to cater to the needs of small and marginal farmers, agricultural laborers, rural artisans and other small borrowers.

#### **3.2.1 Establishment of RRBs in Rajasthan**

The RRBs in Rajasthan were established with that of the country on 2<sup>nd</sup> October 1975, when the first Regional Rural Bank sponsored by UCO Bank came into existence as one of the first five RRBs in the country. In accordance with its geographical area of operation, the bank was named Jaipur Naguar Anchlik Gramin Bank with its head office at Jaipur. In view of its economic backwardness, predominance of rural population depending on agriculture and animal husbandry,

the village artisans, weavers and potters who had never heard the name of any bank, the state was and continues to have large scope for the growth and development of multi-agency credit institutions with specific objective of rural upliftment. Since a major portion of the state had remained under-banked or unbanked through the years, the setting up of the RRBs was a matter of immense pleasure.

The significance of RRBs is greater than that of the other commercial banks operating in the rural areas because, "the over-heads of commercial banks are so high, that their branches may not break-even for a long number of years"<sup>12</sup>, especially in a state like Rajasthan where most of the unbanked rural centers are having infrastructural problems. No good roads, no medical and school facilities, scarcity of drinking water, lack of electricity and bus-facilities have been the common features of rural life of the state.

Institutionally, the co-operative credit system in the state held a monopoly in agricultural finance, till the end of 1970s. "The RRBs have broken this monopoly"<sup>13</sup>. The RRBs were formed with positive features of both the co-operatives and the commercial banks. They are commercially organised, rural oriented and government patronised. They combine "The banking discipline of commercial banks, local feel of cooperatives and the noble culture of its own, as imagined by the authors of the concept of RRBs"<sup>14</sup>.

Table 3.4 shows that the process of establishment of new RRBs in Rajasthan continued till 1985. The second RRB, Marwar Gramin Bank (sponsored by SBBJ), was established in 1976 and in the same year Shekhawati Gramin Bank (sponsored by PNB) was also established. They covered five districts of the state. In the years 1977 and 1978 no Regional Rural Bank was established. In 1979, one more RRB came into existence and that was Marudhar Kshetriya Gramin Bank (sponsored by Bank of Baroda) and it was covering only one district i.e. Churu. In 1981, 2 more RRBs [Alwar Bharatpur Anchlik Gramin Bank (sponsored by Punjab National Bank) and Arawali Kshetriya Gramin Bank (sponsored by Bank of Baroda)] were set up and they together covered 6 districts of the state. One more RRB came into existence in 1982 and that was Hadoti Kshetriya Gramin Bank and it was being sponsored by

Central Bank of India. Two more RRBs Mewar Anchlik Gramin Bank and Thar Anchlik Gramin Bank were established in 1983. In the year 1984, maximum four RRBs were established in Rajasthan and they were- Bundi Chittorgarh Kshetriya Gramin Bank, Bhilwara Ajmer Kshetriya Gramin Bank, Dungarpur Banswara Kshetriya Gramin Bank and Sri Ganganagar Kshetriya Gramin Bank.

**Table 3.4: RRBs in the State of Rajasthan before Amalgamation  
(as on 31 March 2005)**

S.N.	Name of the RRB	Date of Establishment	Name of the Sponsor Bank	Districts Covered (Area of operation)		Head Office
				No.	Names	
1	Jaipur Nagur Anchlik Gramin Bank	02.10.1975	U.Co. Bank	3*	Jaipur, Nagaur, Dausa	Jaipur
2	Marwar Gramin Bank	06.09.1976	SBBJ	3	Pali, Sirohi, Jalore	Pali
3	Shekhawati Gramin Bank	07.10.1976	PNB	2	Sikar, Jhunjhunu	Sikar
4	Marudhar Kshetriya Gramin Bank	29.03.1979	BOB	1	Churu	Churu
5	Alwar Bharatpur Anchlik Gramin Bank	28.02.1981	PNB	3	Alwar, Bharatpur, Dholpur	Bharatpur
6	Arawali Kshetriya Gramin Bank	02.10.1981	BOB	3*	Sawai Madhopur, Tonk, Karauli	Sawai Madhopur
7	Hadoti Kshetriya Gramin Bank	14.10.1982	CBI	3*	Kota, Baran, Jhalawar	Kota
8	Mewar Anchlik Gramin Bank	25.01.1983	BOR (presently ICICI)	2*	Udaipur, Rajsamand	Udaipur
9	Thar Anchlik Gramin Bank	31.01.1983	U.Co. Bank	3	Jodhpur, Jaisalmer, Barmer	Jodhpur
10	Bundi Chittorgarh Kshetriya Gramin Bank	23.03.1984	BOB	2	Bundi, Chittorgarh	Bundi
11	Bhilwara Ajmer Kshetriya Gramin Bank	24.03.1984	BOB	2	Ajmer, Bhilwara	Bhilwara
12	Dungarpur Banswara Kshetriya Gramin Bank	25.03.1984	BOB	3*	Dungarpur, Banswara, Pratapgarh	Dungarpur
13	Sri Ganganagar Kshetriya Gramin Bank	31.03.1984	SBBJ	2	Sri Ganganagar, Hanumangarh	Sri Ganganagar
14	Bikaner Kshetriya Gramin Bank	25.03.1985	SBBJ	1	Bikaner	Bikaner
				33		

\* Consequent upon the reorganisation of districts.

Source : Various Statistical Reports on RRBs, NABARD, Mumbai.

**Table 3.5: Position of RRBs in Rajasthan on the Basis of Key Parameters (as on 31 March 2005)**

(Rs. in lakhs)

S. N.	Name of the RRB	No. of Branches	Owned Funds	Deposits	Borrowings	Investments	Loans Outstanding	Loans Issued	Accumulated Losses	Profit or Loss	CD Ratio	NPA %	Recovery % (June 2004)	Productivity per Employee	Productivity per Branch
1	ABAGB (Bharatpur)	85	2953.00	35976.24	5541.75	14619.00	27271.73	16880.19	0.00	1012	75.80	1.75	90.52	171.40	744.09
2	AKGB (Sawai Madhopur)	60	1114.00	21587.08	3046.50	9733.00	12056.07	4869.08	2143.80	101	55.85	6.39	0.00	131.42	560.72
3	BAKGB (Bhilwara)	53	2968.00	19535.92	2183.89	9114.00	14501.46	6059.60	1473.28	558	74.23	6.61	76.95	168.50	642.21
4	BCKGB (Bundi)	61	1918.00	19108.39	2079.61	8485.00	13185.72	7412.11	0.00	202	69.00	6.30	77.67	121.41	529.41
5	BKGB (Bikaner)	26	618.00	4942.42	527.09	1670.00	3702.86	2182.64	693.45	5	74.92	4.02	52.85	130.99	332.51
6	DBKB (Dungarpur)	38	1030.00	12030.00	548.83	6543.00	5565.54	2685.56	0.00	13	46.26	10.61	61.13	115.00	463.04
7	HKGB (Kota)	81	881.00	33323.77	4556.41	13260.00	21275.96	13428.70	2108.54	400	63.85	4.57	88.34	150.40	674.01
8	JNAGB (Jaipur)	144	4107.00	63983.07	1382.00	40002.00	23961.97	15942.91	1759.83	602	37.45	9.07	83.95	136.77	610.73
9	MAGB (Udaipur)	58	1374.00	20154.04	874.48	15227.00	6136.73	2055.83	0.00	90	30.45	13.81	67.90	113.81	453.29
#	MGB (Pali)	135	2825.00	63327.18	1800.18	38925.00	26378.04	14751.72	0.00	362	41.65	4.38	89.52	147.06	664.48
#	MKGB (Churu)	56	1392.00	16227.96	1210.87	6088.00	6153.40	2919.45	0.00	-333	37.92	6.70	76.43	81.98	399.67
#	SGB (Sikar)	107	5746.00	42243.87	599.08	25093.00	21946.21	9435.18	0.00	1418	51.95	5.00	76.20	135.14	599.91
#	SKGB (Sri Ganganagar)	43	1114.00	13178.78	4278.26	4349.00	13636.68	13101.02	98.77	382	103.47	2.06	82.67	175.26	623.62
#	TAGB (Jodhpur)	66	1512.00	18658.73	3170.92	8437.00	13316.38	5950.28	0.00	408	71.37	3.48	80.30	123.46	484.47
	<b>Total (Rajasthan)</b>	<b>1013</b>	<b>29552.00</b>	<b>384277.45</b>	<b>31799.87</b>	<b>201545.00</b>	<b>209088.75</b>	<b>117674.27</b>	<b>8277.67</b>	<b>5220.00</b>	<b>54.41</b>	<b>8.87</b>	<b>83.17</b>	<b>137.38</b>	<b>585.75</b>
	<b>Total (India)</b>	<b>14484</b>	<b>618126.36</b>	<b>6214300.00</b>	<b>552400.00</b>	<b>3676200.00</b>	<b>3287003.00</b>	<b>2108247.00</b>	<b>271501.00</b>	<b>74810.95</b>	<b>52.89</b>	<b>8.53</b>	<b>77.67</b>	<b>137.88</b>	<b>655.99</b>

Source : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

Among these four RRBs first 3 were being sponsored by Bank of Baroda and fourth one was sponsored by State Bank of Bikaner and Jaipur. The last and 14<sup>th</sup> RRB in Rajasthan was established in 1985 and it was named Bikaner Kshetriya Gramin Bank and again SBBJ was sponsoring it.

At the end of March 1985, the total number of RRBs in Rajasthan was 14 and they were covering all the districts of the state. The position of RRBs of Rajasthan along with their sponsor bank and their operational area as at the end of March 2005 is shown in Table 3.4.

### **3.2.2 Position of RRBs in Rajasthan (Before Amalgamation)**

Table 3.5 gives an idea about the position of RRBs of Rajasthan on the basis of key parameters before the process of amalgamation was started. At the end of March 2005 a total of 14 RRBs were working in Rajasthan as no new RRB was established after 1985. Total number of their branches were 1013, the aggregate deposits of all RRBs in Rajasthan were Rs. 384277.45 lakhs and total amount of outstanding advances was Rs. 209088.75 lakhs. Credit deposit ratio was Rs. 54.41 percent. While at the same time, the number of RRBs, number of their branches, total amount of deposits, total outstanding advances and CD ratio of all RRBs in India were 196, 14484, Rs. 6214300 lakhs, Rs. 3287003.00 lakhs and 52.89 percent respectively.

### **3.3 Process of Amalgamation and Regional Rural Banks in Rajasthan**

In order to improve the operational viability of RRBs, the Government of India initiated the process of structural consolidation of RRBs in 2005-06 as per the recommendations of Vyas Committee II (2004).

A two phase restructuring was initiated:-

- 1) Amalgamation of RRBs of the same sponsor bank in the same state.
- 2) Amalgamation of RRBs sponsored by different banks in the same state.

The amalgamated RRBs were expected to provide better customer services due to better infrastructure, computerization of branches, experienced work force, common publicity, marketing efforts etc. They were also supposed to derive benefits

of a larger area of operation, enhanced credit exposure limits and more diverse banking activities.

The Government of India initiated the first phase of amalgamation of RRBs, sponsor bank wise at state level to over-come the deficiencies prevailing in RRBs and making them viable and profitable units. This phase was first started on September 2005 with the issue of notification in respect of formation of 9 amalgamated entities. As on 31<sup>th</sup> March 2005, 196 RRBs were operating in 26 states across 523 districts.<sup>15</sup> During the first phase of consolidation between September 2005 and March 2010 total number of RRBs in India reduced from 196 to 82.

In Rajasthan, first phase of consolidation of RRBs began on 24<sup>th</sup> January 2006 with amalgamation of two RRBs of the state which were Alwar Bharatpur Anchlik Gramin Bank (ABAGB) and Shekhawati Gramin Bank (SGB) and both were being sponsored by Punjab National Bank (PNB). By amalgamating these two entities a new RRB was formed and was named as Rajasthan Gramin Bank (RGB). It was also being sponsored by PNB. On 27<sup>th</sup> January 2006, two more RRBs of the state, JNAGB and TAGB under the sponsorship of UCO bank were amalgamated to form a new RRB, Jaipur Thar Gramin Bank. Further, on 3<sup>rd</sup> February 2006, a new RRB, Baroda Rajasthan Gramin Bank was formed by amalgamating 5 RRBs which were Marudhar Kshetriya Gramin Bank (MKGB), Arawali Kshetriya Gramin Bank (AKGB), Bundi Chittorgarh Kshetriya Gramin Bank (BCKGB), Bhilwara Ajmer Kshetriya Gramin Bank (BAKGB) and Dungarpur Banswara Kshetriya Gramin Bank (DBKGB). Baroda Rajasthan Gramin Bank was to be sponsored by Bank of Baroda as the amalgamated RRBs were also being sponsored by it. Fourth amalgamation in the state of Rajasthan took place on 12<sup>th</sup> June 2006 when three RRBs, Marwar Gramin Bank (MGB), Bikaner Kshetriya Gramin Bank (BKGB) and Sri Ganganagar Kshetriya Gramin Bank (SKGB) which were under the sponsorship of State Bank of Bikaner and Jaipur (SBBJ) were amalgamated to form Marwar Ganganagar Bikaner Gramin Bank (MGBGB) as a new entity.

During phase I, Mewar Anchlik Gramin Bank (MAGB) [sponsored by Bank of Rajasthan (presently ICICI)] and Hadoti Kshetriya Gramin Bank (HKGB) [sponsored by Central Bank of India] were not touched as they were the only RRBs under the sponsorship of BOR and CBI respectively in the state and phase I was homogeneous that means sponsor bank-wise amalgamation within a state.

Table 3.6: Amalgamation of RRBs in Rajasthan (Phase I)

S.N.	RRBs Amalgamated	Names of New RRBs	Sponsor Bank	Notification No. and Date of Amalgamation	Head Office (New RRB)	Districts Covered by New RRBs
1	1) Alwar Bharatpur Anchlik GB 2) Shekhawati GB	Rajasthan Gramin Bank	PNB	S.O. 76 (E) F.No. 1 (26) /2005 - RRB Dated - 24/01/2006	Alwar	Alwar, Bharatpur, Dholpur, Sikar and Jhunjhunu
2	1) Jaipur Nagaur Anchlik GB 2) Thar Anchlik GB	Jaipur Thar Gramin Bank	UCO	S.O.130 (E) F.No. 1 (26) /2005 - RRB Dated - 27/01/2006	Jaipur	Jaipur, Nagaur, Dausa, Jodhpur, Jaisalmer, Barmer
3	1) Marudhar Kshetriya GB 2) Arawali Kshetriya GB 3) Bundi Chittorgarh Kshetriya GB 4) Bhilwara Ajmer Kshetriya GB 5) Dungarpur Banswara Kshetriya GB	Baroda Rajasthan Gramin Bank	BOB	S.O. 130 (E) F.No. 1 (26) /2005 -RRB Dated - 03/02/2006	Ajmer	Churu, Sawai Madhopur, Tonk, Karuli, Bundi, Chittorgarh, Ajmer, Bhilwara, Dungarpur, Banswara and Pratapgarh
4	1) Marwar GB 2) Bikaner Kshetriya GB 3) Sri Ganganagar Kshetriya GB	Marwar Ganganagar Bikaner Gramin Bank	SBBJ	S.O. 877 (E) F.No. 1 (26) /2005 -RRB Dated - 12/06/2006	Pali	Pali, Sirohi, Jalore, Bikaner, Sriganganagar, Hanumangarh
5	1) Mewar Anchlik Gramin Bank	Standalone RRB	ICICI	-	Udaipur	Udaipur , Rajsamand
6	1) Hadoti Kshetriya Gramin Bank	Standalone RRB	CBI	-	Kota	Kota, Baran, Jhalawar

Source : Various Statistical Reports on RRBs, NABARD, Mumbai.

**Table 3.7: Amalgamation of RRBs in Rajasthan (Phase II)**

S.N.	RRBs (After Phase-I)	Names of New RRBs (Phase II)	Sponsor Bank of New RRBs	Notification No. and Date	Head Office	Districts* Covered by New RRBs
1	1) Baroda Rajasthan Gramin Bank (BOB)	Baroda Rajasthan Kshetriya Gramin Bank (BRKGB)	Bank of Baroda	S.O. 1 (E) -F.No. 07/09/2011 -RRB (Raj.), dated- 01/01/2013	Ajmer	Bikaner, Churu, Jhunjhunu, Sikar, Alwar, Dausa, Bharatpur, Dholpur, Karauli, Tonk, Sawai Madhopur, Ajmer, Bundi, Bhilwara, Kota, Baran, Jhalawar, Pratapgarh, Dungarpur, Banswara, Chittorgarh
	2) Hadoti Kshetriya Gramin Bank (CBI)					
	3) Rajasthan Gramin Bank (PNB)					
2	1) Jaipur Thar Gramin Bank (UCO)	Marudhara Gramin Bank (MGB)	SBBJ	S.O. 457 (E) - F.No. 07/09/2011- RRB (Raj.), dated- 25/02/2013		
	2) Marwar Ganganagar Bikaner Gramin Bank (SBBJ)					
3	1) Marudhara Gramin Bank (SBBJ)	Rajasthan Marudhara Gramin Bank RMGB	SBBJ	S.O. 998 (E) - F.No. 07/09/2011- RRB (Raj.), dated 01/04/2014	Jodhpur	Jalore, Pali, Sirohi, Jodhpur, Jaipur, Nagaur, Dausa, Jaisalmer, Barmer, Bikaner, Sri Ganaganagar, Hanumangarh, Udaipur, Rajsamand and Pratapgarh,.
	2) Mewar Anchlik Gramin Bank (ICICI)					

Source : Various Statistical Reports on RRBs, NABARD, Mumbai.

\* Bikaner, Pratapgarh and Dausa are the districts where both the new RRBs are having their branches.

At the end of June 2006, only 6 RRBs (four amalgamated RRBs and two standalone RRBs) were working in Rajasthan as 12 out of 14 old RRBs had been amalgamated to form 4 new RRBs. The position of RRBs after this consolidation can be seen in Table-3.6.

It is clear from the Table 3.6 that after amalgamation, RRBs have become bigger in size with a larger area of operation as number of districts covered by each new RRB have increased significantly. This has enabled the RRBs to function in a competitive environment more effectively by taking advantages of the economies of scale and reduction in transaction cost. The process of bringing down the number of RRBs has also made it more convenient for the sponsor banks to manage the affairs of RRBs.<sup>16</sup>

Phase-II of the process of amalgamation of RRBs was started in India in October 2012. In this phase, RRBs were amalgamated across sponsor banks within a state to have just one RRB in medium sized states and two or three RRBs in large states. In Rajasthan, it began on 1<sup>st</sup> January 2013 when three RRBs, Baroda Rajasthan Gramin Bank (sponsored by Bank of Baroda), Hadoti Kshetriya Gramin Bank (sponsored by Central Bank of India), and Rajasthan Gramin Bank (sponsored by Punjab National Bank) were amalgamated and a new RRB was formed which was named Baroda Rajasthan Kshetriya Gramin Bank (sponsored by Bank of Baroda). Further, Marudhara Gramin Bank came into existence on 25<sup>th</sup> February 2013 by amalgamating Jaipur Thar Gramin Bank (JTGB) and Marwar Ganganagar Bikaner Gramin Bank (MGBGB). Marudhara Gramin Bank was being sponsored by State Bank of Bikaner and Jaipur. But on 1<sup>st</sup> April 2014, Marudhara Gramin Bank and Mewar Anchlik Gramin Bank were again amalgamated to form Rajasthan Marudhara Gramin Bank and this new entity is being sponsored by State Bank of Bikaner and Jaipur. At present, only two RRBs are working in Rajasthan; one is Rajasthan Marudhara Gramin Bank with its head office in Jodhpur and another is Baroda Rajasthan Kshetriya Gramin Bank with its head office in Ajmer. RRBs in Rajasthan (3 RRBs as on 31<sup>st</sup> March 2014) are covering 36 districts of the state having 1236 branches as at the end of March 2014. The position of RRBs in Rajasthan after phase-II of consolidation is presented in Table 3.7.

### **3.4 Overall Growth and Performance of Regional Rural Banks in Rajasthan**

Since the inception of RRBs in Rajasthan in 1975, significant changes have taken place in the banking scenario of the state particularly in rural areas. The scale and scope of RRBs' operations have undergone substantial changes as the social, economic and political environment in rural areas have also been changing continuously. Along with the branch expansion, the RRBs have adopted new approaches in banking operations in tune with the banking sector reforms initiated in the early nineties and process of consolidation, began in September 2005.

Amalgamation of RRBs has been the turning point in the history of RRBs as it has changed the complete structure of these banks. An attempt has been made in this section to assess the performance of RRBs in Rajasthan on the basis of their basic operations during the period of consolidation.

#### **3.4.1 Structural Growth and Progress**

Table 3.8 presents the data on the trend and growth of the structure of RRBs in Rajasthan during the period of their restructuring. Upto March 2005, a total of 14 RRBs were operating in the state but this number reduced to 8 in 2006 and further reduced to 6 RRBs in March 2007. After second phase of consolidation, there are only 2 RRBs working in the state of Rajasthan (though they were 3 as on 31<sup>st</sup> March 2014). These RRBs are covering all 33 districts of the state. In the given table, number of districts is 36 as in few districts, branches of more than one RRB is working. At present, Pratapgarh, Dausa and Bikaner are the districts where both BRKGB and RMGB are having their branches. The number of branches of RRBs decreased during few years till 2005 as some of the unviable branches had been merged. Though, this process of merger of unviable and inefficient branches continued but a total number of branches have shown an increasing trend since 2005.

As on 31<sup>st</sup> March 2014, 3 RRBs were working in Rajasthan having a network of 1236 branches comprising 959 rural branches, 213 branches in semi urban areas and 64 branches in urban areas. The rural branches account for 78 percent of the total branch network of the state.

**Table 3.8: Structural Growth and Progress of RRBs in Rajasthan**

Year	No. of RRBs	No.* of Districts Covered	No. of Branches	No. of Staff
2000-01	14	34	1023	--
2001-02	14	34	1018	4378
2002-03	14	34	1014	4356
2003-04	14	34	1016	4341
2004-05	14	34	1013	4319
2005-06	8	34	1014	4291
2006-07	6	36	1015	4263
2007-08	6	36	1022	4222
2008-09	6	36	1040	4195
2009-10	6	36	1052	4293
2010-11	6	36	1068	4363
2011-12	6	36	1101	4726
2012-13	3	36	1157	4758
2013-14	3	36	1236	5229

Source : Various Statistical Reports on RRBs, NABARD, Mumbai.

\*Total no. of Districts in Rajasthan is 33 as on 31<sup>st</sup> March 2014, no. of Districts covered is exceeding as at some places more than one RRBs are operating their branches.

Total number of staff was 4378 in March 2002 but then it reduced continuously till March 2009. The reason behind this decreasing trend can be explained as the merger of unviable branches of RRBs and increased computerization in RRB branches.

### 3.4.2 Resource Mobilisation

The financial resources of the RRBs are comprised of owned funds, deposits and borrowings. The resource components of RRBs in Rajasthan, their growth rates and percentage shares in the total resources for the period from 2000-2001 to 2013-2014 are presented in Table 3.9. It is evident from the table that total resources of RRBs in the state of Rajasthan have increased from Rs. 276704.94 lakhs in 2000-01 to Rs. 1837498.25 lakhs in 2013-14, registering an average annual growth rate of 15.77 percent. Average growth rate in post-amalgamation period is 17.15 percent which is higher than the pre-amalgamation period average growth rate of 12.67 percent. The increase in the total resources of Regional Rural Banks is due to the

continuous increase in the amount of all individual components of total resources, particularly the total deposits and owned funds. Owned funds have been increasing due to continuous recapitalization support from Govt. of India, State Government and concerned sponsor banks.

### **3.4.2 (A) Owned Funds**

Owned funds are comprised of share capital, share capital deposits and reserve funds. Owned funds of RRBs in Rajasthan have increased both in absolute terms and in terms of percentage shares. They were Rs. 18590.79 lakhs in 2000-01 and increased to Rs 114759.31 lakhs in 2013-14. The average annual growth rate of the owned funds of RRBs in Rajasthan is 15.46 percent. The average annual growth rate in post-amalgamation period remained 16.76 percent which is higher than the annual growth rate of 12.53 percent in pre-amalgamation period.

The increase in the owned funds was due to the recapitalization measures adopted by the Government of India with a view to strengthen the financial position of the RRBs and to enable them satisfy the minimum capital requirements (CRAR). In 2010, as per the Chakrabarty Committee recommendations, to recapitalize 40 out of 82 RRBs for strengthening their CRAR to the level of 9 percent, the Government of India along with other shareholders decided to infuse the funds to the extent of Rs. 2200 crore. Shareholder wise proportion (Government of India/Sponsor Bank/State Government) was 50:35:15 respectively. Up to 31<sup>st</sup> March 2014, an amount of Rs 2173.43 crore has been released to 38 RRBs in 20 states. In Rajasthan five out of six RRBs (In 2010, there were 6 RRBs in Rajasthan) were selected and their recapitalisation is complete.

Table 3.9 shows that the share of own funds in the total resources of the RRBs in the state was 6.72 percent in 2000-01, but it reduced thereafter and remained 6.63 percent in 2004-05. In post-amalgamation period, this share decreased continuously till 2010-11 and fell to 4.72 percent but from 2011-12 it began to rise and stood at 6.25 percent in 2013-14. The reason behind the fluctuating share of owned funds can be explained as the substantial increase in the share of borrowings in total resources during the amalgamation period.

**Table 3.9: Resource Mobilisation by RRBs in Rajasthan**

(Rs. in lakhs)

Year	Owned Funds		Deposits		Borrowings		Total Resources	
	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %
2000-01	18590.79		234896.17		23217.98		276704.94	
	(6.72)		(84.89)		(8.39)		(100)	
2001-02	19470.47	4.73	273959.67	16.63	28080.29	20.94	321510.43	16.19
	(6.06)		(85.21)		(8.73)		(100)	
2002-03	20928.19	7.49	308941.00	12.77	28167.41	0.31	358036.60	11.36
	(5.85)		(86.29)		(7.87)		(100)	
2003-04	23809.00	13.77	352874.00	14.22	26763.97	-4.98	403446.97	12.68
	(5.90)		(87.46)		(6.63)		(100)	
2004-05	29552.00	24.12	384277.45	8.90	31799.87	18.82	445629.32	10.46
	(6.63)		(86.23)		(7.14)		(100)	
GR (Pre-amalg. period)		12.53		13.13		8.77		12.67
2005-06	30281.57	2.47	438276.08	14.05	45100.52	41.83	513658.17	15.27
	(5.90)		(85.32)		(8.78)		(100)	
2006-07	33590.23	10.93	512130.09	16.85	51225.40	13.58	596945.72	16.21
	(5.63)		(85.79)		(8.58)		(100)	
2007-08	38127.86	13.51	604319.90	18.00	69056.39	34.81	711504.15	19.19
	(5.36)		(84.94)		(9.71)		(100)	
2008-09	46962.86	23.17	770416.17	27.48	99122.07	43.54	916501.10	28.81
	(5.12)		(84.06)		(10.82)		(100)	
2009-10	52503.02	11.80	863371.96	12.07	151587.78	52.93	1067462.76	16.47
	(4.92)		(80.88)		(14.20)		(100)	
2010-11	60529.81	15.29	990849.32	14.77	231249.29	52.55	1282628.42	20.16
	(4.72)		(77.25)		(18.03)		(100)	
2011-12	70770.01	16.92	1141891.29	15.24	246200.38	6.47	1458861.68	13.74
	(4.85)		(78.27)		(16.88)		(100)	
2012-13	102370.67	44.65	1246183.58	9.13	329501.08	33.83	1678055.33	15.02
	(6.10)		(74.26)		(19.64)		(100)	
2013-14	114759.31	12.10	1377603.43	10.55	345135.51	4.74	1837498.25	9.50
	(6.25)		(74.97)		(18.78)		(100)	
GR (Post-amalg. period)		16.76		15.35		31.59		17.15
GR (Total Period)		15.46		14.67		24.57		15.77

GR- Average annual simple growth rate in percent

Note : Figure in parentheses represent percentage of total resources of RRBs in Rajasthan

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

### **3.4.2 (B) Deposits**

A vital activity for banking institution is the mobilization of deposits which determines its working and viability to a great extent and also it is the most important source for the banks to enlarge their resources. Deposits mobilized by the RRBs play a key role in promoting savings and banking habits among the rural people. The resources of any bank largely depend upon the quantum of deposits. But RRBs have to strive very hard for the mobilization of deposits. They have to make special efforts for this purpose. It is evident from Table 3.9 that the deposits of the RRBs in Rajasthan have shown consistently upward trend and have increased from Rs. 234896.17 lakhs in March 2001 to Rs. 1377603.43 lakhs in March 2014 at an average growth rate of nearly 14.67 percent per annum. The average annual growth rate of deposits in post-amalgamation period is 15.35 percent which is higher than the pre-amalgamation period growth rate of deposits that was 13.13 percent. The percentage share of deposits to the total resource of RRBs in Rajasthan reduced during the amalgamation period as it was 86.23 percent in 2004-05 and has declined to 74.97 percent in 2013-14. It can also be noted that share of both owned funds and deposits in the total resources of RRBs reduced during the amalgamation period though in absolute terms they have increased significantly. These two components together constitute 81.22 percent share of total resources of RRBs in Rajasthan in 2013-14 as against 91.61 percent in 2000-01.

### **3.4.2 (C) Borrowings**

Borrowings and refinance are another important sources of finance for the Regional Rural Banks in view of their small capital base and reserve funds. The borrowings and refinance are obtained by RRBs from the financial institutions like RBI, NABARD, IDBI and concerned sponsor banks. Table 3.9 shows that borrowings of RRBs in Rajasthan have also registered a continuous increase from Rs. 23217.98 lakhs in March 2001 to Rs. 345135.51 lakhs in March 2014 at an annual growth rate of around 24.57 percent. Average annual growth rate of borrowings was 31.59 percent in post-amalgamation period which is about 3.5 times of the annual growth rate of 8.77 percent in pre-amalgamation period because of the negative growth in 2003-04.

Percentage share of borrowings in the total resources of RRBs in Rajasthan decreased in pre-amalgamation period from 8.39 percent in 2000-01 to 7.14 percent in 2004-05 but in post-amalgamation period it increased significantly and reached to 18.78 percent in 2013-14. The percentage share of different components of resources in the total resources of Regional Rural Banks in Rajasthan has been presented graphically in Figure 3.1. This figure shows that the percentage share of both owned funds and deposits have shown an overall decreasing trend against the consistent upward trend of the borrowings during the period of study.

#### **3.4.2 (D) Category-wise Deposits**

Category-wise deposits in terms of their absolute amounts, their percentage share in total deposits and the average annual growth rates of each type of deposits of RRBs in Rajasthan for the study period have been displayed in Table 3.10. Table shows that in 2000-01, amount of total deposits of RRBs in the state of Rajasthan was Rs. 234896.17 lakhs, of which the amount of saving deposits was Rs. 71462.96 lakhs, current deposits was Rs. 11765.33 lakhs, and term deposits was Rs. 151667.88 lakhs. These amounts increased to Rs. 1377603.43 lakhs in 2013-14 for total deposits and Rs. 704994.92 lakhs, Rs. 32951.36 lakhs and Rs. 639657.15 lakhs for three respective types of deposits. The average annual growth rates of saving deposits remained highest both in pre and post amalgamation periods and also during the entire period of study (ie. 25.76%, 16.98% and 19.68% respectively). The average annual growth rate of term deposits was only 5.97 percent in pre-amalgamation period due to the negative growth rates in 2003-04 and 2004-05. But they increased by 14.75 percent annually during the post-amalgamation period registering an average annual growth rate of 12.04 percent during the entire period. As far as current deposits are concerned they increased at annual rate of 15.23 percent during pre-amalgamation period but during post-amalgamation period they increased at only 7.27 percent annually. Their average annual growth rate (9.72 percent) remained lower than that of the term deposits (12.04 percent) during the total period of study.

**Table 3.10: Category-wise Deposits of RRBs in Rajasthan**

(Rs. in lakhs)

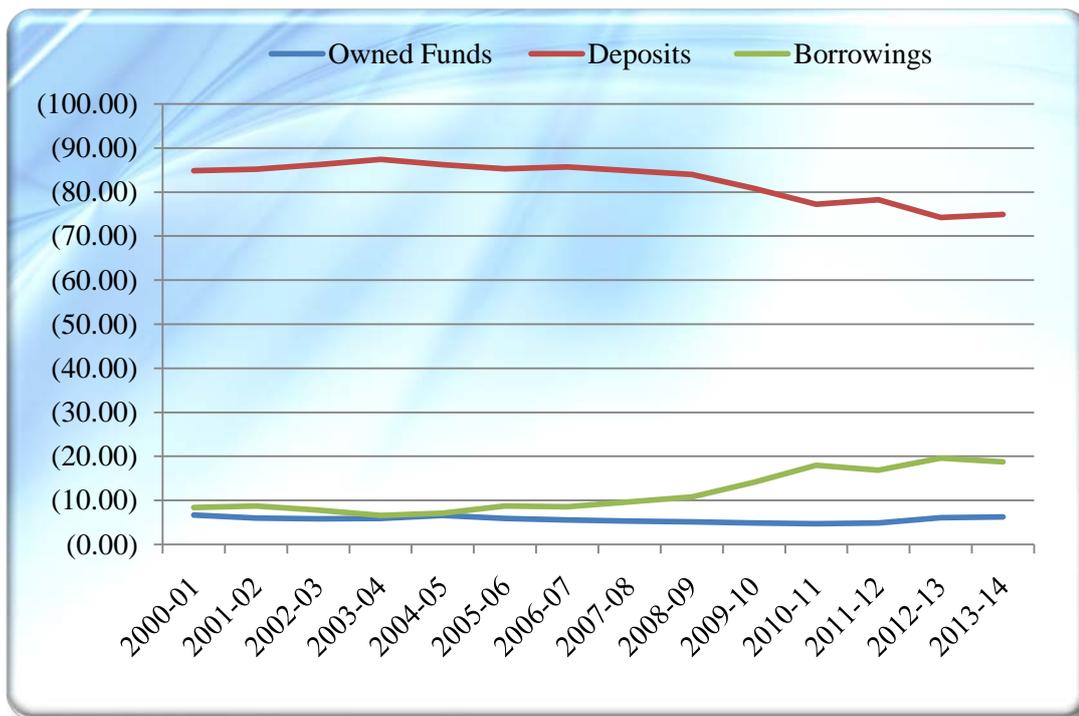
Year	Saving Bank Deposits		Current Deposits		Term Deposits		Total Deposit	
	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %
2000-01	71462.96		11765.33		151667.88		234896.17	
	(30.42)		(5.01)		(64.57)		(100)	
2001-02	86862.24	21.55	14700.83	24.95	172396.6	13.67	273959.67	16.63
	(31.71)		(5.37)		(62.93)		(100)	
2002-03	97618.72	12.38	14665.88	-0.24	196655.93	14.07	308940.53	12.77
	(31.60)		(4.75)		(63.65)		(100)	
2003-04	144802.00	48.33	18683.00	27.39	189391	-3.69	352876.00	14.22
	(41.03)		(5.29)		(53.67)		(100)	
2004-05	174889.00	20.78	20333.00	8.83	189055	-0.18	384277.00	8.90
	(45.51)		(5.29)		(49.20)		(100)	
GR (Pre-amalg. period)		25.76		15.23		5.97		13.13
2005-06	219596.48	25.56	22307.38	9.71	196372.22	3.87	438276.08	14.05
	(50.10)		(5.09)		(44.81)		(100)	
2006-07	268634.55	22.33	27218.73	22.02	216276.81	10.14	512130.09	16.85
	(52.45)		(5.31)		(42.23)		(100)	
2007-08	304539.67	13.37	28394.82	4.32	271385.41	25.48	604319.90	18.00
	(50.39)		(4.70)		(44.91)		(100)	
2008-09	388642.36	27.62	36176.76	27.41	345597.05	27.35	770416.17	27.48
	(50.45)		(4.70)		(44.86)		(100)	
2009-10	422083.48	8.60	44427.60	22.81	396860.88	14.83	863371.96	12.07
	(48.89)		(5.15)		(45.97)		(100)	
2010-11	520799.74	23.39	41021.38	-7.67	429028.20	8.11	990849.32	14.77
	(52.56)		(4.14)		(43.30)		(100)	
2011-12	592181.07	13.71	41446.28	1.04	508263.94	18.47	1141891.29	15.24
	(51.86)		(3.63)		(44.51)		(100)	
2012-13	630642.85	6.49	27709.17	-33.14	587831.56	15.65	1246183.58	9.13
	(50.61)		(2.22)		(47.17)		(100)	
2013-14	704994.92	11.79	32951.36	18.92	639657.15	8.82	1377603.43	10.55
	(51.18)		(2.39)		(46.43)		(100)	
GR (Post-amalg. period)		16.98		7.27		14.75		15.35
GR (Total Period)		19.68		9.72		12.04		14.67

GR- Average annual simple growth rate in percent

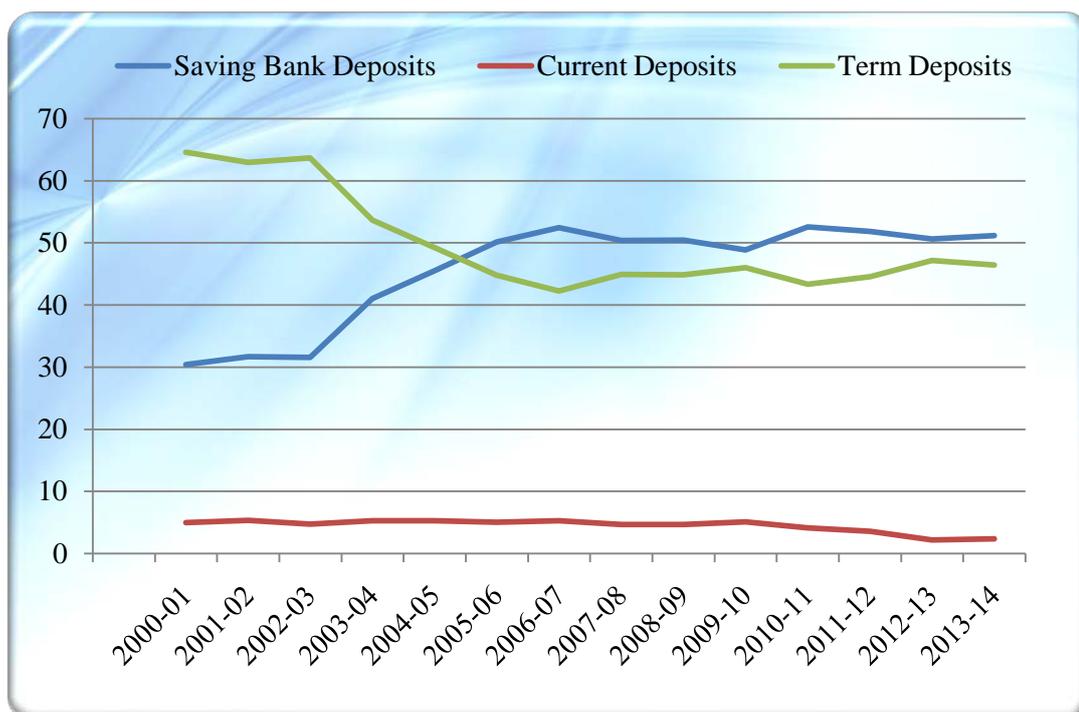
Note : Figure in parentheses represent percentage of total deposits of RRBs in Rajasthan

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in



**Figure 3.1 Percentage Share of Different Components of Resources in Total Resources of RRBs**



**Figure 3.2 Percentage Share of Three Types of Deposits in Total Deposits of RRBs in Rajasthan**

While analyzing the percentage share of each type of deposits to total deposits we find that in the pre-amalgamation period, the share of term deposits was the highest though it had been reducing continuously during that period (from 64.57 percent in 2000-01 to 49.20 percent in 2004-05). Saving banks deposits stood second during this period with 30.42 percentage share in 2000-01 which increased to 45.51 percent in 2004-05. But their position reversed during post-amalgamation period as saving deposits secured more than 50 percent share of total deposits as compared to 46.43 percent share of term deposits in 2013-14. Share of Current deposits was 5.29 percent in 2004-05 which reduced to 2.39 percent in 2013-14. Thus, the major portion of the deposits mobilized by Regional Rural Banks in Rajasthan during the post-amalgamation period is in the form of saving deposits. The percentage shares of different types of deposits are presented graphically in Figure 3.2. Figure reveals that the shares of term deposits and current deposits are showing an overall declining trend but the share of saving deposits has registered an upward trend during the period of study.

### **3.4.2 (E) Sources of Borrowings**

Table 3.11 presents the data on borrowing of Regional Rural Banks in Rajasthan from different sources like NABARD, sponsor banks and other sources with their average annual growth rates and their percentage share in the total resources of RRBs for the period of study (from 2000-01 to 2013-14). It is evident from the table that borrowings of RRBs from NABARD have increased steadily in absolute terms throughout the period of study except in the year 2003-04. However, the growth rate did not follow any specific trend as it was negative (-2.62%) in 2003-04 and highest (85.68 percent) in 2009-10. The table further shows that the borrowings from NABARD increased significantly at higher rate of 33.15 percent in post-amalgamation period than that of 6.25 percent in pre-amalgamation period. The average annual growth rate of the borrowings of RRBs from NABARD for the entire period of study is 24.88 percent.

The borrowings from sponsor banks are not showing any fixed trend during the entire period of study. They decreased in many years, viz., 2002-03, 2003-04, 2012-13 and 2013-14. In some years they increased at a very high rate (i.e. 355.46

**Table 3.11: Borrowings of RRBs in Rajasthan**

(Rs. in lakhs)

Year	NABARD		Sponsor Banks		Others		Total Borrowings	
	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %
2000-01	22067.98		1150.00		0.00		23217.98	
	(95.05)		(4.95)		(0.00)		(100)	
2001-02	26459.43	19.90	1620.86	40.94	0.00	0.00	28080.29	20.94
	(94.23)		(5.77)		(0.00)		(100)	
2002-03	26573.50	0.43	1593.91	-1.66	0.00	0.00	28167.41	0.31
	(94.34)		(5.66)		(0.00)		(100)	
2003-04	25878.21	-2.62	885.76	-44.43	0.00	0.00	26763.97	-4.98
	(96.69)		(3.31)		(0.00)		(100)	
2004-05	27765.61	7.29	4034.26	355.46	0.00	0.00	31799.87	18.82
	(87.31)		(12.69)		(0.00)		(100)	
GR (Pre-amalg. period)		6.25		87.58		0.00		8.77
2005-06	38572.45	38.92	6528.07	61.82	0.00	0.00	45100.52	41.83
	(85.53)		(14.47)		(0.00)		(100)	
2006-07	41313.52	7.11	8818.00	35.08	1093.88		51225.40	13.58
	(80.65)		(17.21)		(2.14)		(100)	
2007-08	45976.03	11.29	20444.76	131.85	2635.60	140.94	69056.39	34.81
	(66.58)		(29.61)		(3.82)		(100)	
2008-09	58977.34	28.28	37067.73	81.31	3077.00	16.75	99122.07	43.54
	(59.50)		(37.40)		(3.10)		(100)	
2009-10	109509.24	85.68	42078.54	13.52	0.00	0.00	151587.78	52.93
	(72.24)		(27.76)		(0.00)		(100)	
2010-11	148255.55	35.38	56952.94	35.35	26040.80	0.00	231249.29	52.55
	(64.11)		(24.63)		(11.26)		(100)	
2011-12	187274.52	26.32	58925.86	3.46	0.00	0.00	246200.38	6.47
	(76.07)		(23.93)		(0.00)		(100)	
2012-13	279597.26	49.30	49597.64	-15.83	306.18	0.00	329501.08	33.83
	(84.85)		(15.05)		(0.09)		(100)	
2013-14	324618.17	16.10	20517.34	-58.63	0.00		345135.51	4.74
	(94.06)		(5.94)		(0.00)		(100)	
GR (Post-amalg. period)		33.15		31.99		17.52		31.59
GR (Total Period)		24.88		49.09		12.13		24.57

GR- Average annual simple growth rate in percent

Note : Figure in parentheses represent percentage to total borrowings of RRBs in Rajasthan

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

percent in 2004-05 and 131.85 percent in 2007-08). Average annual growth rate of borrowings of RBBs from sponsor banks remained 49.09 percent during the total period of study. When we analyse the overall growth rate of borrowings from all sources we find that they have increased at a higher rate (31.59 percent) in the post-amalgamation period than in pre-amalgamation period (8.77 percent).

Further, the table indicates that the borrowings from NABARD are having a giants share in the total borrowings of RRBs in Rajasthan. In 2000-01 it was 95.05 percent but decreased to 87.31 percent in 2004-05, during post-amalgamation period it fluctuated till 2010-11 but increased continuously thereafter, and reached to 94.06 percent again. Share of borrowings from sponsor banks is 5.94 percent in 2013-14, though it was 37.40 percent in 2008-09. Borrowings from other sources remained nil throughout the pre-amalgamation period but in post-amalgamation period, in few years, they were having their share at 2 to 3 percent and 11.26 percent in 2010-11. In 2013-14 they are again nil.

### **3.4.3 Credit Deployment**

The position of outstanding loans and advances of RRBs in Rajasthan with their classification between priority and non-priority sectors for the period of study has been depicted in Table 3.12. It becomes clear from the given table that total loans and advances of RRBs have increased steadily in absolute terms from Rs. 96000.00 lakhs in 2000-01 to Rs. 1035343.24 lakhs in 2013-14 at an average annual growth rate of 20.18 percent. They increased at a comparatively faster rate in pre-amalgamation period than in post-amalgamation period.

#### **3.4.3 (A) Priority and Non- Priority Sector Advances**

The Table, further, shows that priority sector and non-priority sector advances of RRBs have increased at an average annual growth rate of 20.67 percent and 17.23 percent respectively during the post-amalgamation period against the growth rates of 26.15 percent and 15.45. percent respectively in the pre-amalgamation period. Thus, priority sector advances have shown decreasing trend in terms of growth rates during post-amalgamation period.

**Table 3.12: Loans and Advances (o/s) in RRBs in Rajasthan**

(Rs. in lakhs)

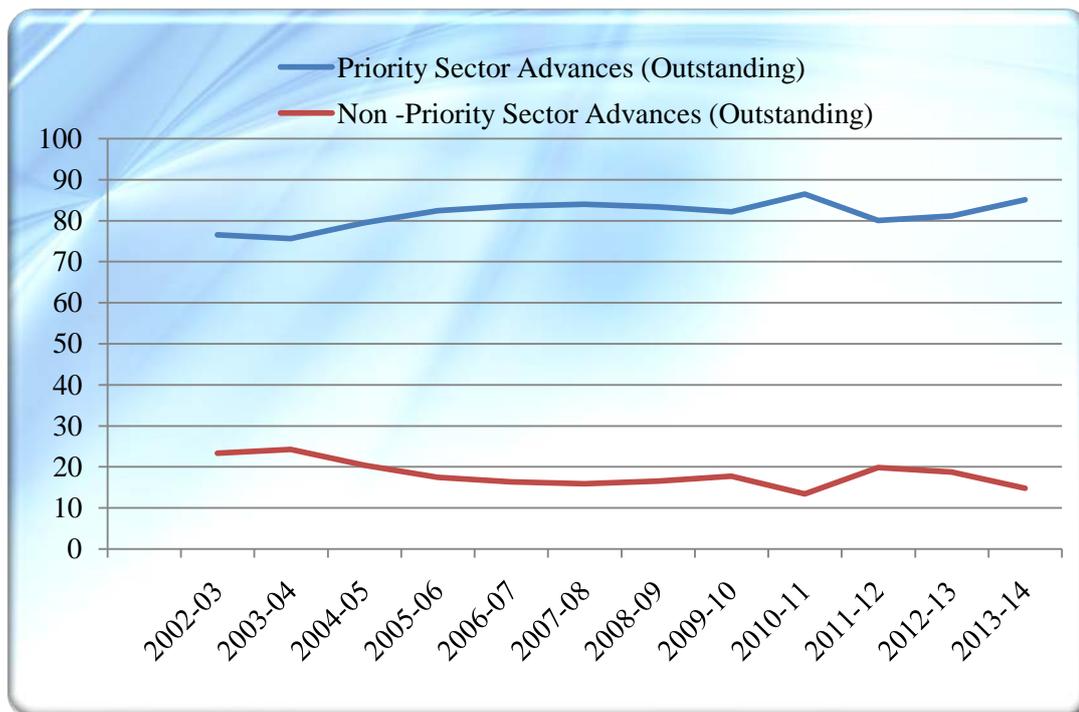
Year	Priority Sector Advances (Outstanding)		Non -Priority Sector Advances (Outstanding)		Total Loans and Advances (Outstanding)	
	Amount	Growth %	Amount	Growth %	Amount	Growth %
2000-01	69846.00	--	26762.93	--	96608.93	--
	(72.30)		(27.70)		(100)	
2001-02	NA	--	NA	--	113881.00	17.88
	--		--		(100)	
2002-03	105463.00	--	32162.00	--	137625.00	20.85
	(76.63)		(23.37)		(100)	
2003-04	120218.00	13.99	38567.29	19.92	158785.29	15.38
	(75.71)		(24.29)		(100)	
2004-05	166278.00	38.31	42811.00	11.00	209089.00	31.68
	(79.52)		(20.48)		(100)	
GR (Pre-amalg. period)		26.15		15.46		21.45
2005-06	212855.91	28.01	45170.56	5.51	258026.47	23.41
	(82.49)		(17.51)		100.00	
2006-07	274726.64	29.07	53943.43	19.42	328670.07	27.38
	(83.59)		(16.41)		100.00	
2007-08	348761.26	26.95	65951.17	22.26	414712.43	26.18
	(84.10)		(15.90)		100.00	
2008-09	378459.44	8.52	75337.32	14.23	453796.76	9.42
	(83.40)		(16.60)		100.00	
2009-10	448637.61	18.54	96816.20	28.51	545453.81	20.20
	(82.25)		(17.75)		100.00	
2010-11	595240.04	32.68	92516.07	-4.44	687756.11	26.09
	(86.55)		(13.45)		100.00	
2011-12	641179.05	7.72	159488.67	72.39	800667.72	16.42
	(80.08)		(19.92)		100.00	
2012-13	752730.58	17.40	173848.66	9.00	926579.24	15.73
	(81.24)		(18.76)		100.00	
2013-14	881978.23	17.17	153365.01	-11.78	1035343.24	11.74
	(85.19)		(14.81)		100.00	
GR (Post- amalg. period)		20.67		17.23		19.62
GR (Total Period)		21.67		16.91		20.18

GR- Average annual simple growth rate in percent

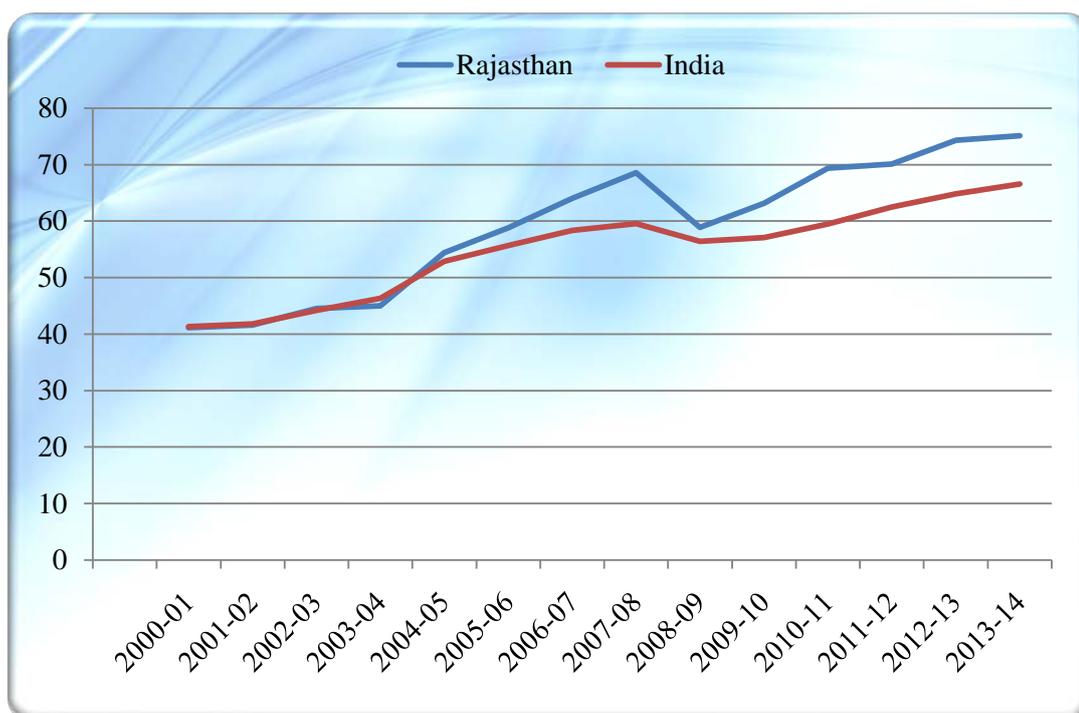
Note: Figures in parentheses represent percentage to total loans and advances (o/s) of RRBs in Rajasthan

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in



**Figure 3.3: Percentage Share of Priority and Non –Priority Sector Advances in Total Outstanding Advances of RRBs in Rajasthan**



**Figure 3.4: Credit-Deposit Ratio of RRBs in Rajasthan and India**

In pre-amalgamation period share of priority sector advances to total advances of RRBs was 72.30 percent in 2000-01 which increased to 79.52 percent in 2004-05. In post-amalgamation period also this share increased and reached to 85.19 percent in 2013-14. Share of non-priority sector advances has shown an overall decreasing trend. It was 27.70 percent in 2000-01 and fell to mere 14.81 percent in 2013-14. Thus, RRBs in Rajasthan are lending mainly to the priority sectors and this way they are working successfully to fulfill the objectives set for them. The graphical presentation of the share of priority and non-priority sector advances to the total advances of RRBs in the state of Rajasthan is presented in Figure 3.3 which depicts their upward and downward trends respectively during the period of study.

### **3.4.3 (B) Purpose-wise Outstanding Advances of RRBs**

Table 3.13 presents the position of agricultural and non-agricultural advances of RRBs in Rajasthan along with their respective growth rates and their percentage share to the total advances of RRBs during the post-amalgamation period. Table reveals that the amount of agricultural advances of RRBs increased from Rs. 171484 lakhs in 2005-06 to Rs. 810596.57 lakhs in 2013-14 at an average annual rate of 21.75 percent. On the other hand non-agricultural advances increased from Rs. 86542.47 lakhs in 2005-06 to Rs. 224746.67 lakhs in 2013-14 at an average annual growth rate of 13.52 percent which includes the negative growth of -14.87 percent during 2013-14. Thus, agricultural advances of RRBs have increased at a faster rate than non-agricultural advances during the period of amalgamation. Share of agricultural advances to total advances has also increased significantly from 66.46 percent in 2005-06 to 78.29 percent in 2013-14. Thus, RRBs in Rajasthan are actively participating in deploying their advances to the agricultural sector. RRBs provide non-agricultural advances under four major categories viz. small scale industries and rural artisans, retail trade, self help groups and other miscellaneous purpose under both priority sector and non-priority sectors categories. All these categories have shown an overall increasing trend during amalgamation period.

**Table 3.13: Purpose-wise Break up of Loans and Advances (o/s) in RRBs in Rajasthan (During Post-Amalgamation Period)**

(Rs. in lakhs)

Year	Agricultural Advances		Non- Agricultural Advances										Total Non Agricultural Advances		Total loans and Advances O/S
			SSI and Rural Artisans		Retail Trade		Self help Groups		Other Priority Sector Advances		Non Priority Sector Advances				
	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %	Amount	Growth %	
2005-06	171484		5204.34		17806.05		3171.69		15189.83		45170.56		86542.47		258026.47
	(66.46)		(2.02)		(6.90)		(1.23)		(5.89)		(17.51)		(33.54)		(100.00)
2006-07	228062.78	32.99	6884.88	32.29	16530.87	-7.16	6185.22	95.01	16462.89	8.38	53943.43	19.42	100007.29	15.56	328070.07
	(69.52)		(2.10)		(5.04)		(1.89)		(5.02)		(16.44)		(30.48)		(100.00)
2007-08	292360.91	28.19	8743.83	27.00	18419.57	11.43	5520.40	-10.75	23716.55	44.06	65951.17	22.26	122351.52	22.34	414712.43
	(70.50)		(2.11)		(4.44)		(1.33)		(5.72)		(15.90)		(29.50)		(100.00)
2008-09	317419.29	8.57	8130.13	-7.02	20707.05	12.42	5529.52	0.17	26673.45	12.47	75337.32	14.23	136377.47	11.46	453796.76
	(69.95)		(1.79)		(4.56)		(1.22)		(5.88)		(16.60)		(30.05)		(100.00)
2009-10	382873.15	20.62	9124.74	12.23	14214.31	-31.36	6693.97	21.06	35761.44	34.07	96816.20	28.51	162610.66	19.24	545483.81
	(70.19)		(1.67)		(2.61)		(1.23)		(6.56)		(17.75)		(29.81)		(100.00)
2010-11	508756.58	32.88	9614.72	5.37	22067.85	55.25	8122.60	21.34	46678.67	30.53	92516.07	-4.44	178999.91	10.08	687756.49
	(73.97)		(1.40)		(3.21)		(1.18)		(6.79)		(13.45)		(26.03)		(100.00)
2011-12	558430.40	9.76	9032.12	-6.06	14416.29	-34.67	8512.57	4.80	50787.67	8.80	159488.67	72.39	242237.32	35.33	800667.72
	(69.75)		(1.13)		(1.80)		(1.06)		(6.34)		(19.92)		(30.25)		(100.00)
2012-13	662589.37	18.65	12217.72	35.27	17501.28	21.40	6408.05	-24.72	54014.54	6.35	173848.66	9.00	263990.25	8.98	926579.62
	(71.51)		(1.32)		(1.89)		(0.69)		(5.83)		(18.76)		(28.49)		(100.00)
2013-14	810596.57	22.34	NA	--	NA	--	NA	--	NA	--	153365.01	-11.78	224746.67	-14.87	1035343.24
	(78.29)										(14.81)		(21.71)		(100.00)
GR		21.75		14.16		3.90		15.27		20.67		18.70		13.52	

GR- Average annual simple growth rate in percent Note: Figures in parentheses represent percentage of total loans and advances outstanding of RRBs in Rajasthan

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

### **3.4.3 (C) Loans and Advances (o/s) under Financial Inclusion**

Reserve Bank of India has been undertaking financial inclusion initiatives in a mission mode through a combination of strategies ranging from provision of new products, relaxation of regulatory guidelines and other supportive measures to achieve sustainable and scalable financial inclusion. In November 2005, banks were specifically advised to make available a basic banking 'no-frills' accounts with low or nil balances as well as charges to expand the outreach of such accounts to vast sections of the population. Several banks have since introduced such 'no frills' accounts with or without value-added features. Besides these no frills accounts, finances are also provided by RRBs through General Credit Cards (GCCs), Kissan Credit Cards (KCCs), Swarna Jyoti Credit Cards (SCCs), and Artisan's Cards (ACs) in meeting the objective of Financial Inclusion.<sup>17</sup>

In Rajasthan also, RRBs are providing advances under all these schemes, viz., 'of deposits no frill A/c's, GCCs, SCCs, KCCs and Artisan's Cards. Table 3.14 reveals the position of outstanding advances of RRBs in Rajasthan under financial inclusion. Table shows that total advances of RRBs in Rajasthan under the scheme 'of deposits no frill A/c' and 'GCC' have increased significantly during the period of amalgamation. Total advances under 'of deposits no frill A/c' jumped from Rs.713.10 lakhs in 2006-07 to Rs. 50402.01 lakhs in 2013-14 showing an increase of 70 times. Number of accounts has also increased from 55160 to 2102151 during this period. Total advances in GCC scheme have increased from Rs. 1257.96 lakhs in 2006-07 to 4118.07 lakhs in 2013-14 and number of GCC accounts increased from 6078 to 18932 during the period. As far as, SCCs are concerned, both the amount of loans outstanding and number of these accounts has shown a decreasing trend which reflects that the scheme of issuing SCCs by RRBs has not been so attractive among the rural people in the state of Rajasthan. Number of SCCs accounts fell to 4716 from 10678 and total advances under this scheme reduced to Rs. 1588.28 lakh from Rs. 2337.13 lakhs during the period from 2006-07 to 2013-14. Performance under KCCs scheme has been satisfactory as amount of total advances under this scheme increased from Rs. 206856.60 lakhs to Rs. 671402.22 lakhs and number of KCC account increased from 282122 to 501920 during the period from 2007-08 to 2013-14. Thus, the financial inclusion, which is an essential

tool for achieving the objective of inclusive growth, is now well accepted and many efforts have been made by RBI through RRBs to make financial system more comprehensive and effective.

**Table 3.14: Loans and Advances (o/s) to Priority Areas under Financial Inclusion in Rajasthan (During Post-Amalgamation Period)**

(Rs. in lakhs)

Year	of deposits no Firlls A/c		GCC		SCC		KCC		Artisan Card	
	No. of A/c	Amount	No. of A/c	Amount	No. of A/c	Amount	No. of A/c	Amount	No. of A/c	Amount
2005-06	--	--	--	--	--	--	--	--	--	--
2006-07	55160	713.10	6078	1257.96	10678	2337.13			1293	331.19
2007-08	163080	959.17	9153	1653.23	6895	1097.55	282122	206856.60	5143	492.17
2008-09	1031557	5318.46	18067	3566.97	10117	2583.43	337838	236670.13	3667	914.84
2009-10	1215010	6575.44	19886	4568.11	14622	3798.95	359026	277036.00	4598	1200.67
2010-11	1367827	8441.42	20117	4799.51	15890	4699.31	420459	386999.56	5159	1487.04
2011-12	1372103	13257.45	12736	2844.02	10932	3431.67	441216	417608.75	4928	1522.94
2012-13	629271	17348.37	14841	3160.60	8385	2342.73	484772	615595.71	4195	1016.80
2013-14*	2102151	50402.01	18932	4118.07	4716	1588.28	501920	671402.22	2913	784.40

\* Excluding MAGB as data was not available for this year for the bank

Sources: (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

### 3.4.4 Credit Deposit Ratio

Credit Deposit ratio (CD Ratio) is obtained by dividing total loans and advances outstanding by total volume of deposits and multiplying it by hundred. This ratio reflects the extent of utilization of resources by the bank. CD ratios of RRBs in Rajasthan and in India are presented in Table 3.15. In Rajasthan, CD ratio of RRBs was 41.13 percent in 2000-01 and has increased to 75.16 percent in 2013-14 at an average annual growth rate of 5.03 percent. The ratio shows a negative growth rate of (-14.16) percent in 2008-09. As a result average annual growth rate of CD Ratio of RRBs in Rajasthan was greater in pre-amalgamation period than post-amalgamation period. The average CD ratio of all RRBs in India has also increased

at an average annual growth rate of 3.81 percent during the study period and showed better growth in pre-amalgamation period than in post amalgamation period. It also showed a negative growth in 2008-09. In 2013-14, CD

**Table 3.15: Credit Deposit Ratio of RRBs in Rajasthan**

(Figures in percent)

Year	Rajasthan		India	
	CD Ratio (%)	Growth %	CD Ratio (%)	Growth %
2000-01	41.13		41.33	
2001-02	41.57	1.07	41.83	1.21
2002-03	44.57	7.22	44.23	5.74
2003-04	45.00	0.96	46.34	4.77
2004-05	54.41	20.91	52.89	14.13
GR (Pre-amalg. Period)		7.54		6.46
2005-06	58.87	8.20	55.68	5.28
2006-07	64.06	8.82	58.32	4.74
2007-08	68.62	7.12	59.52	2.06
2008-09	58.90	-14.16	56.41	-5.23
2009-10	63.18	7.27	57.10	1.22
2010-11	69.41	9.86	59.51	4.22
2011-12	70.12	1.02	62.46	4.96
2012-13	74.35	6.03	64.82	3.78
2013-14	75.16	1.09	66.56	2.68
GR (Post-amalg. Period)		3.92		2.63
GR (Total Period)		5.03		3.81

GR- Average annual simple growth rate in percent

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

ratio of RRBs in India is 66.56 percent. This can be inferred that RRBs in Rajasthan as well as in India are showing significant improvements in their credit deposit ratios and utilizing their resources properly by lending money to the expected levels. However, it can be noted that in most of the years, CD ratios of RRBs in Rajasthan have been higher than their corresponding ratios at all India level during the period of study, particularly in post-amalgamation period. This trend can be understood by seeing Figure-3.4 also.

### 3.4.5 Recovery Performance

Position of recovery performance of RRBs in Rajasthan as compared to that of in India is presented in Table 3.16. Table reveals that overall recovery performance of RRBs in Rajasthan has improved steadily during both pre and post amalgamation periods. Moreover, their recovery percentages have been higher than all India averages every year. Average growth rate of recovery % of RRBs in Rajasthan has also been higher than the average annual growth rates of recovery % at all India level during pre-amalgamation period but remained lower during post-amalgamation period and during the entire period of study. In Rajasthan, RRBs were having around 90 percent recovery in June, 2012. Comparative position of the recovery performances of RRBs in Rajasthan and India can be seen in Figure 3.5 also.

**Table 3.16: Recovery Performance of RRBs in Rajasthan**

(Figures in percent)

Year	Rajasthan		India	
	% of Recovery to Demand	Growth %	% of Recovery to Demand	Growth %
June - 2000	72.20		68.20	
June - 2001	76.17	5.50	70.59	3.50
June - 2002	77.19	1.34	71.52	1.32
June - 2003	80.05	3.71	73.49	2.75
June - 2004	83.17	3.90	77.67	5.69
GR (Pre-amalg. Period)		3.61		3.32
June - 2005	86.06	3.47	79.85	2.81
June - 2006	86.34	0.33	79.80	-0.06
June - 2007	88.61	2.63	80.84	1.30
June - 2008	84.48	-4.66	77.85	-3.70
June - 2009	84.81	0.39	80.09	2.88
June - 2010	89.06	5.01	81.18	1.36
June - 2011	89.48	0.47	81.60	0.52
June - 2012	90.19	0.79	81.17	-0.53
June - 2013	83.81	-7.07	81.89	0.89
GR (Post-amalg. Period)		0.15		0.61
GR (Total Period)		1.22		1.44

GR- Average annual simple growth rate in percent

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

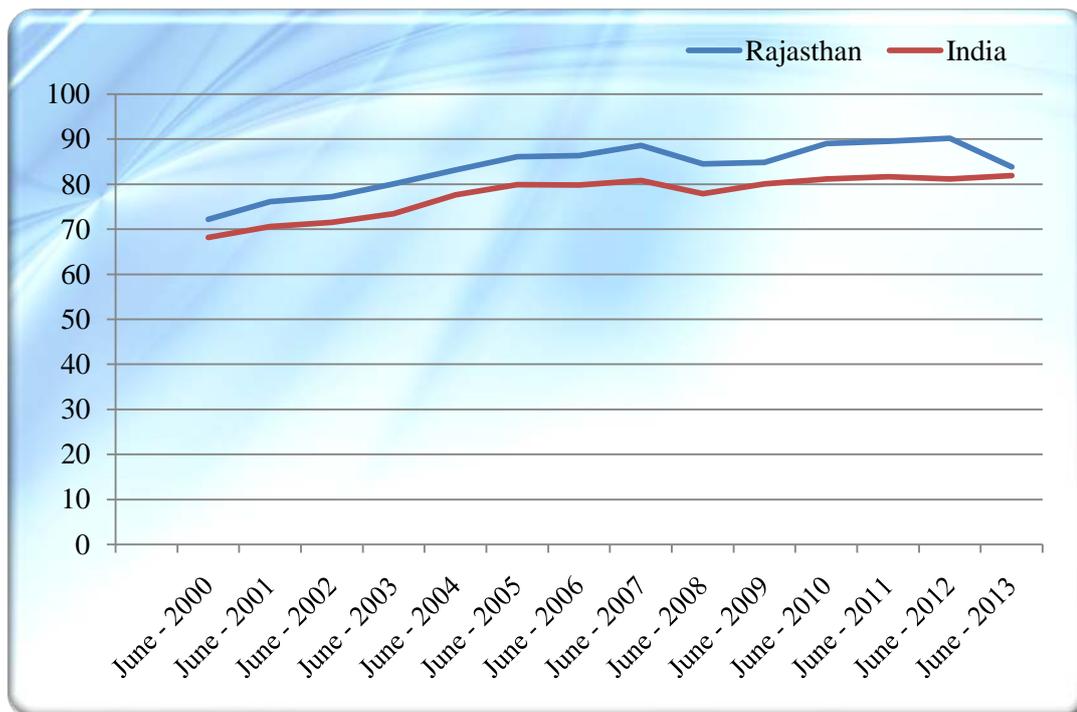


Figure 3.5: Comparative Recovery Position of RRBs in Rajasthan and India

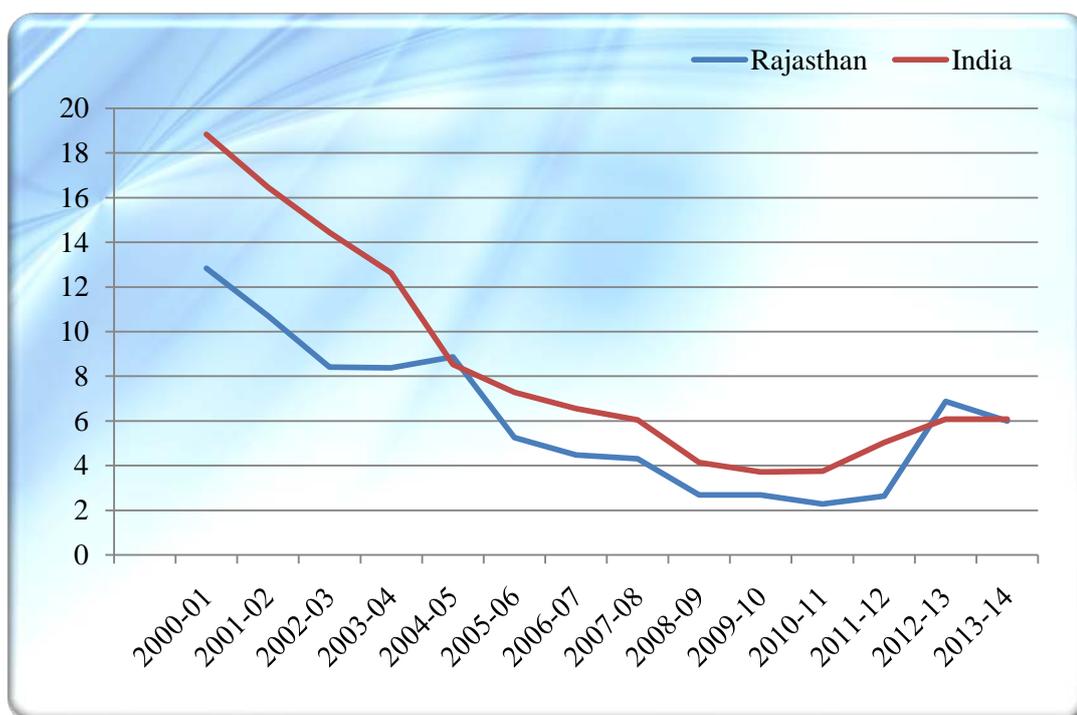


Figure 3.6: Gross NPAs as percentage to Gross Advances of RRBs in Rajasthan and India

### 3.4.6 Non-Performing Assets

The asset classification and provisioning norms as a sequel to the financial sector reforms, require RRBs too to classify their total loans and advances outstanding into four major categories such as;

- i) Standard Assets
- ii) Sub-standard Assets
- iii) Doubtful Assets and
- iv) Loss Assets

**Table 3.17: Asset Classification by RRBs in Rajasthan  
(During Post-Amalgamation Period)**

(Rs. in lakhs)

Year	Standard Assets	Sub-Standard Assets	Doubtful Assets	Loss Assets	Total Assets
2005-06	--	---	---	---	---
2006-07	313400.95	4962.48	9047.59	659.05	328070.07
	(95.53)	(1.51)	(2.76)	(0.20)	(100)
2007-08	396886.13	7002.37	10166.81	657.12	414712.43
	(95.70)	(1.69)	(2.45)	(0.16)	(100)
2008-09	441615.70	4710.53	7005.38	465.15	453796.76
	(97.32)	(1.04)	(1.54)	(0.10)	(100)
2009-10	530822.72	6291.92	7732.87	606.30	545453.81
	(97.32)	(1.15)	(1.42)	(0.11)	(100)
2010-11	672077.00	5885.63	9121.76	671.72	687756.11
	(97.72)	(0.86)	(1.33)	(0.10)	(100)
2011-12	779499.90	10951.44	8868.47	1347.91	800667.72
	(97.36)	(1.37)	(1.11)	(0.17)	(100)
2012-13	862942.00	46580.54	15942.74	1113.96	926579.24
	(93.13)	(5.03)	(1.72)	(0.12)	(100)
2013-14	973322.88	23124.60	36796.38	2099.38	1035343.24
	(94.01)	(2.23)	(3.55)	(0.20)	(100)

Note : Figure in parentheses represent percentage of total assets of RRBs in Rajasthan

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

Since the introduction of these norms, the RRBs in Rajasthan have constantly shown significant improvements on part of their asset quality. Table 3.17 presents the asset classification by RRBs of Rajasthan during post-amalgamation period. It is evident from the table that total loans and advances outstanding of RRBs in Rajasthan were Rs. 1035343.24 lakhs in 2013-14 of which Standard Assets were Rs. 973322.88 lakhs (94.01%), Sub-standard Assets were Rs. 23124.60 lakhs (2.23%), Doubtful Assets were Rs. 36796.38 lakhs (3.55%) and Loss Assets were Rs. 2099.38 lakhs (0.20%). Thus, gross non-performing assets of RRBs in Rajasthan were only 5.99 percent during 2013-14. Further, it can be noted from the table that share of standard asset to total assets has reduced slightly during the period of amalgamation from 95.53 percent in 2006-07 to 94.01 percent in 2013-14. As a result gross non-performing assets have increased from 4.47% in 2006-07 to 5.99 percent in 2013-14 though they were lesser during the years from 2008-09 to 2011-12.

**Table 3.18: Non Performing Assets of RRBs in Rajasthan**

(Figures in percent)

Year	Rajasthan		India	
	Gross NPA %	Growth %	Gross NPA %	Growth %
2000-01	12.84		18.83	
2001-02	10.71	-16.59	16.46	-12.59
2002-03	8.42	-21.38	14.44	-12.27
2003-04	8.38	-0.48	12.63	-12.53
2004-05	8.87	5.85	8.53	-32.46
GR (Pre-amalg. Period)		-8.15		-17.46
2005-06	5.26	-40.70	7.28	-14.65
2006-07	4.47	-15.02	6.55	-10.03
2007-08	4.30	-3.80	6.05	-7.63
2008-09	2.68	-37.67	4.14	-31.57
2009-10	2.68	0.00	3.72	-10.14
2010-11	2.28	-14.93	3.75	0.81
2011-12	2.64	15.79	5.03	34.13
2012-13	6.87	160.23	6.08	20.87
2013-14	5.99	-12.81	6.09	0.16
GR(Post-amalg. Period)		5.68		-2.01
GR (Total Period)		1.42		-6.76

GR- Average annual simple growth rate in percent

Sources : (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

The data regarding gross NPA (%) level along with its growth rates for the RRBs of Rajasthan and India have been given in Table 3.18. The table reveals that percentage of gross NPAs decreased during the pre-amalgamation period for RRBs of Rajasthan as well as for all RRBs in India, though they reduced at comparatively slower rate in the context of RRBs of Rajasthan. Further, during post-amalgamation period, the process of the reduction of the level of gross NPAs for the RRBs of India continued till 2009-10 and for the RRBs of Rajasthan till 2010-11 but they increased thereafter showing an average annual growth rate of 5.68% for the RRBs of Rajasthan and -2.01% at all India level during that period. It can also be noted that level of gross NPAs (%) of RRBs in Rajasthan have been lesser than the average level of gross NPAs (%) of RRBs in India during the whole period except in 2004-05 and 2012-13. This implies that on an average RRBs of Rajasthan are performing in a better way. Comparative position of the trend of Gross NPAs of RRBs in Rajasthan and India has been presented in Figure 3.6 also.

### **3.4.7 Working Results of RRBs in Rajasthan**

The working Results of RRBs in terms of their profit/losses, amount of accumulated losses and net worth (owned funds-accumulated losses) for the period of 2000-01 to 2013-14 are given in Table 3.19. Table reveals that the RRBs in Rajasthan as a whole have been making profits throughout the period of study. The average annual growth rate of combined profits for the total period remained 21.50 percent. Since 2006-07, no RRB in Rajasthan is running in losses. Though, the rate of growth of combined profits of RRBs was negative in 2012-13 but it increased by 70.23 percent during the very next year. In absolute terms, amount of overall profits earned by RRBs in Rajasthan was Rs. 1533.00 lakhs in 2000-01 which increased significantly to Rs. 14299.97 lakhs in 2013-14 showing an increase of 9.33 times during the entire period of study.

The accumulated losses of RRBs in Rajasthan have decreased sharply from Rs. 23671.43 lakhs in 2000-01 to Rs. 391.81 lakhs in 2012-13 and further to Rs 0.00 showing an negative average annual growth rate of (-31.51) percent during the period of study. Rate of decrease in accumulated losses was greater in post-amalgamation period (-41.81%) that in pre-amalgamation period (-8.35%). The credit for the steady

**Table 3.19: Working Results of RRBs in Rajasthan**

(Rs. in lakhs)

Year	Profit / Loss (Gross Profit-Loss Amount)		Accumulated losses		Net Worth (Owned funds-Accumulated losses)	
	Amount	Growth %	Amount	Growth %	Amount	Growth %
2000-01	1533.00		23671.43		-5080.64	
2001-02	2609.00	70.19	21827.18	-7.79	-2356.71	53.61
2002-03*	3137.00	20.24	19672.30	-9.87	1255.89	153.29
2003-04	4696.98	49.73	17974.63	-8.63	5935.00	372.57
2004-05	5220.74	11.15	16695.71	-7.12	12857.00	116.63
GR (Pre-amalgamation period)		37.83		-8.35		174.03
2005-06	5500.07	5.35	13224.67	-20.79	17056.90	32.67
2006-07	5973.31	8.60	11187.86	-15.40	22402.37	31.34
2007-08	6840.89	14.52	8829.45	-21.08	29297.98	30.78
2008-09	8907.35	30.21	5629.88	-36.24	41333.41	41.08
2009-10	7911.90	-11.18	3040.89	-45.99	49462.13	19.67
2010-11	9832.42	24.27	900.92	-70.37	59628.89	20.55
2011-12	10220.41	3.95	698.14	-22.51	70071.87	17.51
2012-13	8400.37	-17.81	391.81	-43.88	101978.86	45.53
2013-14	14299.97	70.23	0.00	-100.00	114759.31	12.53
GR (Post-amalgamation period)		14.24		-41.81		27.96
GR (Total Period)		21.50		-31.51		72.91

GR- Average annual simple growth rate in percent

\* Excluding MAGB (Profit/loss in 2002-03) as data was not available for the bank

Sources: (1) Various Statistical Reports on RRBs, NABARD, Mumbai.

(2) Statistical Tables Relating to Banks in India, www.rbi.org.in

decrease can be attributed to the continuous efforts made by RBI, GOI, sponsor bank and the RRBs themselves to increase the profitability and viability of these banks. Net worth of the RRBs in Rajasthan has also become positive since 2002-03 due to the reduction in accumulated losses. The average annual growth rate of net worth of RRBs in Rajasthan remained 72.91 percent during the period of study though it was higher in pre-amalgamation period. Thus, as a whole, the position of working results of RRBs in Rajasthan is becoming satisfactory gradually.

Thus, RRBs in Rajasthan are playing a key role in the socio-economic development by penetrating every corner of the state making credit available for the development of agriculture and village & cottage industries in the state. There has been substantial functional growth in terms of deposit mobilization and credit deployment by the RRBs in the state. In order to improve the financial health and viability of the RRBs, the Internal Working Group of the RBI suggested the restructuring of RRBs by amalgamating these banks. The process of amalgamation which began in January 2006 in Rajasthan brought down their number from 14 in March 2005 to 6 in March 2007 and further to 3 in March 2014. As a result, functioning of RRBs in the state has improved significantly. In the post-amalgamation period, total capital funds of the RRBs in the state have been increased tremendously. Credit-Deposit ratio has also been increased during this period showing the remarkable deployment of credit by these banks in rural areas of the state. The performance of RRBs in Rajasthan especially in respect of recoveries, NPA position has also been very impressive both in absolute terms and in terms of growth rates during the post-amalgamation period. It has also been observed that at present, no RRB in the state is running in losses and their accumulated losses have also been eroded. All these facts reflect that RRBs in Rajasthan are showing tremendous improvements in their operations.

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*Chapter - 4*

***Operational Efficiency of Regional  
Rural Banks in Rajasthan***

## Chapter - 4

### Operational Efficiency of Regional Rural Banks in Rajasthan

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Regional Rural Banks have showed a remarkable performance in meeting the social objectives set for them and in taking the banking services to the doorsteps of rural masses. They have become an inseparable part of the rural credit structure in India. But, their operational efficiency and financial viability have been a matter of great concern since the 1980s, just five years after their inception. RRBs have been suffering from some serious problem like high risk because of dealing only with the target group and other restrictions on their operations. “The mandate of promoting banking with a rural focus, however, would be an enduring phenomenon only when financial health of the RRBs is sound”.<sup>1</sup> However, over a period of time, RRBs have been allowed to provide credit to the non-target group and non farm sector in a defined proportion and also they have been permitted to engage in all type of banking business. Thus, operational efficiency of Regional Rural Banks has become a crucial factor which can enable them to function as effective and efficient institutions for rural credit.

The structure of RRBs has undergone significant changes during last decade as GOI initiated the process of amalgamation to remove the deficiencies prevailing in RRBs and making them viable and profitable units. As a result of this process (phase I and phase II) total number of RRBs has been reduced from 196 in March 2005 to 57 in March 2014 at all India level. In Rajasthan, at present only 2 RRBs (3 RRBs in March 2014) are working in place of 14 RRBs which were working before the process of amalgamation began. It was envisaged that the amalgamated RRBs would benefit from larger area of operation, enhanced credit exposure and more diverse banking activities. They would also take advantage of the economies of scale and the process would be helpful in strengthening some weak RRBs and their operational efficiency as a whole can be increased. Present chapter attempts to examine the operational efficiency of Regional Rural Banks in Rajasthan for the period of 14 years (i.e. 2001 to 2014). The period of study has been divided into two parts; Period I and Period II. Period I is the period from 2000-2001 to 2004-2005.

This is being considered as the pre-amalgamation period. Period II is the period from 2005-2006 to 2013-2014 which is again divided into two parts; Phase I and Phase II. Phase I of the process of amalgamation of RRBs was started in 2005-2006 and continued till 2011-2012. Phase II of the process of amalgamation, which began in 2012-2013 and continued till 2013-14. The combined period of phase I and phase II of amalgamation is being considered as post-amalgamation period.

Present chapter is divided into two following sections:-

4 [A] Conceptual Framework

4 [B] Empirical Results

Section 4 [A] provides the conceptual framework of operational efficiency in Regional Rural Banks. It analyses the concept of efficiency and its meaning, types of efficiency and operational efficiency in banking sector. Further various aspects of operational efficiency in Regional Rural Banks and techniques to measure them for the purpose of present study have been discussed and analyzed.

Section 4 [B] deals with the measurement and interpretation of empirical findings regarding operational efficiency of Regional Rural Banks in Rajasthan. It covers analysis of the collected information and data for the purpose of study. It also compares the operational efficiency among RRBs of Rajasthan during pre and post amalgamation periods and also with the overall operational efficiency at the state level and at all India level.

## **Section- 4 [A] Conceptual Framework**

### **4.1 Concept of Efficiency**

The term efficiency means different things to different people. In a private concern, efficiency is understood in terms of amount of profits earned as private investment is made only for the purpose of some rate of return on investments. But public concerns are run with entirely different objective of the benefit of the society. So the performance of a public enterprise is judged by the total value addition made by it in the economy. In general, efficiency is concerned with the optimal production and distribution of scarce resources. It refers doing things in a right manner.

Scientifically it is defined as the output to input ratio and focuses on getting the maximum output with minimum resources.

“The concept of efficiency is generally considered as synonymous with productivity but both are quite different. The word efficiency does not embrace the idea of productivity, but goes beyond it in the sense that it expresses capacity or the quality of the input, the productivity of which is under consideration, while productivity introduces the idea of relationship between output and input factors”.<sup>2</sup> Efficiency and productivity, however, are two co-operating concepts. The measures of efficiency are more accurate than the measures of productivity because they involve a comparison with the most efficient frontier.

Lovell (1993)<sup>3</sup> defines the efficiency of a production unit in terms of a comparison between observed and optimal values of its output and input. The comparison can take the form of the ratio of observed to maximum potential output obtainable from the given input, or the ratio of minimum potential to observed input required to produce the given output. In these two comparisons the optimum is defined in terms of production possibilities, and thus efficiency is technical.

Koopmans (1951, p.60) provides a definition of efficiency. He says “An input output vector is technically efficient if, and only if, increasing any output or decreasing any input is possible only by decreasing some other output or increasing some other input”.<sup>4</sup>

Farrell (1957, p.255)<sup>5</sup> and Charnes and Cooper (1985, p.72)<sup>6</sup> emphasize the empirical necessity of treating Koopmans’ definition of technical efficiency as a relative notion, which is relative to best observed practice in the reference set. This definition provides a way of differentiating efficient from inefficient production units.

Thus, it can be inferred that efficiency is a relative term it cannot be absolute. It is related to some criterion. In any field, achieving technical efficiency is clearly a necessary condition for producing any output at the least cost. The existence of technical inefficiency means that costs can be reduced by reducing some inputs and not increasing others. Achieving technical efficiency, however, is not a sufficient

condition for producing at the lowest possible cost. Here, the concept of economic efficiency enters. The appropriate method is the one that uses the smallest total value of inputs. This ensures that the firm spends as little as possible in producing its given output in terms of opportunity cost, the firm sacrifices the least possible value with respect to other things that it might do with those inputs.

## **4.2 Different Concepts Related to Efficiency**

There are several ways of measuring or discussing about the efficiency. Some of the most common include efficiency of scale, productive efficiency, technical efficiency, allocative efficiency, dynamic efficiency, social efficiency and Pareto efficiency. These concepts are not mutually exclusive, but more than one is required to describe a market or economy. Efficiency of scale occurs when the firm produces on the lowest point of its long run average cost (CRS) and therefore gets maximum benefits from economies of scale. Productive efficiency occurs when maximum number of goods and services are produced with a given amount of inputs. When a firm uses optimum combination of inputs to produce goods, technical efficiency occurs and when a society's value for certain goods and services is in equilibrium with the cost of resources used to produce it, it is called allocative efficiency. Dynamic efficiency refers to efficiency over time and social efficiency occurs when externalities are taken into consideration. Pareto efficiency is said to occur when it is impossible to make one party better off without making someone worse off. It is an economic state where resources are distributed in the most efficient way. Sometimes Pareto efficiency is also referred as economic efficiency. Pareto efficiency is concerned with both productive efficiency and allocative efficiency. Economists are generally concerned with this particular concept of efficiency. When we consider efficiency from a individual firm's or DMU's viewpoint, one broader and important concept is there, which is operational efficiency. While efficiency generally measures the efficiency of management in using the resources at its disposal, operational efficiency specifically measures how efficiently a firm's product has been produced, held and distributed.

### **4.3 Concept of Operational Efficiency**

Operational efficiency is the capability of any business enterprise to produce and deliver goods and services to its customers in the most possible cost-effective manner and at the same time ensuring the high quality of its products and services too.

Resource utilization, production, distribution and inventory management are all common aspects of operational efficiency. However, some critical factors may vary according to the nature of the business. Operational efficiency can be attained by organizing the core processes of the company in order to respond to the continuously changing market forces in a most cost-effective manner.

To achieve the goal of operational efficiency, a company needs to minimize redundancy and waste while using the resources and utilises the best of its workforce, technology and business process. By reducing internal cost, a firm can achieve higher profit margins and become more successful in the competitive markets.

Thus, the concept of operational efficiency lays emphasis on the need of performing a job in a planned and co-ordinated manner, so that the organizational efficiency may be achieved and profitability of the organization as a whole is increased. Operational efficiency is simply not the efficiency of a specific factor of production or efficiency of a particular operation or activity alone. In fact, it is more concerned with the overall efficiency of an organization employing various factors of production and operatives for carrying out various activities in order to achieve pre-determined goals.<sup>7</sup>

However, operational efficiency is analysed in a different way in a public sector enterprise than that of in a private enterprise. The reason behind is the fact that a private industry is run to achieve the ultimate goal of maximization of profits and various factors which affect the quantum of profits are generally taken for account to judge the operational efficiency of these enterprises. But, in public sector enterprises which are mainly engaged in providing services to the society, profit cannot be the sole criterion for measuring operational efficiency.

Concept of operational efficiency in a service industry like banks is little more different as there; it is influenced by the combined function of human and financial resource management. In addition to this, it is also influenced by technology, trends and interrelationship among various social, economic, commercial, political and government issues. However, it is very crucial for bank survival. Operational efficiency compares the ability of banks to transform inputs into financial products and services at a lower cost in relation to the revenue obtained from its various operations. The Sukhoy Chkaravathy Committee (1985) observed, “The concept of operational efficiency of a bank in India is associated with such diverse aspects of its operations as cost-effectiveness, profitability, customer services, priority sector lending, mobilization of deposits, deployment of credit.....”.<sup>8</sup>

Since banks play a pivotal role in economic development of a country like India, it is essential to evaluate the operational efficiency of these institutions. Banks in India are playing significant role in agricultural and industrial development, catering to the credit needs of different sectors of the economy, financing infrastructural development projects, employment generation, rural development etc. Besides these, they also promote banking habits among people and encourage them to save, channelize these saving into industrial investment and promote economic growth. Thus, the performance of these institutions has become a matter of great concern for policy makers in India as the growth of real sector of the economy largely depends upon the efficient functioning of banks.

#### **4.4 Measuring Operational Efficiency of Regional Rural Banks in Rajasthan**

Measurement of operational efficiency of Regional Rural Banks is being attempted to fulfill two basic objectives; firstly, it would help to evaluate the relative efficiency of individual RRBs in Rajasthan and also to compare the efficiency of individual RRBs with that of overall efficiency of all RRBs in India, Secondly, it would help in evaluating the impact of various policy measures and reforms, particularly the process of their structural consolidation which began in September 2005, on the operational efficiency of RRBs in Rajasthan. For this purpose, a

comparative analysis of the position of efficiency of RRBs during pre and post amalgamation periods is also being made.

Although, Regional Rural Banks are and will always be important for transforming the ground reality of the village economy and for the socio- economic development of this sector but in order to achieve long term sustainability their efficient functioning is very essential. It also enables them to function as an effective institution of rural credit.

Assessment and improvement of financial health is very important to ensure success of ongoing process of structure consolidation of RRBs. Therefore, various aspects of operational efficiency of RRBs have to be measured through a wide framework of financial indicators.

#### **4.5 Methodological Dimensions of Operational Efficiency for RRBs**

There may be many methodological aspects to assess the operational efficiency of any bank. Five following dimensions of performance of the selected banks have been chosen to fulfill the purpose of study:-

1. Operational Growth Analysis
2. Profitability Analysis
3. Productivity Analysis.
4. Portfolio Quality and Viability Analysis
5. Technical Efficiency Analysis

Operational growth analysis shows the trend and growth of basic operations of RRBs in Rajasthan during pre and post amalgamation periods. In order to analyse next three dimensions of operational efficiency, ratio tools have been used because ratios are the best suitable tool for evaluating the performance of any banking institution including RRBs. However, DEA, which is a non-parametric technique for measuring the relative efficiency of similar DMUs, has also become popular these days. DEA is most valuable in complex situations where there are multiple inputs and outputs. Therefore, to measure technical efficiency of RRBs in Rajasthan, DEA

approach has been used in the present study. This way, present study is a combination of parametric and non-parametric techniques of measuring operational efficiency.

#### **4.5.1 Operational Growth Analysis**

Growth of basic operations of any institution is considered as a most important parameter of operational efficiency. RRBs were established with a basic objective of catering to the credit needs of rural poor. They mobilize financial resources from rural and semi urban areas and grant loans and advances mostly to the small and marginal farmers, agricultural laborers and rural artisans. The scale and scope of operations of RRBs in Rajasthan as well as in India have experienced significant changes subsequent to the changes in social, economic and political environment in rural areas. Operations of RRBs have been diversified in tune with the financial sector reforms and most recently the process of amalgamations has changed their complete structure also. Though, a macro level analysis of the operational growth and performance of RRBs in Rajasthan during the period of study have been made in the previous chapter which shows that these banks have shown a remarkable performance in fulfilling the basic objectives set for them. However, there exist a lot of diversities among the RRBs. They differ in size, area of operation and management too. Therefore, it is very crucial to evaluate the performance of each individual RRB of the state on the basis of their basic operations.

The specific aspects of operational growth analysis selected for the present study are:-

- I. Growth of Own Funds
- II. Growth of Deposits
- III. Growth of Borrowings
- IV. Growth of Loans and Advances (o/s)
- V. Growth of Investments

Analysis has been done with the help of averages, percentages, compound annual growth rates and coefficient of variation.

#### **4.5.2 Profitability Analysis**

Profit is a motivational factor for any entrepreneur. It is the basic objective behind running a business firm. Profit is generally considered as the difference between total revenue and total cost over a period of time. Profitability is the ability of a firm to earn adequate returns from a given investment. Without it, it is very difficult for a firm to survive. According to Lord J.M. Keynes, “Profit is an engine that drives the business enterprise”. The performance and efficiency of a firm is judged on the basis of profitability. The higher degree of profit earning capacity brings prosperity to the organization.

Like other firms, profitability is a significant index of operational efficiency of banks. Profit provides cushion to the bank to support credit risks and endure any anticipated conditions. The banks are highly responsive organization open to public security and must continuously ensure their profitability which is essential for their growth and viability and also for infusing confidence in public.<sup>9</sup> Thus, profits constitute the inner strength to banks and support them for long term survival and growth.<sup>10</sup>

However, social obligation and rural orientation of Regional Rural Banks have forced them to confront great difficulties in their business operations; therefore, their profitability has been affected adversely. The Narasimham Committee had stated as the basic objective of these institutions is socio-economic development of rural areas, they (RRBs) would be bound to make losses in initial years and that would be a price worth paying to achieve the broader objective of eradication of rural poverty.

Though, social obligations raise the cost of operations and adversely affect the profitability of these banks, however, in a broader perspective, social responsibilities and profitability are not mutually exclusive, they go with each other and can be attained together. In fact they complement each other.

Activities of RRBs have undergone far reaching changes in the era of financial sector reforms and structural consolidation in the form of amalgamation of these institutions. Now profitability has also become the main consideration and

indicator of the financial health and strength of Regional Rural Banks and at present their operations are measured in terms of their capacity to generate profits.

As profit in any financial organization including RRBs is derived by subtracting total expenditure from its total income. For the purpose of analyzing the profitability of RRBs of Rajasthan, relevant ratios have been calculated which are based on their interest income, interest expenditure, interest spread, operating cost, miscellaneous income, gross margin, net margin risk cost etc. A comparative analysis of pre and post amalgamation period profitability of individual RRBs of Rajasthan has also been made to evaluate the differences between the two periods. Following profitability ratios have been used for the purpose of study:

- a) **Financial Return Ratio:**– Interest Earned as percentage to Average Working Funds.

This ratio indicates overall efficiency of the RRB to generate interest income out of its assets. It forms a basis for analyzing the loaning and investment policies of the bank and their efficiency thereof. Efficiency of a bank is positively related with financial returns.

- b) **Financial Cost Ratio:**– Interest Spent as percentage to Average Working Funds.

The financial cost ratio shows the average cost of funding the assets of the bank including debt. Financial cost is inversely related with the profitability of the bank.

- c) **Financial Margin Ratio:**– Interest Spread as percentage to Average Working Funds.

In a financial institution financial margin is derived by deducting financial cost from financial income and it is also known as spread. Spread is the interest surplus which is used to cover the operating costs, loan loss provisions etc. Higher positive value of financial margin means higher financial efficiency and profitability.

- d) **Operating Cost Ratio:**– Operating Expenses as percentage to Average Working Funds.

The operating cost ratio is the key to measure the financial efficiency of the operations. If an RRB employs efficient and productive staff and gets less

growth in the operating expenses than that of the average assets, it may be more sustainable. This ratio also highlights the efficiency of the bank operations.

- e) **Miscellaneous Income Ratio:**– Miscellaneous Income as percentage to Average Working Funds.

This ratio reflects the income of the RRB from its non-fund based activities. It includes income from commission, brokerage, exchange and other receipts.

- f) **Gross Margin Ratio:**– (Financial Margin + Miscellaneous Income – Transaction Cost) as percentage to Average Working Funds.

Here, transaction cost shows the operating expenses as percentage of AWF. Gross margin is an important indicator of profitability and operational efficiency and is important in evaluating its operations. A bank can increase its gross margin by increasing its miscellaneous income, and reducing its operating cost. Higher level of gross margin shows greater efficiency.

- g) **Net Margin Ratio:**– (Gross Margin – Provisions) as percentage to Average Working Funds.

Net margin shows the overall result of the banks activities. If the net margin is positive, the financial efficiency will be greater. It shows the efficiency of the bank in recovering costs and using its resources. Thus, it reflects profitability. If negative net margin is recorded, grant of funds may be necessary to continue the RRB in the long run. This ratio is popularly known as Return On Assets (ROA) in the field of bank efficiency.

- h) **Risk Cost Ratio:**– Total Loss Provisions as percentage to Average Working Funds.

As per the provisioning norms initiated during financial sector reforms, RRBs too make provisions for loan losses. This is an important component of the total expenditure of these banks. Therefore, amount of provisions has direct impact on the profitability of an RRB. A higher level of risk cost adversely affects the financial efficiency of the bank. Risk cost reduces the net margin generated by the bank.

### **4.5.3 Productivity analysis**

Productivity is generally defined as the ratio of market value of goods and services to the value of resources needed to produce them. In other words, it is the ratio of total output to total inputs. Productivity determines the sustainability and growth of any enterprise. It is also referred as the cornerstone of development of an economy because the prosperity of a country depends upon the level of productivity of different industries and different sectors in the country. Higher level of productivity helps in faster economic growth at lower economic, technical and social costs.

Productivity is also the major determinant of operational efficiency. Increase in productivity is the way to increase profitability and overall efficiency of any enterprise. It can be maximized through optimum use of resources. Measuring productivity in a service industry like banks is comparatively complicated than that in a manufacturing industry because here it is influenced by various human and financial factors. Besides this, many social, economic, political and technological issues also affect the productivity of banks. However, productivity measurement has become very important in the current competitive environment.

Analysis of productivity has gained greater significance in respect of Regional Rural Banks too. In order to achieve long term viability these banks are required to get sufficient strength and make best use of their resources to become competitive and also they have to manage their business in a cost-effective manner. It is very important to know that whether RRBs are utilizing their resources effectively to increase overall productivity. In the era of amalgamation and other policy measures, the structure and working of these banks have undergone several changes so it is significant to know whether these changes have any positive impacts on the productivity of RRBs. To analyse the productivity of regional rural banks in Rajasthan with a view to make comparative analysis of pre and post-amalgamation periods productivity levels, three dimensions have been taken into consideration, which are; Employee Productivity, Branch Productivity and Financial Productivity.

**I. Employee productivity**

Employee productivity reflects per employee performance of any bank. In the present study, employee productivity of Regional Rural Banks in Rajasthan has been analysed with the help of following sub-parameters;

- a) Deposits per Employee.
- b) Advances per Employee.
- c) Total Business per Employee.
- d) Total Income per Employee.
- e) Total Expenditure per Employee.
- f) Net Profit per Employee.

**II. Branch productivity.**

Branch productivity reflects per bank branch performance of any bank. In the present study, branch productivity has been measured with the help of following indicators:-

- a) Deposits per Branch.
- b) Advances per Branch.
- c) Total Business per Branch.
- d) Total Income per Branch.
- e) Total Expenditure per Branch.
- f) Net Profit per Branch.

**III. Financial productivity**

Financial productivity reflects the efficiency of a bank to generate returns out of its resources. Financial productivity of RRBs in Rajasthan has been measured in terms of following indicators:-

- a) Returns on Advances:—Interest income on advances to total advances
- b) Returns on Investments:—Interest income on investments to total investments
- c) Cost of Deposits:— Interest expenditure on deposits to total deposits
- d) Credit Deposit Ratio
- e) Investment Deposit Ratio

#### **4.5.4 Portfolio Quality and Viability Analysis.**

Credit by RRBs is the only asset which is largely affected by risk. Portfolio of the Regional Rural Banks in Rajasthan has been evaluated on the basis of risk associated with their lending and their ability to ward off the eventual risk when it occurs. The following ratios have been calculated for this purpose.

**a) Credit Risk Ratio –Gross NPAs to Total Loans and Advances (O/S).**

Credit risk ratio measures the risk associated with credit which arises due to internal policies and procedures and also due to external credit environment. Risk analysis helps RRBs to formulate sound credit policies. As non-performing assets are the most significant part of portfolio affected by risk, they have been used to calculate the credit risk ratio. Decreasing credit risk ratio is positive for portfolio quality.

**b) Accumulated Losses to Total Assets.**

Accumulated losses are burden on the future profitability of any bank. Therefore, elimination of accumulated losses is essential to make them viable. RRBs have been suffering from this problem due to continuous losses. The ratio of accumulated losses to total assets has been used to analyse the viability position of RRBs in Rajasthan.

**c) Coverage Ratio:- Net Worth (Owned Funds-Accumulated Losses) to Total Assets**

This ratio has also been used to analyse the viability position of RRBs in Rajasthan. This ratio reflects the ability of a bank to overcome its credit risks and resist unanticipated developments. This way it enhances the financial viability of that bank. This ratio is also used as a proxy of capital adequacy.

#### **4.5.5 Technical Efficiency Analysis.**

Technical efficiency is very useful in judging the efficiency of any organization including banks. Technical efficiency is defined as producing maximum output with lowest possible opportunity cost. In other words, technical efficiency measures how close a firm or bank is to the production possibility frontier for a given quantity of inputs (Farrell, 1957).<sup>11</sup> Technical efficiency relates to how well a

bank employs its resources relative to the existing production possibility frontier or relative to the current best practice of the bank and how a bank simultaneously minimizes cost and maximizes revenue, based on existing level of production technology (Tandon, 2003).<sup>12</sup> Technical efficiency compares the observed ratio of inputs to outputs for a firm against an optimal one which constitutes the efficient frontier.<sup>13</sup> Thus, technical efficiency of a bank is defined as its ability to transform multiple resources into multiple financial services (Bhattacharya,1997).<sup>14</sup> A bank is said to be technically inefficient if it operates below the frontier.

To measure technical efficiency of RRBs in Rajasthan a relatively new model has been employed which is known as Data Envelopment Analysis (DEA). DEA, introduced by Charnes, Cooper and Rhodes (1978)<sup>15</sup> is a nonparametric technique to measure the relative efficiency of a set of similar units, usually referred as decision making units (DMUs). DEA has emerged as a very potent technique to measure the relative efficiency of banks as it is capable of handling multiple inputs and outputs without requiring any formal specification of production function and also it does not requires prior knowledge of the functional form of the frontier, error and inefficiency structures.<sup>16</sup>

In order to measure technical efficiency of individual RRBs in Rajasthan, three different points of the period of study has been selected which are; 2004-05, 2011-12 and 2013-14. Cross-section data for these three years has been used to measure the technical efficiency. 2004-05 is the year before the process of amalgamation of RRBs began. So the technical efficiency of 14 RRBs during that year has been analysed. 2011-12 is the year when there were only 6 RRBs due to the phase I of the process of amalgamation. Here, we analyse the technical efficiency of RRBs after phase I. In 2013-14, we measure the technical efficiency of only 3 RRBs of Rajasthan, working after the phase II of process of amalgamation. In each year, best practice bank is indentified and other banks have been compared on its efficiency base.

Technical efficiency can be divided into Pure Technical Efficiency (PTE) and Scale Efficiency (SE) using DEA. PTE measures the efficiency of management

in producing maximum output and SE reflects whether a firm or DMU is operating at the optimal scale size. In the present study, Technical, Pure Technical and Scale Efficiency scores for individual Regional Rural Banks of Rajasthan have been calculated by using two well known DEA model which are; CCR (Charnes, Cooper and Rhodes, 1978) and BCC (Banker, Charnes and Cooper ,1984)<sup>17</sup> models. A measure of Technical Efficiency, derived from CCR model under the assumption of constant returns to scale (CRS) is known as Overall Technical Efficiency (OTE). This measure is helpful in determining inefficiency due to input/output configuration as well as the size of operation.<sup>18</sup>

CRS assumption is appropriate only when all the DMUs are operating at an optimal scale. This model does not differentiate between pure technical and scale efficiencies. The use of variable returns to scale (VRS) assumption helps in measuring PTE and SE scores (derived from BCC model). PTE reflects all the inefficiencies resulting from managerial inefficiency in using the bank's inputs. Scale Efficiency (SE) is the ratio of OTE to PTE. Scale efficiency measures the capability of management in selecting the optimal scale of production or appropriate size of the bank. If size of the banks is not appropriate, it results in scale inefficiency and this happens due to either decreasing returns to scale (if a bank is too big) or increasing returns to scale (if a bank is too small).

➤ **Selection of Inputs and Outputs**

Selection of appropriate inputs and outputs is the most important step while using DEA to measure efficiency scores. In DEA application to banks, researchers, generally adopt one of two approaches for choosing inputs and outputs. First is Production Approach, also called Value Added Approach and Service Approach, is propounded by Benston (1965)<sup>19</sup>. It treats banks as the providers of services in the form of deposit and loan accounts using capital and labour as inputs. Second is Intermediary Approach also called Assets Approach propounded by Sealey and Lindley (1977)<sup>20</sup>. It views banks as financial intermediaries who channelize funds between depositors and creditors. According to this approach, banks borrow funds from depositors and lend these funds to borrowers to earn profits. From this perspective deposits are inputs and loans are outputs.

As the continuous process of restructuring which started with financial sector reforms in 1991 and most recently the process of amalgamation has completely changed the structure of RRBs in order to make them viable and profitable institutions. These institutions are now expected to concentrate on maximization of income and minimization of costs also in addition to their social objectives. In view of this changing scenario of rural banking in India, the present study uses intermediation approach to select input and output variables for computing the efficiency scores of Regional Rural Banks in Rajasthan. This approach has been used by many studies. Berger and Humphrey (1997)<sup>21</sup> also found it most suited for measuring bank level efficiency.

The output variables selected are:-

- 1) Net Interest Income (Interest earned less Interest expended)
- 2) Non-Interest Income (also known as Other Income).

The input variables selected are:-

- 1) Physical Capital (measured as the Value of Fixed Assets.)
- 2) Labor (measured as the Number of Employees).
- 3) Loanable funds (Deposits plus Borrowings is taken as loanable fund input.)

All the above variables have been measured in Rupees terms (Rs. in lakhs) as at the end of the year except number of employees. The efficiency scores of RRBs in Rajasthan have been calculated with the help of software DEAP (version 2.1).

Following Input Oriented DEA model<sup>22</sup> has been used to measure Technical Efficiency of selected DMUs;

$$\text{Min } \theta_0 - \varepsilon \left( \sum_{i=1}^m S_i^- + \sum_{r=1}^s S_r^+ \right) \quad \dots\dots\dots 1$$

Subject to

$$\sum X_{ij} \lambda_j + S_i^- = \theta_0 X_{i0} \quad (i=1,2,\dots,m) \quad \dots\dots\dots 2$$

$$\sum Y_{rj} \lambda_j - S_r^+ = Y_{r0} \quad (r=1,2,\dots,s) \quad \dots\dots\dots 3$$

$$\lambda_j \geq 0 \quad (j=1,2,\dots,n) \quad \dots\dots\dots 4$$

$$S_r^+, S_i^- \geq 0 \quad \dots\dots\dots 5$$

$$\sum_{j=1}^n \lambda_j = 1 \quad \dots\dots\dots 6$$

Here,

$X_{io}$  = amount of input  $i$  used by DMU $_o$

$Y_{ro}$  = amount of output  $r$  produced by DMU $_o$

$m$  = the number of outputs

$s$  = the number of inputs

$n$  = the number of DMUs

$\epsilon$  = a small positive value

A DMU is fully efficient if and only if  $\theta^*=1$  and all slacks  $S_i^{-*} = S_r^{+*} = 0$ . The model involving constraint 2 to 5 is known as envelopment form of CCR model and provides input-oriented TE scores under the assumption of constant returns to scale. The measure of efficiency provided by CCR model is known as overall technical efficiency (OTE). The last and 6<sup>th</sup> constraint is variable return to scale assumption. The model involving constraints 2<sup>nd</sup> to 6<sup>th</sup> is known as BCC model and provides input oriented TE measure under the assumption of variable returns to scale. The measure of efficiency provided by BCC model is known as pure technical efficiency (PTE). The ratio of OTE/PTE provides a measure of scale efficiency (SE). All the efficiency measures are bonded between one and zero. The nature of returns to scale can be determined from the magnitude of optimal  $\sum_{j=1}^n \lambda_j^*$  in the model. Both the models are needed to be solved  $n$  times, once for each DMU.

## **SECTION- 4 (B) EMPIRICAL RESULTS**

Analysis of operational efficiency of Regional Rural Banks in Rajasthan is the prime objective of this study. In the present section, collected and calculated data are being analyzed and interpreted with the help of parameters discussed in the previous section [i.e. section 4 (A)] to fulfill the purpose of study.

In this section a comparative study of the performance of individual RRBs in the state of Rajasthan during pre and post-amalgamation periods is being carried out for this purpose. The total period (i.e. 2001 to 2014) is being divided into two parts, pre-amalgamation period (2001 to 2005) and post-amalgamation period which is again divided into two parts; phase I (2006 to 2012) and phase II (2013 to 2014). During pre- amalgamation period there were a total of 14 RRBs in Rajasthan but due to amalgamation their number reduced to 6 RRBs in post- amalgamation period phase I and further to 3 RRBs in post- amalgamation period phase II. Operational efficiency of individual RRBs in Rajasthan is also being compared with the aggregate performance of all RRBs in Rajasthan and also with the performance of RRBs at all India level. Present section attempts to analyze and interpret the operational efficiency of RRBs in Rajasthan on the basis of following five different dimensions of their performance which have been discussed in detail in the previous section.

### **4.6 Operational Growth Analysis**

Under this dimension, performance of Regional Rural Banks in Rajasthan is being analyzed on the basis of growth of their basic operations such as growth of own funds, growth of deposits, growth of borrowings, growth of loans and advances outstanding and growth of investments. Detailed analysis of the empirical findings is being done in the following paragraphs.

#### **4.6.1 Growth of Own Funds**

Owned funds are one of the sources of funds for RRBs. They consist of share capital, share capital deposits and reserve funds. Table 4.1[A] and 4.1[B] indicate that owned funds of RRBs in Rajasthan increased from Rs. 18590.79 lakhs in 2000-01 to Rs. 28396.00 lakhs in 2004-05 registering a growth rate of 11.30 percent in

pre-amalgamation period. Amount of owned funds increased to Rs. 70770.01 lakhs in 2011-12 and further to Rs. 114759.31 lakhs in 2013-14 showing higher growth rate of 15.54 percent in post-amalgamation period phase I and 12.10 percent in phase II than that in pre-amalgamation period. Rate of growth of owned funds of all RRBs in India was higher during all three periods than those at all Rajasthan level and remained 15.59%, 16.77% and 14.02% respectively. Among all RRBs of Rajasthan SGB had highest amount of owned funds (Rs. 5746.00 lakh) and BKGB had lowest amount (Rs. 618.00 lakhs) during pre-amalgamation period. During phase I of amalgamation owned funds were highest in RGB (Rs. 23518.45 lakhs) followed by MGBGB (Rs. 15052.70 lakhs) and remained lowest in MAGB (Rs. 1767.44 lakhs). During phase II, owned funds were highest in BRKGB (Rs. 64801.83 lakhs) and lowest in MAGB (Rs. 2364.50 lakhs).

In pre-amalgamation period BAKGB (29.51%) showed a highest rate of growth of owned funds, followed by ABAGB (24.48%), JNAGB (18.07%) and SGB (16.66%). In post-amalgamation period phase I, HKGB showed a highest growth rate of owned funds (36.12%), followed by MGBGB (19.01%) and JTGB (17.70%). All these three banks were having a higher growth rate of owned funds than that at Rajasthan level and also at all India level. HKGB was having a significantly higher growth rate of owned funds in post-amalgamation period than in pre-amalgamation period. During phase II of post-amalgamation period BRKGB showed a highest rate of growth of owned funds (14.85%) which was also higher than average growth rate at all Rajasthan level and at all India level.

The consistency of growth of owned funds was greater in respect of all RRBs of Rajasthan as compared to India as the coefficient of variation was lower in Rajasthan during both pre and post-amalgamation periods (CV=18.03, 31.13 and 08.07 respectively) than those in India (CV=15.59, 32.99 and 9.27 respectively). Growth of owned funds was most consistent in respect of MAGB during all three periods (CV= 7.53, 10.16 and 0.97 respectively).

**Table 4.1 (A): Growth of Own Funds in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Rs. in lakhs)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	1237.30	1237.30	1237.30	1941.00	2953.00	24.48	43.75
2	SGB( PNB)	3129.48	3124.87	3234.79	4328.00	5746.00	16.66	29.22
3	JNAGB(UCO)	1798.70	2235.16	2891.15	2975.00	3577.00	18.07	25.63
4	TAGB (UCO)	1303.70	1367.20	1343.44	1512.00	1512.00	4.05	6.96
5	AKGB (BOB)	961.90	961.90	961.90	1114.00	1114.00	4.50	8.15
6	BAKGB (BOB)	933.04	1194.18	1579.37	2042.00	2600.00	29.51	39.96
7	BCKGB (BOB)	1849.36	1849.36	1917.80	1918.00	1918.00	1.10	1.99
8	DBKGB (BOB)	984.35	984.35	1062.38	1030.00	1030.00	1.37	3.30
9	MKGB( BOB)	1200.77	1198.88	1198.20	1392.00	1392.00	4.55	8.27
10	BKGB (SBBJ)	540.30	540.30	540.30	618.00	618.00	4.11	7.45
11	MGB(SBBJ)	1895.68	2021.05	2114.89	2285.00	2647.00	8.23	13.27
12	SKGB (SBBJ)	962.22	962.22	1001.28	1114.00	1114.00	4.49	7.53
13	MAGB(ICICI)	1183.71	1184.48	1235.12	1369.00	1374.00	4.53	7.54
14	HKGB (CBI)	610.28	610.27	610.27	700.00	801.00	7.05	12.71
15	All RRBs in Rajasthan	18590.79	19470.84	20928.19	24338.00	28396.00	11.30	18.03
16	All RRBs in India	346705.00	405883.48	466599.73	543787.48	618126.36	15.59	22.64

**Table 4.1 (B): Growth of Own Funds in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Rs. in lakhs)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	10984.01	12415.12	13869.11	15038.45	17252.93	19981.00	23518.45	13.13	27.37
2	BRGB (BOB)	6579.78	6639.81	6688.41	9609.65	9808.72	10591.53	13420.46	13.13	28.48
3	HKGB (CBI)	700.32	700.32	802.58	1736.10	2454.57	2758.00	13571.01	57.68	142.66
4	JTGB (UCO)	5209.45	6621.74	8633.59	11139.23	11908.61	13344.67	15052.7	19.15	34.95
5	MGBGB (SBBJ)	5439.27	5851.38	6766.20	7866.89	9505.25	12266.97	1767.44	-5.39	46.91
6	MAGB (ICICI)	1368.74	1361.86	1367.97	1572.54	1572.94	1587.64	3439.95	12.15	42.86
7	All RRBs in Rajasthan	30281.57	33590.23	38127.86	46962.86	52503.02	60529.81	70770.01	15.54	31.13
8	All RRBs in India	664659.05	728597.50	873258.69	1091028.64	1224716.02	1383891.96	1646200.8	16.77	32.99

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	56425.39	64801.83	14.85	9.77
2	MGB (SBBJ)	43612.97	47592.98	9.13	6.17
3	MAGB (ICICI)	2332.31	2364.50	1.38	0.97
4	All RRBs in Rajasthan	102370.67	114759.31	12.10	8.07
5	All RRBs in India	1944541.99	2217222.73	14.02	9.27

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

#### **4.6.2 Growth of Deposits**

Mobilization of deposits by the Regional Rural Banks is very important as it is the most significant source of funds for these banks and also it promotes saving and banking habits among the rural people. Table 4.2[A] and 4.2[B] show the growth of deposit mobilization by RRBs in Rajasthan during pre and post amalgamation periods. Tables reveal that amount of deposits mobilized by RRBs in Rajasthan was Rs. 234896.17 lakhs in 2000-01 which increased to Rs. 384277.45 lakhs in 2004-05 and showed a growth of 13.17 percent during pre- amalgamation period. Further it increased to Rs. 1141891.29 lakhs in 2011-12 and Rs. 1377603.43 lakhs in 2013-14 showing a higher growth rate (17.64%) during phase I of post-amalgamation period but lower growth rate during phase II (10.55%). Growth rate of deposits of all RRBs in Rajasthan was higher than that at all India level in pre-amalgamation period but it was lower during both the phases of post-amalgamation period.

Tables also reveal that among all RRBs of Rajasthan JNAGB had largest amount of deposits mobilized (Rs. 63983.07 lakhs) in 2004-05 followed by MGB (Rs. 63327.18 lakhs) and SGB (Rs. 42243.87 lakhs) while BKGB (Rs. 4942.42 lakhs) was at the lowest position. In 2011-12, RGB was at the top position with Rs. 301294.66 lakhs of total amount of deposits mobilized, followed by BRGB (Rs. 259294.63 lakhs) and MGBGB (Rs. 226295.73 lakhs). MAGB was at the lowest position with Rs. 50856.81 lakhs of total amount of deposits mobilized. MAGB was a standalone RRBs during both the phases of amalgamation till March 2014. In 2013-14, BRKGB had a highest amount of deposits mobilized (Rs. 801808.07 lakhs) while MAGB secured the lowest position (Rs. 61500.54 lakhs) among all 3 RRBs in Rajasthan during that year.

During pre-amalgamation period TAGB showed highest rate of growth of deposits (20.88%) followed by MKGB (17.89%), SKGB (16.50%), JNAGB (16.46%) and AKGB(16.26%). SGB showed lowest rate of growth of deposits (8.93%) followed by MGB (9.00%) and MAGB (9.08%). The highest and the lowest rate of growth of deposits were shown by RGB (20.10%) and JTGB (14.11%) respectively during post-amalgamation period phase I. MAGB showed a higher rate of growth of deposits during this period. During phase II of post-amalgamation period, rate of growth of deposits was highest in BRKGB (13.08%) and lowest in MGB (6.90%).

**Table 4.2 (A): Growth of Deposits in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Rs. in lakhs)

S.No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	20051.04	24164.23	28001.46	32957.40	35976.24	15.95	22.81
2	SGB( PNB)	29614.26	35859.27	37777.75	41467.95	42243.87	8.93	13.58
3	JNAGB(UCO)	34611.51	40209.59	48448.05	54009.57	63983.07	16.46	23.89
4	TAGB (UCO)	8926.72	11392.61	14457.60	17373.80	18658.73	20.88	28.62
5	AKGB (BOB)	11997.04	14354.11	16948.04	20002.23	21587.08	16.26	23.21
6	BAKGB (BOB)	12480.55	14478.01	16254.79	18310.32	19535.92	11.97	17.55
7	BCKGB (BOB)	12607.97	13556.79	15199.49	17568.87	19108.39	11.53	17.39
8	DBKGB (BOB)	7528.47	7916.00	9320.37	11132.00	12030.00	13.64	20.51
9	MKGB( BOB)	8615.14	10463.88	12917.26	15295.44	16227.96	17.89	25.18
10	BKGB (SBBJ)	3184.07	3454.68	3839.31	4286.00	4942.42	11.57	17.68
11	MGB(SBBJ)	44335.83	51223.17	54364.83	59420.23	63327.18	9.00	13.48
12	SKGB (SBBJ)	7168.18	8305.29	9614.94	11313.72	13178.78	16.50	24.09
13	MAGB(ICICI)	14095.64	16242.57	17714.69	18954.92	20154.04	9.08	13.56
14	HKGB (CBI)	19679.75	22339.47	24081.95	30780.79	33323.77	14.73	22.19
15	All RRBs in Rajasthan	234896.17	273959.67	308940.53	352874.00	384277.45	13.17	19.22
16	All RRBs in India	3827186.00	4453915.09	5009833.5	5635008.00	6214300.00	12.80	18.73

**Table 4.2 (B): Growth of Deposits in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Rs. in lakhs)

S.No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	91635.78	107198.33	125596.99	166738.16	191593.61	238281.62	301294.66	22.10	43.29
2	BRGB (BOB)	95893.29	109283.59	124230.87	152790.07	166935.89	189273.82	206522.95	14.11	27.73
3	HKGB (CBI)	99788.24	121047.44	147879	191024.25	206191.88	227582.74	259294.63	17.27	32.49
4	JTGB (UCO)	90795.41	104099.52	123904.47	157757.17	178676.49	200100.4	226295.73	17.07	32.75
5	MGBGB (SBBJ)	23075.3	27692.7	31401.74	37965.59	43566.05	48189.51	50856.81	14.56	28.18
6	MAGB (ICICI)	37088.06	42808.51	51306.83	64140.93	76408.04	87421.23	97626.51	18.40	35.15
7	All RRBs in Rajasthan	438276.08	512130.09	604319.9	770416.17	863371.96	990849.32	1141891.29	17.64	33.93
8	All RRBs in India	7132883.39	8314355.36	9909346.4	12018890.16	14503494.56	16623234.1	18633607.19	18.05	34.69

**Phase II**

S.No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	709069.96	801808.07	13.08	8.68
2	MGB (SBBJ)	481088	514294.82	6.90	4.72
3	MAGB (ICICI)	56025.62	61500.54	9.77	6.59
4	All RRBs in Rajasthan	1246183.58	1377603.43	10.55	7.08
5	All RRBs in India	21148795.6	23949419.19	13.24	8.78

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

During pre-amalgamation period 8 out of 14 RRBs in Rajasthan were showing a higher rate of growth of deposits than the growth rate of deposits at all India level and at state level. But in phase I of post-amalgamation period only 2 RRBs (RGB and HKGB) showed higher rate of growth of deposits than that at all India level and state level. During phase II growth rate of deposits was higher at all India level than those in all individual RRBs in Rajasthan.

The growth of deposit mobilization by RRBs in India was more consistent (CV = 18.73) than in Rajasthan (CV=19.22) during pre-amalgamation period but during post-amalgamation period growth of deposits of RRBs in Rajasthan was more consistent during both phase I (CV = 33.93) and phase II (CV=7.08) than that at all India level (CV = 34.69 and 8.78 respectively).

The coefficient of variation was least in MGB (CV=13.48), followed by MAGB(CV=13.56) and SGB (CV=13.58) while TAGB (CV= 28.62) had the highest variation during pre-amalgamation period. During post-amalgamation period phase I consistency of deposits mobilized was highest in JTGB (CV= 27.73) and lowest in RGB (CV=43.29) and during phase II, the consistency was highest in MGB (CV= 4.72) and lowest in BRKGB (CV=8.68). Thus, level of consistency increased in TAGB after amalgamating it into JTGB in phase I and further into MGB in phase II.

### **4.6.3 Growth of Borrowings**

Borrowings are also a resource component of RRBs but they are not supposed to depend too much on this source of funds. Table 4.3[A] and 4.3[B] present the growth of borrowings by RRBs in Rajasthan. In Rajasthan, RRBs have shown an unfavorable trend in terms of much higher rate of growth of borrowings during post-amalgamation period phase I, as 5 out of 6 RRBs in the state were showing higher rate to growth of borrowings than all India average growth rate (27.27%). During this period borrowings increased at a very faster rate. During pre-amalgamation period RRBs in Rajasthan showed a very low growth of borrowings (5.98%). Some RRBs showed negative growth rates also like SGB (-25.05%), JNAGB (-16.91%), BCKGB (-3.25%), DBKGB (-12.02%), BKGB (-7.93%) and MAGB (-2.17%). Growth rate of borrowings was highest in SKGB (41.68%) during this period.

**Table 4.3 (A): Growth of Borrowings in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Rs. in lakhs)

S.No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	3377.15	4814.72	3518.73	2621.94	5541.75	3.90	29.65
2	SGB(PNB)	1776.07	1667.38	1239.26	820.26	599.08	-25.05	42.08
3	JNAGB(UCO)	2743.48	2963.69	2459.66	1832.43	1382	-16.91	28.82
4	TAGB (UCO)	1222.8	1533.73	1765.53	2341.22	3170.92	26.22	38.30
5	AKGB (BOB)	1238.38	1385.9	2154.14	2414.03	3046.5	26.56	36.51
6	BAKGB (BOB)	2158.76	2473.46	2958.56	2500.16	2183.89	0.34	13.16
7	BCKGB (BOB)	2141	2416.98	2319.29	1840.21	2079.61	-3.25	10.37
8	DBKGB (BOB)	881.49	1213.33	1132.87	869.73	548.83	-12.02	28.10
9	MKGB( BOB)	1259.64	1353.54	1585.44	1690.82	1210.87	1.45	14.71
10	BKGB (SBBJ)	723.23	661.36	656.39	545.04	527.09	-7.93	13.42
11	MGB(SBBJ)	1517.64	2576	1948.44	2620.89	1800.18	3.65	23.28
12	SKGB (SBBJ)	992.44	1471.57	2002.15	2580.22	4278.26	41.68	56.15
13	MAGB(ICICI)	959.33	1127.2	1132.3	1089.42	874.48	-2.17	11.04
14	HKGB (CBI)	2226.57	2421.43	3294.65	2997.6	4556.41	17.89	29.72
15	All RRBs in Rajasthan	23217.98	28080.29	28167.41	26763.97	31799.87	5.98	11.18
16	All RRBs in India	406400	452437.08	479869.16	459548.01	552431.8	6.50	11.33

**Table 4.3 (B): Growth of Borrowings in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Rs. in lakhs)

S.No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	7972.59	11571.69	14298.86	15008.77	32359.17	70270.28	66123.24	46.91	85.31
2	BRGB (BOB)	4851.70	5047.24	6435.80	12713.33	8137.23	34765.85	39197.34	44.78	92.65
3	HKGB (CBI)	13961.77	11801.35	21901.23	31373.82	45198.65	50417.46	57879.39	32.57	55.08
4	JTGB (UCO)	12202.74	17352.25	21598.83	32771.55	50645.73	59752.36	55733.20	32.51	54.80
5	MGBGB (SBBJ)	849.92	817.70	559.38	395.83	2113.34	1744.55	11627.43	46.50	156.01
6	MAGB (ICICI)	5261.80	4635.17	4262.32	6858.77	13133.65	14298.79	15639.78	26.79	54.45
7	All RRBs in Rajasthan	45100.52	51225.40	69056.42	99122.07	151587.77	231249.29	246200.38	37.38	65.75
8	All RRBs in India	730259.31	977579.62	1149400.49	1273464.25	1877006.46	2649080.50	3028883.59	27.27	52.67

**Phase II**

S.No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	181711.32	194045.15	6.79	4.64
2	MGB (SBBJ)	142823.35	148004.83	3.63	2.52
3	MAGB (ICICI)	4966.41	3085.53	-37.87	33.04
4	All RRBs in Rajasthan	329501.08	345135.51	4.74	3.28
5	All RRBs in India	3807321.92	5023009.68	31.93	19.47

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

During phase I, growth rate of borrowings was highest in RGB (46.91%) and lowest in HKGB (26.79%). During phase II, situation became much favorable as borrowings grew at a very low rate in RRBs in Rajasthan (4.74%) than in India (31.93%), even MAGB showed a negative growth rate (-37.87%). During this period, growth of borrowings in BRKGB was highest (6.79%).

The consistency of growth of borrowings of RRBs was higher in Rajasthan in pre-amalgamation period (CV=11.18) than in India (CV=11.33) and also in phase II as it was having only 3.28 percent of variation as compared to India (CV = 19.47). But during phase I of amalgamation coefficient of variation was very high in Rajasthan (CV=65.75). The consistency of growth of borrowings in RRBs was highest in BCKGB (CV=10.37) and lowest in SKGB (CV=56.15) during pre-amalgamation period. It was highest in HKGB (CV=54.45) and lowest in MAGB (CV= 156.01) during phase I of amalgamation and remained highest in MGB (CV = 2.52) and lowest in MAGB (CV = 33.04) again during phase II of amalgamation.

Thus, RRBs sponsored by SBBJ performed comparatively better during post-amalgamation period.

#### **4.6.4 Growth of Loans and Advances (o/s)**

Advancing of loans is the most important function of Regional Rural Banks as these banks were established to cater to the credit needs of rural sector of the country. Table 4.4 [A] and 4.4 [B] present the growth of outstanding advances of individual RRBs in Rajasthan during pre and post-amalgamation periods respectively. Tables reveal that total advances of RRBs in Rajasthan increased from Rs. 96608.93 lakhs in 2000-01 to Rs. 209088.75 lakhs in 2004-05, Rs. 800667.72 lakhs in 2011-12 and further to Rs. 1035343.24 lakhs in 2013-14. While in India, total advances increased from Rs. 1581630.00 lakhs in 2000-01 to Rs. 3287002.91 lakhs in 2004-05, to Rs. 11638496.62 lakhs in 2011-12 and further to Rs. 15940658.11 lakhs in 2013-14. Among all RRBs of Rajasthan ABAGB had largest amount of total advances (Rs. 27271.73 lakhs) in 2004-05 followed by MGB (Rs. 26378.04 lakhs) while BKGB (Rs. 3702.86 lakhs) was at the lowest position. In 2011-12, RGB was at the top with Rs. 231086.84 lakhs of total amount of outstanding advances followed

by BRGB (Rs. 193663.97 lakhs) and MGBGB (Rs. 185263.32 lakhs). MAGB was at the lowest position with Rs. 20418.97 lakhs of total amount of loans and advances outstanding as it was yet a standalone RRB. In 2013-14, BRKGB was at the top position with a total amount of outstanding advances of Rs. 628050.00 lakhs while MAGB secured the last position (Rs. 28005.30 lakhs).

Tables also reveal that growth rate of outstanding advances of RRBs in Rajasthan was higher during pre-amalgamation period (20.64%) and phase I of post-amalgamation period (20.20%) than those at all India level during both the periods (19.73% and 19.51% respectively) but during phase II it remained lower (11.74%) than the national average (16.29%). Growth rate of loans and advances was highest in TAGB (35.28%) followed by SKGB (33.25%), ABAGB (27.26%) and HKGB (25.87%), during pre-amalgamation period. 7 out of 14 RRBs in Rajasthan showed a higher rate of growth of advances than the national level and state level growth rates. MAGB showed lowest growth rate of advances during this period. During phase I of amalgamation MAGB showed the highest rate of growth of advances (23.00%) followed by RGB (22.84%) and MGBGB (21.49%). JTGB showed lowest growth of advances during this period. During phase II of amalgamation also, MAGB showed highest rate of growth of advances (13.08%) followed by MGB (12.89%). BRKGB showed lowest rate of growth of advances during this period.

During pre-amalgamation period and phase I of amalgamation, the growth of outstanding advances of RRBs in India was more consistent (CV = 28.89 and 37.70 respectively) than in Rajasthan (CV = 30.53 and 38.88% respectively) while it was less consistent in India (CV = 10.65) than in Rajasthan (CV = 7.84) during phase II of amalgamation. The consistency of growth of advances was highest in MAGB (CV = 13.17) and lowest in TAGB (CV = 46.41) during pre- amalgamation period. While it was highest in JTGB (CV = 28.58) and lowest in RGB (CV = 48.16) during phase I. It shows that TAGB has improved its level of consistency of growth of advances after amalgamation. During phase II, this consistency was highest in BRKGB (CV = 7.37) and lowest in MAGB (CV = 8.68). Thus, growth of outstanding advances of RRBs in Rajasthan was most consistent during phase II of amalgamation and least during phase I of the process of amalgamation.

**Table 4.4 (A): Growth of Loans & Advances (o/s) in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Rs. in lakhs)

S.No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	10146.94	13298.89	16211.28	20518.24	27271.73	27.26	38.14
2	SGB(PNB)	9741.12	11437.29	12850.07	15537.44	21946.21	21.30	33.36
3	JNAGB(UCO)	10662.90	11480.40	14396.71	16701.78	23961.97	22.07	34.54
4	TAGB (UCO)	4163.16	5012.22	7819.11	10055.31	13316.38	35.28	46.41
5	AKGB (BOB)	5372.34	6398.23	8442.02	9494.98	12056.07	22.28	31.52
6	BAKGB (BOB)	8117.46	9599.33	11517.77	12535.02	14501.46	15.34	22.14
7	BCKGB (BOB)	7293.64	8144.52	9097.48	10219.43	13185.72	15.16	23.86
8	DBKGB (BOB)	3587.25	4076.36	4422.37	4506.98	5565.54	10.28	16.47
9	MKGB( BOB)	3428.95	4588.48	5056.08	5422.94	6153.40	14.30	20.60
10	BKGB (SBBJ)	2100.37	2096.79	2538.24	2830.90	3702.86	15.42	25.01
11	MGB(SBBJ)	14854.94	16567.41	17824.16	19778.60	26378.04	14.17	23.36
12	SKGB (SBBJ)	4270.82	5672.13	7782.80	9818.09	13636.68	33.25	44.68
13	MAGB(ICICI)	4496.16	5641.95	6408.82	6115.78	6136.73	7.28	13.17
14	HKGB (CBI)	8372.88	9867.00	13330.93	15249.80	21275.96	25.87	37.25
15	All RRBs in Rajasthan	96608.93	113881.00	137697.84	158785.29	209088.75	20.64	30.53
16	All RRBs in India	1581630.00	1862922.47	2215784.83	2611385.86	3287002.91	19.73	28.89

**Table 4.4 (B): Growth of Loans & Advances (o/s) in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Rs. in lakhs)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	61281.55	77707.46	104552.16	102752.99	114843.86	180292.88	231086.84	22.84	48.16
2	BRGB (BOB)	48648.48	57102.45	67215.96	75084.59	88343.93	101168.90	108188.97	14.60	28.58
3	HKGB (CBI)	60769.00	83029.00	104987.00	117931.21	139627.43	167899.07	193663.97	20.28	37.69
4	JTGB (UCO)	57660.42	75639.16	94313.83	112190.77	143337.29	162645.36	185263.32	21.49	39.49
5	MGBGB (SBBJ)	6360.54	6930.52	9083.34	11541.36	14713.94	17168.42	20418.97	23.00	43.28
6	MAGB (ICICI)	23306.48	27661.48	34560.14	34295.84	44587.36	58581.48	62045.65	18.25	36.72
7	All RRBs in Rajasthan	258026.47	328070.07	414712.43	453796.76	545453.81	687756.11	800667.72	20.20	38.88
8	All RRBs in India	3971257.21	4849259.39	5898426.61	6780209.62	8281910.28	9891743.10	11638496.62	19.51	37.70

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	565837.96	628050	10.99	7.37
2	MGB (SBBJ)	335974.48	379287.94	12.89	8.56
3	MAGB (ICICI)	24766.80	28005.30	13.08	8.68
4	All RRBs in Rajasthan	926579.24	1035343.24	11.74	7.84
5	All RRBs in India	13707758.99	15940658.11	16.29	10.65

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

#### **4.6.5 Growth of Investments**

Investments of Regional Rural Banks include balances in current accounts of banks other than RBI and deposit accounts of banks including money at call and other investments by them in government approved securities and other securities like debentures and bonds of different companies. Table 4.5 [A] and 4.5 [B] show the growth of investments of RRBs in Rajasthan during pre and post-amalgamation periods. Tables reveal that total investments of RRBs in Rajasthan were Rs. 158470.61 lakhs in 2000-01 which increased to Rs. 201545.00 lakhs in 2004-05 registering an annual growth of 6.92 percent. Further they increased to Rs. 595041.01 lakhs in 2011-12 and to Rs. 723940.86 lakhs in 2013-14 showing an annual growth rate of 20.10 percent and 6.30 percent during phase I and phase II of post-amalgamation periods respectively. In India, total amount of investments was Rs. 2754600.00 lakhs in 2000-01, which increased to Rs. 3676200.00 lakhs in 2004-05 further to Rs. 10809083.06 lakhs in 2011-12 and to Rs. 14626061.83 lakhs in 2013-14. Rate of growth of investments at all India level was higher than at Rajasthan level during pre-amalgamation period (7.73%) and phase II of amalgamation (16.17%). But during phase I of amalgamation it was higher in Rajasthan. Tables further reveal that among all RRBs of Rajasthan, JNAGB had a largest amount of investments (Rs. 40002.00 lakhs) in 2004-05 followed by MGB (Rs. 38925.00 lakhs) and SGB (Rs. 25093.00 lakhs). BKGB was having a smallest amount of investments (Rs. 1670.00 lakhs) during that year. In 2011-12, RGB had largest amount of total investments (Rs. 142123.01 lakhs) followed by JTGB (Rs. 141036.15 lakhs) and BRGB (Rs. 125347.67 lakhs) while MAGB had the smallest amount (Rs. 41102.34 lakhs) of total investments among all 6 RRBs in Rajasthan during that year. In 2013-14, BRKGB secured the top position with Rs. 395332.18 lakhs of total investments while MAGB had the least investments during that year (Rs. 35877.62 lakhs).

Growth rate of investments was highest in MKGB (22.25%) followed by AKGB (16.85%) while two RRBs, BKGB (-5.34%) and SKGB (-0.12%) showed the declining trend during pre-amalgamation period. During phase I of amalgamation, RGB secured the highest rate of growth of investments (26.24%) while MGBGB showed the lowest rate of growth among all 6 RRBs in Rajasthan during that period.

**Table 4.5 (A): Growth of Investments in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Rs. in lakhs)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	11063.00	12612.12	14608.56	15253.00	14619.00	7.76	12.81
2	SGB(PNB)	21778.38	25717.67	27764.41	29327.00	25093.00	4.23	11.06
3	JNAGB(UCO)	30849.27	33396.08	34672.27	38283.21	40002.00	6.78	10.44
4	TAGB (UCO)	6575.93	7544.20	8194.53	9548.00	8437.00	7.62	13.65
5	AKGB (BOB)	5671.16	5728.96	6990.87	9233.55	9733.00	16.85	25.68
6	BAKGB (BOB)	7091.32	7952.74	8526.33	9511.20	9114.00	7.05	11.34
7	BCKGB (BOB)	7253.74	7377.94	8433.86	9254.03	8485.00	5.55	10.27
8	DBKGB (BOB)	4296.56	4524.97	5550.21	7022.44	6543.00	13.66	21.49
9	MKGB( BOB)	3232.69	3338.91	5310.03	7019.00	6088.00	22.25	33.54
10	BKGB (SBBJ)	1999.27	2188.93	1902.67	1813.00	1670.00	-5.34	10.20
11	MGB(SBBJ)	32791.36	36204.03	38229.75	39942.00	38925.00	4.51	7.60
12	SKGB (SBBJ)	4444.09	4352.86	4184.40	4489.00	4349.00	-0.12	2.68
13	MAGB(ICICI)	11565.01	11896.37	11580.44	14631.00	15227.00	7.86	13.84
14	HKGB (CBI)	9858.83	11328.15	9789.14	14909.00	13260.00	9.06	18.82
15	All RRBs in Rajasthan	158470.61	174163.93	185737.47	210235.23	201545.00	6.92	11.17
16	All RRBs in India	2754600.00	3053173.75	3306341.60	3609500.00	3676200.00	7.73	11.75

**Table 4.5 (B): Growth of Investments in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Rs. in lakhs)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	44427.73	48176.71	40789.72	87831.48	114184.03	131448.25	142123.01	26.24	49.68
2	BRGB (BOB)	50863.28	58844.36	62550.93	95538.79	88975.57	125835.78	141036.15	19.26	38.80
3	HKGB (CBI)	48559.83	45569.68	58048.62	104115.79	111336.55	107976.89	125347.67	20.50	39.27
4	JTGB (UCO)	47920.37	47839.92	51427.41	72301.82	79028.18	93083.00	95307.82	14.63	29.82
5	MGBGB (SBBJ)	16668.48	20135.53	21023.08	25968.65	29846.55	31413.94	41102.34	15.14	31.31
6	MAGB (ICICI)	16990.07	17629.15	18690.02	34662.40	42502.24	41515.22	50124.02	22.93	43.53
7	All RRBs in Rajasthan	225429.76	238195.35	252529.78	420418.93	465873.12	531273.08	595041.01	20.10	38.86
8	All RRBs in India	4118244.73	4566613.86	5250353.65	6984865.55	8639113.85	9935966.13	10809083.06	19.33	37.19

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	343829.94	395332.18	14.98	9.85
2	MGB (SBBJ)	301062.84	292731.06	-2.77	1.98
3	MAGB (ICICI)	36157.00	35877.62	-0.77	0.55
4	All RRBs in Rajasthan	681049.78	723940.86	6.30	4.32
5	All RRBs in India	12590305.65	14626061.83	16.17	10.58

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

During phase II, BRKGB showed highest rate of growth of investments (14.98%) while other 2 RRBs showed negative growth rates [MGB (-2.77%) and MAGB (0.77%)].

During pre-amalgamation period, growth of investments was more consistent at Rajasthan level (CV=11.17) than in India (CV=11.75). Among all RRBs in Rajasthan growth of investments was most consistent in SKGB (CV= 2.68) and least in MKGB (CV=33.54). During post-amalgamation period phase I, growth of investments was more consistent at India level (CV=37.19) than Rajasthan (CV= 38.86). Among all 6 RRBs, growth of investments was most consistent in MGBGB (CV=29.82) and least in RGB (CV=49.68) while during phase II it was most consistent in MAGB (CV= 0.55) and least in BRKGB (CV= 9.85). Further, growth was more consistent at Rajasthan level (CV=4.32) than at all India level (CV=10.58) during phase II. Thus, growth of investments of RRBs in Rajasthan was most consistent during phase II of amalgamation and least during phase I of amalgamation process.

#### **4.7 Profitability Analysis**

The profitability of RRBs in Rajasthan has been analyzed on the basis of various profitability ratios such as financial return, financial cost, financial margin, operating cost, miscellaneous income, gross margin, net margin and risk cost. Table 4.6 [A] and 4.6 [B] show the growth of financial return, financial cost and financial margin ratios of RRBs in Rajasthan and Table 4.7 [A] and 4.7 [B] show the growth of operating cost and miscellaneous income ratios. Table 4.8 [A] and 4.8 [B] show gross margin, net margin and risk cost ratios of RRBs in Rajasthan along with their growth pattern during pre and post-amalgamation periods.

##### **4.7.1 Growth of Financial Return, Financial Cost and Financial Margin**

Table 4.6 [A] and 4.6 [B] show that financial return of RRBs in Rajasthan decreased from 10.12 percent in 2000-01 to 7.75 percent in 2006-07 but they increased thereafter during post-amalgamation period phase I. They remained very low (4.79%) in 2012-13 but again increased to 8.61 percent in 2013-14. The same trend has been found at all India level too. The RRBs in Rajasthan were having

higher percentage of financial return during phase I of amalgamation. Growth rate of financial return of RRBs was negative in pre-amalgamation period but became positive during both the phases of amalgamation at both Rajasthan level and at all India level. In Rajasthan, growth rate remained higher than those at all India level during all three periods. Financial return was highest in BKGB (10.29%) and lowest in DBKGB (7.05%) in 2004-05. In 2011-12, it was highest in MGBGB (9.21%) and lowest in HKGB (8.08%). In 2013-14, it was highest in MAGB (9.34%).

During pre-amalgamation period, growth rate of financial return remained positive only in ABAGB (1.27%) but during phase-I of amalgamation it was positive in respect of all RRBs in Rajasthan except HKGB (-0.10%). It was highest in BRGB (4.88%) during this period. During phase II of amalgamation, growth rate was exceptionally high in BRKGB (330.88%) but remained negative in other two RRBs (i.e. MGB and MAGB).

Growth of financial return was more consistent in RRBs in Rajasthan (CV=8.82%) than in India (CV=11.76) during pre-amalgamation period but it was less consistent during both the phases of post-amalgamation period. Consistency was highest in ABAGB (CV=3.21) during pre-amalgamation period, in JTGB (CV=2.94) during phase I and in MAGB (CV=1.65) during phase II of amalgamation.

Table 4.6 [A] and 4.6 [B] further reveal that financial cost of RRBs in Rajasthan decreased from 7.38% percent in 2000-01 to 4.43 percent in 2004-05. It fluctuated during amalgamation period and remained 5.41 percent in 2013-14. In India also financial cost decreased from 6.98 percent in 2000-01 to 4.59 percent in 2004-05 and after fluctuating during post-amalgamation period it remained 5.45 percent in 2013-14. Growth rate of financial cost was positive and higher in RRBs in Rajasthan than those at all India level during both the phases of amalgamation period. Financial cost was highest in BKGB (6.91 percent) and lowest in ABAGB (3.99%) in 2004-05. In 2011-12, it was highest in MGBGB. (6.13%) and lowest in HKGB (4.63%) and in 2013-14, it was highest in MGB (5.35%)

**Table 4.6 (A): Profitability Analysis of RRBs in Rajasthan: Financial Return, Financial Cost and Financial Margin  
(Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	Financial Return	8.94	8.98	9.18	9.68	9.17	1.27	3.21
		Financial Cost	5.53	5.58	5.47	4.72	3.99	-7.87	13.70
		Financial Margin	3.41	3.40	3.70	4.96	5.18	12.91	21.07
2	SGB(PNB)	Financial Return	9.75	9.12	8.44	8.60	8.82	-2.56	5.78
		Financial Cost	6.59	6.29	6.07	5.89	4.58	-7.63	13.16
		Financial Margin	3.16	2.82	2.37	2.71	4.24	5.63	23.44
3	JNAGB(UCO)	Financial Return	10.84	10.20	9.84	8.39	7.60	-8.66	14.28
		Financial Cost	7.24	6.67	6.02	5.29	4.01	-13.18	21.52
		Financial Margin	3.60	3.53	3.82	3.10	3.59	-1.35	7.47
4	TAGB (UCO)	Financial Return	9.83	9.57	8.58	9.46	8.56	-2.84	6.42
		Financial Cost	7.08	6.84	5.57	6.07	4.38	-10.24	18.07
		Financial Margin	2.75	2.73	3.01	3.39	4.18	11.11	18.78
5	AKGB (BOB)	Financial Return	9.20	8.87	9.10	8.91	7.18	-4.79	9.64
		Financial Cost	8.33	7.55	6.28	6.08	4.38	-13.95	23.21
		Financial Margin	0.87	1.31	2.82	2.83	2.80	36.45	45.08
6	BAKGB (BOB)	Financial Return	10.11	10.27	9.06	9.38	8.89	-3.42	6.49
		Financial Cost	6.38	6.10	6.39	5.35	4.38	-8.46	15.04
		Financial Margin	3.73	4.17	2.67	4.03	4.51	3.52	18.38
7	BCKGB (BOB)	Financial Return	10.06	10.35	9.43	9.55	8.13	-4.94	8.99
		Financial Cost	7.22	7.13	6.24	5.73	4.39	-11.43	18.89
		Financial Margin	2.84	3.22	3.19	3.82	3.74	7.48	12.22
8	DBKGB (BOB)	Financial Return	8.98	9.62	9.19	8.13	7.05	-6.31	11.86
		Financial Cost	6.47	6.70	6.16	5.75	4.32	-9.16	16.02
		Financial Margin	2.51	2.92	3.03	2.33	2.73	-0.58	10.64

Contd...

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB(BOB)	Financial Return	9.81	9.71	8.56	8.46	8.35	-4.50	8.00
		Financial Cost	10.33	9.57	8.37	8.37	6.85	-9.11	15.27
		Financial Margin	-0.52	0.14	0.19	0.09	1.50	-	264.39
10	BKGB (SBBJ)	Financial Return	10.39	10.78	9.70	8.52	10.29	-2.51	8.87
		Financial Cost	7.77	7.47	7.46	6.42	6.91	-3.79	7.47
		Financial Margin	2.62	3.31	2.24	2.10	3.38	0.55	21.73
11	MGB(SBBJ)	Financial Return	10.57	10.42	10.27	10.86	9.15	-2.44	6.38
		Financial Cost	8.39	7.71	7.28	6.99	5.33	-9.57	15.98
		Financial Margin	2.18	2.71	2.99	3.87	3.82	15.93	23.38
12	SKGB (SBBJ)	Financial Return	10.83	10.49	9.62	9.88	9.94	-2.29	4.87
		Financial Cost	7.00	7.08	6.40	6.50	5.38	-5.94	10.50
		Financial Margin	3.83	3.41	3.22	3.38	4.56	3.46	14.71
13	MAGB(ICICI)	Financial Return	10.49	10.61	9.77	9.07	7.96	-6.84	11.45
		Financial Cost	8.79	8.54	7.06	6.41	5.15	-12.68	21.06
		Financial Margin	1.70	2.07	2.71	2.66	2.81	13.38	20.18
14	HKGB (CBI)	Financial Return	10.00	9.72	8.90	8.95	7.59	-6.14	10.38
		Financial Cost	7.22	6.96	6.37	5.75	4.27	-11.67	19.24
		Financial Margin	2.78	2.76	2.53	3.20	3.32	5.16	11.31
15	All RRBs in Rajasthan	Financial Return	10.12	9.90	9.38	9.33	8.00	-5.16	8.82
		Financial Cost	7.38	7.00	6.38	6.01	4.43	-11.07	18.32
		Financial Margin	2.74	2.90	3.00	3.32	3.57	6.87	10.78
16	All RRBs in India	Financial Return	10.89	10.55	9.62	8.83	8.20	-7.18	11.76
		Financial Cost	6.98	6.74	6.14	5.36	4.59	-10.12	16.60
		Financial Margin	3.91	3.81	3.48	3.47	3.61	-2.50	5.40

**Table 4.6 (B): Profitability Analysis of RRBs in Rajasthan: Financial Return, Financial Cost and Financial Margin  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Figures in percent)

S.No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Financial Return	8.29	7.89	8.37	8.12	8.05	8.33	8.93	1.05	4.02
		Financial Cost	3.87	3.54	4.32	4.24	4.72	4.57	5.34	5.75	13.41
		Financial Margin	4.42	4.35	4.06	3.88	3.32	3.77	3.59	-3.89	10.15
2	JTGB (UCO)	Financial Return	8.29	8.06	8.53	8.77	8.74	8.47	8.57	0.80	2.94
		Financial Cost	3.94	3.96	4.57	4.90	4.97	4.71	5.19	4.59	10.61
		Financial Margin	4.35	4.09	3.96	3.87	3.77	3.75	3.38	-3.44	7.80
3	BRGB (BOB)	Financial Return	6.34	7.25	8.37	8.80	8.49	8.50	8.85	4.88	11.58
		Financial Cost	3.64	3.91	4.88	5.37	5.28	4.74	5.43	6.12	15.09
		Financial Margin	2.69	3.34	3.49	3.42	3.21	3.75	3.42	3.15	9.82
4	MGBGB (SBBJ)	Financial Return	8.94	8.06	8.15	8.61	8.62	8.90	9.21	1.23	4.86
		Financial Cost	4.89	4.63	4.89	5.95	5.68	5.55	6.13	4.34	10.84
		Financial Margin	4.05	3.43	3.27	2.67	2.94	3.35	3.09	-3.39	13.39
5	MAGB (ICICI)	Financial Return	7.47	7.43	7.57	8.44	8.19	7.68	8.74	2.22	6.59
		Financial Cost	4.69	4.39	4.72	5.17	5.34	4.70	5.10	1.84	6.90
		Financial Margin	2.78	3.04	2.84	3.27	2.85	2.98	3.64	2.80	9.98
6	HKGB (CBI)	Financial Return	8.17	7.53	7.78	7.78	7.41	7.74	8.08	-0.10	3.49
		Financial Cost	4.24	3.95	4.20	4.31	4.82	4.46	4.63	2.33	6.63
		Financial Margin	3.94	3.58	3.58	3.47	2.59	3.28	3.45	-3.15	12.16
7	All RRBs in Rajasthan	Financial Return	7.87	7.75	8.27	8.50	8.37	8.45	8.83	1.91	4.50
		Financial Cost	4.11	4.01	4.64	5.06	5.16	4.85	5.44	4.86	11.26
		Financial Margin	3.76	3.74	3.62	3.44	3.21	3.59	3.39	-1.81	5.64
8	All RRBs in India	Financial Return	7.74	7.65	8.12	8.12	8.27	8.05	8.70	1.70	4.29
		Financial Cost	4.13	3.99	4.42	4.68	4.71	4.56	5.17	3.65	8.70
		Financial Margin	3.61	3.66	3.70	3.44	3.56	3.50	3.53	-0.69	2.56

Contd...

**Phase II**

S.No.	RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Financial Return	2.04	8.79	330.88	88.14
		Financial Cost	1.44	5.45	278.47	82.31
		Financial Margin	0.60	3.35	458.33	98.46
2	MGB (SBBJ)	Financial Return	8.53	8.29	-2.81	2.02
		Financial Cost	5.45	5.35	-1.83	1.31
		Financial Margin	3.08	2.94	-4.55	3.29
3	MAGB (ICICI)	Financial Return	9.56	9.34	-2.30	1.65
		Financial Cost	5.80	5.40	-6.90	5.05
		Financial Margin	3.76	3.94	4.79	3.31
4	All RRBs in Rajasthan	Financial Return	4.79	8.61	79.75	40.32
		Financial Cost	3.13	5.41	72.84	37.76
		Financial Margin	1.66	3.21	93.37	45.01
5	All RRBs in India	Financial Return	7.99	8.91	11.51	7.70
		Financial Cost	4.82	5.45	13.07	8.68
		Financial Margin	3.17	3.46	9.15	6.19

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

During pre-amalgamation period, growth rate of financial cost was negative in respect of all 14 RRBs. But during phase I of amalgamation it was positive in respect of all RRBs in Rajasthan and was highest in BRGB (6.12%) and lowest in MAGB (1.84%). During phase II, growth rate of financial cost was positive and exceptionally high in BRKGB (278.47%). It remained negative in other two RRBs.

Growth of financial cost was less consistent in RRBs in Rajasthan (CV=18.32, 11.26 and 37.76) than in India (CV=16.60, 8.70 and 8.68) during all three periods respectively. Consistency was highest in BKGB (CV=7.47) during pre-amalgamation period, in HKGB (CV=6.63) during phase I and in MGB (CV=1.31) during phase II of amalgamation.

Table 4.6 [A] and 4.6 [B] also bring out that the financial margin of RRBs in Rajasthan increased from 2.74 percent in 2000-01 to 3.76 percent in 2005-06 but it decreased thereafter throughout the amalgamation period and remained 3.21 percent in 2013-14. At all India level financial margins decreased from 3.91 percent in 2000-01 to 3.61 percent in 2004-05 and further to 3.46 percent in 2013-14. Financial margin of RRBs in Rajasthan remained lower than the financial margin of RRBs at all India level throughout the period of study except in 2005-06, 2006-07 and 2010-11. Growth rate of financial margin was higher in RRBs in Rajasthan than in India during pre-amalgamation period and phase I of amalgamation. Financial margin was highest in ABAGB (5.18%) and lowest in MKGB (1.50%) in 2004-05. In 2011-12, it was highest in MAGB (3.64) and lowest in MGBGB (3.09%). In 2013-14, it was highest in MAGB (3.94%) and lowest in MGB (2.94%). Growth rate of financial margin was positive in most of the RRBs during pre-amalgamation period. AKGB secured highest growth rate of financial margin (36.45%). During post-amalgamation period phase I, only 2 RRBs, BRGB (3.15%) and MAGB (2.80%) secured positive growth rates of financial margin. During phase II, growth rate was extremely high in BRKGB (458.33%) but negative in MGB (-2.30%)

Growth of financial margin of RRBs was more consistent at all India level (CV=5.40, 2.56 and 6.19) than all Rajasthan level (CV= 10.78, 5.64 and 45.01) during all three periods respectively. Consistency was highest in JNAGB (CV=7.47)

during pre-amalgamation period, in JTGB (CV= 7.80) during phase I and in MGB (CV=3.29) during phase II of amalgamation.

#### **4.7.2 Growth of Operating Cost and Miscellaneous Income**

Table 4.7[A] and 4.7[B] show that operating costs of RRBs in Rajasthan increased from 2.56 percent in 2000-01 to 2.70 percent in 2004-05 but during post-amalgamation period it decreased to 2.32 percent in 2013-14. At all India level operating costs increased from 2.74 percent in 2000-01 to 2.98 in 2005-06 but it decreased continuously thereafter and remained 2.35 percent in 2013-14. Operating cost of RRBs remained lower in Rajasthan than in India during most of the years. Growth rates of operating costs were higher in Rajasthan during all three periods of study. Operating cost was highest in MKGB(5.05%) and lowest in BAKGB (2.12%) in 2004-05. In 2011-12, it was highest in MAGB (3.33%) and lowest in MGBGB (2.16%). In 2013-14, operating cost was highest in MAGB (3.67%)

Growth rate of operating cost was highest negative in BAKGB (-8.03%) and highest positive in BCKGB (7.70%) during pre-amalgamation period. During phase I of amalgamation, all 6 RRBs showed negative growth rates of operating costs. MGBGB (-4.21%) showed highest negative growth rate. Growth rate was negative in MGB (-10.93) during phase II.

Growth or decrease of operating cost was less consistent in Rajasthan (CV= 6.87 and 47.14) than in India (CV= 3.66 and 4.66) during pre-amalgamation period and phase II of amalgamation respectively. Consistency was highest in ABAGB (CV = 5.66) during pre-amalgamation period, in BRGB (CV = 9.67) during phase I and in MAGB (CV =8.15) during phase II of amalgamation.

Tables 4.7[A] and 4.7[B] further reveal that miscellaneous income of RRBs in Rajasthan increased from 0.54 percent in 2000-01 to 0.68 percent in 2004-05 but decreased to 0.50 percent in 2011-12 and further increased to 0.60 percent in 2013-14. At all India level, miscellaneous income increased from 0.55 percent in 2000-01 to 0.67 percent in 2004-05 but decreased to 0.51 percent in 2011-12 and remained 2.53 percent in 2013-14. Growth rates of miscellaneous income were higher in Rajasthan than in India during pre-amalgamation period and Phase II of amalgamation.

**Table 4.7 (A): Profitability Analysis of RRBs in Rajasthan: Operating Cost and Miscellaneous Income (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRB	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB (PNB)	Operating Cost	2.47	2.84	2.57	2.69	2.78	1.84	5.66
		Miscellaneous Income	0.82	2.13	1.98	1.77	0.14	-31.07	62.51
2	SGB (PNB)	Operating Cost	2.25	2.60	2.46	2.91	2.89	6.32	10.79
		Miscellaneous Income	1.19	1.97	2.82	4.26	1.69	15.87	50.42
3	JNAGB (UCO)	Operating Cost	2.51	2.84	2.89	3.08	2.81	3.12	7.27
		Miscellaneous Income	0.30	0.39	0.30	0.28	0.44	4.44	20.30
4	TAGB (UCO)	Operating Cost	3.21	2.86	3.66	3.08	2.64	-3.12	12.48
		Miscellaneous Income	0.61	0.81	0.75	0.53	0.45	-9.81	23.76
5	AKGB (BOB)	Operating Cost	4.54	2.43	4.16	3.72	3.02	-3.82	23.88
		Miscellaneous Income	0.52	0.84	1.38	1.77	0.66	13.00	50.79
6	BAKGB (BOB)	Operating Cost	2.46	3.31	2.02	1.93	2.12	-8.03	23.80
		Miscellaneous Income	0.47	0.49	0.39	0.41	0.42	-3.95	9.68
7	BCKGB (BOB)	Operating Cost	2.49	3.00	3.24	3.32	3.43	7.70	12.07
		Miscellaneous Income	0.30	0.40	0.38	0.79	0.64	24.56	40.83
8	DBKGB (BOB)	Operating Cost	2.79	3.41	3.51	3.20	3.00	0.82	9.25
		Miscellaneous Income	5.96	0.77	0.56	1.29	0.79	-29.71	122.72

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S. No.	RRB	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB (BOB)	Operating Cost	5.65	4.62	6.02	5.44	5.05	-0.61	10.10
		Miscellaneous Income	0.28	0.51	0.3	0.46	0.69	18.54	37.46
10	BKGB (SBBJ)	Operating Cost	2.88	3.38	4.42	3.42	3.91	6.43	16.23
		Miscellaneous Income	0.64	0.69	0.36	0.37	0.67	-5.18	30.44
11	MGB (SBBJ)	Operating Cost	1.89	2.20	2.38	2.48	2.43	6.42	10.56
		Miscellaneous Income	0.25	0.43	0.34	0.49	0.47	14.95	25.23
12	SKGB (SBBJ)	Operating Cost	2.59	3.00	2.81	2.64	2.52	-1.81	7.13
		Miscellaneous Income	0.51	0.52	0.40	0.68	0.55	4.28	18.86
13	MAGB (ICICI)	Operating Cost	2.49	2.51	2.88	3.02	2.99	5.66	9.33
		Miscellaneous Income	0.57	0.51	0.52	0.77	0.89	13.92	25.99
14	HKGB (CBI)	Operating Cost	2.49	2.83	2.87	3.63	2.60	3.41	15.46
		Miscellaneous Income	0.64	0.53	0.54	1.32	0.81	14.84	42.77
15	All RRBs in Rajasthan	Operating Cost	2.56	2.77	2.91	3.06	2.70	2.08	6.87
		Miscellaneous Income	0.54	0.84	0.89	1.25	0.68	8.96	31.84
16	All RRBs in India	Operating Cost	2.74	2.98	2.98	2.88	2.81	0.16	3.66
		Miscellaneous Income	0.55	0.75	0.76	1.13	0.67	8.38	28.12

**Table 4.7 (B): Profitability Analysis of RRBs in Rajasthan: Operating Cost and Miscellaneous Income  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Figures in percent)

S. No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Operating Cost	2.77	2.93	2.90	3.21	2.22	2.77	2.33	-3.16	12.70
		Miscellaneous Income	0.69	0.64	0.56	0.31	0.36	0.45	0.31	-11.90	33.22
2	JTGB (UCO)	Operating Cost	2.92	3.00	2.57	2.78	3.35	3.10	2.38	-1.00	11.38
		Miscellaneous Income	0.60	0.52	0.56	0.51	0.49	0.48	0.38	-5.77	13.69
3	BRGB (BOB)	Operating Cost	2.71	2.97	2.90	2.45	2.23	2.76	2.61	-1.85	9.67
		Miscellaneous Income	0.53	0.73	0.85	0.80	0.57	0.57	0.65	-1.00	18.53
4	MGBGB (SBBJ)	Operating Cost	2.53	2.63	2.42	2.48	1.92	2.05	2.16	-4.21	11.63
		Miscellaneous Income	0.52	0.63	0.60	0.63	0.64	0.46	0.69	1.02	13.25
5	MAGB (ICICI)	Operating Cost	3.45	3.96	2.76	2.92	2.53	2.93	3.33	-2.80	15.52
		Miscellaneous Income	0.52	0.59	0.54	0.97	0.64	0.47	0.35	-5.12	33.29
6	HKGB (CBI)	Operating Cost	2.94	2.64	2.49	2.36	1.94	3.20	2.55	-1.04	15.65
		Miscellaneous Income	0.88	0.77	0.79	0.76	0.62	0.52	0.49	-9.46	21.43
7	All RRBs in Rajasthan	Operating Cost	2.78	2.91	2.68	2.67	2.35	2.71	2.42	-2.43	7.44
		Miscellaneous Income	0.59	0.64	0.65	0.60	0.53	0.49	0.50	-4.31	11.41
8	All RRBs in India	Operating Cost	2.98	2.91	2.59	2.43	2.37	2.60	2.53	-2.83	8.79
		Miscellaneous Income	0.55	0.58	0.62	0.62	0.57	0.53	0.51	-1.74	7.42

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**Phase II**

S. No.	RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Operating Cost	0.51	2.32	354.90	90.45
		Miscellaneous Income	0.09	0.51	466.67	98.99
2	MGB (SBBJ)	Operating Cost	2.47	2.20	-10.93	8.18
		Miscellaneous Income	0.61	0.75	22.95	14.56
3	MAGB (ICICI)	Operating Cost	3.27	3.67	12.23	8.15
		Miscellaneous Income	0.31	0.41	32.26	19.64
4	All RRBs in Rajasthan	Operating Cost	1.36	2.32	70.59	36.89
		Miscellaneous Income	0.30	0.60	100.00	47.14
5	All RRBs in India	Operating Cost	2.20	2.35	6.82	4.66
		Miscellaneous Income	0.51	0.53	3.92	2.72

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

But during phase I it was negative both at Rajasthan and all India level. Miscellaneous income was highest in SGB (1.69%) and lowest in ABAGB (0.14) in 2004-05. In 2011-12, it was highest in MGBGB (0.69%) and lowest in RGB (0.31%). In 2013-14, it was highest in MGB (0.75%) and lowest in MAGB (0.41%). Growth rate of miscellaneous income was highest in BCKGB (24.56%) and lowest in ABAGB (-31.07%) during pre-amalgamation period. 5 RRBs in Rajasthan showed negative growth rates during this period. During phase I of amalgamation growth rate was positive only for MGBGB (1.02%). It was extremely high in BRKGB (466.67%) during phase II.

Growth of miscellaneous income in RRBs was more consistent in India (CV=28.12, 7.42 and 2.72) than in Rajasthan (CV= 31.84, 11.41 and 47.14). Consistency was highest in BAKGB (CV=9.68) during pre-amalgamation period, in JTGB (CV=13.69) during phase I and in MGB (CV=14.56) during phase II of amalgamation.

#### **4.7.3 Growth of Gross Margin, Net Margin and Risk Cost**

The growth of gross margin, net margin and risk cost have been presented in Tables 4.8[A] and 4.8[B]. Tables show that gross margin of RRBs in Rajasthan increased from 0.72 percent in 200-01 to 1.55 percent in 2004-05, further to 2.05 percent in 2011-12 but reduced to 1.49 percent in 2013-14. At all India level gross margin decreased from 1.72 percent in 2000-01 to 1.47 percent in 2004-05, then increased to 1.86 percent in 2010-11 but again reduced to 1.64 percent in 2013-14. Growth rate of gross margin remained higher in RRBs in Rajasthan during pre-amalgamation period and phase II than at all India level but during phase I, it was lower in Rajasthan.

Gross margin was highest in SGB (3.04%) and lowest in MKGB (-2.86%) in 2004-05. In 2011-12, gross margin was highest in MGBGB (1.62%) and lowest in MAGB (0.67%) and in 2013-14, it was highest in BRKGB (1.54%) and lowest in MAGB (0.68%). Growth rate of gross margin was negative in JNAGB (-11.19%) during pre-amalgamation period. It was positive only in BRGB (15.08%) during phase I and exceptionally very high in BRKGB (755.56%) during phase II of amalgamation.

**Table 4.8 (A): Profitability Analysis of RRBs in Rajasthan: Gross Margin, Net Margin and Risk Cost (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	Gross Margin	1.76	2.70	3.12	4.14	2.54	12.31	30.59
		Net Margin	1.76	2.37	2.92	3.72	2.34	10.74	28.16
		Risk Cost	0.00	0.33	0.20	0.32	0.20	--	63.35
2	SGB(PNB)	Gross Margin	2.11	2.19	2.73	4.06	3.04	14.43	27.95
		Net Margin	1.87	2.19	2.65	3.19	1.80	3.04	24.86
		Risk Cost	0.24	0.00	0.08	0.87	1.24	--	111.64
3	JNAGB(UCO)	Gross Margin	1.40	1.07	1.23	0.43	1.22	-11.19	35.17
		Net Margin	1.19	0.86	1.13	0.14	0.85	-22.03	50.05
		Risk Cost	0.21	0.21	0.10	0.29	0.37	15.67	42.75
4	TAGB (UCO)	Gross Margin	0.15	0.66	0.10	0.84	1.99	71.80	102.17
		Net Margin	0.04	0.42	0.10	0.78	1.74	126.25	112.67
		Risk Cost	0.11	0.24	0.00	0.06	0.25	--	83.57
5	AKGB (BOB)	Gross Margin	-3.15	-0.27	0.05	0.88	0.43	--	-385.85
		Net Margin	-4.08	-0.47	0.05	0.88	0.43	--	-311.45
		Risk Cost	0.93	0.20	0.00	0.00	0.00	--	178.30
6	BAKGB (BOB)	Gross Margin	1.74	1.36	1.81	2.51	2.81	17.02	29.11
		Net Margin	1.30	1.36	1.76	2.06	2.40	17.84	26.26
		Risk Cost	0.44	0.00	0.05	0.45	0.41	--	83.27
7	BCKGB (BOB)	Gross Margin	0.65	0.62	0.33	1.29	0.95	16.09	47.54
		Net Margin	0.49	0.40	0.09	0.91	0.89	22.33	62.48
		Risk Cost	0.16	0.22	0.24	0.38	0.06	-13.20	55.25
8	DBKGB (BOB)	Gross Margin	0.31	0.28	0.09	0.42	0.52	15.49	49.89
		Net Margin	0.05	0.10	0.02	0.21	0.10	23.72	75.33
		Risk Cost	0.26	0.18	0.07	0.21	0.42	11.78	56.12

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S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB(BOB)	Gross Margin	-5.89	-3.96	-5.54	-4.89	-2.86	--	-26.61
		Net Margin	-5.89	-3.90	-5.54	-5.49	-2.65	--	-29.34
		Risk Cost	0.00	0.00	0.00	0.60	0.21	--	161.23
10	BKGB (SBBJ)	Gross Margin	0.38	0.63	-1.82	-0.95	0.14	--	-318.18
		Net Margin	0.24	0.63	-2.05	-1.10	0.09	--	-253.10
		Risk Cost	0.14	0.00	0.23	0.15	0.05	--	79.09
11	MGB(SBBJ)	Gross Margin	0.54	0.93	0.93	1.88	1.86	37.40	49.46
		Net Margin	0.49	0.64	0.86	1.18	0.53	7.99	38.50
		Risk Cost	0.05	0.29	0.07	0.70	1.33	110.50	110.34
12	SKGB (SBBJ)	Gross Margin	1.75	0.94	0.81	1.42	2.59	12.71	47.62
		Net Margin	1.56	0.76	0.69	1.12	2.24	11.75	50.32
		Risk Cost	0.19	0.18	0.12	0.30	0.35	18.92	41.31
13	MAGB(ICICI)	Gross Margin	-0.21	0.06	0.35	0.41	0.71	--	133.11
		Net Margin	-0.33	0.01	0.16	0.03	0.39	--	503.39
		Risk Cost	0.12	0.05	0.19	0.38	0.32	49.03	64.62
14	HKGB (CBI)	Gross Margin	0.93	0.46	0.20	0.89	1.53	18.01	63.38
		Net Margin	0.93	0.46	0.18	0.43	1.04	1.57	59.70
		Risk Cost	0.00	0.00	0.02	0.46	0.49	--	132.41
15	All RRBs in Rajasthan	Gross Margin	0.72	0.97	0.98	1.51	1.55	21.85	31.93
		Net Margin	0.55	0.80	0.88	1.10	1.17	20.06	27.54
		Risk Cost	0.17	0.17	0.10	0.41	0.38	28.26	56.66
16	All RRBs in India	Gross Margin	1.72	1.58	1.26	1.72	1.47	-2.27	12.46
		Net Margin	1.42	1.24	0.92	1.23	1.09	-5.23	15.82
		Risk Cost	0.30	0.34	0.34	0.49	0.38	8.74	19.68

**Table 4.8 (B): Profitability Analysis of RRBs in Rajasthan: Gross Margin, Net Margin and Risk Cost  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Figures in percent)

S. No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Gross Margin	2.33	2.05	1.71	0.97	1.47	1.45	1.57	-6.99	26.73
		Net Margin	2.31	1.71	1.03	0.63	1.02	1.01	1.04	-11.61	45.29
		Risk Cost	0.03	0.34	0.68	0.34	0.44	0.44	0.52	36.14	50.19
2	JTGB (UCO)	Gross Margin	1.98	1.61	1.95	1.60	0.92	1.14	1.38	-8.62	26.11
		Net Margin	1.58	1.19	1.58	1.60	0.43	0.69	0.03	-39.96	62.74
		Risk Cost	0.41	0.42	0.37	0.00	0.49	0.44	1.35	--	82.43
3	BRGB (BOB)	Gross Margin	0.51	1.09	1.45	1.79	1.54	1.56	1.46	15.08	31.43
		Net Margin	0.04	0.44	1.09	1.51	0.99	1.01	0.95	48.48	55.51
		Risk Cost	0.47	0.65	0.36	0.28	0.55	0.55	0.52	1.41	26.02
4	MGBGB (SBBJ)	Gross Margin	2.04	1.43	1.45	0.92	1.66	1.76	1.62	-0.50	22.32
		Net Margin	1.15	0.92	0.57	0.62	0.73	0.93	0.94	-1.19	24.57
		Risk Cost	0.89	0.51	0.88	0.30	0.93	0.83	0.68	0.80	32.84
5	MAGB (ICICI)	Gross Margin	-0.14	-0.34	0.62	1.32	0.95	0.52	0.67	--	113.17
		Net Margin	-0.83	0.07	0.20	0.49	0.49	0.22	0.37	--	316.79
		Risk Cost	0.69	-0.41	0.42	0.83	0.46	0.30	0.29	--	107.64
6	HKGB (CBI)	Gross Margin	1.88	1.71	1.88	1.88	1.28	0.60	1.39	-11.39	31.22
		Net Margin	1.61	1.53	1.46	1.41	0.88	0.32	0.64	-20.44	45.12
		Risk Cost	0.27	0.18	0.41	0.47	0.40	0.28	0.75	15.04	47.11
7	All RRBs in Rajasthan	Gross Margin	1.76	1.60	2.17	2.06	1.82	1.89	2.05	2.22	10.42
		Net Margin	1.30	1.18	1.61	1.78	1.23	1.35	1.33	0.24	15.55
		Risk Cost	0.45	0.42	0.56	0.28	0.59	0.54	0.71	7.11	27.22
8	All RRBs in India	Gross Margin	1.18	1.32	1.73	1.63	1.86	1.43	1.52	3.61	15.51
		Net Margin	0.78	0.67	0.95	1.03	1.20	0.91	0.85	4.02	18.88
		Risk Cost	0.39	0.65	0.77	0.61	0.66	0.52	0.66	3.55	19.98

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**Phase II**

S.No.	NAME OF RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Gross Margin	0.18	1.54	755.56	111.82
		Net Margin	0.42	0.85	102.38	47.88
		Risk Cost	-0.24	0.69	--	292.27
2	MGB (SBBJ)	Gross Margin	1.21	1.49	23.14	14.67
		Net Margin	0.65	0.79	21.54	13.75
		Risk Cost	0.56	0.70	25.00	15.71
3	MAGB (ICICI)	Gross Margin	0.80	0.68	-15.00	11.47
		Net Margin	0.49	0.62	26.53	16.56
		Risk Cost	0.30	0.06	-80.00	94.28
4	All RRBs in Rajasthan	Gross Margin	0.59	1.49	152.54	61.19
		Net Margin	0.51	0.82	60.78	32.96
		Risk Cost	0.08	0.67	737.50	111.25
5	All RRBs in India	Gross Margin	1.47	1.64	11.56	7.73
		Net Margin	0.88	0.94	6.82	4.66
		Risk Cost	0.59	0.70	18.64	12.06

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

Growth of gross margin of RRBs was more consistent at all India level (CV=12.46, 7.73) than in Rajasthan (CV= 31.93, 61.19) during pre-amalgamation period and phase I of amalgamation respectively. During phase II, it was more consistent in Rajasthan. Consistency was highest in MKGB (CV=26.61) during pre-amalgamation period, in MGBGB (CV=22.32) during phase I and in MAGB (CV=11.47) during phase II of amalgamation process.

Table 4.8[A] and 4.8 [B] further reveal that net margin of RRBs in Rajasthan increased from 0.55 percent in 2000-01 to 1.17 percent in 2004-05, further to 1.33 percent in 2011-12 but reduced to 0.82 percent in 2013-14. Net margin of RRBs at all India level decreased from 1.42 percent in 2000-01 to 1.09 percent in 2004-05, further to 0.85 percent in 2011-12 then increased to 0.94 percent in 2013-14. Growth rate of net margin of RRBs was positive and higher in Rajasthan during pre-amalgamation period and phase II of amalgamation but it was higher at all India level during phase I.

Net margin was highest in BAKGB (2.40%) and lowest in MKGB (-2.65%) in 2004-05. In 2011-12, it was highest in RGB (1.04%) and lowest in JTGB (0.03%) and in 2013-14, it was highest in BRKGB (0.85%) and lowest in MAGB (0.62%).

Growth of net margin of RRBs was more consistent in India (CV=15.82 and 4.66) than in Rajasthan (CV=27.54, 32.96) during pre-amalgamation period and phase II respectively. But during phase I of amalgamation it was more consistent in Rajasthan. Consistency was highest in SGB (CV=24.86) during pre-amalgamation period, in MGBGB (CV=24.57) during phase I and in MGB (CV=13.75) during phase II of amalgamation.

Tables 4.8 [A] and 4.8 [B] further bring out that risk cost of RRBs in Rajasthan increased from 0.17 percent in 2000-01 to 0.38 percent in 2004-05, further to 0.71 percent in 2011-12 but reduced to 0.67 percent in 2013-14. At all India level, risk cost increased from 0.30 percent in 2000-01 to 0.38 percent in 2004-05, further to 0.66 percent in 2011-12 and to 0.70 percent in 2013-14. Growth rate of risk cost of RRBs remained higher in Rajasthan than at all India level during all three periods. Risk cost was highest in MGB (1.33%) and lowest in AKGB (0%) in 2004-05. In

2011-12, it was highest in JTGB (1.35%) and lowest in MAGB (0.29%) and in 2013-14, it was highest in MGB (0.70%) and lowest in MAGB (0.06%).

Growth of risk cost of RRBs was less consistent in Rajasthan (CV=56.66, 27.22 and 111.25) than in India (CV=19.68, 19.98 and 12.06) during all three period respectively. Consistency was highest in SKGB (CV=41.31) during pre-amalgamation period, in BRGB (CV=26.02) during phase I of amalgamation and in MGB (CV=15.71) during phase II.

## **4.8 Productivity Analysis**

Productivity of RRBs in Rajasthan has been analyzed by evaluating Employee Productivity, Branch Productivity and Financial Productivity.

### **4.8.1 Employee Productivity**

Employee productivity of RRBs in Rajasthan has been analyzed in the form of deposits per employee, advances per employee, total business per employee, total income per employee, total expenditure per employee and net profit per employee. Table 4.9 [A] and 4.9 [B] show the growth of deposits per employee, advances per employee and total business per employee, while Table 4.10[A] and 4.10[B] show the growth of total income per employee, total expenditure per employee and net profit per employee of RRBs in Rajasthan for pre and post amalgamation periods.

#### **4.8.1 (A) Deposits per Employee**

Table 4.9 [A] and 4.9 [B] reveal that the deposits per employee of RRBs in Rajasthan increased from Rs. 53.65 lakhs in 2000-01 to Rs. 88.97 lakhs in 2004-05, further to Rs. 241.62 lakhs in 2011-12 and to Rs. 263.45 lakhs in 2013-14, registering a growth rate of 13.58 percent, 16.17 percent and 0.59 percent respectively during pre-amalgamation period, phase I and phase II of amalgamation period. In India, the deposits per employee increased from Rs. 54.56 lakhs in 2000-2001 to Rs. 90.18 lakhs in 2004-05, further to Rs. 250.82 lakhs in 2011-12 and to Rs. 299.26 lakhs in 2013-14 and recorded a rate of growth of 13.25 percent, 16.77 percent and 7.89 percent respectively during the three periods. The deposits per employee of RRBs in Rajasthan were lower than those at all India level throughout the period of study

except in 2008-09 but, their growth rate was higher in Rajasthan during pre-amalgamation period only.

In 2004-05, the deposits per employee were highest in MGB (Rs. 103.82 lakhs) and lowest in MKGB (Rs. 59.44 lakhs). 5 out of 14 RRBs in Rajasthan were having deposits per employee higher than both national average and state average. During pre-amalgamation period, 8 out of 14 RRBs recorded a higher growth rate of deposits per employee than those at national level and Rajasthan level. In 2011-12, RGB had the highest amount of deposits per employee (Rs. 305.77 lakhs) and BRGB had the lowest amount (Rs. 216.26 lakhs). RGB had higher deposits per employee than national and state average and also the highest growth rate during phase I (18.80%). In 2013-14, BRKGB had the highest deposits per employee (Rs. 271.89 lakhs) in Rajasthan yet it was below the national average. Growth rate was negative in BRKGB (-18.44%) and MGB (-1.29%) during phase II of amalgamation.

The growth of deposits per employee was more consistent in Rajasthan (CV=30.78 and 0.41) than in India (CV=32.07 and 5.37) during both the phases of amalgamation respectively though it was less in pre-amalgamation period. Consistency was highest in MGB (CV=13.91) during pre-amalgamation period, in MGBGB (CV = 26.38) during phase I of amalgamation and in MGB (CV=0.92) during phase II.

#### **4.8.1 (B) Advances per Employee**

Table 4.9 [A] and 4.9[B] further depict that advances per employee of RRBs in Rajasthan increased from Rs. 22.07 lakhs in 2000-01 to Rs. 48.41 lakhs in 2004-05, further to Rs. 169.42 lakhs in 2011-12 and to Rs. 198.00 lakhs in 2013-14 registering growth rates of 21.07 percent, 18.70 percent and 1.67 percent respectively during pre-amalgamation period, phase I and phase II of post-amalgamation periods. In India, advances per employee grew from Rs. 22.55 lakhs in 2000-01 to Rs. 47.70 lakhs in 2004-05, further to Rs. 156.66 lakhs in 2011-12 and to Rs. 199.19 lakhs in 2013-14 and recorded growth rates of 20.40 percent, 18.57 percent and 10.80 percent respectively during the three periods. Advances per employee were higher in Rajasthan throughout the post-amalgamation period except in 2013-14 but lower in pre-amalgamation period except 2004-05.

**Table 4.9 (A): Deposits, Advances and Business per Employee in RRBs in Rajasthan  
(Pre-Amalgamation Period)**

(Rs. in lakhs)

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	Deposits per Employee	54.49	65.66	76.51	90.54	97.50	16.01	22.88
		Advances per Employee	27.57	36.14	44.29	56.37	73.90	27.33	38.01
		Business per Employee	82.06	101.80	120.80	146.91	171.40	20.20	28.47
2	SGB(PNB)	Deposits per Employee	59.47	72.01	77.10	84.63	88.93	10.14	15.08
		Advances per Employee	19.56	22.97	26.22	31.71	46.21	22.65	35.60
		Business per Employee	79.03	94.98	103.22	116.34	135.14	13.61	20.13
3	JNAGB(UCO)	Deposits per Employee	52.60	61.12	73.97	83.22	99.50	17.16	24.88
		Advances per Employee	16.21	17.44	21.98	25.73	37.26	22.80	35.66
		Business per Employee	68.81	78.56	95.95	108.95	136.77	18.54	27.32
4	TAGB (UCO)	Deposits per Employee	34.07	43.48	55.39	66.82	72.04	21.26	29.07
		Advances per Employee	15.89	19.13	29.96	38.67	51.42	35.70	46.89
		Business per Employee	49.96	62.61	85.35	105.49	123.46	26.25	35.27
5	AKGB (BOB)	Deposits per Employee	46.86	56.07	66.20	78.13	84.32	16.26	23.21
		Advances per Employee	20.89	24.99	32.98	37.09	47.10	22.40	31.63
		Business per Employee	67.75	81.06	99.18	115.22	131.42	18.26	25.83
6	BAKGB (BOB)	Deposits per Employee	61.48	71.32	80.47	91.10	96.71	12.20	17.86
		Advances per Employee	39.99	47.29	57.02	62.36	71.78	15.56	22.40
		Business per Employee	101.47	118.61	137.49	153.46	168.50	13.56	19.67
7	BCKGB (BOB)	Deposits per Employee	46.70	50.21	56.93	65.80	71.84	11.98	18.02
		Advances per Employee	27.01	30.17	34.07	38.28	49.57	15.63	24.49
		Business per Employee	73.71	80.38	91.00	104.08	121.41	13.39	20.29
8	DBKGB (BOB)	Deposits per Employee	48.26	50.74	60.52	71.82	78.63	14.15	21.20
		Advances per Employee	23.00	26.13	28.72	20.08	36.67	6.92	23.57
		Business per Employee	71.26	76.87	89.24	91.90	115.00	12.03	19.05

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S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB(BOB)	Deposits per Employee	31.56	38.33	46.97	55.82	59.44	17.85	25.13
		Advances per Employee	12.56	16.81	18.39	19.79	22.54	14.26	20.58
		Business per Employee	44.12	55.14	65.36	75.61	81.98	16.82	23.70
10	BKGB (SBBJ)	Deposits per Employee	48.24	52.34	58.17	65.94	74.89	11.75	17.85
		Advances per Employee	31.82	31.77	38.46	43.55	56.10	15.60	25.04
		Business per Employee	80.06	84.11	96.63	109.49	130.99	13.30	20.63
11	MGB(SBBJ)	Deposits per Employee	72.36	83.56	89.12	97.89	103.82	9.20	13.76
		Advances per Employee	24.23	27.03	21.47	32.58	43.24	14.40	28.97
		Business per Employee	96.59	110.59	110.59	130.47	147.06	10.58	16.60
12	SKGB (SBBJ)	Deposits per Employee	46.55	53.93	62.03	73.00	86.14	16.58	24.34
		Advances per Employee	27.73	36.83	50.21	63.34	89.12	33.34	45.05
		Business per Employee	74.28	90.76	112.24	136.34	175.26	23.66	33.70
13	MAGB(ICICI)	Deposits per Employee	60.24	69.41	76.36	80.66	87.25	9.32	13.91
		Advances per Employee	19.21	24.11	27.62	26.02	26.56	7.51	13.46
		Business per Employee	79.45	93.52	103.98	106.68	113.81	8.88	13.43
14	HKGB (CBI)	Deposits per Employee	53.62	60.87	65.62	84.80	91.80	15.11	22.78
		Advances per Employee	22.81	26.89	36.32	42.01	58.60	26.28	37.77
		Business per Employee	76.43	87.76	101.94	126.81	150.40	18.79	27.58
15	All RRBs in Rajasthan	Deposits per Employee	53.65	62.58	70.92	81.29	88.97	13.58	19.78
		Advances per Employee	22.07	26.01	31.61	36.58	48.41	21.07	31.13
		Business per Employee	75.72	88.59	102.53	117.87	137.38	15.92	23.19
16	All RRBs in India	Deposits per Employee	54.56	64.04	72.04	81.37	90.18	13.25	19.34
		Advances per Employee	22.55	26.36	31.86	37.71	47.70	20.40	29.81
		Business per Employee	77.11	90.40	103.90	119.08	137.88	15.46	22.54

**Table 4.9 (B): Deposits, Advances and Business per Employee in RRBs in Rajasthan  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Rs. in lakhs)

S. No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Deposits per Employee	109.22	129.31	152.42	204.84	207.80	263.88	305.57	18.80	36.47
		Advances per Employee	73.64	93.75	126.89	126.23	124.56	199.66	234.37	19.41	40.87
		Business per Employee	182.26	223.06	279.31	331.07	332.36	463.54	539.94	19.10	37.95
2	JTGB (UCO)	Deposits per Employee	108.11	124.19	143.45	178.91	198.73	212.91	221.83	13.56	26.42
		Advances per Employee	54.85	64.89	77.62	87.92	105.17	113.80	116.21	14.04	27.23
		Business per Employee	162.96	189.08	221.07	266.83	303.90	326.71	338.04	13.72	26.66
3	BRGB (BOB)	Deposits per Employee	87.15	106.18	131.56	170.41	185.26	194.85	216.26	16.53	31.00
		Advances per Employee	53.07	72.83	93.41	105.20	125.45	143.75	161.52	19.52	35.74
		Business per Employee	140.22	179.01	224.97	275.61	310.71	338.60	377.78	17.73	32.79
4	MGBGB (SBBJ)	Deposits per Employee	129.66	126.33	151.10	192.62	214.24	243.73	231.39	12.92	26.38
		Advances per Employee	69.64	91.80	115.02	136.99	171.87	198.10	189.43	19.30	35.66
		Business per Employee	199.30	218.13	266.12	329.61	386.11	441.83	420.82	15.46	30.23
5	MAGB (ICICI)	Deposits per Employee	99.89	119.88	135.94	164.35	191.08	212.29	225.03	15.03	29.05
		Advances per Employee	27.54	30.00	39.32	49.97	64.53	75.63	90.35	23.50	44.21
		Business per Employee	127.43	149.88	175.26	214.32	255.61	287.92	315.38	17.02	32.69
6	HKGB (CBI)	Deposits per Employee	102.74	119.24	143.72	180.17	214.63	246.26	240.46	17.03	32.56
		Advances per Employee	64.56	77.06	96.80	96.34	125.24	165.02	152.82	16.87	34.06
		Business per Employee	167.30	196.30	240.52	276.51	339.87	411.28	393.28	16.97	32.89
7	All RRBs in Rajasthan	Deposits per Employee	102.14	120.13	143.14	183.65	201.11	227.10	241.62	16.17	30.78
		Advances per Employee	60.13	76.96	98.22	108.18	127.06	157.64	169.42	18.70	35.29
		Business per Employee	162.27	197.09	241.36	291.83	328.17	384.74	411.04	17.16	32.43
8	All RRBs in India	Deposits per Employee	103.93	121.76	145.71	175.39	210.07	236.96	250.82	16.77	32.07
		Advances per Employee	57.87	71.00	79.58	98.95	119.95	141.00	156.66	18.57	35.77
		Business per Employee	161.80	192.76	225.29	274.34	330.02	377.96	407.48	17.43	33.38

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**Phase II**

S. No.	RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Deposits per Employee	333.37	271.89	-18.44	14.37
		Advances per Employee	151.20	212.97	40.85	23.99
		Business per Employee	484.57	484.86	0.06	0.04
2	MGB (SBBJ)	Deposits per Employee	257.68	254.35	-1.29	0.92
		Advances per Employee	179.95	187.58	4.24	2.94
		Business per Employee	437.63	441.93	0.98	0.69
3	MAGB (ICICI)	Deposits per Employee	215.48	238.37	10.62	7.13
		Advances per Employee	95.26	108.55	13.95	9.22
		Business per Employee	310.74	346.92	11.64	7.78
4	All RRBs in Rajasthan	Deposits per Employee	261.91	263.45	0.59	0.41
		Advances per Employee	194.74	198.00	1.67	1.17
		Business per Employee	456.65	461.45	1.05	0.74
5	All RRBs in India	Deposits per Employee	277.38	299.26	7.89	5.37
		Advances per Employee	179.78	199.19	10.80	7.24
		Business per Employee	457.16	498.45	9.03	6.11

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

In 2004-05, the advances per employee in Rajasthan were highest in SKGB (Rs. 89.12 lakhs) and lowest in MKGB (Rs. 22.54 lakhs). 7 out of 14 RRBs were having advances per employee higher than both national average and state average and 7 RRBs in Rajasthan showed higher growth rate of advances per employee than those at national level and Rajasthan level during pre-amalgamation period. In 2011-12, advances per employee were highest in RGB (Rs. 234.37lakhs) and lowest in MAGB (Rs. 90.35lakhs). RGB (Rs. 234.37lakhs) and MGBGB (Rs. 189.43lakhs) had higher advances per employee than national and state averages and also the higher growth rates during phase I. In 2013-14, BRKGB (Rs. 212.97lakhs) had the highest amount of advances per employee and MAGB had the lowest (Rs. 108.55 lakhs). Growth rate was highest in BRKGB (40.85%) during phase II.

The growth of advances per employee was more consistent in Rajasthan (CV=35.29 and 1.17) than in India (CV=35.77 and 7.24) during phase I and phase II of post-amalgamation period respectively though it was less consistent in pre-amalgamation period. Coefficient of variation regarding advances per employee was least in MAGB (CV=13.46) during pre-amalgamation period, in JTGB (CV=27.23) during phase I of amalgamation and in MGB (CV=2.94) during phase II.

#### **4.8.1 (C) Business per Employee**

Table 4.9 [A] and 4.9 [B] also indicate that business per employee of RRBs in Rajasthan increased from Rs. 75.72 lakhs in 2000-01 to Rs. 137.38 lakhs in 2004-05, further to Rs. 411.04 lakhs in 2011-12 and to Rs. 461.45 lakhs in 2013-14 and recorded growth rates of 15.92 percent, 17.16 percent and 1.05 percent respectively during pre-amalgamation period, phase I and phase II of post- amalgamation period. In India, total business per employee of RRBs increased from Rs. 77.11 lakhs in 2000-01 to Rs. 137.88 lakhs in 2004-05, further to Rs. 407.48 lakhs in 2011-12 and to Rs. 498.45 lakhs in 2013-14 registering growth rates of 15.46 percent, 17.43 percent and 9.03 percent respectively during the same periods. Business per employee of RRBs in Rajasthan remained lower than that at all India level during pre-amalgamation period and phase II of post-amalgamation period though it was higher throughout the phase I except in 2009-10.

In 2004-05, business per employee in Rajasthan was highest in SKGB (Rs.175.26lakhs) and lowest in MKGB (Rs. 81.98lakhs). 5 out of 14 RRBs in Rajasthan were having business per employee higher than both national average and state average. 7 RRBs in Rajasthan showed higher growth rates of business per employee than that at national level and state level during pre-amalgamation period. In 2011-12, business per employee was highest in RGB (Rs. 539.94lakhs) and lowest in MAGB (Rs. 315.38lakhs). RGB (Rs. 539.94lakhs) and MGBGB (Rs. 420.82lakhs) had higher business per employee than national and state averages. RGB and BRGB had higher growth rates of business per employee than all India level and Rajasthan level during phase I. In 2013-14, BRGB had the highest amount of business per employee in Rajasthan (Rs. 484.86lakhs) and MAGB had the lowest (Rs.346.92lakhs). All RRBs in Rajasthan were having lower business per employee than national average. Growth rate of business per employee was higher in MAGB (11.64%) than both India level and Rajasthan level growth rates during phase II.

The degree of consistency regarding business per employee was less in Rajasthan (CV=23.19) than in India (CV=22.54) during pre-amalgamation period but it was higher during both the phases of amalgamation. The consistency was highest in MAGB (CV=13.43) during pre-amalgamation period, in JTGB (CV=26.66) during phase I of amalgamation and in BRKGB (CV= 0.04) during phase II of amalgamation.

#### **4.8.1 (D) Total Income per Employee**

Table 4.10[A] and 4.10 [B] reveal that total income per employee of RRBs in Rajasthan increased from Rs.6.85 lakhs in 2000-01 to Rs. 8.98 lakhs in 2004-05, further to Rs. 26.65 lakhs in 2011-12 and reduced to Rs.17.56 lakhs in 2012-13 and then again increased to Rs. 30.86 lakhs in 2013-14 and registered growth rates of 6.68 percent, 19.20 percent, and significantly higher 75.74 percent respectively during pre-amalgamation period, phase I and phase II of post-amalgamation period. In India, total income per employee was Rs.6.93 lakhs in 2000-01 which increased to Rs.8.90 lakhs in 2004-05, further to Rs. 26.99 lakhs in 2011-12 and to Rs. 33.75 lakhs in 2013-14 and showed growth rates of 6.43 percent, 19.28 percent and 17.02 percent respectively during the same periods. Growth rates were higher in Rajasthan

during all three periods. Total income per employee of RRBs in Rajasthan was higher than that at all India level during the post amalgamation period except 2011-12, and 2012-13.

In 2004-05, total income per employee in Rajasthan was highest in SKGB (Rs. 11.69 lakhs) and lowest in MKGB (Rs. 4.16 lakhs). 6 out of 14 RRBs in Rajasthan were having income per employee higher than both national average and state average. 7 RRBs in Rajasthan recorded higher growth rates of income per employee than those at national level and Rajasthan level during pre-amalgamation period. Growth rate of income per employee was negative in MAGB (-0.35%) during this period. In 2011-12, total income per employee was highest in RGB (Rs. 31.74 lakhs) and lowest in MAGB (Rs. 21.79 lakhs). RGB and MGBGB (Rs. 30.11 lakhs) had higher income per employee than national average and state average. BRGB (21.88%) and MGBGB (19.55%) had higher growth rates of income per employee than those at India level and Rajasthan level during phase I of amalgamation. In 2013-14, MGB (Rs. 31.25 lakhs) had the highest amount of income per employee in Rajasthan and MAGB had the lowest (Rs. 24.45 lakhs) and all three RRBs were having lower income per employee than the national average. Growth rate of income per employee was very high in BRKGB (302.98%) during phase II.

The level of consistency of growth of total income per employee was lower in Rajasthan (CV=10.47 and 38.85) than in India (CV= 10.27 and 11.09) during pre-amalgamation period and phase II respectively though it was higher in phase I. The consistency was highest in MAGB (CV= 3.96) during pre-amalgamation period, in JTGB (CV= 30.92) during phase I of amalgamation and in MGB (CV= 1.53) during phase II of the process of amalgamation.

#### **4.8.1 (E) Total Expenditure per Employee**

Table 4.10 [A] and 4.10[B] also indicate that total expenditure per employee of RRBs in Rajasthan increased from Rs. 6.50 lakhs in 2000-01 to Rs. 7.78 lakhs in 2004-05, further to Rs. 24.48 lakhs in 2011-12 and to Rs. 28.12 lakhs in 2013-14 registering growth rates of 4.62 percent, 20.35 percent and 78.09 percent respectively during pre-amalgamation period, phase I and phase II of post-amalgamation period.

**Table 4.10 (A): Total Income, Total Expenditure and Net Profit per Employee in RRBs in Rajasthan  
(Pre-Amalgamation Period)**

(Rs. in lakhs)

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	Income per Employee	6.22	8.95	10.14	11.10	10.30	13.02	20.41
		Expenditure per Employee	5.10	7.04	7.48	7.31	7.56	8.60	14.85
		Profit per Employee	1.12	1.91	2.66	3.79	2.74	28.08	40.84
2	SGB(PNB)	Income per Employee	7.53	9.03	9.94	10.84	10.46	8.76	13.83
		Expenditure per Employee	6.26	7.24	7.60	8.16	7.47	4.84	9.46
		Profit per Employee	1.29	1.79	2.34	2.68	2.99	23.18	30.82
3	JNAGB(UCO)	Income per Employee	7.62	8.11	8.57	8.03	8.81	2.84	5.70
		Expenditure per Employee	6.80	7.45	7.60	7.90	7.87	3.57	5.93
		Profit per Employee	1.22	0.66	0.97	0.13	0.94	-19.31	53.06
4	TAGB (UCO)	Income per Employee	4.58	5.50	6.19	6.88	8.14	14.73	21.62
		Expenditure per Employee	4.56	5.28	6.12	6.57	6.56	9.92	15.08
		Profit per Employee	0.02	0.22	0.07	0.31	1.58	147.98	147.21
5	AKGB (BOB)	Income per Employee	4.40	5.32	7.14	7.31	7.19	13.88	21.22
		Expenditure per Employee	6.25	5.58	7.12	6.72	6.80	3.61	9.21
		Profit per Employee	-1.85	-0.26	0.02	0.59	0.39	--	-435.81
6	BAKGB (BOB)	Income per Employee	8.75	10.21	10.24	10.88	10.66	4.69	8.19
		Expenditure per Employee	7.68	8.93	8.34	8.58	7.90	0.17	6.10
		Profit per Employee	1.07	1.28	1.90	2.30	2.76	28.16	37.65
7	BCKGB (BOB)	Income per Employee	6.06	6.85	6.90	7.30	7.58	5.25	8.29
		Expenditure per Employee	5.77	6.59	6.85	6.59	6.82	3.40	6.73
		Profit per Employee	0.29	0.26	0.05	0.71	0.76	34.06	74.34
8	DBKGB (BOB)	Income per Employee	5.28	6.31	6.88	6.84	6.71	5.76	10.42
		Expenditure per Employee	5.26	6.25	6.86	6.69	6.62	5.42	10.12
		Profit per Employee	0.02	0.06	0.02	0.15	0.09	48.06	80.14

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S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB(BOB)	Income per Employee	2.80	3.50	3.66	3.81	4.16	9.16	14.01
		Expenditure per Employee	4.45	4.85	5.95	6.17	5.38	6.40	13.49
		Profit per Employee	-1.65	-1.35	-2.29	-2.36	-1.22	--	-29.72
10	BKGB (SBBJ)	Income per Employee	7.30	7.93	7.42	7.58	9.64	5.24	12.05
		Expenditure per Employee	7.14	7.50	8.92	8.52	9.56	7.37	12.01
		Profit per Employee	0.16	0.43	-1.50	-0.94	0.08	--	-233.11
11	MGB(SBBJ)	Income per Employee	9.42	10.75	11.13	11.16	10.54	2.66	6.69
		Expenditure per Employee	8.99	10.11	10.23	11.16	9.95	3.06	7.67
		Profit per Employee	0.43	0.64	0.90	0.00	0.59	--	64.92
12	SKGB (SBBJ)	Income per Employee	6.77	7.75	8.37	9.64	11.69	14.00	21.50
		Expenditure per Employee	5.84	7.22	7.80	8.61	9.20	11.46	16.82
		Profit per Employee	0.93	0.53	0.57	1.03	2.49	30.14	72.23
13	MAGB(ICICI)	Income per Employee	8.57	9.37	9.24	8.74	8.72	-0.35	3.96
		Expenditure per Employee	8.83	9.35	9.10	8.71	8.33	-1.86	4.38
		Profit per Employee	-0.26	0.02	0.14	0.03	0.39	--	366.54
14	HKGB (CBI)	Income per Employee	6.27	6.86	6.91	8.36	8.88	9.35	14.85
		Expenditure per Employee	5.73	6.55	6.78	8.00	7.78	8.46	13.36
		Profit per Employee	0.54	0.31	0.13	0.36	1.10	17.03	76.23
15	All RRBs in Rajasthan	Income per Employee	6.85	7.95	8.47	8.83	8.98	6.68	10.47
		Expenditure per Employee	6.50	7.36	7.74	8.07	7.78	4.62	8.12
		Profit per Employee	0.35	0.59	0.73	0.76	1.20	31.23	42.77
16	All RRBs in India	Income per Employee	6.93	7.98	8.46	9.02	8.90	6.43	10.27
		Expenditure per Employee	6.07	7.10	7.72	7.91	7.81	6.31	10.49
		Profit per Employee	0.86	0.88	0.74	1.11	1.09	7.32	17.00

**Table 4.10 (B): Total Income, Total Expenditure and Net Profit per Employee in RRBs in Rajasthan  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Rs. in lakhs)

S. No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Income per Employee	10.60	13.05	15.26	19.12	19.60	26.24	31.74	19.28	38.52
		Expenditure per Employee	7.87	10.43	13.50	17.68	17.22	23.22	28.15	22.44	42.07
		Profit per Employee	2.73	2.62	1.76	1.44	2.38	3.02	3.59	5.16	29.20
2	JTGB (UCO)	Income per Employee	9.92	11.24	13.35	17.04	19.62	20.81	23.29	16.09	30.92
		Expenditure per Employee	8.15	9.68	11.03	14.10	18.70	19.19	23.21	19.71	37.89
		Profit per Employee	1.77	1.56	2.32	2.94	0.92	1.62	0.08	-30.38	57.67
3	BRGB (BOB)	Income per Employee	7.70	9.72	12.27	17.14	19.60	21.56	24.56	21.88	39.39
		Expenditure per Employee	7.65	9.17	10.82	14.44	17.46	19.15	22.11	20.13	37.73
		Profit per Employee	0.05	0.55	1.45	2.70	2.14	2.41	2.45	70.99	61.36
4	MGBGB (SBBJ)	Income per Employee	11.63	12.31	17.12	20.03	24.87	29.88	30.11	19.55	36.94
		Expenditure per Employee	10.21	11.01	16.00	18.69	18.91	26.91	27.26	19.13	36.99
		Profit per Employee	1.42	1.30	1.12	1.34	1.96	2.97	2.85	16.61	41.53
5	MAGB (ICICI)	Income per Employee	7.95	9.12	10.88	14.47	16.45	18.14	21.79	18.76	35.91
		Expenditure per Employee	8.71	9.04	10.61	13.71	15.53	17.66	20.89	16.79	33.48
		Profit per Employee	-0.76	0.08	0.27	0.76	0.92	0.48	0.90	--	156.95
6	HKGB (CBI)	Income per Employee	9.64	10.92	12.63	15.84	18.35	21.83	22.51	16.61	32.31
		Expenditure per Employee	7.93	8.90	10.47	13.22	16.33	20.98	20.83	19.79	38.50
		Profit per Employee	1.71	2.02	2.16	2.62	2.02	0.85	1.68	-6.40	29.30
7	All RRBs in Rajasthan	Income per Employee	9.66	11.25	13.97	17.81	20.36	23.79	26.65	19.20	36.18
		Expenditure per Employee	8.38	9.85	12.35	15.69	18.52	21.54	24.48	20.35	38.08
		Profit per Employee	1.28	1.40	1.62	2.12	1.84	2.25	2.16	9.91	21.38
8	All RRBs in India	Income per Employee	9.54	11.22	13.83	16.62	20.04	23.12	26.99	19.28	36.85
		Expenditure per Employee	8.64	10.31	12.32	14.67	17.31	20.68	24.49	18.95	36.88
		Profit per Employee	0.90	0.91	1.51	1.95	2.73	2.44	2.50	22.27	41.06

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**Phase II**

S. No.	RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Income per Employee	7.73	31.15	302.98	85.19
		Expenditure per Employee	6.21	28.31	355.88	90.54
		Profit per Employee	1.52	2.84	86.84	42.82
2	MGB (SBBJ)	Income per Employee	30.58	31.25	2.19	1.53
		Expenditure per Employee	28.39	28.52	0.46	0.32
		Profit per Employee	2.19	2.73	24.66	15.52
3	MAGB (ICICI)	Income per Employee	23.53	24.45	3.91	2.71
		Expenditure per Employee	22.35	22.90	2.46	1.72
		Profit per Employee	1.18	1.55	31.36	19.17
4	All RRBs in Rajasthan	Income per Employee	17.56	30.86	75.74	38.85
		Expenditure per Employee	15.79	28.12	78.09	39.71
		Profit per Employee	1.77	2.74	54.80	30.42
5	All RRBs in India	Income per Employee	28.84	33.75	17.02	11.09
		Expenditure per Employee	25.86	30.38	17.48	11.37
		Profit per Employee	2.98	3.37	13.09	8.69

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

In India, total expenditure per employee increased from Rs. 6.07 lakhs in 2000-01 to Rs. 7.81 lakhs in 2004-05, further to Rs. 24.49 lakhs in 2011-12 and to Rs. 30.38 lakhs in 2013-14 and recorded growth rates of 6.31 percent, 18.95 percent, and 17.48 percent respectively during the same periods. In post-amalgamation period phase I, growth rates of expenditure per employee in respect of all the individual RRBs were higher than those in pre-amalgamation period. Total expenditure per employee was higher in Rajasthan than in India in most of the years during the period of study.

In 2004-05, total expenditure per employee in Rajasthan was highest in MGB (Rs. 9.95 lakhs) and lowest in MKGB (Rs. 5.38 lakhs). 6 out of 14 RRBs had expenditure per employee higher than both national average and state average. Six RRBs recorded higher growth rates than national level growth rate during pre-amalgamation period. In 2011-12, total expenditure per employee was highest in RGB (Rs. 28.15 lakhs) and lowest in HKGB (Rs. 20.83 lakhs). 5 out of 6 RRBs recorded higher growth rate of expenditure per employee than national level growth rate during phase I. In 2013-14, expenditure per employee was highest in MGB (Rs. 28.52 lakhs). All the RRBs in Rajasthan had lower amount of expenditure per employee than national average during phase II. Growth rate was significantly very high in BRKGB (355.88%) and very low in MGB (2.46%) during this period.

The level of consistency regarding total expenditure per employee was lower in Rajasthan (CV = 38.08 and 39.71) than in India (CV = 36.88 and 11.37) during both the phases of amalgamation period respectively though it was higher in pre-amalgamation period. The consistency was highest in MAGB (CV = 4.38) during pre-amalgamation period, again in MAGB (CV = 33.48) during phase I and in MGB (CV = 0.32) during phase II of amalgamation.

#### **4.8.1 (F) Net Profit per Employee**

Table 4.10 [A] and 4.10[B] further depict that a few RRBs in Rajasthan were incurring losses during pre-amalgamation period. However, profits per employee of RRBs in Rajasthan increased at a rate of 31.23 percent, 9.91 percent and 54.50 percent respectively during the three periods. In India, they increased at a rate of

7.32 percent, 22.27 percent and 13.09 percent respectively during the same periods. Profits per employee were highest in SGB (Rs. 2.99 lakhs) in 2004-05, in RGB (Rs. 3.59 lakhs) in 2011-12 and in BRKGB (Rs. 2.84 lakhs) in 2013-14. Profits per employee in Rajasthan were lower than India during most of the years during the period of study. Growth rate of profit per employee was negative in JTGB (-30.38%) and in HKGB (-6.40%) during phase I and in JNAGB (-19.31%) during pre-amalgamation period. It was significantly high in TAGB (147.98%) during this period.

The growth of profits per employee was less consistent in Rajasthan (CV= 42.77 and 30.42) than in India (CV=17.00 and 8.69) during pre-amalgamation period and phase II of amalgamation respectively though it was high during phase I.

#### **4.8.2 Branch productivity**

Branch productivity of individual RRBs in Rajasthan has been analyzed with the help of deposits per branch, advances per branch, total business per branch, total income per branch, total expenditure per branch and net profit per branch. Table 4.11[A] and 4.11 [B] show the growth of deposits per branch, advances per branch and total business per branch while Table 4.12 [A] and 4.12 [B] show the growth of total income per branch, total expenditure per branch and net profits per branch of RRBs in Rajasthan for pre and post amalgamation periods.

##### **4.8.2 (A) Deposits per Branch**

Tables 4.11 [A] and 4.11 [B] display that deposits per branch of RRBs in Rajasthan increased from Rs. 229.17 lakhs in 2000-01 to Rs. 379.35 lakhs in 2004-05, further to Rs. 1037.14 lakhs in 2011-12 and to Rs. 1114.57 lakhs in 2013-14 and registered growth rates of 13.46 percent, 16.07 percent and 3.48 percent respectively during the pre-amalgamation period, phase I and phase II of amalgamation. Deposits per branch of RRBs in India increased from Rs. 267.39 lakhs in 2000-01 to Rs. 429.05 lakhs in 2004-05, further to Rs. 1101.99 lakhs in 2011-12 and to Rs. 1255.08 lakhs in 2013-14 and recorded growth rates of 12.49 percent, 15.13 percent and 6.00 percent respectively during the same periods. Growth rates were higher in Rajasthan during pre-amalgamation period and phase I though amount of deposits per branch were lower in Rajasthan as compared to India throughout the period of study.

In 2004-05, deposits per branch were highest in MGB (Rs. 469.09 lakhs) and lowest in BKGB (Rs. 190.09 lakhs). Only 3 RRBs in Rajasthan were having deposits per branch higher than the national average. However, during pre-amalgamation period, 8 RRBs recorded higher growth rates of deposits per branch than those at national level and state level. In 2011-12, RGB had the highest amount of deposits per branch (Rs. 1276.67 lakhs) and MAGB had the lowest amount (Rs. 861.98 lakhs). RGB and HKGB had higher deposits per branch than the national average and 4 out of 6 RRBs in Rajasthan recorded higher growth rates than that at all India level. In 2013-14, BRKGB (Rs. 1187.86 lakhs) had the highest deposits per branch and recorded higher growth rate than that at all India level while MGB (-1.85%) showed a negative growth rate during this period.

The growth of deposits per branch was less consistent in Rajasthan (CV=19.58 and 30.97) than in India (CV=18.32 and 29.30) during pre-amalgamation period and phase I of amalgamation respectively though it was more consistent during phase II. Degree of consistency increased during phase II both at Rajasthan level and at all India level. Consistency was highest in SGB (CV=11.63) during pre-amalgamation period, in JTGB (CV= 26.32) during phase I of amalgamation and in MGB (CV= 1.32) during phase II.

#### **4.8.2 (B) Advances per Branch**

Table 4.11[A] and 4.11[B] further reveal that advances per branch of RRBs in Rajasthan grew from Rs. 94.25 lakhs in 2000-01 to Rs. 206.40 lakhs in 2004-05, further to Rs. 727.22 lakhs in 2011-12 and to Rs. 837.65 lakhs in 2013-14 and registered growth rates of 20.95 percent, 18.59 percent and 4.60 percent respectively during the pre-amalgamation period, phase I and phase II of amalgamation. In India, advances per branch increased from Rs. 110.50 lakhs in 2000-01 to Rs. 226.94 lakhs in 2004-05, further to Rs. 688.30 lakhs in 2011-12 and to Rs. 837.65 lakhs in 2013-14 and recorded growth rates of 19.40 percent, 16.95 percent and 8.85 percent respectively during the three periods. Growth rates in Rajasthan were higher than India during pre-amalgamation period and phase I but amounts of advances per branch were lower in pre-amalgamation period and till 2009-10 during phase I but they were higher afterwards than the national average.

**Table 4.11 (A): Deposits, Advances and Business per Branch in RRBs in Rajasthan  
(Pre-Amalgamation Period)**

(Rs. in lakhs)

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	Deposits per Branch	235.89	284.29	329.43	387.73	423.25	15.95	22.81
		Advances per Branch	119.38	156.45	190.72	214.39	320.84	25.76	38.09
		Business per Branch	355.27	440.74	520.15	629.12	744.09	20.13	28.49
2	SGB(PNB)	Deposits per Branch	296.14	358.59	377.78	402.60	394.80	7.15	11.63
		Advances per Branch	97.41	114.38	128.50	150.85	205.11	19.32	29.95
		Business per Branch	393.55	472.97	506.28	553.45	599.91	10.52	15.59
3	JNAGB(UCO)	Deposits per Branch	240.35	279.23	336.44	375.07	444.33	16.46	23.89
		Advances per Branch	74.05	79.73	99.98	115.98	166.40	22.07	34.54
		Business per Branch	314.41	358.96	436.42	491.05	610.73	17.84	26.29
4	TAGB (UCO)	Deposits per Branch	135.25	172.62	219.05	263.24	282.71	20.88	28.62
		Advances per Branch	63.08	75.94	118.48	152.35	201.76	35.28	46.40
		Business per Branch	198.33	248.56	337.53	415.59	484.47	25.86	34.80
5	AKGB (BOB)	Deposits per Branch	190.43	227.84	282.47	333.37	359.79	17.98	25.34
		Advances per Branch	85.27	101.56	140.70	158.25	200.93	24.08	33.53
		Business per Branch	275.70	329.40	423.17	491.62	560.72	19.96	27.90
6	BAKGB (BOB)	Deposits per Branch	235.48	273.17	306.69	345.48	368.60	11.97	17.55
		Advances per Branch	153.16	181.12	217.32	236.51	273.61	15.34	22.14
		Business per Branch	388.64	454.29	524.01	581.99	642.21	13.34	19.38
7	BCKGB (BOB)	Deposits per Branch	193.97	211.82	237.49	278.87	313.25	13.13	19.77
		Advances per Branch	112.21	127.26	142.15	162.21	216.16	16.81	26.55
		Business per Branch	306.18	339.08	379.64	441.08	529.41	14.55	22.19
8	DBKGB (BOB)	Deposits per Branch	171.10	202.97	245.27	292.95	316.58	17.32	24.62
		Advances per Branch	81.53	104.53	116.38	118.60	146.46	13.86	20.77
		Business per Branch	252.63	307.50	361.65	411.55	463.04	16.22	23.10

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S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB(BOB)	Deposits per Branch	143.59	174.40	215.29	254.92	289.79	19.53	27.37
		Advances per Branch	57.14	76.47	84.27	90.38	109.88	15.89	23.06
		Business per Branch	200.73	250.87	299.56	345.30	399.67	18.49	26.02
10	BKGB (SBBJ)	Deposits per Branch	113.72	123.38	137.12	158.74	190.09	13.65	21.11
		Advances per Branch	75.01	74.89	90.65	104.85	142.42	17.57	28.70
		Business per Branch	188.73	198.27	227.77	263.59	332.51	15.23	24.09
11	MGB(SBBJ)	Deposits per Branch	330.86	382.26	405.71	440.15	469.09	8.75	13.14
		Advances per Branch	110.86	123.64	133.01	146.51	195.39	13.92	23.00
		Business per Branch	441.72	505.90	538.72	586.66	664.48	10.13	15.34
12	SKGB (SBBJ)	Deposits per Branch	166.70	193.15	223.60	263.12	306.48	16.50	24.09
		Advances per Branch	99.32	131.91	181.00	228.33	317.14	33.25	44.68
		Business per Branch	266.02	325.06	404.60	491.45	623.62	23.58	33.40
13	MAGB(ICICI)	Deposits per Branch	243.03	280.04	305.43	326.81	347.48	9.08	13.56
		Advances per Branch	77.52	97.28	110.49	105.44	105.81	7.28	13.17
		Business per Branch	320.55	377.32	415.92	432.25	453.29	8.64	13.09
14	HKGB (CBI)	Deposits per Branch	240.00	275.80	297.31	380.01	411.40	15.01	22.48
		Advances per Branch	102.11	103.81	164.58	188.27	262.61	28.20	40.57
		Business per Branch	342.11	379.61	461.89	568.28	674.01	19.24	28.17
15	All RRBs in Rajasthan	Deposits per Branch	229.17	269.12	304.68	347.32	379.35	13.46	19.58
		Advances per Branch	94.25	111.86	135.79	156.28	206.40	20.95	30.88
		Business per Branch	323.42	380.98	440.47	503.60	585.75	15.80	22.97
16	All RRBs in India	Deposits per Branch	267.39	309.51	347.11	390.07	429.05	12.49	18.32
		Advances per Branch	110.50	129.46	153.52	180.77	226.94	19.40	28.49
		Business per Branch	377.90	438.97	500.63	570.84	655.99	14.63	21.44

**Table 4.11 (B): Deposits, Advances and Business per Branch in RRBs in Rajasthan  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Rs. in lakhs)

S. No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Deposits per Branch	469.93	549.74	644.09	837.88	925.57	1083.10	1276.67	18.35	35.45
		Advances per Branch	314.26	398.49	536.16	516.35	544.80	819.51	979.18	18.99	39.78
		Business per Branch	784.19	948.23	1180.25	1354.23	1480.37	1902.61	2255.85	18.65	36.76
2	JTGB (UCO)	Deposits per Branch	458.82	522.89	594.41	717.32	783.74	888.61	947.35	13.36	26.32
		Advances per Branch	232.77	273.22	321.60	352.51	414.76	474.97	496.28	13.85	27.22
		Business per Branch	691.59	796.11	916.01	1069.83	1198.50	1363.58	1443.63	13.53	26.59
3	BRGB (BOB)	Deposits per Branch	375.14	453.36	547.70	697.17	752.53	827.57	929.37	16.36	30.98
		Advances per Branch	228.46	310.97	388.84	430.40	509.58	610.55	694.14	19.35	36.18
		Business per Branch	603.60	764.33	936.54	1127.57	1262.11	1438.12	1623.51	17.56	32.97
4	MGBGB (SBBJ)	Deposits per Branch	442.90	507.80	601.48	744.14	827.21	917.89	1019.35	15.37	29.70
		Advances per Branch	281.27	368.97	457.83	529.20	663.59	746.08	834.52	19.73	36.52
		Business per Branch	724.17	876.77	1059.31	1273.34	1490.80	1663.97	1853.87	17.20	32.61
5	MAGB (ICICI)	Deposits per Branch	397.85	477.46	541.41	654.58	751.14	830.85	861.98	14.35	27.79
		Advances per Branch	109.66	119.49	156.61	198.99	253.69	296.01	346.08	22.77	42.74
		Business per Branch	507.51	596.95	698.02	853.57	1004.83	1126.86	1208.06	16.34	31.36
6	HKGB (CBI)	Deposits per Branch	457.88	521.50	610.80	763.58	909.62	1040.73	1122.14	17.31	33.36
		Advances per Branch	287.73	341.50	411.43	408.29	530.80	697.40	713.17	17.04	34.76
		Business per Branch	745.61	870.00	1022.23	1171.87	1440.42	1738.13	1835.31	17.14	33.55
7	All RRBs in Rajasthan	Deposits per Branch	432.22	504.56	591.31	740.78	820.70	927.76	1037.14	16.07	30.97
		Advances per Branch	254.47	323.22	405.79	436.35	518.49	643.97	727.22	18.59	35.81
		Business per Branch	686.69	827.78	997.10	1177.13	1339.19	1571.73	1764.36	17.05	32.76
8	All RRBs in India	Deposits per Branch	492.13	572.38	671.32	791.71	936.92	1038.89	1101.99	15.13	29.30
		Advances per Branch	273.99	333.83	362.81	446.62	535.01	618.20	688.30	16.95	33.13
		Business per Branch	766.12	906.21	1034.13	1238.33	1471.93	1657.09	1790.29	15.80	30.65

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**Phase II**

S. No.	RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Deposits per Branch	1111.39	1187.86	6.88	4.70
		Advances per Branch	886.90	930.45	4.91	3.39
		Business per Branch	1998.29	2118.31	6.01	4.12
2	MGB (SBBJ)	Deposits per Branch	1045.84	1026.54	-1.85	1.32
		Advances per Branch	730.38	757.06	3.65	2.54
		Business per Branch	1776.22	1783.60	0.42	0.29
3	MAGB (ICICI)	Deposits per Branch	949.59	1025.01	7.94	5.40
		Advances per Branch	419.77	466.75	11.19	7.49
		Business per Branch	1369.36	1491.76	8.94	6.05
4	All RRBs in Rajasthan	Deposits per Branch	1077.08	1114.57	3.48	2.42
		Advances per Branch	800.85	837.65	4.60	3.18
		Business per Branch	1877.93	1952.22	3.96	2.74
5	All RRBs in India	Deposits per Branch	1184.08	1255.08	6.00	4.12
		Advances per Branch	767.47	835.38	8.85	5.99
		Business per Branch	1951.55	2090.46	7.12	4.86

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

In 2004-05, advances per branch were highest in ABAGB (Rs. 320.84 lakhs) and lowest in MAGB (Rs. 105.81 lakhs). 4 RRBs in Rajasthan had higher advances per branch than in India and 6 RRBs recorded higher growth rates of advances per branch than that at all Indian level. In 2011-12, RGB (Rs. 1083.10 lakhs) had the highest amount of advances per branch and MAGB (Rs. 296.01 lakhs) had the lowest. RGB, MGBGB and HKGB had higher advances per branch than the national average. 5 RRBs (except JTGB) recorded higher growth rates than that at India level. In 2013-14, BRKGB had the highest advances per branch (Rs. 930.45 lakhs) but MAGB (Rs. 466.75 lakhs) recorded higher growth rate of advances per branch (11.19%) than that at India level during phase II.

The growth of advances per branch was less consistent in Rajasthan (CV=30.88 and 35.81) than in India (CV=28.49 and 33.13) during pre-amalgamation period and phase I of amalgamation respectively though it was more consistent in phase II. Consistency was highest in MAGB (CV=13.17) during pre-amalgamation period, in JTGB (CV=27.22) during phase I and in MGB (CV=2.54) during phase II. Level of consistency increased in respect of all the RRBs in state during phase II.

#### **4.8.2 (C) Business per Branch**

Table 4.11 [A] and 4.11 [B] further bring out that total business per branch of RRBs in Rajasthan increased from Rs. 323.42 lakhs in 2000-01 to Rs. 585.75 lakhs in 2004-05, further to Rs. 1764.36 lakhs in 2011-12 and to Rs. 1952.22 lakhs in 2013-14 and registered growth rates of 15.80 percent, 17.05 percent and 3.96 percent respectively during the pre-amalgamation period, phase I and phase II of amalgamation. While in India, business per branch increased from Rs. 377.90 lakhs in 2000-01 to Rs. 655.99 lakhs in 2004-05, further to Rs. 1790.29 lakhs in 2011-12 and to Rs. 2090.46 lakhs in 2013-14 and recorded growth rates of 14.63 percent, 15.80 percent and 7.12 percent respectively during the three periods. Growth rates were higher in Rajasthan during pre-amalgamation period and phase I but lower during phase II. Business per branch remained lower in Rajasthan than in India throughout the period of study.

In 2004-05, the business per branch was highest in ABAGB (Rs.744.09 lakhs) and lowest in BKGB (Rs. 332.51 lakhs). Three RRBs had higher amounts of business per branch than the national average and nine RRBs recorded higher growth rates of business per branch than that at all Indian level during pre-amalgamation period. In 2011-12, business per branch of RRBs in Rajasthan was highest in RGB (Rs. 2255.85 lakhs) and lowest in MAGB (Rs. 1208.06 lakhs). 3 RRBs out of 6 achieved higher business per branch than the national average and 5 RRBs (except JTGB) recorded higher growth rate of business per branch than that at all India level. In 2013-14, business per branch was highest in BRKGB (Rs. 2118.31 lakhs) while MAGB recorded the highest rate of growth, also higher than the all India level growth rate.

The growth of business per branch was less consistent in Rajasthan (CV=22.97 and 32.76) than in India (CV=21.44 and 30.65) during pre-amalgamation period and phase I of amalgamation respectively. Consistency was highest in MAGB (CV= 13.09) during pre--amalgamation period, in JTGB (CV= 26.59) during phase I and in MGB (CV= 0.29) during phase II of amalgamation.

#### **4.8.2 (D) Total Income per Branch**

Table 4.12 [A] and 4.12 [B] show that total income per branch of RRBs in Rajasthan increased from Rs. 29.26 lakhs in 2000-01 to Rs. 38.31 lakhs in 2004-05, further to Rs. 114.38 lakhs in 2011-12, decreased to Rs. 72.22 lakhs in 2012-13 and again increased to Rs. 130.54 lakhs in 2013-14 and recorded growth rates of 6.57 percent and 19.10 percent respectively during pre-amalgamation period and phase I and significantly high growth rate of 80.75 percent during phase II. In India, total income per branch increased from Rs. 33.95 lakhs in 2000-01 to Rs. 42.36 lakhs in 2004-05, further to Rs. 118.56 lakhs in 2011-12 and to Rs. 141.56 lakhs in 2013-14 and registered growth rates of 5.72 percent, 17.60 percent and 14.98 percent respectively during the three periods. Growth rates were higher in Rajasthan during all three periods though the amount of total income per branch remained lower in Rajasthan than in India throughout the period of study.

In 2004-05, income per branch was highest in MGB (Rs. 47.61 lakhs) and lowest in MKGB (Rs. 20.29 lakhs). Three RRBs had higher amounts of income per

branch than the national average while 8 RRBs recorded higher growth rates of income per branch than that at India level during pre- amalgamation period. Growth rate was negative in MAGB (-0.56) during this period. In 2011-12, income per branch of RRBs in Rajasthan was highest in MGBGB (Rs. 132.63 lakhs) and lowest in MAGB (Rs. 83.48 lakhs). RGB and MGBGB showed higher income per branch than the national average and 4 RRBs recorded higher growth rates of income per branch than at all India level during post-amalgamation period phase I. In 2013-14, income per branch in Rajasthan was highest in BRKGB (Rs. 136.09 lakhs) and lowest in MAGB (Rs. 105.13 lakhs). All three RRBs had income per branch below the national average though the growth rate of income per branch in BRKGB was significantly high during phase II as the amount was very low in 2012-13.

The growth of income per branch was less consistent in Rajasthan (CV=10.41, 36.70 and 40.48) than in India (CV=9.32, 34.12 and 9.85) during all three periods respectively. Level of consistency decreased during phase I, then again increased during phase II, both in Rajasthan and in India. Consistency was highest in MAGB (CV = 3.94) during pre-amalgamation period, in JTGB (CV =31.10) during phase I and in MAGB (CV = 0.97) during phase II of amalgamation.

#### **4.8.2 (E) Total Expenditure per Branch**

Table 4.12 [A] and 4.12 [B] further reveal that total expenditure per branch in RRBs in Rajasthan increased from Rs. 27.77 lakhs in 2000-01 to Rs. 33.15 lakhs in 2004-05, further to Rs. 105.10 lakhs in 2011-12, decreased to Rs. 64.96 lakhs in 2012-13 and again increased to Rs. 118.97 lakhs in 2013-14 registering growth rates of 4.5 percent, 20.25 percent and 83.14 percent respectively during pre-amalgamation period, phase I and phase II of post-amalgamation period. In India, total expenditure per branch increased from Rs. 27.76 lakhs in 2000-01 to Rs. 37.19 lakhs in 2004-05, further to Rs. 107.58 lakhs in 2011-12 and to Rs. 127.44 lakhs in 2013-14 and recorded growth rates of 5.59 percent, 17.28 percent and 15.45 percent respectively during the same three periods. Growth rates were higher in Rajasthan during post-amalgamation period. Total expenditure per branch was lower in Rajasthan than in India throughout the period of study.

**Table 4.12 (A): Total Income, Total Expenditure and Net Profit per Branch in RRBs in Rajasthan  
(Pre-Amalgamation Period)**

(Rs. in lakhs)

S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	Income per Branch	26.93	38.74	43.64	47.56	44.70	12.96	20.17
		Expenditure per Branch	22.07	30.48	32.21	31.30	32.80	8.53	14.76
		Profit per Branch	4.86	8.26	11.43	16.26	11.90	28.00	40.47
2	SGB(PNB)	Income per Branch	37.58	44.97	48.72	51.58	46.43	5.76	11.47
		Expenditure per Branch	31.15	36.06	37.25	38.60	33.18	1.96	8.63
		Profit per Branch	6.43	8.91	11.47	12.78	13.25	19.80	27.08
3	JNAGB(UCO)	Income per Branch	34.80	37.08	38.96	36.19	39.34	2.23	5.10
		Expenditure per Branch	31.07	34.05	34.59	35.60	35.16	2.96	5.25
		Profit per Branch	3.73	3.03	4.37	0.59	4.18	-13.14	48.33
4	TAGB (UCO)	Income per Branch	18.20	21.82	24.46	27.09	31.94	14.35	21.11
		Expenditure per Branch	18.12	20.95	24.21	25.86	25.76	9.57	14.64
		Profit per Branch	0.08	0.87	0.25	1.23	6.18	146.96	147.21
5	AKGB (BOB)	Income per Branch	17.89	21.63	30.48	31.20	30.68	15.55	23.46
		Expenditure per Branch	25.40	22.67	30.33	28.16	29.00	4.94	11.32
		Profit per Branch	-7.51	-1.04	0.15	2.53	1.68	--	-474.40
6	BAKGB (BOB)	Income per Branch	33.52	39.11	39.06	41.26	40.62	4.47	7.90
		Expenditure per Branch	29.40	34.19	31.79	32.55	30.09	-0.03	6.08
		Profit per Branch	4.12	4.92	7.27	8.71	10.53	27.74	37.22
7	BCKGB (BOB)	Income per Branch	25.16	28.89	28.82	30.92	33.07	6.34	9.98
		Expenditure per Branch	23.97	20.81	28.56	27.92	29.75	7.53	14.17
		Profit per Branch	1.19	8.08	0.26	3.00	3.31	11.13	95.41
8	DBKGB (BOB)	Income per Branch	18.74	25.24	27.88	27.89	27.00	8.66	15.19
		Expenditure per Branch	18.64	25.01	27.82	27.29	26.66	8.36	14.97
		Profit per Branch	0.10	0.23	0.06	0.60	0.34	40.58	81.57

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S. No.	RRBs	Item	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
9	MKGB(BOB)	Income per Branch	12.78	15.92	16.78	17.43	20.29	10.68	16.29
		Expenditure per Branch	21.24	22.09	27.27	28.17	26.24	6.89	12.54
		Profit per Branch	-8.46	-6.17	-10.49	-10.74	-5.95	--	-27.28
10	BKGB (SBBJ)	Income per Branch	17.21	18.69	17.48	18.26	24.46	7.03	15.55
		Expenditure per Branch	16.83	17.67	21.04	20.52	24.27	9.22	14.75
		Profit per Branch	0.38	1.02	-3.56	-2.26	0.19	--	-232.11
11	MGB(SBBJ)	Income per Branch	43.09	49.17	50.67	50.18	47.61	2.22	6.35
		Expenditure per Branch	41.13	45.67	46.58	50.18	44.93	2.75	7.12
		Profit per Branch	1.96	3.50	4.09	0.00	2.68	--	64.92
12	SKGB (SBBJ)	Income per Branch	24.24	27.78	30.16	34.74	41.60	13.93	21.20
		Expenditure per Branch	20.90	25.87	28.09	31.02	32.72	11.38	16.72
		Profit per Branch	3.34	1.91	2.07	3.72	8.88	29.98	71.46
13	MAGB(ICICI)	Income per Branch	34.58	37.78	36.96	35.40	34.74	-0.56	3.94
		Expenditure per Branch	35.62	37.74	36.39	35.29	33.19	-2.06	4.67
		Profit per Branch	-1.04	0.04	0.57	0.11	1.55	--	381.34
14	HKGB (CBI)	Income per Branch	28.08	31.09	31.34	37.44	39.79	9.23	14.52
		Expenditure per Branch	25.63	29.69	30.73	35.86	34.85	8.37	13.19
		Profit per Branch	2.45	1.40	0.61	1.58	4.94	16.46	75.93
15	All RRBs in Rajasthan	Income per Branch	29.26	34.20	36.37	37.71	38.31	6.57	10.41
		Expenditure per Branch	27.77	31.63	33.24	34.48	33.15	4.50	8.11
		Profit per Branch	1.49	2.57	3.13	3.23	5.16	31.17	42.86
16	All RRBs in India	Income per Branch	33.95	38.57	40.77	43.22	42.36	5.72	9.32
		Expenditure per Branch	29.76	34.35	37.18	37.90	37.19	5.59	9.56
		Profit per Branch	4.19	4.22	3.59	5.32	5.17	6.74	16.20

**Table 4.12 (B): Total Income, Total Expenditure and Net Profit per Branch in RRBs in Rajasthan  
(Post-Amalgamation Period: Phase I & II)**

**Phase I**

(Rs. in lakhs)

S. No.	RRBs	Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	Income per Branch	45.59	55.48	64.50	78.21	87.30	107.69	132.59	18.84	37.42
		Expenditure per Branch	33.86	44.36	57.04	72.33	76.69	95.29	117.60	21.97	40.97
		Profit per Branch	11.73	11.12	7.46	5.88	10.61	12.40	14.99	4.77	28.88
2	JTGB (UCO)	Income per Branch	42.11	47.33	55.31	68.33	77.37	86.86	99.48	15.89	31.10
		Expenditure per Branch	34.60	40.74	45.68	56.57	73.76	80.12	99.13	19.51	38.37
		Profit per Branch	7.50	6.59	9.63	11.76	3.61	6.74	0.35	-30.36	56.93
3	BRGB (BOB)	Income per Branch	33.13	41.48	51.08	70.11	79.60	91.59	105.54	21.72	39.70
		Expenditure per Branch	32.95	39.17	45.06	59.07	70.92	81.36	95.01	19.95	38.10
		Profit per Branch	0.18	2.31	6.02	11.04	8.68	10.23	10.53	74.25	61.60
4	MGBGB (SBBJ)	Income per Branch	46.97	49.47	68.15	77.37	96.04	112.54	132.63	19.98	38.52
		Expenditure per Branch	41.25	44.25	63.71	72.19	88.46	101.34	120.08	20.37	38.49
		Profit per Branch	5.72	5.22	4.44	5.18	7.59	11.20	12.55	17.10	43.45
5	MAGB (ICICI)	Income per Branch	31.65	36.33	43.35	57.61	64.67	71.01	83.48	18.07	34.51
		Expenditure per Branch	34.94	36.01	42.26	54.59	61.05	69.13	80.04	16.01	31.91
		Profit per Branch	-3.29	0.32	1.09	3.02	3.62	1.88	3.44	--	168.18
6	HKGB (CBI)	Income per Branch	42.95	48.38	53.68	67.15	77.77	92.24	105.05	16.78	33.47
		Expenditure per Branch	35.33	39.47	44.51	56.04	69.22	88.63	97.21	19.96	39.61
		Profit per Branch	7.62	8.91	9.17	11.11	8.55	3.61	7.84	-6.20	28.24
7	All RRBs in Rajasthan	Income per Branch	40.86	47.25	57.72	71.84	83.07	97.17	114.38	19.10	36.70
		Expenditure per Branch	35.44	41.36	51.03	63.28	75.55	87.96	105.10	20.25	38.69
		Profit per Branch	5.42	5.87	6.69	8.56	7.52	9.21	9.28	9.85	20.96
8	All RRBs in India	Income per Branch	45.17	52.75	63.72	75.02	89.37	101.37	118.56	17.60	34.12
		Expenditure per Branch	40.90	48.45	56.76	66.22	77.20	90.66	107.58	17.28	34.12
		Profit per Branch	4.27	4.30	6.96	8.80	12.17	10.71	10.98	20.48	38.75

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**Phase II**

S. No.	RRBs	Item	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	Income per Branch	31.90	136.09	326.61	87.71
		Expenditure per Branch	25.62	123.68	382.75	92.89
		Profit per Branch	6.28	12.41	97.61	46.38
2	MGB (SBBJ)	Income per Branch	124.11	126.10	1.60	1.12
		Expenditure per Branch	115.22	115.07	-0.13	0.09
		Profit per Branch	8.89	11.03	24.07	15.19
3	MAGB (ICICI)	Income per Branch	103.70	105.13	1.38	0.97
		Expenditure per Branch	98.51	98.48	-0.03	0.02
		Profit per Branch	5.19	6.65	28.13	17.44
4	All RRBs in Rajasthan	Income per Branch	72.22	130.54	80.75	40.68
		Expenditure per Branch	64.96	118.97	83.14	41.53
		Profit per Branch	7.26	11.57	59.37	32.37
5	All RRBs in India	Income per Branch	123.12	141.56	14.98	9.85
		Expenditure per Branch	110.39	127.44	15.45	10.14
		Profit per Branch	12.72	14.12	11.01	7.38

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

In 2004-05, total expenditure per branch was highest in MGB (Rs. 44.93 lakhs) and lowest in BKGB (Rs. 24.27 lakhs). Only MGB had higher amount of total expenditure per branch than the national average and 8 out of 14 RRBs recorded higher growth rates than that at all India level during pre-amalgamation period. Growth rate was negative in BAKGB (-0.03) during this period. In 2011-12 expenditure per branch of RRBs in Rajasthan was highest in MGBGB (Rs. 120.08 lakhs) and lowest in MAGB (Rs. 80.04 lakhs). RGB and MGBGB showed higher expenditure per branch than the national average and 5 out of 6 RRBs recorded higher growth rates of expenditure per branch than that at all India level during phase I of post-amalgamation period. In 2013-14, expenditure per branch in Rajasthan was highest in BRKGB (Rs. 123.68 lakhs) and lowest in MAGB (Rs. 98.48 lakhs). All the three RRBs had expenditure per branch below the national average though the growth rate was very high in BRKGB (382.75%) during phase II. MAGB showed the negative growth rate (-0.03%) during this period.

The growth of expenditure per branch was less consistent in Rajasthan (CV = 38.69, 41.53) than in India (CV=34.12, 10.14) during phase I and Phase II of post-amalgamation periods respectively. Consistency was highest in MAGB (CV =4.67, 31.91 and 0.02) during all three periods of study respectively.

#### **4.8.2 (F) Net Profit per Branch**

Table 4.12 [A] and 4.12 [B] also present that few RRBs were incurring losses during pre-amalgamation period. However, the profits per branch of RRBs in Rajasthan increased from Rs. 1.49 lakhs in 2000-01 to Rs. 5.16 lakhs in 2004-05, further to Rs. 9.28 lakhs in 2011-12 and to Rs. 11.57 lakhs in 2013-14 and registered growth rates of 31.17 percent, 9.85 percent and 59.37 percent respectively during pre-amalgamation period, phase I and phase II of post-amalgamation period. In India, the profits per branch increased from Rs. 4.19 lakhs in 2000-01 to Rs. 5.17 lakhs in 2004-05, further to Rs. 10.98 lakhs in 2011-12 and to Rs. 14.12 lakhs in 2013-14 and recorded growth rates of 6.74 percent, 20.48 percent and 11.01 percent respectively during the same periods. The profits per branch grew at a faster rate in Rajasthan RRBs than that at all India level during pre-amalgamation period and

phase II. The amount of profits per branch was lower in Rajasthan than that in India throughout the period of study except 2005-06 and 2006-07.

In 2004-05, the profits per branch in Rajasthan were highest in ABAGB (Rs. 11.90 lakhs) and MKGB was the only RRB which had losses per branch (Rs. -5.95 lakhs) during that year. 5 RRBs in Rajasthan had profits per branch higher than the national average and 8 RRBs recorded growth rates higher than that at all India level during pre-amalgamation period. In respect of 5 RRBs growth rates could not be calculated due to negative amount of profits. TAGB recorded significantly high (146.96%) growth rate during that period while JNAGB (-13.14%) recorded negative growth rate. In 2011-12, RGB (Rs. 14.99 lakhs) had highest amount of profits per branch and JTGB (Rs. 0.35 lakhs) had the lowest. 2 RRBs recorded higher amount of profits per branch than the national average. Growth rate was negative in JTGB (-30.36%) and HKGB (-6.20%) during this period. In 2013-14, profits per branch were highest in BRKGB (Rs. 12.41 lakhs) and lowest in MAGB (Rs. 6.65 lakhs). Growth rate was highest in BRKGB (97.61%).

Growth of profit per branch was more consistent in Rajasthan (CV = 20.96) than in India (CV = 38.75) during phase I of amalgamation process. The consistency was highest in SGB (CV = 27.08) during pre-amalgamation period, in HKGB (CV = 28.24) during phase I and in MGB (CV = 15.19) during phase II of amalgamation.

#### **4.8.3 Financial Productivity**

Financial productivity of Regional Rural Banks in Rajasthan has been analyzed with the help of return on advances, return on investments, cost of deposits credit deposits ratio and investment deposit ratio.

##### **4.8.3 (A) Return on Advances**

Return on advances shows the ratio of interest income on advances to total advances. It reflects the average return on advances. If it increases the financial productivity of the bank also increases. Table 4.13 [A] and 4.13 [B] reveal the position of return on advances of individual RRBs in Rajasthan during pre and post amalgamation periods. Tables reveal that return on advances had a decreasing trend both in Rajasthan and in India during pre-amalgamation period and also till 2006-07

**Table 4.13 (A): Return on Advances in RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	10.87	10.88	11.22	10.65	9.26	-3.36	7.22
2	SGB(PNB)	10.84	9.97	9.51	8.96	10.87	-1.01	8.31
3	JNAGB(UCO)	11.33	11.06	10.05	10.29	9.22	-4.73	8.09
4	TAGB (UCO)	10.63	10.92	9.71	10.17	10.18	-1.56	4.52
5	AKGB (BOB)	9.79	9.09	11.47	10.69	9.40	0.81	9.70
6	BAKGB (BOB)	10.80	11.07	9.72	10.24	9.18	-3.95	7.58
7	BCKGB (BOB)	11.28	11.49	10.58	10.30	9.30	-4.83	8.22
8	DBKGB (BOB)	9.59	11.03	10.82	10.36	8.07	-4.00	12.02
9	MKGB( BOB)	11.63	11.77	12.44	11.08	10.81	-2.05	5.50
10	BKGB (SBBJ)	13.41	13.85	11.74	11.16	12.21	-3.95	9.06
11	MGB(SBBJ)	13.02	13.58	12.77	11.87	10.00	-6.41	11.43
12	SKGB (SBBJ)	11.41	11.42	10.75	10.41	9.96	-3.58	5.89
13	MAGB(ICICI)	11.50	11.15	11.59	11.95	11.57	0.82	2.47
14	HKGB (CBI)	11.01	10.24	9.48	10.79	9.51	-2.38	6.93
15	All RRBs in Rajasthan	11.30	11.24	10.77	10.58	9.79	-3.41	5.69
16	All RRBs in India	10.65	10.66	10.22	9.79	9.27	-3.56	5.88

**Table 4.13 (B): Return on Advances in RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	9.06	8.42	8.49	10.64	10.48	8.26	8.53	-0.03	11.08
2	JTGB (UCO)	9.02	9.15	8.81	9.64	9.53	9.84	10.15	2.09	5.06
3	BRGB (BOB)	8.54	7.64	8.74	9.63	9.07	9.40	9.56	2.86	7.88
4	MGBGB (SBBJ)	9.96	8.34	10.03	9.83	9.73	10.48	10.84	2.46	7.95
5	MAGB (ICICI)	9.26	9.26	8.18	11.03	9.67	10.14	10.34	2.46	9.48
6	HKGB (CBI)	9.26	8.28	8.00	9.88	7.79	8.15	8.78	-0.78	8.80
7	All RRBs in Rajasthan	9.15	8.34	8.91	9.96	9.53	9.33	9.60	1.57	5.69
8	All RRBs in India	8.80	8.55	8.87	8.86	9.02	9.13	9.59	1.46	3.64

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	2.24	9.44	321.43	87.18
2	MGB (SBBJ)	10.04	10.25	2.09	1.46
3	MAGB (ICICI)	10.48	11.51	9.83	6.62
4	All RRBs in Rajasthan	5.28	9.79	85.42	42.32
5	All RRBs in India	9.03	9.79	8.42	5.71

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

during phase I of amalgamation. However, it increased thereafter, decreased in 2009-10 again but from 2010-11 it increased during phase I. This ratio was less again in 2012-13, both in Rajasthan and in India, but increased again in 2013-14. Return of advances in Rajasthan remained higher than those in India during pre-amalgamation period and phase I of amalgamation except in 2006-07 but during phase II, they were lower in 2012-13 and equal in 2013-14.

The growth rate of return on advances was negative both in Rajasthan and in India (-3.41% and -3.56% respectively) during pre-amalgamation period. During phase I of amalgamation it was (1.57% and 1.46% respectively) and during phase II it was significantly high (85.42%) in Rajasthan and 8.42 percent in India. Growth rate was recorded higher in Rajasthan during all three periods.

In 2004-05, return of advances was highest in BKGB (12.21%) and lowest in DBKGB (8.07%). Ten RRBs secured higher return on advances than national average. Growth rates of return on advances of RRBs in Rajasthan were negative in respect of all individual RRBs except AKGB and MAGB during pre-amalgamation period. In 2011-12, return on advances was highest in MGBGB (10.84%) and lowest in RGB (8.53%). Four RRBs recorded positive growth rates and also higher than those at Rajasthan level and all India level during phase I. In 2013-14, MAGB (11.51%) had highest return on advances and growth rate was extremely high in BRKGB (321.43%) during phase II.

The growth of return on advances was more consistent in Rajasthan (CV = 5.69) than in India (CV = 5.88) during pre-amalgamation period but was less consistent during both the phases of post-amalgamation period. Consistency was highest in MAGB (CV= 2.47) during pre-amalgamation period, in JTGB (CV= 5.06) during phase I and in MGB (CV = 1.46) during phase II.

#### **4.8.3 (B) Return on Investments**

Return on investments shows the ratio of interest income on investments to total investments. Financial productivity is positively related with this ratio. Table 4.14 [A] and 4.14 [B] reveal that return on investments of RRBs in Rajasthan decreased from 11.08 percent in 2000-01 to 7.60 percent in 2004-05, further to 7.12

percent in 2011-12 and to 4.37 percent in 2012-13 and then increased to 6.83 percent in 2013-14 though it increased slightly during few years. Growth rate of return on investments was negative during pre-amalgamation period (-10.15%) and phase I (-0.27%) and positive during phase II (56.29%). In India also, return on investments showed a decreasing trend during pre-amalgamation period but increasing trend during phase I and phase II. Growth rates of return on investments in India were -6.47 percent, 0.80 percent and 2.43 percent respectively during the three periods.

In 2004-05, return on investments were highest in MGB (8.93%) and lowest in AKGB (5.58%). All the RRBs in Rajasthan registered a negative growth rate of return on investments during pre-amalgamation period. In 2011-12, return on investments were highest in MGBGB (7.67%) and lowest in HKGB (6.32%). Growth rates of return on investments were positive only in MGBGB (1.16%) and BRGB (1.57%) during phase I of amalgamation. In 2013-14, return on investments were highest in BRKGB (14.99%) and lowest in MGB (0.15%). Growth rate of return on investments was extremely high in BRKGB (653.27%) during phase II.

Growth of return of investments was less consistent in RRBs of Rajasthan (CV =17.27, 12.09 and 31.06) than in India (CV =12.20, 4.88 and 1.70) during all three periods of study respectively. Consistency was highest in BKGB (CV = 3.48) during pre-amalgamation period, in MAGB (CV=5.92) during phase I and in MGB (CV=0.11) during phase II of amalgamation.

**Table 4.14 (A): Return on Investments in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	8.98	9.63	8.44	7.45	6.87	-7.62	13.53
2	SGB(PNB)	10.53	9.95	8.75	7.38	7.71	-8.81	15.45
3	JNAGB(UCO)	11.88	11.60	11.53	8.48	7.86	-10.77	18.83
4	TAGB (UCO)	10.46	10.35	8.53	6.98	7.68	-9.62	17.78
5	AKGB (BOB)	9.54	11.58	8.86	5.92	5.68	-15.70	30.14
6	BAKGB (BOB)	11.59	11.52	10.14	8.54	7.93	-10.04	16.87
7	BCKGB (BOB)	10.55	11.45	9.60	8.07	7.59	-9.59	17.22
8	DBKGB (BOB)	9.99	10.21	9.36	6.37	7.38	-10.21	19.61
9	MKGB( BOB)	10.73	11.01	6.47	5.57	6.31	-16.00	32.77
10	BKGB (SBBJ)	8.62	9.21	9.13	8.55	8.68	-0.60	3.48
11	MGB(SBBJ)	11.31	11.26	11.24	10.34	8.93	-5.43	9.66
12	SKGB (SBBJ)	11.43	11.26	9.75	8.42	7.75	-10.13	16.95
13	MAGB(ICICI)	11.97	12.30	11.17	7.93	7.23	-13.47	23.40
14	HKGB (CBI)	12.61	12.17	11.54	6.69	6.70	-17.00	30.06
15	All RRBs in Rajasthan	11.08	11.08	10.15	8.08	7.60	-10.15	17.27
16	All RRBs in India	9.59	10.47	9.65	8.30	7.71	-6.47	12.20

**Table 4.14 (B): Return on Investments in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	5.98	7.18	7.15	4.62	4.60	5.78	7.42	-0.81	19.58
2	JTGB (UCO)	7.60	6.92	7.88	6.83	8.07	6.00	6.94	-1.89	10.01
3	BRGB (BOB)	6.06	8.17	5.76	6.00	6.99	7.26	7.11	1.57	12.78
4	MGBGB (SBBJ)	7.00	6.47	7.03	5.88	6.79	6.75	7.67	1.16	8.07
5	MAGB (ICICI)	6.76	6.51	7.63	6.64	6.87	6.82	6.39	-0.64	5.92
6	HKGB (CBI)	5.78	7.17	7.11	5.05	6.00	5.98	6.32	-0.94	12.09
7	All RRBs in Rajasthan	6.62	7.10	7.02	5.84	6.48	6.38	7.12	-0.27	7.05
8	All RRBs in India	6.36	6.52	6.68	6.55	6.33	6.23	7.19	0.80	4.88

**Phase-II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	1.99	14.99	653.27	108.27
2	MGB (SBBJ)	6.50	6.51	0.15	0.11
3	MAGB (ICICI)	9.22	7.86	-14.75	11.26
4	All RRBs in Rajasthan	4.37	6.83	56.29	31.06
5	All RRBs in India	6.59	6.75	2.43	1.70

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

### **4.8.3 (C) Cost of Deposits**

Cost of deposits indicates the ratio of interest expended on deposits to total deposits. Financial productivity is negatively related with this ratio. Table 4.15 [A] and 4.15[B] present that cost of deposits of RRBs in Rajasthan decreased throughout the pre- amalgamation period from 8.04 percent in 2000-01 to 4.69 percent in 2004-05. Again decreased to 3.96 percent in 2006-07 then increased to 5.20 percent in 2009-10 and to 5.25 percent in 2011-12 after a slight decrease in 2010-11. During phase II, cost of deposits increased from 3.41 percent in 2012-13 to 5.87 percent in 2013-14. It registered a growth rate of -12.94 percent, 4.45 percent and 72.14 percent respectively during the three parts of the period of study. Cost of deposits at all India level was lower than Rajasthan throughout the period of study except 2012-13. Growth rate was negative during pre-amalgamation period (-10.02) and positive but lower than Rajasthan during phase I (3.52%) and phase II (11.20%).

In 2004-05, cost of deposits was highest in BKGB (7.24%) and lowest in ABAGB (3.73%). Growth rates were negative in respect of all individual RRBs in Rajasthan during pre-amalgamation period. In 2011-12, cost of deposits was highest in JTGB (5.29%) and lowest in HKGB (3.22%). All RRBs except HKGB had higher cost of deposits than national average. In 2013-14, cost of deposits was highest in MGB (6.22%) and lowest in MAGB (5.36%). Growth rate of cost of deposits was extremely high in BRKGB (279.33%) during phase II of amalgamation.

The growth of cost of deposits was less consistent in Rajasthan (CV= 21.32, 10.67 and 37.49) than in India (CV=16.46, 8.36 and 7.50) during all three parts of the periods of study respectively. Consistency was highest in BKGB (CV=7.09) during pre-amalgamation period, in HKGB (CV=9.07) during phase I and in MAGB (CV=0.00) during phase II of amalgamation.

**Table 4.15 (A): Cost of Deposits in Individual RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	5.40	5.56	5.14	4.11	3.73	-9.90	17.07
2	SGB(PNB)	7.16	6.75	6.63	5.66	5.01	-8.52	14.12
3	JNAGB(UCO)	8.76	7.84	6.40	5.48	4.25	-16.51	27.55
4	TAGB (UCO)	8.16	7.37	5.73	5.50	4.53	-13.67	23.56
5	AKGB (BOB)	7.08	6.60	5.71	4.56	4.09	-13.65	22.84
6	BAKGB (BOB)	7.31	6.85	6.31	5.37	4.63	-10.92	17.91
7	BCKGB (BOB)	7.45	7.60	6.44	5.23	4.65	-12.33	20.93
8	DBKGB (BOB)	6.74	7.12	6.28	4.99	4.41	-11.34	19.64
9	MKGB( BOB)	7.94	7.46	6.40	5.50	4.63	-12.92	21.35
10	BKGB (SBBJ)	8.43	8.03	7.94	7.14	7.24	-4.13	7.09
11	MGB(SBBJ)	9.78	8.91	8.25	6.79	5.47	-13.36	21.90
12	SKGB (SBBJ)	7.76	8.03	7.41	6.64	5.53	-8.31	14.26
13	MAGB(ICICI)	10.77	9.86	7.79	6.61	5.56	-15.82	26.84
14	HKGB (CBI)	6.85	6.70	6.20	4.59	4.14	-12.94	21.92
15	All RRBs in Rajasthan	8.04	7.55	6.68	5.55	4.69	-12.94	21.32
16	All RRBs in India	6.90	6.68	6.15	5.32	4.56	-10.02	16.46

**Table 4.15 (B): Cost of Deposits in Individual RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	3.75	3.74	4.41	4.26	4.85	4.27	4.89	4.22	10.72
2	JTGB (UCO)	3.78	3.92	4.39	4.72	5.00	4.75	5.15	5.29	11.56
3	BRGB (BOB)	4.01	3.85	4.32	4.61	5.25	4.66	5.33	5.24	12.44
4	MGBGB (SBBJ)	4.94	4.47	5.46	5.75	5.96	5.44	6.10	4.06	10.58
5	MAGB (ICICI)	4.41	3.99	4.54	4.75	5.12	4.65	5.87	4.69	12.54
6	HKGB (CBI)	3.69	3.69	3.84	4.03	4.68	4.03	4.38	3.22	9.07
7	All RRBs in Rajasthan	4.09	3.96	4.56	4.75	5.20	4.69	5.25	4.45	10.67
8	All RRBs in India	4.02	3.90	4.17	4.39	4.49	4.40	5.00	3.52	8.36

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	1.50	5.69	279.33	82.41
2	MGB (SBBJ)	6.01	6.22	3.49	2.43
3	MAGB (ICICI)	5.36	5.36	0.00	0.00
4	All RRBs in Rajasthan	3.41	5.87	72.14	37.49
5	All RRBs in India	4.91	5.46	11.20	7.50

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

### 4.8.3 (D) Credit Deposit Ratio

The credit deposit ratio is an indicator of the level of credit activities of banks in relation to deposits mobilization by them. An increasing credit deposit ratio of the RRBs enables them to meet the credit requirements of the rural areas so as to accelerate the process of growth in those areas. Table 4.16 [A] and 4.16[B] reveal that average CD ratio of RRBs in Rajasthan increased from 41.13 percent in 2000-01 to 54.41 percent in 2004-05, further to 70.12 percent in 2011-12 and to 75.16 percent in 2013-14 and recorded a growth rate of 6.60 percent, 2.17 percent and 1.09 percent respectively during pre-amalgamation period, phase I and phase II of amalgamation. In India, CD ratio increased from 41.33 percent in 2000-01 to 52.89 percent in 2004-05, further to 62.46 percent in 2011-12 and to 66.56 percent in 2013-14 and registered a growth rate of 6.14 percent, 1.23 percent and 2.68 percent respectively during the same periods. CD ratio in RRBs in Rajasthan remained higher than those in India throughout the post-amalgamation period though it was lower in few of the years of pre-amalgamation period, however, growth rate was higher in Rajasthan during that period.

In 2004-05, CD ratio was highest in SKGB (103.47%) and lowest in MAGB (30.45%). 8 out of 14 RRBs had higher CD ratio than both national and state average. Growth rate of CD ratio was highest in SKGB (14.38%) during pre-amalgamation period. Three RRBs (DBKGB, MKGB and MAGB) recorded negative growth rates during the period. Five RRBs recorded growth rates higher than the national average. In 2011-12, CD ratio was highest in MGBGB (81.87%) and lowest in MAGB (40.15%). Four RRBs had higher CD ratio than the national average. Growth rates of CD ratio were higher in 4 RRBs (RGB, BRGB, MGBGB and MAGB) than that at all India level during phase I of amalgamation. HKGB recorded negative growth rate (-0.13%) of CD ratio. In 2013-14, CD ratio was highest in BRKGB (78.33%) and lowest in MAGB (45.54%). Growth rate of CD ratio was negative in BRKGB (-1.84%) during phase II.

The growth of CD ratio was less consistent in Rajasthan during pre-amalgamation period (CV=11.82) and phase I (CV=7.39) than in India (CV=10.33 and 3.95 respectively) though it was more consistent in phase II (CV=0.77 for Rajasthan and 1.87 for India). Consistency was highest in BAKGB (CV=5.33) during pre-amalgamation period, in JTGB (CV=3.25) during phase I and in BRKGB (CV= 1.31) during phase II.

**Table 4.16 (A): Credit Deposit Ratio in RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	50.61	55.04	57.89	62.26	75.80	9.76	15.98
2	SGB(PNB)	32.89	31.89	34.01	37.47	51.95	11.35	21.97
3	JNAGB(UCO)	30.81	28.55	29.72	30.92	37.45	4.81	11.01
4	TAGB (UCO)	46.64	44.00	54.08	57.88	71.37	11.91	19.74
5	AKGB (BOB)	44.78	44.57	49.81	47.47	55.85	5.18	9.57
6	BAKGB (BOB)	65.04	66.30	70.86	68.46	74.23	3.01	5.33
7	BCKGB (BOB)	57.85	60.08	59.85	58.17	69.00	3.25	7.52
8	DBKGB (BOB)	47.65	51.50	47.45	40.49	46.26	-2.95	8.52
9	MKGB( BOB)	39.80	43.85	39.14	35.45	37.92	-3.05	7.82
10	BKGB (SBBJ)	65.96	60.69	66.11	66.05	74.92	3.45	7.68
11	MGB(SBBJ)	33.51	32.34	32.79	33.28	41.65	4.74	11.24
12	SKGB (SBBJ)	59.58	68.30	80.94	86.78	103.47	14.38	21.26
13	MAGB(ICICI)	31.90	34.74	36.18	32.36	30.45	-1.63	6.95
14	HKGB (CBI)	42.55	44.17	55.36	49.54	63.85	9.71	17.07
15	All RRBs in Rajasthan	41.13	41.57	44.57	45.00	54.41	6.60	11.82
16	All RRBs in India	41.33	41.83	44.23	46.34	52.89	6.14	10.33

**Table 4.16 (B): Credit Deposit Ratio in RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	56.88	72.49	83.24	61.63	59.94	75.66	76.70	2.36	14.39
2	JTGB (UCO)	50.73	52.25	54.11	49.14	52.92	53.45	52.39	0.43	3.25
3	BRGB (BOB)	60.90	68.59	71.00	61.74	67.72	73.77	74.69	2.57	7.93
4	MGBGB (SBBJ)	0.00	72.66	76.12	71.12	80.22	81.28	81.87	--	44.55
5	MAGB (ICICI)	27.56	25.03	28.93	30.40	33.77	35.63	40.15	7.36	16.43
6	HKGB (CBI)	62.84	64.62	67.36	53.47	58.35	67.01	63.55	-0.13	7.96
7	All RRBs in Rajasthan	58.87	64.06	68.62	58.90	63.18	69.41	70.12	2.17	7.39
8	All RRBs in India	55.68	58.32	59.52	56.41	57.10	59.51	62.46	1.23	3.95

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	79.80	78.33	-1.84	1.31
2	MGB (SBBJ)	69.84	73.75	5.60	3.85
3	MAGB (ICICI)	44.21	45.54	3.01	2.10
4	All RRBs in Rajasthan	74.35	75.16	1.09	0.77
5	All RRBs in India	64.82	66.56	2.68	1.87

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

### **4.8.3 (E) Investment Deposit Ratio**

Investment deposit ratio indicates the ratio of total investments to total deposits. It reflects what percentage of total deposits has been deployed in the investment portfolio of the RRBs. Table 4.17 [A] and 4.17 (B) present that ID ratio of RRBs in Rajasthan decreased from 67.46 percent in 2000-01 to 52.45 percent in 2004-05, further to 41.79 percent in 2007-08, then increased to 54.57 percent in 2008-09 and again decreased to 52.11 percent in 2011-12. It was 52.55 percent in 2013-14. Growth rate of ID ratio in Rajasthan was negative during pre-amalgamation period (-5.52%) and during phase II (-3.84%) though it was positive during phase I (2.09%). In India too, ID ratio decreased from 71.97 percent in 2000-01 to 52.98 percent in 2007-08, then increased to 59.77 percent in 2010-11 and to 61.07 percent in 2013-14 though it decreased in 2011-12. Growth rate of ID ratio was negative at all India level too (-4.49%) during pre-amalgamation period but it was positive during phase I (1.08%) and phase II (2.59%). Average ID ratio of RRBs in Rajasthan remained lower than the national average throughout the period of study.

In 2004-05, ID ratio was highest in MAGB (75.55%) and lowest in SKGB (33.00%). Only 4 RRBs in Rajasthan secured higher level of ID ratio than the national average. Growth rates of ID ratio remained negative in respect of 11 RRBs in Rajasthan during the pre-amalgamation period. The position improved slightly with ups and downs during post-amalgamation period phase I. In 2011-12, MAGB (80.82%) had highest level of ID ratio and it was lowest in MGBGB (42.12%) with a negative growth rate (-0.86%) during phase I. Other 5 RRBs registered a positive growth rate during this period. In 2013-14, ID ratio was highest in MAGB (58.34%) though growth rate was negative (-9.61%). MGB too registered a negative growth rate (-9.04%) during phase II.

The growth (or fall) of ID ratio was less consistent in Rajasthan (CV = 9.17, 9.33 and 2.77) than in India (CV = 7.30, 4.33 and 1.81) during pre-amalgamation period, phase I and phase II of amalgamation respectively. Consistency was highest in DBKGB (CV = 5.60) during pre-amalgamation period, in MAGB (CV = 7.38) during phase I and in BRKGB (CV = 1.19) during phase II.

**Table 4.17 (A): Investment Deposit Ratio in RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	55.17	52.19	52.17	46.28	40.64	-7.05	11.79
2	SGB(PNB)	73.50	71.72	73.49	70.73	59.40	-4.30	8.48
3	JNAGB(UCO)	89.13	83.06	71.57	70.88	62.51	-8.31	14.04
4	TAGB (UCO)	73.67	66.22	56.68	54.96	45.22	-10.97	18.42
5	AKGB (BOB)	47.27	39.91	41.25	46.16	45.09	0.51	7.27
6	BAKGB (BOB)	56.82	54.93	52.45	51.94	46.65	-4.40	7.31
7	BCKGB (BOB)	57.53	54.42	55.52	52.67	44.40	-5.36	9.59
8	DBKGB (BOB)	57.07	57.16	59.55	63.08	54.39	0.02	5.60
9	MKGB( BOB)	37.52	31.91	41.11	45.89	37.52	3.70	13.29
10	BKGB (SBBJ)	62.79	63.36	49.56	42.30	33.79	-15.15	25.58
11	MGB(SBBJ)	73.96	70.68	70.32	67.22	61.47	-4.11	6.85
12	SKGB (SBBJ)	62.00	52.41	43.52	39.68	33.00	-14.27	24.53
13	MAGB(ICICI)	82.05	73.24	65.37	77.19	75.55	-1.12	8.20
14	HKGB (CBI)	50.10	50.71	40.65	48.44	39.79	-4.94	11.52
15	All RRBs in Rajasthan	67.46	63.57	60.12	59.58	52.45	-5.52	9.17
16	All RRBs in India	71.97	68.55	66.00	64.05	59.16	-4.49	7.30

**Table 4.17 (B): Investment Deposit Ratio in RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	48.48	44.94	32.48	52.68	59.60	43.63	47.17	1.68	17.80
2	JTGB (UCO)	53.04	53.85	50.35	62.53	53.30	66.48	68.29	4.51	12.54
3	BRGB (BOB)	48.66	37.65	39.25	54.50	54.00	47.45	48.34	2.76	13.90
4	MGBGB (SBBJ)	52.78	38.61	41.51	45.83	44.23	46.52	42.12	-0.86	10.20
5	MAGB (ICICI)	72.24	72.71	66.95	68.40	68.51	65.19	80.82	0.51	7.38
6	HKGB (CBI)	45.81	41.18	36.43	54.04	55.63	47.49	51.34	3.82	14.63
7	All RRBs in Rajasthan	51.44	46.51	41.79	54.57	53.96	53.62	52.11	2.09	9.33
8	All RRBs in India	57.74	54.92	52.98	58.16	59.57	59.77	58.01	1.08	4.33

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	48.49	49.31	1.69	1.19
2	MGB (SBBJ)	62.58	56.92	-9.04	6.70
3	MAGB (ICICI)	64.54	58.34	-9.61	7.14
4	All RRBs in Rajasthan	54.65	52.55	-3.84	2.77
5	All RRBs in India	59.53	61.07	2.59	1.81

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

## **4.9 Portfolio Quality and Viability Analysis**

Portfolio quality of Regional Rural Banks in Rajasthan has been analyzed on the basis of credit risk ratio, accumulated losses to total assets ratio and coverage ratio.

### **4.9.1 Credit Risk Ratio**

Credit risk ratio measures gross non performing assets of RRBs as percentage to their total outstanding loans and advances. A decreasing credit risk ratio is positive for portfolio quality. Table 4.18 [A] and 4.18[B] present the favorable trend in respect of credit risk ratio as it decreased throughout the pre-amalgamation period and phase I and recorded negative growth rates both in Rajasthan (-18.30% and -12.96% respectively) and in India (-16.88% and -9.33% respectively) but during phase II, the ratio was comparatively higher though the growth rate in Rajasthan was still negative (-12.81%) but positive at all India level (0.33%). Credit risk ratio remained lower in Rajasthan than in India throughout the period of study except in 2012-13. This shows the better position of RRBs in Rajasthan.

In 2004-05, only 3 RRBs; MAGB (13.81%), DBKGB (10.61%) and JNAGB (9.01%) had credit risk ratio higher than the national average and 4 RRBs; JNAGB (2.94%), MKGB (15.57%), MGB (4.22%) and MAGB (15.65%) recorded positive growth rates of credit risk ratio during pre-amalgamation period. In 2011-12, all 6 RRBs in Rajasthan had lower credit risk ratio than the national average with highest in MAGB (4.82%). Growth rates were negative in respect of all the RRBs in Rajasthan during phase I of amalgamation. In 2013-14, credit risk ratio was highest in BRKGB (6.80%) which was higher than the national average also. Only MAGB (14.15%) recorded a positive growth rate of credit risk ratio during phase II.

The growth (or fall) of credit risk ratio was less consistent in Rajasthan (CV=31.07, 33.76 and 9.68) than in India (CV=27.59, 27.46 and 0.23) during all three periods respectively. Consistency was highest in DBKGB (CV=16.83) during pre-amalgamation period, in MGBGB (CV=19.91) during phase I of amalgamation and in MGB (CV= 0.30) during phase II.

**Table 4.18 (A): Gross NPAs to Total Loans and Advances (o/s) in RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	7.35	6.53	3.95	2.50	1.75	-31.82	55.55
2	SGB(PNB)	31.94	23.43	19.53	12.65	5.00	-35.11	55.52
3	JNAGB(UCO)	8.36	11.22	10.05	12.73	9.07	2.94	16.90
4	TAGB (UCO)	13.42	7.36	4.34	2.64	3.48	-31.10	70.22
5	AKGB (BOB)	26.57	22.47	10.21	9.42	6.39	-31.06	59.38
6	BAKGB (BOB)	15.27	10.70	8.88	7.90	6.61	-17.95	34.10
7	BCKGB (BOB)	12.34	10.93	8.77	8.64	6.30	-14.61	24.71
8	DBKGB (BOB)	13.37	12.16	13.26	16.78	10.61	-1.39	17.16
9	MKGB( BOB)	7.16	3.23	4.62	15.68	6.70	15.57	64.89
10	BKGB (SBBJ)	9.64	8.99	8.27	7.56	4.02	-17.49	28.55
11	MGB(SBBJ)	4.09	4.65	5.41	6.13	4.38	4.22	16.83
12	SKGB (SBBJ)	7.57	5.97	4.55	3.24	2.06	-27.49	46.55
13	MAGB(ICICI)	8.70	8.15	10.40	13.85	13.81	15.65	24.85
14	HKGB (CBI)	15.32	12.50	7.16	6.54	4.57	-26.41	48.82
15	All RRBs in Rajasthan	12.84	10.71	8.42	8.17	5.35	-18.30	31.07
16	All RRBs in India	18.83	16.46	14.44	12.63	8.53	-16.88	27.59

**Table 4.18 (B): Gross NPAs to Total Loans and Advances (o/s) in RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	2.24	1.84	3.46	1.46	1.27	0.83	2.03	-9.81	45.14
2	JTGB (UCO)	6.46	7.31	5.50	3.33	3.87	3.92	3.97	-10.35	31.07
3	BRGB (BOB)	9.12	6.71	6.11	3.42	3.86	3.51	2.34	-18.81	47.67
4	MGBGB (SBBJ)	2.51	2.28	2.02	2.38	1.76	1.35	2.39	-4.65	19.91
5	MAGB (ICICI)	13.27	10.34	9.26	4.97	4.12	4.85	4.82	-17.43	48.37
6	HKGB (CBI)	5.23	3.81	3.90	2.65	2.74	2.22	3.61	-8.69	29.41
7	All RRBs in Rajasthan	5.26	4.47	4.30	2.68	2.68	2.28	2.64	-12.96	33.76
8	All RRBs in India	7.28	6.55	6.05	4.14	3.72	3.75	5.03	-9.23	27.46

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	8.24	6.80	-17.48	13.54
2	MGB (SBBJ)	4.77	4.75	-0.42	0.30
3	MAGB (ICICI)	4.10	4.68	14.15	9.34
4	All RRBs in Rajasthan	6.87	5.99	-12.81	9.68
5	All RRBs in India	6.07	6.09	0.33	0.23

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - [www.rbi.org.in](http://www.rbi.org.in)

#### **4.9.2 Accumulated Losses to Total Assets**

Accumulated losses are considered as burden in any institution including RRBs. They affect adversely the viability of these banks. As many RRBs in the country as well as in the state of Rajasthan were incurring losses since their inception, they had a large amount of accumulated losses too and their viability was a serious issue for the policy makers. However, after the implementation of financial sector reforms, position of accumulated losses of RRBs improved and till the end of 20<sup>th</sup> Century, a few RRBs could eliminate their accumulated losses. Table 4.19[A] and 4.19 [B] reveal the position of accumulated losses of RRBs as percentage to their total assets during the period of study. It becomes clear from the tables that the average amount of accumulated losses to total assets was lower in Rajasthan than in India throughout the period of study. Moreover, it became NIL in 2013-14. However, the growth rate showed the declining trend both in Rajasthan and in India. Two RRBs in Rajasthan JNAGB and BAKGB had already eliminated their accumulated losses thus the ratio became 0.00 for them in 2000-01. This number increased to 5 out of 14 RRBs till the end of pre-amalgamation period.

During post-amalgamation period phase I, 4 amalgamated RRBs; RGB, JTGB, BRGB and MGBGB and one standalone RRB (HKGB) eliminated their accumulated losses and ratio became nil for them in 2011-12. Only MAGB (standalone RRB) continued to have the positive ratio which was 5.69 percent in 2005-06 but reduced to 1.06 percent in 2011-12. During phase II, MAGB also eliminated its accumulated losses and the ratio of accumulated losses to total assets became nil for this RRB too. Thus, today all RRBs in Rajasthan are free from accumulated losses and have attained sustainable viability by the end of phase II.

Coefficient of variation regarding the accumulated losses to total assets was higher in Rajasthan (CV=25.86, 101.52 and 141.42) than in India (CV=18.68, 58.09 and 20.80) during pre-amalgamation period, post-amalgamation period phase I and phase II respectively. It shows the lower level of consistency in Rajasthan regarding this ratio.

**Table 4.19 (A): Accumulated Losses to Total Assets in RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	9.80	5.86	2.57	0.00	0.00	--	115.16
2	SGB(PNB)	5.99	3.10	0.35	0.00	0.00	--	139.61
3	JNAGB(UCO)	0.00	0.00	0.00	0.00	0.00	--	--
4	TAGB (UCO)	14.26	11.74	9.91	7.97	5.67	-20.00	33.47
5	AKGB (BOB)	22.33	19.51	16.28	13.32	11.78	-15.30	26.08
6	BAKGB (BOB)	0.00	0.00	0.00	0.00	0.00	--	--
7	BCKGB (BOB)	9.24	8.20	7.48	5.98	4.67	-15.47	25.43
8	DBKGB (BOB)	10.91	9.92	8.75	7.59	7.14	-10.56	17.76
9	MKGB( BOB)	34.12	31.54	30.27	29.39	30.46	-2.93	5.86
10	BKGB (SBBJ)	11.45	10.53	11.56	11.79	10.65	-0.32	5.08
11	MGB(SBBJ)	2.85	1.90	0.97	0.00	0.00	--	108.21
12	SKGB (SBBJ)	8.11	6.29	4.71	3.00	0.51	-46.60	64.87
13	MAGB(ICICI)	7.26	6.70	6.22	5.83	5.35	-7.22	11.84
14	HKGB (CBI)	11.07	9.50	8.60	6.68	4.96	-17.78	29.31
15	All RRBs in Rajasthan	7.75	6.28	5.19	4.22	3.60	-17.56	30.63
16	All RRBs in India	5.63	4.74	4.36	3.88	3.49	-10.92	18.68

**Table 4.19 (B): Accumulated Losses to Total Assets in RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	--
2	JTGB (UCO)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	--
3	BRGB (BOB)	7.70	6.19	4.07	1.83	0.75	0.00	0.00	--	105.79
4	MGBGB (SBBJ)	0.60	0.00	0.00	0.00	0.00	0.00	0.00	--	264.58
5	MAGB (ICICI)	5.69	4.77	4.08	2.97	2.07	1.70	1.06	-24.27	53.66
6	HKGB (CBI)	3.08	1.33	0.00	0.00	0.00	0.00	0.00	--	188.67
7	All RRBs in Rajasthan	2.48	1.79	1.20	0.59	0.28	0.07	0.05	-50.43	101.52
8	All RRBs in India	2.94	2.61	2.10	1.53	0.96	0.71	0.55	-25.96	58.09

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	0.00	0.00	--	--
2	MGB (SBBJ)	0.00	0.00	--	--
3	MAGB (ICICI)	0.61	0.00	--	141.42
4	All RRBs in Rajasthan	0.02	0.00	--	141.42
5	All RRBs in India	0.39	0.29	-25.64	20.80

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

### **4.9.3 Coverage Ratio**

This ratio shows the surplus of owned funds over accumulated losses as percentage of total assets. This ratio is also used as a proxy of capital adequacy. Higher magnitude of this ratio provides greater support to the bank to overcome its credit risks and resist unanticipated developments. This way it enhances the financial viability of that bank. Table 4.20 [A] and 4.20[B] provides the data regarding the ratio of net worth to total assets of RRBs in Rajasthan as well as at all India level during the period of study. It is evident from the tables that RRBs in Rajasthan were having negative ratio of net worth to total assets in 2000-01(-1.66%) and 2001-02 (-0.68%) but it became positive and increased continuously thereafter and went up to 6.15 percent in 2013-14 showing growth rates of 6.46 percent and 2.84 percent respectively during phase I and phase II of amalgamation. For pre-amalgamation period growth rates could not be calculated due to negative values. The ratio of net worth to total assets has been lower in Rajasthan than in India throughout the period of study. However, the growth rates were higher in Rajasthan RRBs. In 2004-05, 3 out of 14 RRBs in Rajasthan were having negative ratios of net worth to total assets. Negative value was highest in MKGB (-23.30). The ratio was highest in SGB (11.43%). During post-amalgamation period phase I, BRGB (-2.46%), MAGB (0.42%) and HKGB (-1.53%) were having negative values of the ratio in 2005-06 but the position became better thereafter and in 2008-09 all RRBs in Rajasthan were having positive and rising net worth to total assets ratio. It was highest in RGB (5.88%) and lowest in MAGB (1.63%) in 2011-12. Though, all the RRBs had a lower ratio than the national average. In 2013-14, MGB (6.59%) had the highest net worth to total assets ratio and also higher than the national average. Growth rate of this ratio was highest in MAGB (15.67%) during phase II.

### **4.10 Technical Efficiency Analysis**

To analyse the technical efficiency of RRBs in Rajasthan, the input-oriented efficiency scores obtained from the CCR model (under the assumption of CRS) and BCC model (under the assumption of VRS) have been evaluated.

**Table 4.20 (A): Coverage Ratio in RRBs in Rajasthan (Pre-Amalgamation Period)**

(Figures in percent)

S. No.	RRBs	2000-01	2001-02	2002-03	2003-04	2004-05	GR	CV
1	ABAGB(PNB)	-5.05	-1.94	1.10	4.98	6.46	--	429.34
2	SGB(PNB)	2.57	4.36	7.09	9.04	11.43	44.97	51.43
3	JNAGB(UCO)	4.00	4.43	5.22	4.90	5.07	5.92	10.62
4	TAGB (UCO)	-4.55	-3.52	-2.93	-1.37	0.42	--	-81.48
5	AKGB (BOB)	-15.90	-14.00	-11.67	-8.75	-7.61	--	-29.99
6	BAKGB (BOB)	5.54	6.19	7.20	8.48	10.14	16.46	24.53
7	BCKGB (BOB)	1.39	1.66	1.95	2.63	3.26	24.17	34.94
8	DBKGB (BOB)	-7.36	-0.59	0.15	0.07	0.16	--	-216.84
9	MKGB( BOB)	-23.72	-22.77	-22.93	-22.07	-23.30	--	-2.69
10	BKGB (SBBJ)	-0.54	0.04	-1.77	-1.36	-1.16	--	-74.41
11	MGB(SBBJ)	0.59	1.36	2.29	3.26	3.65	57.13	57.28
12	SKGB (SBBJ)	1.50	2.01	2.65	3.95	5.23	37.35	49.45
13	MAGB(ICICI)	-1.21	-1.11	-0.67	-0.04	0.35	--	-126.29
14	HKGB (CBI)	-8.57	-7.26	-6.53	-4.74	-2.98	--	-36.40
15	All RRBs in Rajasthan	-1.66	-0.68	0.33	1.50	2.52	--	414.75
16	All RRBs in India	1.36	2.40	3.03	3.86	4.45	32.92	40.18

**Table 4.20 (B): Coverage Ratio in RRBs in Rajasthan (Post-Amalgamation Period: Phase I & II)****Phase I**

(Figures in percent)

S. No.	RRBs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	GR	CV
1	RGB (PNB)	9.70	9.18	8.74	7.39	6.98	5.95	5.88	-8.85	20.05
2	JTGB (UCO)	4.79	5.21	6.02	6.04	6.17	5.45	4.97	0.81	10.14
3	BRGB (BOB)	-2.46	-1.65	-0.41	2.16	2.88	3.55	3.94	--	228.06
4	MGBGB (SBBJ)	4.17	4.38	4.22	3.90	3.90	4.43	4.98	1.72	8.67
5	MAGB (ICICI)	-0.42	-0.32	-0.08	0.86	1.15	1.30	1.63	--	143.32
6	HKGB (CBI)	-1.53	0.06	1.37	2.31	2.61	2.55	2.85	--	112.11
7	All RRBs in Rajasthan	3.20	3.59	3.97	4.37	4.51	4.53	4.71	6.46	13.57
8	All RRBs in India	4.47	4.28	4.88	5.72	5.69	5.71	6.24	6.38	14.00

**Phase II**

S. No.	RRBs	2012-13	2013-14	GR	CV
1	BRKGB (BOB)	5.86	6.02	2.73	1.90
2	MGB (SBBJ)	6.44	6.59	2.33	1.63
3	MAGB (ICICI)	3.00	3.47	15.67	10.27
4	All RRBs in Rajasthan	5.98	6.15	2.84	1.98
5	All RRBs in India	6.57	6.55	-0.30	0.22

Note: GR- Compound Annual Growth Rate in Percent, CV- Coefficient of Variation

Source: (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.

(2) Statistical Tables Relating to Banks in India - www.rbi.org.in

#### **4.10.1 Technical Efficiency in RRBs in Rajasthan (Year 2004-05)**

Table 4.21 (A) shows the Overall Technical Efficiency (OTE) scores of 14 Regional Rural Banks in Rajasthan in the year 2004-05 (pre-amalgamation period), along with the magnitude of Overall Technical Inefficiency (OTIE) in percentage. Empirical results presented in Table 4.21 (A) reveal that RRBs in Rajasthan had been operating with a large asymmetry between banks during that year as their OTE scores in percentage terms ranged between 64.5 percent to 100 percent. As given in the Table 4.21 (A), average of OTE scores of 14 RRBs is 0.911 which reveals that, if an average RRB produces on the efficiency frontier instead of its present location, would require only 91.10 percent of the inputs currently in use. This gives out that the average level of OTIE in RRBs in Rajasthan is around 8.9 percent. This finding further implies that, an average RRBs in Rajasthan can reduce their inputs (physical capital, labour and loanable funds) by at least 8.9%, to produce the same output by adopting the best practice technology. Though, the potential reduction varies in different RRBs in Rajasthan.

In DEA analysis, the bank which achieves the OTE score equal to one is called “Globally Efficient” i.e. most efficient amongst the banks included in the analysis. The bank which achieves OTE score less than 1 is supposed to be relatively inefficient. In 2004-05, 7 RRBs out of 14 in Rajasthan were found to be technically efficient as they attained the OTE score equal to 1. These RRBs together determine the efficient frontier. Moreover, they form the “Reference Set” for inefficient RRBs. These banks utilize their resources properly and efficiently without any wastage in the process of production. In DEA terminology, these RRBs are called “Peers”. They set an example for inefficient RRBs to operate.

The efficient RRBs in Rajasthan in the year 2004-05, were ABAGB, SGB, JNAGB, TAGB, BAKGB, DBKGB, and SKGB. The remaining 7 RRBs had OTE score less than one and thus considered as technically inefficient as they reflected deviations from the best practice frontier. These banks could improve their efficiency by reducing the use of inputs. For example, OTE score for inefficient RRB- MAGB was 0.645 and for MGB it was 0.998. This implies that MAGB and MGB could potentially reduce their inputs by 35.5 percent and 0.2 percent respectively to attain

the same level of output. Likewise, AKGB, BCKGB, MKGB, BKGB, and HKGB, could reduce their input use by 24.5 percent, 11.5 percent, 3.1 percent, 24.7 percent and 25.6 percent respectively and get the same level of output. Thus, we find that OTIE level in inefficient RRBs in Rajasthan ranged from 0.2 percent to 35.5 percent in 2004-05.

**Table 4.21 (A): Overall Technical Efficiency, Pure Technical Efficiency and Scale Efficiency Scores for Regional Rural Banks in Rajasthan (Year 2004-05)**

S. No.	RRBs	OTE Score	OTIE %	PTE Score	PTIE %	SE Score	SIE %	Returns to Scale
1	ABAGB(PNB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
2	SGB( PNB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
3	JNAGB(UCO)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
4	TAGB (UCO)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
5	AKGB (BOB)	0.755	24.50	0.756	24.40	0.999	0.10	IRS
6	BAKGB (BOB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
7	BCKGB (BOB)	0.885	11.50	0.894	10.60	0.990	1.00	IRS
8	DBKGB (BOB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
9	MKGB( BOB)	0.969	3.10	1.000	0.00	0.969	3.10	IRS
10	BKGB (SBBJ)	0.753	24.70	1.000	0.00	0.753	24.70	IRS
11	MGB(SBBJ)	0.998	0.20	1.000	0.00	0.998	0.20	DRS
12	SKGB (SBBJ)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
13	MAGB(ICICI)	0.645	35.50	0.698	30.20	0.924	7.60	IRS
14	HKGB (CBI)	0.744	25.60	0.747	25.30	0.997	0.30	IRS

Source: Researcher's Calculation

#### ➤ **Pure Technical Efficiency (PTE) and Scale Efficiency (SE)**

Overall Technical Efficiency from CCR model gives combined inefficiency level of any DMU which is caused by both Pure Technical Inefficiency (PTIE) and inefficiency due to inappropriate bank size or Scale Inefficiency (SIE). But, by using BCC model under the assumption of VRS, OTE scores can be divided into PTE scores and SE scores. Table 4.21 [A] also gives the PTE and SE scores for all 14 RRBs in Rajasthan in the year 2004-05. In DEA analysis, the RRBs, having the PTE scores equal to 1 are known as "Locally Efficient". It is evident from the Table 4.21

[A] that 10 out of 14 RRBs in Rajasthan in 2004-05, earned PTE score equal to 1 and achieved the status of “Locally Efficient” RRBs as they were on the efficient frontier under VRS assumption. In addition to the 7 RRBs those achieved the status of “Globally Efficient” RRBs, 3 more RRBs namely, MKGB, BKGB, and MGB achieved the PTE scores equal to 1. This shows that OTIE in these three RRBs is not due to poor input utilization (which we call managerial inefficiency) but due to operating the RRB at inappropriate scale size. The remaining 4 RRBs which had PTE score less than 1 were having managerial inefficiency. These 4 RRBs namely, AKGB, BCKGB, MAGB and HKGB had both PTE and SE scores less than 1. Besides, these four RRBs had PTE scores less than SE scores which imply that inefficiency in these RRBs is primarily due to managerial inefficiency rather than scale inefficiency. Table 4.21 [A] also indicates that 7 most efficient RRBs were being operated under constant return to scale (CRS) which is also known as most productive scale size. 6 RRBs were being operated below the optimal scale size (i.e. IRS) and only one RRB was being operated under DRS.

➤ **Reference Set (Year 2004-05)**

Table 4.21 [B] gives the reference set of 7 inefficient RRBs with their respective peer count (frequency) and peer weights. With the help of frequency in the reference set, all seven efficient RRBs can be discriminated. An efficient RRB that shows more frequency in the reference set of inefficient RRBs represents the higher level of robustness of it in relation to the other efficient RRBs and is probably a good example of “Global Leader”. The RRBs with less frequency count in the reference set are considered as “marginally efficient banks” because they would not be able to keep themselves on efficient frontier if there is even a small increase in the value of input variable (or a small decrease in the value the output variable). An efficient bank with zero frequency count is considered as efficient by default. With the help of frequency count (as shown in Table 4.21[B]) all 7 efficient RRBs in Rajasthan can be classified into 2 broad categories; (1) Highly Robust Bank and (2) Marginally Robust Bank. SGB (Shekhawati Gramin Bank) with highest frequency count (7) comes alone under category-I and can be considered as “Global Leader” for the RRBs of Rajasthan in the year 2004-05. Other 6 RRBs with the frequency count (ranged from 1 to 3) come under category- 2.

**Table 4.21 (B): Reference Set for Inefficient Regional Rural Banks (Year 2004-05)**

Inefficient RRBs	OTE Scores (CCR)	Reference Set						
		ABAGB (1)	SGB (2)	JNAGB (3)	TAGB (4)	BAKGB (6)	DBKGB (8)	SKGB (12)
AKGB (BOB)	<b>0.755</b>		0.083	0.127			0.473	
BCKGB (BOB)	<b>0.885</b>		0.096		0.473	0.158		
MKGB (BOB)	<b>0.969</b>		0.108					
BKGB (SBBJ)	<b>0.753</b>		0.033			0.124		
MGB(SBBJ)	<b>0.998</b>		0.000	0.737				0.880
MAGB(ICICI)	<b>0.645</b>		0.235		0.002	0.158		
HKGB (CBI)	<b>0.744</b>	0.193	0.270					0.462
Frequency Count		1	7	2	2	3	1	2

Source: Researcher's Calculation

#### 4.10.2 Technical Efficiency in RRBs in Rajasthan (Year 2011-12)

As mentioned earlier, the process of amalgamation of RRBs brought down their number to 6 in Rajasthan during phase I, therefore, Technical Efficiency analysis of RRBs in Rajasthan in the year 2011-12 includes these 6 RRBs as DMUs. Table 4.22 [A] presents the OTE scores of 6 RRBs in Rajasthan in the Year 2011-12 (post amalgamation period phase I) along with magnitude of OTIE. Empirical results presented in the table reveal that out of 6 RRBs in Rajasthan, 3 RRBs namely RGB, BRGB and MGBGB achieved the OTE score equal to 1 and therefore, were considered technically efficient and achieved the title of "Globally Efficient" RRBs. These RRBs together form the efficient frontier and reference set for inefficient RRBs. The remaining 3 RRB namely JTGB, MAGB and HKGB had OTE scores less than 1 and considered as technically inefficient RRBs in 2011-12. Their OTE scores were 0.997, 0.946 and 0.975 respectively. This finding reflects that JTGB, MAGB and HKGB could reduce their current input use by 0.3%, 5.4%, and 2.5%, respectively and still could achieve the same level of output.

#### ➤ Pure Technical Efficiency (PTE) and Scale Efficiency (SE)

Table 4.22[A] also presents the PTE scores and SE scores of RRBs in Rajasthan by using BCC model under the assumption of VRS. It is evident from the table that 3 RRBs which had OTE scores less than one had attained PTE scores

**Table 4.22 (A): Overall Technical Efficiency, Pure Technical Efficiency and Scale Efficiency Scores for Regional Rural Banks in Rajasthan (Year 2011-12)**

S. No.	RRBs	OTE Score	OTIE %	PTE Score	PTIE %	SE Score	SIE %	Returns to Scale
1	RGB (PNB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
2	JTGB (UCO)	0.997	0.30	1.000	0.00	0.997	0.30	IRS
3	BRGB (BOB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
4	MGBGB (SBBJ)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
5	MAGB(ICICI)	0.946	5.40	1.000	0.00	0.946	5.40	IRS
6	HKGB (CBI)	0.975	2.50	1.000	0.00	0.975	2.50	IRS

Source: Researcher's Calculation

equal to one and thus they are “Locally Efficient” RRBs. They lie on the efficient frontier under the VRS assumption. This implies that OTIE in these 3 RRBs is not due to managerial inefficiency or poor input utilization rather due to operating the RRBs at inappropriate scale size. Table further shows that these 3 RRBs were being operated under IRS i.e. below the optimal size. By increasing their scale size scale inefficiency could be eliminated.

**Table 4.22 (B): Reference Set for Inefficient Regional Rural Banks (Year 2011-12)**

Inefficient RRBs	OTE Scores (CCR)	Reference Set		
		RGB (PNB)	BRGB (BOB)	MGBGB (SBBJ)
JTGB (UCO)	0.997	---	0.773	---
MAGB (ICICI)	0.946	0.024	0.159	---
HKGB (CBI)	0.975	0.054	0.286	---
Frequency Count		2	3	--

Source: Researcher's Calculation

#### ➤ Reference Set (Year 2011-12)

Table 4.22 [B] gives the reference set of 3 inefficient RRBs in Rajasthan in the year 2011-12 along with their respective peer counts (frequency count). In the reference set, BRGB and RGB had the frequency count 3 and 2 respectively and can be considered as highly robust banks. BRGB can be considered as “Global Leader”

for other RRBs. On the other hand MGBGB with frequency count “0” is considered as efficient by default.

#### 4.10.3 Technical Efficiency in RRBs in Rajasthan (Year 2013-14)

Table 4.24 presents Overall Technical Efficiency (OTE), Pure Technical Efficiency (PTE) and Scale Efficiency (SE) scores for RRBs in Rajasthan in the Year 2013-14. As we know that during phase II of the process of amalgamation, number of RRBs in Rajasthan reduced to 3 in 2013-14. The three RRB are BRKGB, MGB and MAGB. Table presents efficiency scores for these three RRBs. It is evident from the table that all three RRBs in Rajasthan in the year 2013-14 attained the OTE, PTE and SE scores equal to 1. This implies that all the RRBs are technically efficient under both CRS and VRS assumptions in 2013-14. RRBs in Rajasthan are suffering neither from managerial inefficiency nor from scale inefficiency. They all are using their inputs properly and are being operated on the optimal scale size. Thus, they all are best practice banks and together form efficiency frontier. As none of the bank in the group is inefficient reference set is not needed at all.

**Table 4.23: Overall Technical Efficiency, Pure Technical Efficiency and Scale Efficiency Scores for Regional Rural Banks in Rajasthan (Year 2013-14)**

S. No.	Name of RRBs	OTE Score	OTIE %	PTE Score	PTIE %	SE Score	SIE %	Returns to Scale
1	BRKGB (BOB)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
2	MGB (SBBJ)	1.000	0.00	1.000	0.00	1.000	0.00	CRS
3	MAGB (ICICI)	1.000	0.00	1.000	0.00	1.000	0.00	CRS

Source: Researcher's Calculation

#### 4.10.4 Average Technical Efficiency

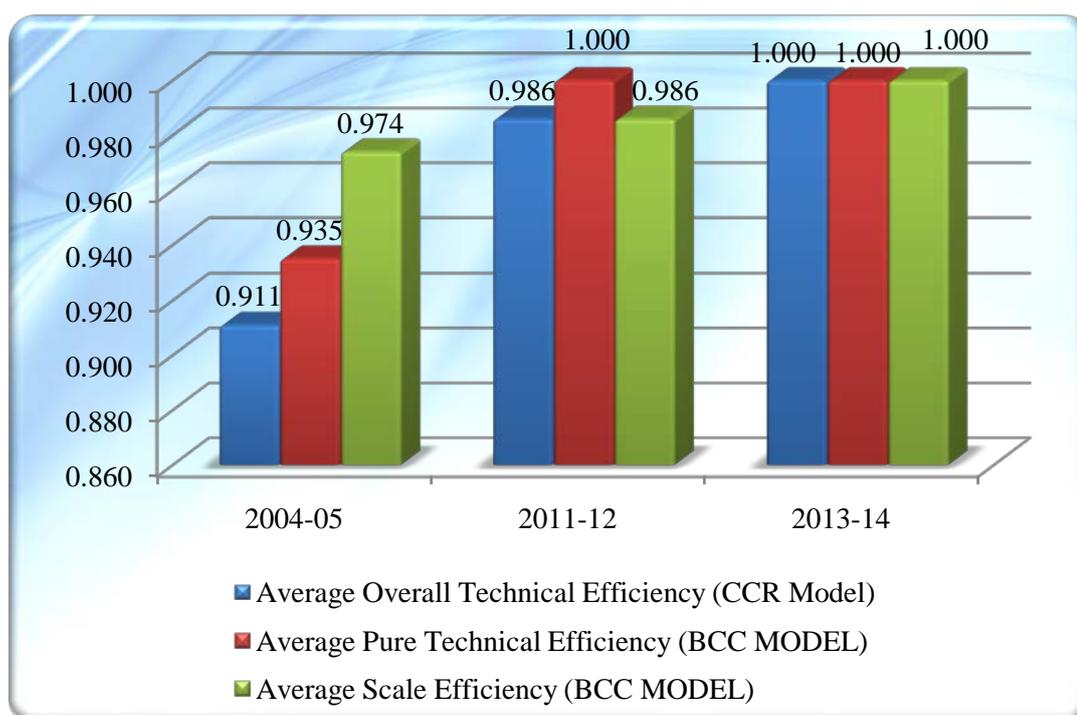
Table 4.24 gives the information about Average Overall Technical Efficiency, Average Pure Technical Efficiency and Average Scale Efficiency scores of all RRBs in Rajasthan in the years 2004-05, 2011-12 and 2013-14. Table reveals that average OTE under CRS assumption of CCR model was 91.1 percent in 2004-05 which went up to 98.6 percent in 2011-12 and further to 100% in 2013-14. Average PTE under VRS assumption of BCC model was 93.5 percent in 2004-05 which increased to 100 percent in 2011-12 and 2013-14. Average Scale Efficiency (SE) was 97.4 percent in

2004-05 and increased to 98.6 percent in 2011-12 and further to 100% in 2013-14. The findings show that, on an average inefficiency in RRBs in Rajasthan was caused by both managerial inefficiency and by inappropriate scale of operation in 2004-05, but only due to scale inefficiency in 2011-12. All RRBs in Rajasthan experienced the 100% level of OTE, PTE and SE in 2013-14. This shows that the process of amalgamation has successfully removed OTIE, PTIE and SIE in the RRBs of Rajasthan.

**Table 4.24: Average Technical Efficiency Scores of Regional Rural Banks in Rajasthan**

S. No.	Average Technical Efficiency	2004-05	2011-12	2013-14
1	Average Overall Technical Efficiency (CCR Model)	0.911	0.986	1.000
2	Average Pure Technical Efficiency (BCC Model)	0.935	1.000	1.000
3	Average Scale Efficiency (BCC Model)	0.974	0.986	1.000

Source: Researcher's Calculation



**Figure 4.1: Average Technical Efficiency Scores of Regional Rural Banks in Rajasthan**

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*Chapter - 5*

*Factors Determining Operational  
Efficiency of Regional Rural Banks in  
Rajasthan: Regression Analysis*

## Chapter - 5

### **Factors Determining Operational Efficiency of Regional Rural Banks in Rajasthan: Regression Analysis**

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Since their inception, Regional Rural Banks have been playing a crucial role in rural financial sector of the country as well as in the state of Rajasthan. They have been considered as an important medium of providing low cost banking facilities to the rural poor. They have also been expected to advance loans under government sponsored targeted credit schemes intended to uplift the poor families in rural areas. “Having been saddled with the twin burdens of directed credit and a restrictive interest rate regime, however, RRBs have historically incurred substantial losses”.<sup>1</sup> As a result, operational efficiency and financial viability of the RRBs became a matter of great concern for the policy makers.

Various reform measures introduced by the Government of India in consultation with the RBI and NABARD in the years from 1994-95 to 2005-06 have resulted in improvements in respect of their major efficiency aspects such as capital composition, deposits, loans and advances and also the profitability. Further, the process of amalgamation initiated by Government of India in September 2005, has improved the operational efficiency and profitability of RRBs by taking advantage of the economics of scale and reduction in the transaction costs. A comparative analysis of various dimensions of operational efficiency of RRBs during pre and post-amalgamation periods, which has been discussed in the previous chapter, revealed such improvements during the post-amalgamation period both in Rajasthan and at all India level.

In this changed scenario, when the structure and the way of operations of RRBs has undergone significant changes, question arises that what have been the specific factors which have determined the operational efficiency and financial health of these banks, particularly in the state of Rajasthan. Present chapter attempts to identify such factors. For this purpose a multiple linear regression analysis has been employed. Average performance of RRBs in Rajasthan has been considered for

a period of 14 years (2001 to 2014) to empirically examine the factors. For this purpose, present chapter has been divided into following 3 parts:-

- Determinants of Operational Efficiency: Selection of Variables
- Specification of Regression Models
- Empirical Findings and Analysis

First section provides the brief review of the various factors selected for the analysis. Second section provides the specification of the regression models adopted for the analysis. Third section analyses the empirical findings and tests the hypothesis proposed to achieve the objective of the research.

## **5.1 Determinants of Operational Efficiency: Selection of Variables**

Regional Rural Banks operate as the major source of institutional credit in rural areas, particularly among the economically and socially marginalized sections of the society. However, they are primarily scheduled commercial banks who mobilize savings of the society and provide credit to the needy rural poor. They supplement their resources by borrowings from NABARD and others. They have to pay interest on both deposits and borrowings. They have to pay salaries to their employees and bear other operating expenses also to execute their business activities. They are also required to make provisions for any probable loss of their assets. Besides all these, they have to earn profits too in order to achieve long term sustainability and viability.

It is a well established phenomenon that larger banks may be more efficient and profitable than smaller ones and generate economies of scale and scope. The transaction costs and risks associated with financing of priority sector advances may be high for smaller banks. Large and consolidated banks can migrate the costs and penetrate through lending into these sectors.<sup>2</sup> Regional Rural Banks have also undergone this process of structural consolidation from September 2005 in order to take advantages of economics of scale and reduction in transaction costs.

### 5.1.1 The Dependent Variables

As discussed in the previous chapter, operational efficiency is a very broad term and any single parameter is not able to reflect the level of operational efficiency in any organization. There are several ratios being used by researchers as the indicators of Operational Efficiency of the bank.

In the present analysis, in order to find out the determinants of operational efficiency of Regional Rural Banks, two ratios have been taken as a measure of operational efficiency of these banks. These are; Return on Assets (ROA) and Cost to Income Ratio (CIR). Return on Assets has been taken to be the indicator of profitability based performance and operational efficiency of RRBs in Rajasthan. Greater magnitude of this ratio indicates better performance of the bank. ROA has been used as dependent variable in many studies related to commercial banks. Mawutor and Fred (2015)<sup>3</sup>, Buchory (2015)<sup>4</sup>, Sreesha Ch (2014)<sup>5</sup>, Karim (2013)<sup>6</sup>, Sufian and Chong (2011)<sup>7</sup>, Gul Irshad and Zaman (2011)<sup>8</sup>, Kosmidou (2008)<sup>9</sup> are few among them. B.S. Mishra (2006)<sup>10</sup> used ROA as the indicator of financial performance of Regional Rural Banks in India. He denoted it as Net Income to Total Assets (NITA). In particular, ROA measures how efficiently and effectively the management of RRBs is making use of their total assets. In the present study ROA is obtained by dividing net income by average working funds (AWF) of RRBs in Rajasthan.

$$\text{ROA} = \frac{\text{NET INCOME}}{\text{AVERAGE WORKING FUNDS}} \times 100$$

The larger ROA of an RRB reflects greater the level of efficiency of that bank and better position of the bank in terms of utilization of assets.

Cost to Income Ratio (CIR) is another dependent variable which has been taken as the cost based performance and operational efficiency indicator of RRBs in Rajasthan. CIR has been employed by RBI also in constructing the Banking Stability Map and Banking Stability Indicator as a ratio for efficiency in its Financial Stability Report (June 2014)<sup>11</sup>.

CIR is obtained in our study by dividing operating expenses by the sum of interest spread and other income.

$$\text{CIR} = \frac{\text{OPERATING EXPENSES}}{(\text{INTEREST INCOME} - \text{INTEREST EXPENSES} + \text{OTHER INCOME})} \times 100$$

Lower level of CIR reflects higher level of operational efficiency in RRBs.

### 5.1.2 The Explanatory Variables

The operational efficiency of any financial institution including RRBs is presumed to depend upon two types of factors; Internal and External. Internal factors concentrate on specific features of RRBs which are presented in the balance sheets of individual banks. While external factors take into account some macro economic factors which are external to RRBs. Present study attempts to find out the effects of both internal and external factors on operational efficiency of RRBs. The explanatory variables selected for the study are explained below.

#### 5.1.2 (A) Internal Determinants

The internal and bank specific variables included for the regression analysis are SIZE (Natural log of average total assets per RRB in Rajasthan), Credit Risk (CR), Bank Diversification (BD), Capital Adequacy (CAR), Liquidity (LIQ), Expense Management (EM) and Priority sector advances to total advances (PSA).

##### (i) Bank Size

Size of any bank including RRBs influences its efficiency as larger banks can get the benefits of economics of scale and can increase their operational efficiency in the form of reduced transaction costs. The process of structural consolidation of RRBs was also aimed to take benefits of economics of scale. Thus, a positive relation is expected between size of RRBs and their operational efficiency. The natural log of average total assets per RRBs in Rajasthan (Total assets of RRBs in Rajasthan divided by number of RRBs during the year) has been taken as a proxy of size in the present analysis. Many studies have attempted to measure the impact of size of the bank on their efficiency and profitability and the actual relationship was found to be mixed but a study conducted by Chatterjee *et al.* (2014)<sup>12</sup> to measure efficiency of RRBs in India found this relationship positive and statistically significant.

**(ii) Credit Risk**

Credit constitutes largest portion of bank assets. It is also the largest source of income for Regional Rural Banks. If loans issued are not recovered within a certain period they become Non-Performing Assets and the ability of RRBs to provide new loans is limited. Besides, interest income from loans also decreases. Hence, the credit risk level of the bank affects its efficiency and profitability adversely. Therefore, lowering the magnitude of the credit risk is always favorable. Many previous studies like Ahmad *et al.* (2014)<sup>13</sup>, Mawutor and Fred (2015)<sup>14</sup>, Buchory (2015)<sup>15</sup>, Sreesha ch (2014)<sup>16</sup>, Karim and Alam (2013)<sup>17</sup> also stated that Credit Risk or NPAs have significant negative impact on the efficiency, profitability and growth of banking sector. Credit Risk ratio (CR) is measured as:

$$CR = \frac{\text{NON-PERFORMING ASSETS}}{\text{TOTAL LOANS AND ADVANCES (O/S)}} \times 100$$

**(iii) Bank Diversification**

Generally, diversification of operations of a bank increases its operational efficiency both in terms of costs and profits. The RRBs were also allowed to conduct some non-fund business operations during financial sector reforms in 1990s as the traditional form of financial intermediation was not profitable for them. But, this bank diversification is benefitted only when performed in a right direction and in a right manner so that their earnings may not become unsteady, because this uncertainty sometimes adversely affects operational efficiency of banking institutions. According to Chatterjee *et al.* (2014)<sup>18</sup>, Gefli F.Y. (2014)<sup>19</sup> and Kumar and Gulati (2008)<sup>20</sup>, bank diversification positively affects the efficiency of banks. In the present analysis also, a positive relationship is expected. Bank Diversification (BD) has been calculated as a ratio of non-interest income to average working funds.

$$BD = \frac{\text{NON-INTEREST INCOME}}{\text{AVERAGE WORKING FUNDS}} \times 100$$

**(iv) Capital Adequacy**

Capital Adequacy (CAR) reflects overall financial condition of a bank and also the ability of management to meet the need of additional capital and to absorb unexpected losses. Recapitalization program for RRBs was first initiated in 1994-95

to revitalize them and is still continued in order to enable RRBs to maintain a desirable level of capital adequacy. The recapitalization is complete in respect of most of the RRBs in India.

According to Rose (2002)<sup>21</sup>, capital held with banks plays a very crucial role in attaining long term viability and efficiency and it also supports bank operations. A higher level of capital adequacy, according to Mbizi (2012)<sup>22</sup>, affects positively and significantly the overall performance of a bank. In the present analysis, ratio of net worth to total assets of RRBs in Rajasthan has been taken as a proxy for capital adequacy of these banks and a positive effect is expected.

$$\text{CAR} = \frac{\text{NET WORTH (OWNED FUNDS - ACCUMULATED LOSSES)}}{\text{TOTAL ASSETS}} \times 100$$

#### (v) **Liquidity**

Bank management has to take one more important decision which is referred to as liquidity management. They have to measure their needs for liquid assets in the process of bank intermediation. According to Mishra (2006)<sup>23</sup>, “since banks are involved in the business of transforming short term deposits into long term credit, they would be constantly faced with the risk associated with the maturity mismatch”. To avoid liquidity shortfall, banks generally hold liquid assets. However, it is agreed that when banks hold high liquidity, they do so at the opportunity cost of some investments, which could generate high returns (Kamau, 2009)<sup>24</sup>. Hence, high liquidity ratio reflects lower profitability for the bank. Myers and Rajan (1998)<sup>25</sup> also stated that “more liquid assets increase the ability to raise cash on short notice, but they also reduce management’s ability to commit credibly to an investment strategy that protects investors”. This trade-off between profitability and liquidity can be understood by the fact that when a bank goes from short term loans or securities to long term loans or securities, it earns more profits but also increases its liquidity risk.

Thus, management has to face the dilemma of liquidity and returns. In the present study, the impact of liquidity on efficiency of RRBs has been analyzed by a ratio of cash in hand of the RRBs in Rajasthan to their total assets which is taken as an indicator of liquidity (LIQ).

$$\text{LIQ} = \frac{\text{CASH IN HAND}}{\text{TOTAL ASSETS}} \times 100$$

#### (vi) Expense Management

Expense management is also an important determinant of a bank's operational efficiency and profitability. The cost of operations of RRBs has been high due to the increase in the salary structure of the employees in line with those in commercial banks. Moreover, their operational methods and procedures have also been similar to the methods of commercial banks which have not been found favorable to their rural clientele.

In the present analysis ratio of overhead expenses to average working funds has been used to evaluate the impact of expense management of RRBs in Rajasthan on their efficiency. This ratio explains the total amount of wages and salaries along with the costs of running various branches as percentage to average working funds. The relationship between expense management ratio and bank efficiency is expected to be negative as an efficient bank always efforts to minimize its operating costs. Moreover, with the increasing use of automated means of delivering services and computerization of branches, RRBs may have succeeded to reduce their wage expenses.

$$\text{EM} = \frac{\text{OVERHEAD EXPENSES}}{\text{AVERAGE WORKING FUNDS}} \times 100$$

#### (vii) Share of Priority Sector Advances

Priority sector advances are also important in determining operational efficiency of RRBs. Share of priority sector advances to total advances is expected to affect bank efficiency adversely because an increase in this share generally produces higher percentage of non-performing assets, particularly in RRBs. In the present analysis, total priority sector advances of RRBs in Rajasthan as percentage to the total outstanding advances of these banks has been used.

$$\text{PSA} = \frac{\text{TOTAL PRIORITY SECTOR ADVANCES}}{\text{TOTAL ADVANCES O/S}} \times 100$$

### 5.1.2 (B) External Determinants

Apart from the internal and bank specific factors, some macro-economic or industry based factors which are external to the banks also affect the performance and operational efficiency of the bank. Two such external factors have been selected for present analysis.

**(i) Gross State Domestic Product**

The Gross Domestic Product is the most common external factor which is usually taken as the determinant of efficiency of banks. According to Suffian and Chong (2008)<sup>26</sup>, “The GDP is expected to influence numerous factors related to the supply and demand for loans and deposits.” When GDP growth slows down during recessions, credit risk increases because of poor asset quality. Cases of defaults increase and it results in reduced rate of return to the banks. On the other hand, higher economic growth encourages banks to lend more and permits them to charge higher margins and improve the quality of their assets. In the present analysis, natural log of Gross State Domestic Product of the state of Rajasthan at constant prices has been taken as an external determinant of efficiency of RRBs in Rajasthan. A positive effect is being expected.

**(ii) Market Share**

Another external determinant which is industry based explanatory variable of bank efficiency is market share. It has also been used widely as an external determinant in many studies related to commercial banks. Kumar and Gulati (2008)<sup>27</sup> and Singla (2014)<sup>28</sup> used this variable in their studies of public sector banks in India but found it insignificant to influence the technical efficiency of the banks under consideration. In the present study, share of RRBs in total deposits of all scheduled commercial bank in the state of Rajasthan has been taken as a measure of market share of these banks.

**5.1.2 (C) Dummy Variable**

This is a qualitative variable which has been taken in the present analysis in order to measure the impact of structural changes on operational efficiency of Regional Rural Banks in Rajasthan. As the process of amalgamation has changed the complete structure of RRBs, to examine the impact of these changes, value ‘0’ has been given to dummy in pre-amalgamation years (i.e. 2001 to 2005) and value ‘1’ has been given to dummy in post-amalgamation years (i.e.2006 to 2014).

## 5.2 Model Specification and Analysis Techniques

In order to identify the various determinants of operational efficiency of RRBs in Rajasthan two base line functions have been developed. Each of them has one dependent variable and 10 identical, independent variables. Table 5.1 presents the variables used to proxy operational efficiency and its various determinants selected for the study along with their notations used in the analysis.

**Table 5.1: Description of the Variables Used In Regression Models**

S. No	Variables	Description	Notations
<b>DEPENDENT</b>			
1	Return on Assets	Net Income to Average Working Funds	ROA
2	Cost to Income Ratio	Operating Cost to Net Interest Income Plus Other Income.	CIR
<b>INDEPENDENT</b>			
<b>a) Internal</b>			
1.	Bank Size	Natural Log of Average Assets per RRB in Rajasthan	LNTA
2.	Credit Risk	Gross NPAs to Gross Loans and Advances ( O/S )	CR
3.	Bank Diversification	Non- Interest Income to Average Working Funds	BD
4.	Capital Adequacy	Net worth to Total Assets	CAR
5.	Liquidity	Cash in Hand to Total Assets	LIQ
6.	Expense Management	Overhead Expenses to Average Working Funds	EM
7.	Priority Sector Advances	Share of Priority Sector Advances to Total Advances	PSA
<b>b) External</b>			
1.	Gross State Domestic Product	Natural Log of Gross State Domestic Product at constant prices.	LNGSDP
2.	Market Share	Deposits of RRBs in Rajasthan to Deposits of All Scheduled Commercial Banks in Rajasthan.	M_Share
<b>c) Dummy Variable</b>			
1.	(Structural Changes)	Measured as 0 for pre-amalgamation years and 1 for post-amalgamation years	Dummy

As shown in the Table 5.1, two dependent variables ROA and CIR have been taken to design the two respective functions. In ROA function, ROA has been used as an income or profit based indicator of operational efficiency and in CIR function, CIR has been used as a cost based indicator of operational efficiency of RRBs in Rajasthan.

### **5.2.1 Methodology and Data**

To examine the impact of internal bank specific and external factors on operational efficiency of Regional Rural Banks in Rajasthan, multiple linear regression analysis has been used. Pearson correlation coefficient has also been used to investigate the correlation between the variables selected for the study at 5 percent level of significance. All the calculations have been carried out with the help of software package IBM SPSS version 23 for Windows.

The necessary information regarding the dependent variables and bank specific independent variables has been gathered from the Financial Statements of Regional Rural Banks, NABARD, Mumbai and Statistical Tables Relating to Banks in India, RBI (available on [www.rbi.org.in](http://www.rbi.org.in)) over the period of study (2000-2001 to 2013-2014). The data regarding Gross State Domestic Product has been collected from various issues of Economic Review, Directorate of Economics and Statistics, Government of Rajasthan, Jaipur. Quarterly statistics on Deposits and Credits of Scheduled Commercial Banks (available on [www.rbi.org.in](http://www.rbi.org.in)) has been used to collect the data regarding market share of RRBs in total deposits of Scheduled Commercial Banks in Rajasthan for the period of study.

The trend of selected dependent and independent variables in Regional Rural Banks in Rajasthan during the period of study has been presented in Table 5.2.

### **5.2.2 Hypotheses**

To fulfill the purpose of study the following hypotheses have been formulated.

H1- Bank size, Credit Risk, Bank Diversification, Capital Adequacy, Liquidity, Expense Management, PSA, GSDP, Market share and dummy have impact on profit based operational efficiency (ROA) of RRBs in Rajasthan.

**Table 5.2: Growth of Selected Variables in Regional Rural Banks in Rajasthan (From 2000-01 to 2013-14)**

Year	ROA	CIR	SIZE	CR	BD	CAR	LIQ	EM	PSA	GSDP	M_Share	Dummy
2000-01	0.55	78.14	21812.24	12.84	0.54	-1.66	1.52	2.56	72.3	92957.72	8.36	0
2001-02	0.8	74.14	24756.28	10.71	0.84	-0.68	1.75	2.77	75.90*	103055.45	8.73	0
2002-03	0.88	74.94	27094.88	8.42	0.89	0.33	1.25	2.91	76.63	92858.69	8.65	0
2003-04	1.1	66.99	30388.50	8.17	1.25	1.50	1.38	3.06	75.71	119480.19	8.92	0
2004-05	1.17	63.34	33167.36	5.35	0.68	2.52	1.53	2.70	79.53	127745.65	8.81	0
2005-06	1.3	68.21	88810.69	5.26	0.59	3.20	1.37	2.78	82.48	136284.96	8.85	1
2006-07	1.18	66.57	103909.69	4.47	0.64	3.59	1.23	2.91	83.58	152188.67	8.41	1
2007-08	1.61	62.67	122983.06	4.30	0.65	3.97	1.08	2.68	84.09	160016.62	8.23	1
2008-09	1.78	66.19	157776.56	2.68	0.60	4.37	0.86	2.67	83.39	174555.75	8.33	1
2009-10	1.23	62.79	182819.14	2.68	0.53	4.51	0.89	2.35	82.24	186244.54	7.97	1
2010-11	1.35	66.16	219544.91	2.28	0.49	4.53	0.88	2.71	86.54	213079.00	7.67	1
2011-12	1.33	62.20	250485.66	2.64	0.50	4.71	0.88	2.42	80.07	230859.00	7.48	1
2012-13	0.51	69.65	568130.35	6.87	0.30	5.98	0.71	1.36	81.24	245666.00	7.01	1
2013-14	0.82	60.88	622432.62	5.99	0.60	6.15	0.75	2.32	85.19	257432.00	6.83	1

Note: Data for SIZE and GSDP are in rupees (in lakhs), Rest of the variables are in percentage form (except dummy variable)

\*shows data for Dec. 2001 as it was not available for March 2002.

Sources:

- (1) Financial Statements of RRBs, Statistics on RRBs, Various Issues, NABARD Publications, Mumbai.
- (2) Statistical Tables Relating to Banks in India, www.rbi.org.in
- (3) Economic Reviews of Rajasthan, 2007-08 to 2014-15, Directorate of Economics and Statistics, Govt. of Rajasthan, Jaipur.
- (4) Quarterly Statistics on Deposits and Credits of Scheduled Commercial Banks, RBI, www.rbi.org.in

H2- Bank Size, Credit Risk, Bank Diversification, Capital Adequacy, Liquidity, Expense Management, PSA, GSDP, Market Share, and dummy have impact on operating cost based operational efficiency (CIR) of RRBs in Rajasthan.

### 5.2.3 Specification of Regression Models

To examine the impact of bank-specific and macro-economic determinants on operational efficiency of Regional Rural Banks in Rajasthan, two functions have been developed. Each function is a panel of three regression models both in linear and log-linear form. As the explanatory variables selected for the regression estimation caused the problem of multicollinearity when taken together in the model, they have been grouped into three models in order to keep VIF (Variable Inflation Factor) values less than 10. “A variable is, generally, said to be highly collinear when its VIF value exceeds 10 in the model along with the R<sup>2</sup> Value exceeding 90 percent”.<sup>29</sup>

The functions developed and estimated are:

#### [A] ROA FUNCTION

ROA function has been formulated as under;

$$ROA = f(LNTA, CR, BD, CAR, LIQ, EM, PSA, LNGSDP, M\_Share, Dummy)$$

Under the above function following regression models have been estimated by using the OLS method;

#### MODEL – I

$$ROA = \alpha + \beta_1 CR + \beta_2 BD + \beta_3 CAR + \beta_4 LIQ + \beta_5 Dummy + \varepsilon \quad (1)$$

#### MODEL – II

$$ROA = \alpha + \beta_1 EM + \beta_2 LNGSDP + \beta_3 M\_Share + \varepsilon \quad (2)$$

#### MODEL – III

$$ROA = \alpha + \beta_1 LNTA + \beta_2 PSA + \varepsilon \quad (3)$$

All the above models have been estimated both in linear and log-linear form. Under linear models, absolute change in dependent variable ROA due to absolute unit change in explanatory variables has been estimated while under log-linear

models, the percentage change in dependent variable ROA due to the given percentage change in explanatory variable has been estimated. In other words they measured the elasticity of dependent variable ROA with respect to the independent variables.

### [B] CIR FUNCTION

CIR function has been formulated as under;

$CIR = f(LNTA, CR, BD, CAR, LIQ, EM, PSA, LNGSDP, M\_Share, Dummy)$

Under the above function following regression models have been estimated by using the OLS method;

#### MODEL – I

$$CIR = \alpha + \beta_1 CR + \beta_2 BD + \beta_3 CAR + \beta_4 LIQ + \beta_5 Dummy + \varepsilon \quad (4)$$

#### MODEL – II

$$CIR = \alpha + \beta_1 EM + \beta_2 LNGSDP + \beta_3 M\_Share + \varepsilon \quad (5)$$

#### MODEL – III

$$CIR = \alpha + \beta_1 LNTA + \beta_2 PSA + \varepsilon \quad (6)$$

All the above models have also been estimated both in linear and log linear form. Under linear models, absolute change in dependent variable CIR due to absolute unit change in explanatory variables has been estimated while under log-linear models, the percentage change in dependent variable CIR due to the given percentage change in explanatory variable has been estimated. In other words they measured the elasticity of dependent variable CIR with respect to the independent variables.

In all regression equations under both functions mentioned above;

ROA	=	Return On Assets
CIR	=	Cost to Income Ratio
LNTA	=	Natural Log of Average Total Assets per RRB in Rajasthan.
CR	=	Credit Risk
BD	=	Bank Diversification

CAR	=	Capital Adequacy
LIQ	=	Liquidity
EM	=	Expense Management
PSA	=	Share of Priority Sector Advances in Total Advances
LNGSDP	=	Natural Log of Gross State Domestic Product
M_Share	=	Market Share of RRBs in Total Deposits of All Scheduled Commercial Banks in Rajasthan
Dummy	=	Dummy variable representing Structural Changes
$\alpha$	=	Constant term of the Models or intercept
$\beta$	=	Coefficients of Regression Models
$\varepsilon$	=	Error Term

### 5.3 Empirical Findings and Analysis

This section summarizes the results obtained by running multiple linear regression models discussed in the previous section.

#### 5.3.1 Correlation Analysis

Table 5.3 presents the Pearson Correlation matrix for the variables which have been included in regression models. Results indicate that Return On Assets (ROA) is negatively correlated with Credit Risk (CR) and Liquidity (LIQ) while Cost to Income Ratio (CIR) is negatively correlated with Bank Size (LNTA), Capital Adequacy (CAR), Gross State Domestic Product (LNGSDP), Priority Sector Advances as percentage to Total Advances (PSA) and also with the dummy variable. The matrix shows that in general, the correlation between the explanatory variables is strong which indicates that the problem of multicollinearity may exist if all the explanatory variables are taken together in a single model. Table further shows that correlation of ROA is significant only with CR and PSA at 5 percent and 10 percent level of significance respectively while correlation of CIR is significant with LNTA, LIQ and dummy variable at 10 percent level of significance and with CR, CAR, LNGSDP and PSA at 5 percent level of significance.

**Table 5.3: Correlations**

		ROA	CIR	LNTA	CR	BD	CAR	LIQ	EM	LNGSDP	M_Share	PSA	Dummy
ROA	Pearson Correlation	1	-.581*	.148	-.766**	.034	.353	-.223	.418	.211	.219	.535*	.451
	Sig. (2-tailed)		.029	.614	.001	.909	.216	.444	.137	.469	.453	.049	.106
	N	14	14	14	14	14	14	14	14	14	14	14	14
CIR	Pearson Correlation	-.581*	1	-.626*	.812**	.171	-.800**	.556*	.102	-.721**	.381	-.733**	-.614*
	Sig. (2-tailed)	.029		.017	.000	.558	.001	.039	.729	.004	.179	.003	.019
	N	14	14	14	14	14	14	14	14	14	14	14	14
LNTA	Pearson Correlation	.148	-.626*	1	-.636*	-.658*	.941**	-.917**	-.667**	.973**	-.879**	.784**	.877**
	Sig. (2-tailed)	.614	.017		.014	.010	.000	.000	.009	.000	.000	.001	.000
	N	14	14	14	14	14	14	14	14	14	14	14	14
CR	Pearson Correlation	-.766**	.812**	-.636*	1	.365	-.799**	.658*	.068	-.697**	.305	-.826**	-.771**
	Sig. (2-tailed)	.001	.000	.014		.200	.001	.011	.818	.006	.289	.000	.001
	N	14	14	14	14	14	14	14	14	14	14	14	14
BD	Pearson Correlation	.034	.171	-.658*	.365	1	-.530	.555*	.712**	-.608*	.652*	-.465	-.652*
	Sig. (2-tailed)	.909	.558	.010	.200		.051	.040	.004	.021	.011	.094	.012
	N	14	14	14	14	14	14	14	14	14	14	14	14
CAR	Pearson Correlation	.353	-.800**	.941**	-.799**	-.530	1	-.873**	-.523	.949**	-.712**	.862**	.866**
	Sig. (2-tailed)	.216	.001	.000	.001	.051		.000	.055	.000	.004	.000	.000
	N	14	14	14	14	14	14	14	14	14	14	14	14
LIQ	Pearson Correlation	-.223	.556*	-.917**	.658*	.555*	-.873**	1	.589*	-.888**	.826**	-.691**	-.791**
	Sig. (2-tailed)	.444	.039	.000	.011	.040	.000		.027	.000	.000	.006	.001
	N	14	14	14	14	14	14	14	14	14	14	14	14
EM	Pearson Correlation	.418	.102	-.667**	.068	.712**	-.523	.589*	1	-.619*	.766**	-.187	-.402
	Sig. (2-tailed)	.137	.729	.009	.818	.004	.055	.027		.018	.001	.522	.154
	N	14	14	14	14	14	14	14	14	14	14	14	14
LNGSDP	Pearson Correlation	.211	-.721**	.973**	-.697**	-.608*	.949**	-.888**	-.619*	1	-.856**	.771**	.832**
	Sig. (2-tailed)	.469	.004	.000	.006	.021	.000	.000	.018		.000	.001	.000
	N	14	14	14	14	14	14	14	14	14	14	14	14
M_Share	Pearson Correlation	.219	.381	-.879**	.305	.652*	-.712**	.826**	.766**	-.856**	1	-.497	-.607*
	Sig. (2-tailed)	.453	.179	.000	.289	.011	.004	.000	.001	.000		.071	.021
	N	14	14	14	14	14	14	14	14	14	14	14	14
PSA	Pearson Correlation	.535*	-.733**	.784**	-.826**	-.465	.862**	-.691**	-.187	.771**	-.497	1	.858**
	Sig. (2-tailed)	.049	.003	.001	.000	.094	.000	.006	.522	.001	.071		.000
	N	14	14	14	14	14	14	14	14	14	14	14	14
Dummy	Pearson Correlation	.451	-.614*	.877**	-.771**	-.652*	.866**	-.791**	-.402	.832**	-.607*	.858**	1
	Sig. (2-tailed)	.106	.019	.000	.001	.012	.000	.001	.154	.000	.021	.000	
	N	14	14	14	14	14	14	14	14	14	14	14	14

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### **5.3.2 Regression Analysis**

To examine the impact of explanatory variables on operational efficiency of RRBs in Rajasthan two functions has been formulated and estimated. In each function all explanatory variables have been grouped into three models both in linear and log-linear form in order to avoid the problem of multicollinearity. For this purpose independent variables in each group have been selected with a view to keep their VIF (Variable Inflation Factor) values less than 10. In the present analysis, VIF values have been estimated but not being reported.

#### **5.3.2 (A) Regression Results for ROA Function: Linear models**

Table 5.4 presents the regression estimates of the various determinants of operation efficiency of RRBs in Rajasthan under the linear models of ROA function. Here ROA is the dependent variable which has been taken as the profitability based measure of operational efficiency of RRBs. Results of estimation as presented in the table indicate that the explanatory power of all three models is reasonably high as the  $R^2$  Values and adjusted  $R^2$  values of all models are good enough and is significant at one percent level for model-I and model-II. For model-III they are significant at five percent level of significance. Durbin-Watson statistics have also been estimated and found to be near to the value of 2 in all three models. It implies that there is no autocorrelation in residuals.

In the first linear model of ROA function, ROA has been regressed on four explanatory variables (CR, BD, CAR and LIQ) along with dummy variable as per the regression equation (1). Results show that CR and CAR are negatively related to the Return on Assets of RRBs in Rajasthan. But only CR was found to be statistically significant at one percent level. This result suggests that higher credit risk tend to lower the level of profits in RRBs in Rajasthan. Coefficients of Bank Diversification (BD), Liquidity (LIQ) and dummy variables entered the regression model with a positive sign but are not found to be statistically significant.

**Table 5.4: Estimates of ROA Function: Linear Models**

Independent Variables	Model I	Model II	Model III
CONSTANT	1.538* (2.268)	-22.716*** (-4.304)	-4.142** (-2.505)
LNTA	-	-	-0.227* (-2.082)
CR	-0.135*** (-4.559)	-	-
BD	0.530 (1.645)	-	-
CAR	-0.111 (-1.821)	-	-
LIQ	0.126 (0.376)	-	-
EM	-	0.430* (1.886)	-
PSA	-	-	0.098*** (3.247)
LNGSDP	-	1.504*** (4.504)	-
M-Share	-	0.582** (2.773)	-
Dummy	0.348 (1.379)	-	-
R <sup>2</sup>	0.840***	0.736***	0.501**
$\bar{R}^2$	0.739	0.656	0.410
F-Statistic	8.379	9.271	5.512
D-W Statistic	1.988	1.572	1.929

Note: 1) Values in parentheses are t-statistics.

2)\*\*\*, \*\*and\* indicate significance at 1, 5 and 10% levels respectively

Source: Researcher's Calculation

Second linear model of ROA function regresses ROA on Expense Management (EM), Natural log of Gross State Domestic Product (LNGSDP) and Market Share (M-Share) as per the regression equation (2). All three explanatory variables in this model are positively related to ROA. The impact of both macroeconomic variables (LNGSDP and M-Share) is significant at one percent level and five percent level respectively which support the argument regarding the association between economic growth and the performance of banking sector. It also establishes that the growing share of RRBs in total scheduled commercial bank deposits increases their profits.

In Model III, as per the regression equation (3), Natural log of Total Assets (LNTA) and Priority Sector Advances as percentage to total advances (PSA) have taken as the independent variables. Estimation results indicate that bank size (LNTA) is negatively related to the profit based operational efficiency of RRBs indicating that the larger banks tend to earn lower profits. The result is significant at 10 percent level and establishes economics of scale for smaller banks and diseconomies of scale for larger banks. This further provides that increasing the size of RRBs by amalgamating these banks has negatively affected their profits. Priority Sector Advances as percentage to total Advances (PSA) has positive and significant (at 1 percent level) impact on profits of RRBs in Rajasthan. This finding seems to be contradictory to the general proposition that priority sector advances affect the profitability of a bank adversely. This may be because of the increased level of awareness among the priority sector borrowers as a result of awareness programs conducted by the Government and the Regional Rural Banks themselves regarding effective utilization of loans and their timely repayment.

### **5.3.2 (B) Regression Results for ROA Function: Log-Linear Models**

Table 5.5 presents the regression estimates of the various determinants of operational efficiency of RRBs in Rajasthan under log-linear models of ROA function. Here, natural log of ROA (LNROA) is the dependent variable. All the explanatory variables are also in log form. These models are linear in the logs of variables. Results of estimation as presented in the table indicate that the explanatory power of all three models is reasonably high as the  $R^2$  values and

adjusted R<sup>2</sup> values of all the models are good enough and are significant at one percent level for Model-I and Model-II and at five percent level for Model-III. Durbin-Watson statistics have also been found to be near to the value of 2 in all three models. It implies that there is no autocorrelation in residuals.

In the first log-linear model of ROA function, LNROA has been regressed on four explanatory variables in log form (LNCR, LNBD, LNCR and LNLIQ) as per the log form of regression equation (1). Dummy variable has been excluded as its value in log-form cannot be determined. Results show that LNCR is negatively related to the LNROA of RRBs in Rajasthan and significant at one percent level of significance. This result indicates that with one percent increase in CR, ROA decreases by 0.650 percent and vice versa. Thus, higher credit risks tend to lower the level of profits in RRBs in Rajasthan and consistent with the results found in linear model in our study. Coefficients of LNBD, LNCR and LNLIQ entered the regression model with a positive sign but only LNBD was found to be significant at 5 percent level of significance. Coefficient value of LNBD establishes that with one percent increase in Bank Diversification, ROA also increases by 0.523 percent. Thus, by diversifying their activities RRBs can increase their profits.

In Second log-linear model of ROA function, LNROA has been regressed on LNEM, LNGSDP and LNM\_Share as per the log form of regression equation (2). All three explanatory variables in this model are positively related to the LNROA of RRBs in Rajasthan. Both the macro-economic variables (LNGSDP and M-Share) are affecting the ROA significantly (at one percent level of significance). With one percent increase in LNGSDP, ROA increases by 1.522 percent and with one percent increase in Market Share of RRBs, their ROA increases by 4.639 percent. These results are supporting the association of bank performances with both economic growth and share of RRBs in total scheduled commercial bank deposits in Rajasthan.

**Table 5.5: Estimates of ROA Function: Log- Linear Models**

Independent Variables	Model-I	Model-II	Model-III
CONSTANT	1.261*** (4.998)	-28.898*** (6.110)	-33.582** (-3.736)
LNTA	-	-	-0.265** (-2.582)
LNCR	-0.650*** (-5.335)	-	-
LNBD	0.523** (2.420)	-	-
LNCAR	0.074 (0.830)	-	-
LNLIQ	0.475 (1.809)	-	-
LNEM	-	1.103*** (3.531)	-
LNPSA	-	-	8.358*** (3.715)
LNGSDP	-	1.522*** (6.552)	-
LN M-Share	-	4.639*** (4.155)	-
R <sup>2</sup>	0.862***	0.871***	0.561**
$\bar{R}^2$	0.783	0.832	0.481
F-Statistic	10.921	22.470	7.015
D-W Statistic	1.930	2.017	2.224

Note: 1) Values in parentheses are t-statistics.

2) \*\*\*, \*\*and\* indicates significance at 1, 5 and 10% levels respectively

Source: Researcher's Calculation

Model-III estimates the relative effects of Bank Size and PSA on dependent variable ROA as per the log form of regression equation (3). Estimation results indicate that with one percent increase in the size of the RRB, ROA decreases by 0.265 percent. Coefficient of LNTA was found to be significant at 5 percent level of

significance. This result again establishes economies of scale for smaller banks and diseconomies of scale for larger banks. This result implies that increasing the size of RRBs by amalgamating them has negatively affected their profits. PSA is affecting the ROA of RRBs positively and coefficient is significant at one percent level of significance. With one percent increase in PSA, ROA increases by 8.358 percent. Thus, relative effect of PSA on ROA of RRBs is very impressive.

### **5.3.2 (C) Regression Results for CIR Function: Linear models**

Table 5.6 presents the regression estimates of the various determinants of operational efficiency of RRBs in Rajasthan under the linear models of CIR Function. Here CIR (Cost to Income Ratio) is the dependent variable which has been taken as the cost based measure of operational efficiency of RRBs in Rajasthan. Estimation results as presented in the Table indicate that the explanatory power of all three models under CIR function also is reasonably high as the  $R^2$  and adjusted  $R^2$  values in the models are sufficiently high and are significant at the one percent level for model-I and model-II and at five percent level for model-III. Durbin-Watson statistics have also been found to be near to the value of 2 in all three models. It implies that there is no autocorrelation in residuals.

In the first linear model of CIR function explanatory variables are identical with those in ROA function viz. CR, BD, CAR, LIQ and dummy variable. CIR has been regressed on all these variables as per the equation (4). Results show that BD, CAR and LIQ negatively affect the CIR but CR and dummy have positive impact on CIR of RRBs in Rajasthan. The results suggest that higher credit risk tend to increase the operating costs in RRBs and results in higher CIR. Increased level of Bank Diversification, Capital Adequacy and Liquidity tend to decrease the operating costs and level of CIR in RRBs in Rajasthan. A positive estimate of dummy indicates that CIR in RRBs increases with structural changes in these banks. Out of all these five explanatory variables only CAR was found to be significant at five percent level of significance. This implies that CIR can be reduced significantly by increasing the level of capital adequacy in RRBs.

**Table 5.6: Estimates of CIR Function: Linear Models**

Independent Variables	Model-I	Model-II	Model-III
CONSTANT	79.228*** (8.402)	371.748*** (5.370)	137.461*** (6.101)
LNTA	-	-	-0.700 (-0.472)
CR	0.738 (1.796)	-	-
BD	-4.617 (-1.031)	-	-
CAR	-2.433** (-2.857)	-	-
LIQ	-6.449 (-1.384)	-	-
EM	-	-4.244 (-1.421)	-
PSA	-	-	-0.770* (-1.880)
LNGSDP	-	-21.453*** (-4.898)	-
M-Share	-	-4.542 (-1.651)	-
Dummy	2.483 (0.707)	-	-
R <sup>2</sup>	0.846***	0.774***	0.540**
$\bar{R}^2$	0.750	0.707	0.456
F-Statistic	8.802	11.433	6.452
D-W Statistic	2.884	2.880	2.524

Note: 1) Values in parentheses are t-statistics.

2)\*\*\*, \*\*and\* indicates significance at 1, 5 and 10% levels respectively

Source: Researcher's Calculation

Second linear model of CIR function regresses CIR on three explanatory variables viz. EM, LNGSDP and M\_Share as per the regression equation (5). All these three variables have negative impact on the Cost to Income Ratio of RRBs in Rajasthan. A high magnitude of regression co-efficient of LNGSDP (21.453) which is significant at one percent level again supports the association between economic growth and performance of banking sector. With one percent increase in LNGSDP,

Cost to Income Ratio in RRBs decreases by 21.453 units which results in higher level of operational efficiency in these banks. Other macroeconomic variable which is affecting the Cost to income ratio of RRBs is M\_Share, which implies that with the increase in the share of RRBs in total scheduled commercial bank deposits in Rajasthan, Cost to Income Ratio tends to decrease. This probably happens because increase in market share raises the loanable capacity and overall business activities of these banks, which helps in reducing the average level of costs in these banks. But this variable was not found to be significant.

In Model III, CIR of RRBs has been regressed on natural log of total assets (LNTA) and priority sector advances as percentage to total advances (PSA) as per the regression equation (6). Estimation results indicate that Bank Size (LNTA) negatively affects the cost to income ratio of RRBs in Rajasthan but this coefficient was not found to be significant at any level. PSA is also negatively affecting the CIR of RRBs and is significant at ten percent level of significance. This finding again seems to be contradictory to the general proposition that priority sector advances increase the level of operating costs in RRBs.

### **5.3.2 (D) Regression Results for CIR Function: Log-Linear Models**

Table 5.7 shows the regression estimates of the various determinants of operational efficiency of RRBs in Rajasthan under log-linear models of CIR function. Here, Natural Log of CIR is the dependent variable. All the explanatory variables are also in log form. Estimation results indicate that explanatory power of all three models in CIR function also is good as the  $R^2$  values and adjusted  $R^2$  values of the models are reasonably high and are significant at five percent level for Model-I and Model-III and at one percent level for Model-II. Durbin-Watson statistics show that there is no autocorrelation in residuals.

In the log-linear models of CIR function explanatory variables are identical with those in log-linear models of ROA function. In first model, LNCIR has been regressed on four explanatory variables in log form (LNCR, LNBD, LNCAR and LNLIQ) as per the log form of regression equation (4). Results indicate that LNBD and LNCAR are negatively related to LNCIR but LNCR and LNLIQ are positively

related with LNCIR of RRBs in Rajasthan. Coefficients of LNBD and LNCAR have been found significant at ten percent and five percent level of significance respectively. With one percent increase in the Bank diversification and Capital Adequacy, CIR tends to reduce by 0.109 percent and 0.074 percent respectively. Thus, both BD and CAR support operational efficiency of RRBs in Rajasthan significantly under CIR function. Co-efficient of LNCR and LNLIQ were not found to be significant.

**Table 5.7: Estimates of CIR Function: Log- Linear Models**

Independent Variables	Model-I	Model-II	Model-III
CONSTANT	4.185*** (65.273)	8.823*** (6.756)	8.196*** (4.323)
LNTA	-	-	-0.010 (-0.468)
LNCR	0.021 (0.685)	-	-
LNBD	-0.109* (-1.981)	-	-
LNCAR	-0.074** (-3.285)	-	-
LNLIQ	0.005 (0.080)	-	-
LNEM	-	-0.144 (-1.666)	-
LNPSA	-	-	-0.882* (-1.859)
LNGSDP	-	-0.297*** (-4.630)	-
LNM-Share	-	-0.445 (-1.443)	-
R <sup>2</sup>	0.708*	0.766***	0.535**
$\bar{R}^2$	0.535	0.696	0.451
F-Statistic	4.239	10.907	6.339
D-W Statistic	3.284	2.727	2.617

Note: 1) Values in parentheses are t-statistics.

2)\*\*\*, \*\*and\* indicates significance at 1, 5 and 10% levels respectively

Source: Researcher's Calculation

In second log-linear model of CIR function, LNCIR has been regressed on LNEM, LNGSDP and LNM\_Share as per the log form of regression equation (5). All three explanatory variables in this model have negative impact on LNCIR of RRBs in Rajasthan. Regression co-efficient of LNGSDP, which is significant at one percent level, again supports the strong correlation between bank performance and economic growth. With 1 percent increase in LNGSDP, CIR reduces by 0.297 percent and improves the level of operational efficiency of these banks. Coefficients of LNEM and LNM\_Share have not been found to be significant at any level.

Model-III estimates the relative effects of Bank Size and PSA on dependent variable CIR as per the log form of regression equation (6). Estimation results indicate that with one percent increase in the size of the RRB, CIR reduces by 0.010 percent, but the co-efficient was not found to be significant. Coefficient of PSA was also negative and significant at 10 percent level of significance. It indicates that with one percent increase in PSA of RRBs in Rajasthan, Cost to Income Ratio decreases by 0.882 percent. This result is again contradictory to the general proposition that Priority Sector Advances increase the level of operating costs in RRBs.

In all, on the basis of the estimation results of all regression models it can be observed that the coefficient of Determination ( $R^2$  and Adjusted  $R^2$ ) which shows the amount of variation in the dependent variable as being explained by the independent variables is reasonably high and significant at some level (1% or 5%) in all the estimated models. This implies that all the independent variables included in the models have a significant impact on both ROA and CIR of RRBs in Rajasthan. It explains the statistical significance of the whole model. Further, Credit Risk, Bank diversification, Expense Management, LNGSDP, Market Share, PSA and Bank Size are found to be the important and significant determinants of profitability based operational efficiency (ROA) of RRBs in Rajasthan while Cost to Income Ratio (CIR) of RRBs in Rajasthan is determined significantly by Capital Adequacy, LNGSDP, PSA and also by Bank Diversification (in log-linear model).

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*Chapter - 6*

***Conclusions and  
Suggestions***

## **Chapter-6**

### **Conclusions and Suggestions**

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By following the recommendations of the Working Group, Regional Rural Banks were established in India in October 1975, with a basic objective of providing credit only to the weaker sections of the rural areas such as small and marginal farmers, agricultural laborers, share-croppers, rural artisans, small entrepreneurs and self-employed persons and other rural residents of small means at very soft lending rates. These Banks were set up as state sponsored regional based, rural oriented commercial banks which would have local feel and familiarity with the rural problems, professional attitude, ability to mobilize deposits and access to the central money markets and the modernized outlook of commercial banks.

RRBs have now become an important part of the multi-agency credit delivery system to the agricultural and rural sector. As these banks are the grass-root level institutions in this field, they are expected to play an increasingly important role in achieving the goal of financial inclusion also. But to fulfill these objectives it is necessary that they function in a highly professional and cost-effective manner. That's why operational efficiency and viability is essential and critical for RRBs as a basis for their effective functioning. Amalgamation, recapitalization, interest-subvention, core banking solutions have been some important initiatives taken by Government of India in order to improve the performance and financial health of RRBs during past 2 decades. In this context, the main objective of this study is to analyse the operational efficiency of Regional Rural Banks particularly in the state of Rajasthan.

In the light of above broad objective present study entitled “Analysis of Operational Efficiency of Regional Rural Banks in Rajasthan” analyses following four dimensions:

- It studies the overall growth and performance of Regional Rural Banks in India in terms of physical and financial indicators.

- It analyses trend and growth of RRBs in Rajasthan along with socio-economic profile of the state.
- It analyses operational efficiency of RRBs in Rajasthan on the basis of various dimensions of their performance and examines whether the amalgamation process began in 2005-06 has helped to improve their operational efficiency.
- It attempts to identify the factors that influence the operational efficiency of RRBs in the state of Rajasthan.

Present study covers the period of 14 years from 2000-01 to 2013-14 and studies all the RRBs working in the state of Rajasthan during this period. There were a total of 14 RRBs working in Rajasthan before the process of amalgamation began. This number reduced to 6 during phase I of amalgamation. Further this number reduced to 3 RRBs during Phase II of amalgamation. RRBs have been studied individually to fulfill the main objective of the study. The study is primarily based on secondary data. The relevant secondary data have been gathered from Annual Reports of individual Regional Rural Banks, Key Statistics on Regional Rural Banks, RBI Bulletins, Statistical Tables Relating to Banks in India, Quarterly Statistics on Deposits and Credits of Scheduled Commercial Banks, various Reports on Trend and Progress of Banking in India, Economic Reviews of Rajasthan, Statistical Abstracts of Rajasthan and other published and unpublished reports.

Overall growth and performance of RRBs at all India level and at state level in Rajasthan has been analyzed on the basis of their operations and performance indicators. Operational efficiency of individual RRBs in Rajasthan has been analyzed by making a comparative analysis between pre-amalgamation and post-amalgamation periods, as well as between the RRBs. Five dimensions of operational efficiency viz. operational growth, profitability, productivity, asset quality and viability and technical efficiency have been analyzed. While investigating the factors which determine operational efficiency of RRBs in Rajasthan, a multiple linear regression analysis has been used.

## 6.1 Conclusion

Present chapter summarizes the major findings of the study under the following heads.

### 6.1.1 Growth of Regional Rural Banks in India and Two Decades of Reforms

- a) Since their inception in 1975, the way of operations and role expectation of RRBs have undergone significant changes over a period of around four decades. During financial sector reforms, Narasimham Committee (1991) recommended to allow RRBs to take all type of banking business including non-fund business in line with the commercial banks. Complete deregulation of interest rates, lending to not-target group borrowers, capitalization, preparation of DAPs, introduction of prudential norms, broadening of the investment portfolios were the important measures which enabled RRBs to compete with commercial banks in the field of rural credit in the country.
- b) Further, the process of restructuring by amalgamating RRBs sponsor bank wise and across sponsor banks within a state from 2005-06 has been proved as a milestone in the history of RRBs as it resulted in significant improvements in working of RRBs in India. Amalgamation was mainly aimed to achieve economies of scale, to maintain better managerial control and to help overall strengthening of the weak RRBs. Process of amalgamation along with other policy initiatives like recapitalization, core-banking solutions, interest-subvention, diversification of their operations have resulted in significant improvements in the functioning of RRBs.
- c) Although the number of RRBs have decreased from 196 to 57 in March 2014 due to the amalgamation process but the branch network has continued to rise. During the period of 14 years from April 2000 to March 2014, 5781 new branches have been opened. As at the end of March 2014, 57 RRBs were working in India covering 642 districts and having 19082 number of branches, functioning in 26 states and Union Territory of Puducherry.
- d) Resource base of RRBs in India comprised of owned funds, deposits and borrowings has increased from Rs.4580292.00 lakhs in March 2001 to Rs. 31189651.60 lakhs registering an average annual growth rate of 15.95 percent during the period. Deposits are the largest resource component constituted

nearly 77 percent of total resources through it was around 85 percent in 2003-04. The share of borrowings in the total resources has recorded an increasing trend and remained around 16 percent during 2013-14.

- e) Deposit mobilization in terms of deposits per branch has also increased from Rs.267.39 lakhs in 2000-01 to Rs.1255.08 lakhs in 2013-14. Share of Saving Bank deposits in total deposits at all India level increased from around 39 percent to 50 percent but share of term deposits decreased from around 57 percent to 45 percent during the period of study. RRBs have shown remarkable growth of outstanding advances also (around 20 percent) during the period of study. Share of priority sector advance in total advances increased from 74.21 percent to 81.57 percent in March 2013. While agricultural advances constituted around 44 percent of total advances during the period of study. CD ratio also increased from 41.33 percent to 66.56 percent.
- f) The study also revealed that percentage of recovery improved from 68.2 percent in June 2000 to 81.89 percent in June 2013. The level of Gross NPAs decreased from 18.83 percent in 2000-01 to 3.72 percent in 2009-10 but it again increased to 6.09 percent in 2013-14. It is a matter of concern for the management of RRBs. The position of working results revealed that no RRB in India was running in losses during 2013-14 and their total profit amount increased from Rs.60061.69 lakhs to Rs.269406.55 lakhs during the study period. Only 8 RRBs were having accumulated losses amounted Rs.94845.96 lakhs in 2013-14. Thus, 49 RRBs were sustainably viable, while 8 RRBs were in current viability.

### **6.1.2 Trend and Growth of Regional Rural Banks in Rajasthan**

- a) This chapter reveals that the economy of the state of Rajasthan is mainly characterized by over-dependence on agriculture along with inadequate irrigation facilities and low level of investment in it, inadequate socio-economic infrastructure, inadequate exploitation of vast natural resources, and slow industrial development. The rural and agricultural sector of the state should be given high priority to alleviate poverty from the state. Vast

natural resources of the state should also be exploited widely in order to generate more income and more employment opportunities.

- b) As the overall development of the state of Rajasthan largely depends upon the development of rural areas, the inception of RRBs had a great importance. RRBs in Rajasthan are playing a key role in the socio-economic development by penetrating every corner of the state and making credit available for the development of agriculture and village and cottage industries in the state.
- c) RRBs occupy an important place in banking scenario of the state of Rajasthan as they constitute 21.34 percent of the total bank branches, 6.83 percent of total deposits and 5.95 percent of total advances of all scheduled commercial banks in the state of Rajasthan as on September 2014. These percentages are higher than those of 15.53 percent, 1.79 percent and 2.63 percent respectively at all India level.
- d) Jaipur Nagaur Anchlik Gramin Bank, the first RRB established in Rajasthan, was one of the first five RRBs in the country. The last and 14<sup>th</sup> RRB in the State was established in 1985 which was Bikaner Kshetriya Gramin Bank. At the end of March 2005, a total of 14 RRBs were working in Rajasthan with a network of 1013 branches, having aggregate deposits of Rs.384277.45 lakhs and aggregate advances of Rs.209088.75 lakhs. CD Ratio was 54.41 percent.
- e) In order to improve operational viability of RRBs, Government of India initiated the process of amalgamation of RRBs in 2005-06 in a phased manner. In Rajasthan, first phase of amalgamation (sponsor bank wise within a state) began in January 2006 by amalgamating ABAGB and SGB into a new RRB, Rajasthan Gramin Bank (RGB) sponsored by PNB. Further, two more RRBs, JNAGB and TAGB were amalgamated to form a new RRB (JTGB) sponsored by UCO Bank. BRGB was formed by amalgamating MKGB, AKGB, BCKGB, BAKGB and DBKGB and it was being sponsored by BOB. In June 2006, MGB, BKGB and SKGB were amalgamated to form MGBGB as a new entity. After Phase I only 6 RRBs ( four amalgamated and 2 standalone) were working in Rajasthan. Phase II of the process of amalgamation (across sponsor banks within a state) began in January 2013 in the state of Rajasthan by amalgamating BRGB, HKGB and RGB to form

BRKGB which was sponsored by Bank of Baroda. Further, in February 2013, JTGB and MGBGB were amalgamated to form Marudhara Gramin Bank (MGB) which was sponsored by SBBJ. Again in April 2014, MGB and MAGB were amalgamated and RMGB came into existence which was sponsored by SBBJ. Thus Amalgamation of RRBs has changed the complete structure of these banks. At the end of March 2014, 3 RRBs (2 amalgamated and 1 Standalone) were working in the state of Rajasthan.

- f) As on 31<sup>st</sup> March 2014, a total of 3 RRBs were working in Rajasthan having a network of 1236 branches comprising 959 rural branches, 213 branches in semi urban areas and 64 branches in urban areas. The rural branches accounted for nearly 78 percent of the total branch network of RRBs in the state. Total number of staff was 4378 in March 2002, but then it reduced continuously till March 2009 probably due to increased computerization in RRB branches.
- g) The comparative analysis of the performance of RRBs in Rajasthan between pre-amalgamation and post-amalgamation periods shows that these banks have registered remarkable improvements in all important aspects of their basic operations like resource mobilization, own funds, credit deployment, priority sector advances, CD ratios, recoveries, NPAs and profit position. Deposits registered higher average growth rates during post-amalgamation period. Outstanding advances increased consistently in absolute terms but average growth rate remained little lower during post-amalgamation period (19.62 percent) than that in pre-amalgamation period (21.45 percent). Share of priority sector advances increased from 72.3 percent in 2000-01 to 85.19 percent in 2013-14. Agricultural advances increased at an annual growth rate of 21.75 percent during post-amalgamation period. Total advances under “of deposit no frills account” jumped from Rs.713.10 lakhs in 2006-07 to Rs. 50402.01 lakhs in 2013-14 showing an increase of 70 times. Advances under GCCs, SCCs, and KCCs also increased significantly.
- h) CD ratio and recovery percentage of RRBs in Rajasthan increased consistently and average annual growth rate of both CD ratio and recovery percentage remained higher in Rajasthan than those at all India level during pre-

amalgamation period but recovery percentage grew little slower during post-amalgamation period. Moreover, CD ratio and Recovery percentage (during most of the years) of RRBs in Rajasthan have also been higher than those at all India level during the period of study. In June 2012, RRBs in Rajasthan achieved around 90% recoveries. Study reveals that percentage of Gross NPAs to total loans and advances (o/s) decreased up to 2010-11 but then it again began to rise. The Gross NPAs (%) in RRBs in Rajasthan has been lower than those at all India level during the period of study except in 2004-05 and 2012-13.

- i) RRBs in Rajasthan as a whole have been making profits throughout the period of study. Amount of overall profits earned increased at an average annual growth rate of 21.50 percent showing an increase of 13.6 times during the entire period of study. The accumulated losses decreased sharply and became NIL in 2013-14. Average annual growth rate of net worth of RRBs in Rajasthan remained very high (72.91 percent) during the period. All 3 RRBs in Rajasthan have become sustainably viable during 2013-14.

### **6.1.3 Operational Efficiency of Regional Rural Banks in Rajasthan**

- a) Bank-wise and period-wise analysis of operational growth parameters of Regional Rural Banks in Rajasthan reveals that owned funds of RRBs in Rajasthan grew at a lower rate as compared to RRBs in India throughout the period of study. HKGB (36.12%), MGBGB (19.01%) and JTGB ( 17.70%) showed higher rate of growth of own funds as compared to that at Rajasthan level and also at all India Level during phase I of amalgamation. During Phase II, BRKGB (14.85%) showed higher rate of growth of own funds than average growth at Rajasthan level and at all India level. Growth rates of deposits were also lower in Rajasthan than at all India level during post-amalgamation period phase I and phase II. During pre-amalgamation period 8 out of 14 RRBs in Rajasthan including TAGB (20.88%), MKGB (17.89%) and SKGB (16.50%) showed higher rate of growth of deposits than at Rajasthan level and at all India level. During Phase I of amalgamation, two RRBs viz. RGB (20.10%) and HKGB (18.40%) showed higher rate of growth of deposits than at all India level and state level.

- b) Analysis of operational growth parameters further reveals that during phase I of amalgamation, growth rates of borrowings and outstanding loans and advances remained higher in Rajasthan RRBs than those at all India level but during phase II they remained lower in Rajasthan RRBs. During pre-amalgamation period growth rates of borrowings were negative in respect of SGB (-25.05%), JNAGB (-16.91%) and BCKGB (-3.25%). During phase II also, situation was favorable as borrowings grew at a very low rate in Rajasthan RRBs (4.74%) even MAGB showed negative growth rate (-37.87%). RRBs sponsored by SBBJ performed comparatively better during post-amalgamation period. 7 out of 14 RRBs in Rajasthan showed higher rate of growth of outstanding loans and advances during pre-amalgamation period. TAGB (35.28%), SKGB (33.25%), ABAGB (27.26%) and HKGB (25.87%) were at the top among them. During phase I MAGB (23.00%), RGB (22.84%), MGBGB (21.49%) and BRGB (20.28%) showed higher rates of growth of advances than at national level and state level. During phase II of amalgamation, MAGB (13.08%) showed highest rate of growth of advances. Growth of outstanding advances was most consistent in Rajasthan during phase II of amalgamation.
- c) Operational growth analysis further brings out that rate of growth of investments of RRBs at Rajasthan level were lower than that at all India level during pre-amalgamation period and Phase II of amalgamation but during phase-I of amalgamation it was higher in Rajasthan. 6 out of 14 RRBs including MKGB (22.25%), AKGB (16.85%) and DBKGB (13.66%) showed higher rates of growth of investments than both national level and state level growth rates during pre-amalgamation period. During phase-I, RGB (26.24%) secured highest rate of growth of investments while during phase II of amalgamation BRKGB (14.98%) showed highest rate of growth of investments while other 2 RRBs MGB (-2.77%) and MAGB (-0.77%) showed negative growth rates.
- d) Profitability analysis of RRBs in Rajasthan reveals that both financial return and financial cost showed the decreasing trend both in Rajasthan RRBs and in India RRBs during pre-amalgamation period but during post-

amalgamation period they showed increasing trend. Growth Rates of both the ratios were higher in Rajasthan RRBs than all India level growth rates during all three period. Financial returns were lower in Rajasthan during pre-amalgamation period and Phase II but remained higher during phase I of amalgamation. Financial costs were higher in Rajasthan during pre-amalgamation period and Phase I but remained lower during phase II. Financial margins of RRBs decelerated during pre-amalgamation period and phase I of amalgamation both at state level and at national level but they increased during phase II. Financial margins in RRBs in Rajasthan were lower in most of the years of study period except 2005-06, 2006-07 and 2010-11. Financial return was highest in BKGB (10.29%) in 2004-05, in MGBGB (9.21%) in 2011-12 and in MAGB (9.34%) in 2013-14. Financial cost was highest in BKGB (6.91%) in 2004-05, in MGBGB (6.13%) in 2011-12 and in MGB (5.35%) in 2013-14. Financial margin was highest in ABAGB (5.18%) in 2004-05, in MAGB (3.64%) in 2011-12 and in MAGB (3.94%) again in 2013-14.

- e) Profitability analysis further brings out that both operating cost and miscellaneous income showed an increasing trend during pre-amalgamation period and phase II of amalgamation both in Rajasthan RRBs and in RRBs at all India level but they decreased during phase I of amalgamation. Growth rates of operating cost were higher in Rajasthan during all three periods. Operating cost was highest in BAKGB (2.12%) in 2004-05, in MAGB (3.33%) in 2011-12 and in MAGB (3.67%) in 2013-14. During phase I all 6 RRBs in Rajasthan showed negative growth rates of operating costs. MGBGB (-4.21%) showed highest negative growth rate. Growth rates of miscellaneous income were higher in Rajasthan RRBs than at all India level during pre-amalgamation period and phase II. Miscellaneous income was highest in SGB (1.69%) in 2004-05, in MGBGB (0.69%), in 2011-12 and in MGB (0.75%) in 2013-14. 5 out of 6 RRBs in Rajasthan during phase I showed negative growth rates.
- f) Profitability analysis also reveals that gross margin and net margin of RRBs in Rajasthan showed an increasing trend during all three periods of study

while at all India level they showed a decreasing trend during pre-amalgamation period. Growth rate of gross margin was higher in Rajasthan RRBs than at all India level during pre-amalgamation period and phase II. Gross margin was highest in SGB (3.04%) in 2004-05, in MGBGB (1.62%) in 2011-12 and in BRKGB (1.54%) in 2013-14. Growth rate of gross margin was positive only in BRGB (15.08%) during phase I. Growth rates of net margin of Rajasthan RRBs were higher during pre-amalgamation period and phase I of amalgamation. Net margin was highest in BAKGB (2.40%) in 2004-05, in RGB (1.04%) in 2011-12 and in BRKGB (0.85%) in 2013-14. Growth rate of net margin was also positive only in BRGB (48.48%) during phase I. Risk cost of RRBs showed an increasing trend during all three periods both at state level and national level. Growth rates of risk cost remained higher in Rajasthan RRBs during all three periods. Risk cost was highest in MGB (1.33%) in 2004-05, in JTGB (1.35%) in 2011-12 and in MGB (0.70%) in 2013-14. RGB (36.14%) and HKGB (15.04%) showed higher growth rates of risk cost during phase I.

- g) Employee productivity analysis reveals that deposits per employee of RRBs in Rajasthan were lower than those in India throughout the period of study except in 2008-09 and their growth rate in Rajasthan was higher in pre-amalgamation period only. Deposits per employee were highest in MGB (RS.103.82 lakhs) in 2004-05, in RGB (Rs.305.77 lakhs) and in 2011-12 and in BRKGB (Rs.271.89 lakhs) in 2013-14. RGB had higher deposits per employee than national and state average and also the highest growth rate. Advances per employee were higher in Rajasthan throughout the post-amalgamation period except in 2013-14. Advances per employee were highest in SKGB (Rs.89.12 lakhs) in 2004-05, in RGB (Rs.234.37 lakhs) in 2011-12 and in BRKGB (Rs.212.97 lakhs) in 2013-14. Growth rate was highest in BRKGB (40.85%) during phase-II. Business per employee of RRBs in Rajasthan remained higher than that in India throughout the phase I except in 2009-10. Business per employee was highest in SKGB (Rs.175.26 lakhs ) in 2004-05, in RGB Rs.539.94 lakhs) in 2011-12 and in BRGB (Rs.484.86 lakhs) in 2013-14. RGB and BRGB in phase mI and MAGB in

phase II had higher growth rates of business per employee than both India level and state level growth rates.

- h) Analysis of employee productivity further brings out that total income per employee of RRBs in Rajasthan were higher than the national average during post-amalgamation period except in 2011-12 and 2012-13. Total income per employee was highest in SKGB (Rs.11.69 lakhs) in 2004-05, in RGB (Rs.31.74 lakhs) in 2011-12 and in MGB (Rs.31.25 lakhs) in 2013-14. All three RRBs had lower income per employee than the national average during phase II. Total expenditure per employee grew at higher rates in Rajasthan during both the phases of amalgamation. Amount of total expenditure per employee also remained higher in Rajasthan in most of the years of study. Total expenditure per employee was highest in MGB (Rs.9.95 lakhs) in 2004-05, in RGB (Rs.28.15 lakhs) in 2011-12 and in MGB (Rs.28.52 lakhs) in 2013-14. All the RRBs in Rajasthan had lower amount of expenditure per employee than the national average during phase II. Profits per employee in Rajasthan were lower than the national average during most of the years of the period of study. Profits per employee were highest in SGB (Rs.2.99 lakhs) in 2004-05, in RGB (Rs.3.59 lakhs) in 2011-12 and in BRKGB (Rs.2.84 lakhs) in 2013-14.
- i) Branch productivity analysis reveals that deposits per branch were lower in Rajasthan as compared to India throughout the period of study though the growth rates were higher in Rajasthan during pre-amalgamation period and phase-I of amalgamation. Deposits per branch were highest in MGB (Rs.469.09 lakhs) in 2004-05, in RGB (Rs.1276.67 lakhs) in 2011-12 and in BRKGB (Rs.1187.86 lakhs) in 2013-14. Advances per branch were lower in Rajasthan during pre-amalgamation period and till 2009-10 during phase I but they remained higher thereafter than the national average. Growth rate of advances per branch were higher in Rajasthan RRBs during pre-amalgamation period and phase I. Advances per branch were highest in ABAGB (Rs.320.84 lakhs) in 2004-05, in RGB (Rs.1083.10 lakhs) in 2011-12 and in BRKGB (Rs. 930.45 lakhs) in 2013-14. 5 RRBs during phase I and MAGB during phase II recorded higher growth rates of advances per branch than

those at all India level. Business per branch was lower in Rajasthan than in India throughout the period of study but the growth rates were higher in Rajasthan during pre-amalgamation period and phase I. Business per branch was highest in ABAGB in 2004-05, in RGB in 2011-12 and in BRKGB in 2013-14.

- j) Analysis of branch productivity further brings out that total income per branch was lower in Rajasthan than in India throughout the period of study though growth rates were higher in Rajasthan RRBs during all three periods. Total income per branch was highest in MGB (Rs.47.61 lakhs) in 2004-05, in MGBGB (Rs.132.63 lakhs) in 2011-12 and in BRKGB (Rs.136.09 lakhs) in 2013-14. All three RRBs during phase II had income per branch below the national average. Total expenditure per branch was also lower in Rajasthan than in India throughout the period of study though the growth rates were higher in Rajasthan during post-amalgamation period. Total expenditure per branch was highest in MGB (Rs.44.93 lakhs) in 2004-05, in MGBGB (Rs.120.08 lakhs) in 2011-12 and in BRKGB (Rs.123.68 lakhs) in 2013-14. All three RRBs had expenditure per branch below the national average though the growth rate was very high in BRKGB during phase-II. The profits per branch grew at a faster rate in Rajasthan RRBs than at all India level during pre-amalgamation period and phase II of amalgamation. The amount of profit per branch was lower in Rajasthan than that in India throughout the period of study except 2005-06 and 2006-07. Profits per branch in Rajasthan were highest in ABAGB (Rs.11.90 lakhs) in 2004-05, in RGB (Rs.14.99 lakhs) in 2011-12 and in BRKGB (Rs.12.41 lakhs) in 2013-14.
- k) Financial productivity analysis of RRBs in Rajasthan reveals that returns on advances of RRBs in Rajasthan were higher than those at all India level during pre-amalgamation period and phase I of amalgamation. Growth rates of returns on advances were negative both at Rajasthan level and India level during pre-amalgamation period. Growth rates were higher in Rajasthan RRBs during all three periods. Return on advances were highest in BKGB (12.21%) in 2004-05, in MGBGB (10.84%) in 2011-12 and in MAGB(11.51%) in 2013-14. During phase I, 4 out of 6 RRBs recorded higher

growth rates than state level and national level growth rates of return on advances. Growth rate of returns of investments in Rajasthan RRBs remained negative during pre-amalgamation period (-10.15%) and phase I (-0.27%) but positive during phase II (56.29%). Returns on investments were higher in Rajasthan RRBs during most of the years of phase I but lower during phase II. All the RRBs in Rajasthan registered a negative growth rate of return on investments during pre-amalgamation period. Only 2 RRBs MGBGB and BRGB registered positive growth rates of return on investments during phase I. ROI was highest in MGB (8.93%) in 2004-05, in MGBGB (7.67%) in 2011-12 and in BRKGB (14.99%) in 2013-14.

- l) Analysis of financial productivity further reveals that cost of deposits in Rajasthan RRBs was higher as compared to the cost of deposits in RRBs at all India level throughout the period of study except 2012-13. Growth rates were negative both at Rajasthan level and India level during pre-amalgamation period but positive and higher in Rajasthan RRBs during both the phases of post-amalgamation period. Cost of deposits was lowest in ABAGB (3.73%) in 2004-05, in HKGB (3.22%) in 2011-12 and in MAGB (5.36%) in 2013-14.
- m) Financial productivity analysis also reveals that CD ratio of RRBs in Rajasthan was higher as compared to India level throughout the post-amalgamation period. Growth rates were also higher in Rajasthan during pre-amalgamation period and phase I of amalgamation. CD ratio was highest in SKGB (103.47%) in 2004-05, in MGBGB (81.87%) in 2011-12 and in BRKGB (78.33%) in 2013-14. Four RRBs in Rajasthan recorded growth rates of CD ratio higher than the national level during phase I of amalgamation. Average ID ratio of RRBs in Rajasthan remained lower than the national average throughout the period of study. Growth rates were also negative and lower during pre-amalgamation period and phase II of amalgamation though it was positive but lower during phase I. ID ratio was highest in MAGB during the three years (i.e. 2004-05, 2011-12 and 2013-14).
- n) Portfolio quality analysis of RRBs in Rajasthan shows that credit risk ratio (Gross NPAs to total loans and advances) was lower in Rajasthan RRBs than

RRBs at all India level throughout the period of study except in 2012-13. Growth rates of credit risk ratio were negative in Rajasthan RRBs during all three periods of study. Credit risk ratio was lowest in ABAGB (1.75%) in 2004-05, in RGB (2.03%) in 2011-12 and in MAGB (4.68%) in 2013-14. Growth rates of credit risk ratio were negative in respect of all RRBs in Rajasthan during phase I of amalgamation. During phase II only MAGB recorded a positive growth rate.

- o) Viability analysis of RRBs in Rajasthan brings out that the position of accumulated losses of RRBs has improved up to a great extent. Average amount of accumulated losses to total assets was lower in Rajasthan RRBs than the national average throughout the period of study. Moreover, it became NIL in 2013-14. The growth rates also showed a declining trend both in Rajasthan RRBs and in RRBs at all India level. 5 out of 14 RRBs recorded a NIL ratio in 2004-05. In 2011-12, 5 out of 6 RRBs recorded a NIL ratio. Only MAGB continued to have a positive ratio. But in 2013-14, all RRBs in Rajasthan have become free from accumulated losses and have attained sustainable viability.
- p) Analysis of viability position of RRBs in Rajasthan in the form of coverage ratio reveals that RRBs in Rajasthan on an average are having positive and increasing ratio of net worth to total assets (coverage ratio) since 2002-03. But the ratio has been recorded lower in Rajasthan RRBs than the national average throughout the period of study. Moreover, growth rates too were lower in Rajasthan. Since 2008-09, all individual RRBs in Rajasthan are having positive and rising net worth to total assets ratio. In 2013-14, MGB secured the highest (6.59%) ratio of net worth to total assets and also higher than the national average.
- q) Analysis of technical efficiency under CRS assumption in the year 2004-05 reveals that 7 out of 14 RRBs in Rajasthan in the year 2004-05 found to be highly efficient as they attained the OTE score equal to 1. These RRBs were; ABAGB, SGB, JNAGB, TAGB, BAKGB, DBKGB and SKGB. These RRBs together determined the efficient frontier during that year. Moreover, they formed the “Reference Set” for inefficient RRBs. They set an example

for inefficient RRBs to operate. They were also known as “Globally Efficient” or “Peers” in DEA terminology. OTE scores for inefficient RRBs ranged from 0.645 to 0.998.

- r) Technical efficiency analysis under VRS assumption in the year 2004-05 shows that 10 out of 14 RRBs in Rajasthan in the year 2004-05, earned PTE scores equal to 1. In addition to the 7 “Globally Efficient” RRBs, 3 more RRBs namely MKGB, BKGB and MGB achieved the PTE scores equal to 1 and achieved the status of “Locally Efficient” RRBs as they were on the efficient frontier under VRS assumption. These three RRBs were suffering from scale inefficiency. Remaining 4 RRBs were having managerial inefficiency rather than scale inefficiency. 7 most efficient RRBs were being operated under CRS, 6 RRBs under IRS and only one RRB was being operated under DRS. SGB was found to be the “Global Leader” for other RRBs during that year.
- s) Technical efficiency analysis under CRS assumption in the year 2011-12 reveals that out of 6 RRBs in Rajasthan during that year, 3 RRBs namely RGB, BRGB and MGBGB achieved the OTE scores equal to 1 and therefore, were considered technically efficient and achieved the title of “Globally Efficient” RRBs. These RRBs together formed the “Reference Set” and efficient frontier for other 3 inefficient RRBs which were JTGB, MAGB and HKGB which had OTE scores less than 1. It was found that JTGB, MAGB and HKGB could reduce their current input use by 0.3%, 5.4% and 2.5% respectively and still could achieve the same level of output.
- t) Technical efficiency analysis under VRS assumption during the year 2011-12 reflects that 3 RRBs which had OTE scores less than one had attained PTE scores equal to one and thus they were “Locally Efficient” RRBs. They were on the efficient frontier under the VRS assumption. This implies that these three RRBs were being operated on an inappropriate scale size (IRS). BRGB was found to be the “Global Leader” for other RRBs during that year.
- u) Analysis of technical efficiency under CRS assumption in the year 2013-14 brings out that all three RRBs in Rajasthan in the year 2013-14 attained the

OTE, PTE and SE scores equal to 1. This implies that all the RRBs were technically efficient under both CRS and VRS assumptions during that year. RRBs in Rajasthan were suffering neither from managerial inefficiency nor from scale inefficiency. They all were using their inputs properly and were being operated on the optimal scale size.

- v) Technical efficiency analysis further provides that average OTE score under CRS assumption was 91.1 percent in 2004-05 which increased to 98.6 percent in 2011-12 and further to 100% in 2013-14. Average PTE score increased from 93.5 percent in 2004-05 to 100 percent in 2011-12 and 2013-14. Average SE score increased from 97.4 percent in 2004-05 to 98.6 percent in 2011-12 and further to 100 percent in 2013-14. All the RRBs in Rajasthan experienced the 100% level of OTE, PTE and SE during the year 2013-14.

#### **6.1.4 Factors Determining Operational Efficiency of Regional Rural Banks in Rajasthan: Regression Analysis**

- a) In order to examine the impact of bank-specific and macro-economic determinants on operational efficiency of RRBs two functions have been developed. Two independent variable Return on Assets (ROA) and Cost to Income Ratio (CIR) have been taken to design the two respective functions. Each function is a panel of three regression models both in linear and log-linear form. Under linear models we estimated absolute change in dependent variable ROA/CIR due to absolute change in explanatory variables while under log-linear models we estimated the percentage change in dependent variable ROA/CIR due to given percentage change in explanatory variables.
- b) Under ROA function regression estimates were found by using Ordinary Least Square (OLS) method for both linear and log linear models. Estimation results indicated that Credit Risk (CR) was negatively affecting Return on Assets in RRBs in Rajasthan both in absolute terms and relative terms. Coefficient was found to be significant at one percent level in both the models. This implies that credit risk tend to lower the level of profits in RRBs in Rajasthan. Further, both macroeconomic variables Gross State Domestic Product (GSDP) and Market Share (M\_Share) were affecting ROA positively and significantly in both linear and log linear models which

supports the association of both economic growth and growing share of RRBs' deposits in total scheduled commercial bank deposits in Rajasthan with the operational efficiency of a bank. Coefficient of Bank Size (LNTA) was found to be negative and significant at ten percent level and five percent level in linear and log-linear models respectively which implies that larger banks tend to earn lower profits. Priority sector advances to total advances (PSA) had positive and significant impact (at 1% level in both the models) on profit based operational efficiency of RRBs in Rajasthan. This finding seems to be contradictory to the general proposition that priority sector advances affect the profitability of banks adversely. Impact of Expense Management (EM) was positive and significant at 10 percent level in linear model and at 1 percent level in log-linear model. Bank Diversification (BD) was found to be significant only in log linear model at 5 percent level which established that relative impact of BD is positive on ROA. Other variables viz., Liquidity, Capital Adequacy, and Dummy were not found to be significant at any level.

- c) Under CIR function too, regression coefficients were estimated by using OLS method for both linear and log linear models. Estimation results indicated that Capital Adequacy (CAR) affected the Cost to Income Ratio (CIR) in RRBs in Rajasthan negatively and significantly (at 5% level in both the models) which implies that CIR can be reduced significantly by increasing the level of capital adequacy in RRBs. Negative value of the coefficient of LNGSDP in both the models (significant at one percent level) supported the link between economic growth and bank performance under CIR function also. Further, results revealed that Bank Size (LNTA) negatively affected the CIR in RRBs but not found to be significant in both the models. Coefficient of PSA indicated that by increasing the PSA of RRBs in Rajasthan CIR can be reduced significantly (at 10% level) in both absolute and relative terms. Thus, they enhance the level of operational efficiency. Bank Diversification (BD) was found to be significant in log-linear model only at 10 percent level of significance and affected CIR positively. Coefficient of Credit Risk, Liquidity, Expense Management,

M\_Share and Dummy were not found to be significant in both the models under CIR function.

- d) Results of estimation under both ROA function and CIR function further indicated that explanatory powers of all linear and log-linear models under both the functions were reasonably high as the  $R^2$  values and adjusted  $R^2$  values in all the estimated models remained sufficiently high and were significant also at some level of significance (1,5 or 10 percent level). It suggests that we can accept both our Hypotheses ( $H_A$  and  $H_B$ ) which state that independent variables are significantly effecting the ROA and CIR respectively or it can be inferred that a sufficient amount of variation in the dependent variables ROA and CIR is being explained by the independent variables selected for the models.

## 6.2 Suggestions

On the basis of the findings mentioned above, following suggestions have been made to further improve the operational efficiency of Regional Rural Banks in the state of Rajasthan and to make them capable for achieving the basic objective of eradication of rural poverty for which they were set up:-

- a) Growth rate of deposits has been lower in Rajasthan RRBs as compared to the RRBs in India during post-amalgamation period. As deposits are the major source of funds for RRBs, these banks should make adequate and effective efforts in this direction. RRBs should introduce diversified investment schemes providing various combinations of returns to their depositors apart from traditional saving deposits or term deposit policies. Deposit camps can be organized to introduce their clients with these schemes. This will motivate the rich and well off people of villages to deposit their money in RRBs and will enable RRBs to raise their funds.
- b) Though RRBs have performed well in deployment of Credits in the state as compared to the all India level but still there is a lot of scope to increase the disbursement of credit. Loans and advances are the major source of interest income for RRBs which enables them to attain profitability and viability though they are risky too. RRBs should identify the differential credit needs of the various segments of rural society and accordingly a variety of credit

products should be developed. RRBs should motivate the prospective borrowers to train themselves as entrepreneurs in order to make the loans self-liquidating. It is further suggested to the RRBs in Rajasthan to adopt liberal lending policy to increase their loans and advances in order to earn more profits. RRBs should also extend the credit facilities under financial inclusion too, by issuing more Kisan Credit Cards, General Credit Cards, Artisans Cards etc. Further, RRBs should disburse more loans to self help groups like Self Employed Women's Association (SEWA) and other micro financial programs.

- c) In rural areas, RRBs have to face a wasteful competition with rural branches of commercial banks. To avoid the problem RBI should make a policy of transferring the business from rural branches of Commercial Banks to RRBs branches which will provide them opportunity to get business of rich clients of their area. It will further enable them to earn more profits. This transfer of business can be done in a phased manner by giving proper training to the RRB staff about the business.
- d) Level of NPAs affects the profitability and efficiency of RRBs adversely. NPAs still need to be reduced in these banks to make them efficient and accord with capital adequacy norms. Banks should accept the compromise proposals of only non-willful defaulters. Willful defaults should be treated as criminal offence and strong actions should be taken. Write-off of the loans should not be a regular practice. It should be done only in special cases. Banks should mutually share the information regarding defaulting customers so that further NPAs can be prevented. Quality of pre-credit and post-credit appraisals, monitoring of borrowers accounts and follow-up of advances should be improved to avoid future NPAs. It has now become essential to make special provisions in RRB act to provide a legal framework for recovery of loans. Strict provisions should be there to realize the securities and personal assets of defaulters.
- e) In near future, RRBs will have to face more competition from the foreign and private sector banks. Hence, they should make more effective efforts to improve their operational efficiency and reduce their overhead expenses.

They should work hard to provide better customer services. RRBs need to base their operations fully on Core Banking Solutions (CBS). GOI has constituted a committee to revisit the Human Resource Policy for RRBs which has finalized a RRB wise Road Map and time frame for staffing pattern, skill development and technological up-gradation in these banks. Government should implement these recommendations effectively in order to meet the challenges resulting from the changing scenario.

- f) Operating expenses have grown in Rajasthan at a faster rate as compared to the all India level during post-amalgamation period. This proves that the structural consolidation has not been much beneficial in reducing these expenses. Higher operating expenses lead to lower operational efficiency and profitability in these banks. RRBs particularly in the state of Rajasthan need to make special efforts in order to keep these expenses within limits. RRBs should monitor these expenses regularly. They should utilize all their resources to get maximum returns. Proper human resources management is the need of time. Staff should be evaluated on the basis of their performance and productivity grounds. It will help in increasing the business volume with minimum resources. Thus, operating cost will reduce gradually and operational efficiency will be improved.
- g) RRBs in Rajasthan are not involved in providing much non-fund business. They should make more efforts to generate other income rather than depending on only interest income. For this purpose, RRBs should diversity their operations and undertake more non-fund based activities such as issuance of guarantee, demand drafts, traveler's cheques, providing locker facilities etc. They can also work as agents by marketing the various low premium schemes of private as well as public sector insurance agencies which cover the rural people against various mis-happenings in their lives. They can also market the products of other financial institutions such as shares, bonds, mutual funds to earn commission based income. RRBs should be allowed to undertake non trade related currency account transactions also. All these efforts will help RRBs in augmenting their other income.

Moreover, this will attract more potential customers and help in increasing the overall business of these banks.

- h) Regional Rural Banks should avoid to go for high cost borrowings and inter-bank deposits in order to reduce their interest expenditure. If these types of resources are mobilized, RRBs should deploy them consciously. This will help in increasing the financial margin and further increase the profitability of these banks.
- i) As the requirements of rural people are also changing with time, RRBs need to search for new products on regular basis to meet the expectations of their customers. Moreover, they need to identify the weaknesses in their functioning also. For this purpose, each RRB should have its own research cell. Banks should encourage the research work conducted by individuals also. Valuable suggestions should be implemented by the banks on grounds of their practicability.
- j) Findings indicate that structural consolidation of RRBs particularly in the state of Rajasthan has not been significant in improving the profitability and efficiency of RRBs so far. Though it may have some long term impacts on the performance of these banks. But it can be suggested that no further amalgamation should be taken and more emphasis should be given to other policy initiatives such as human resources development, re-capitalization, technological up-gradation of RRB branches, widening the horizon of banking activities of RRBs, adequate infrastructure facilities in RRB branches in remote areas etc., in order to make some qualitative improvements in the functioning of RRBs.
- k) Skilled and efficient staff is the key to success for any organization including RRBs. RRBs' staff should be given continuous and compulsory training so that they become capable of meeting the challenges in the emerging scenario. Professional work culture should also be developed. Efforts should be made by the management to make the staff technology friendly.
- l) RRBs did not have any other source of capital except paid up capital. Besides, they have to maintain a capital adequacy ratio of at least 9 percent which sometimes created shortage of funds and limited the credit disbursal by these banks. Hence, to enable them to acquire more capital, the

government has enacted RRBs (Amendment) Act, 2015 This Amendment is aimed to help these banks to mobilize resources from financial markets by keeping a combined government holding of at least 51 percent. This change will pave the way for their part privatization. Though, this Act is aimed primarily to strengthen the RRBs and to help them become capable of fulfilling government's attempt of providing financial inclusion to every village in the country but government should take care that the RRBs do not lose their orientation and not get distracted from their original goals.

- m) Regional Rural Banks have to face various types of risks relating to advances, market, reputation etc. As Indian Financial Market has been liberalized and being an integral part of it, RRBs are also facing the complex and large risk associated with their diversified bank operations in the present scenario. Thus, it has become imperative to introduce a suitable internal control and risk management system in these banks particularly in the post-amalgamation era. Asset Liability Management System (ALM) can be adopted as a tool for risk management in RRBs. NABARD should help RRBs to operationalise this system.

The suggestions discussed above are based on the conclusions drawn in the study. Though, the RRBs in the state of Rajasthan are improving their performance but still there is a greater scope for further improvement. Suitable policy initiatives by following the suggestions provided by the study would have far reaching impacts on overall functioning of these banks and would help to improve their operational efficiency.

### **Scope for Future Research**

During the course of study many new dimensions of the working of RRBs came up where the future researches can be based. As the financial sector has been facing significant changes during past few years and RRBs as an integral part of it can be evaluated on the basis of customer satisfaction and employee satisfaction by using primary data. Besides, a branch level performance evaluation and comparative analysis of the performances of rural and urban branches of RRBs in the state of Rajasthan can also be taken as the subject of future research. Role of RRBs in Financial Inclusion and Micro Financing, Impact of Technological Up-gradation on profitability and productivity of RRBs are also the areas where research is needed.

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# Performance of Regional Rural Banks in Rajasthan : A Study of Pre and Post Amalgamation Period

*Regional Rural Banks were established in 1975, with a basic objective to ensure sufficient institutional credit for agriculture and other rural sectors. Various reform measures introduced by the Govt. of India in consultation with the RBI and NABARD in the years from 1994-95 to 2005-06 have resulted in improvements in respect of their key performance indicators like number of branches, capital composition, deposits, loans and advances, recoveries and profitability also. Further, GOI initiated the process of structural consolidation of RRBs in Sept. 2005 by merging/amalgamating these banks, sponsor bank-wise and across sponsor banks, following the recommendations of Vyas Committee II (2004). Present study attempts to investigate whether the process of amalgamation has improved the performance of RRBs. The study concentrates only on the RRBs in the state of Rajasthan. By analyzing secondary data on the basis of compound annual growth rates, study concludes that deposit mobilization and credit deployment by RRBs in Rajasthan has grown significantly after amalgamation.*

**MRS. NEELAM GOENKA\* & DR. ARUNA KAUSHIK\*\***

## **I**ntroduction :

The economy of the state of Rajasthan is mainly characterized by over dependence on agriculture, inadequate exploitation of vast natural resources, inadequate socio-economic infrastructure. In view of the large incidence of rural poverty in the state, establishment of RRBs had a great importance as these banks were created to cater exclusively to the credit need of the rural poor, particularly among the economically and socially marginalized sections in the rural areas. Since their inception in 1975, RRBs in Rajasthan as well as in India are playing a key role in the Socio-economic development by penetrating every corner of the state. However, in response to the financial sector reforms, initiated in 1991-92, and more recently the process of amalgamation, began in September 2005, the structure and the way of operations of these banks has changed significantly. In this context, it has become imperative to analyze the performance of RRBs in order to decide about their desired role in emerging economic scenario.

## **Regional Rural Banks in Rajasthan : An Overview of The Amalgamation Process :**

In Rajasthan, first RRB was established on 2nd October 1975, as one of the first five RRBs in the country. According to its geographical area of operation, the bank was named Jaipur-Nagaur Anchlik Gramin Bank (sponsored by UCO Bank) with its head office at Jaipur. In 1976, two more RRBs Marwar Gramin Bank and Shekhawati Gramin Bank were

opened. By the end of 1985, the number of RRBs increased to 14 when last and 14th RRB, Bikaner Kshetriya Gramin Bank was established. Till the amalgamation, there were 14 RRBs working in Rajasthan with a network of 1013 branches covering all the districts of the State (as on 31st March, 2005).

Government of India initiated the process of structural consolidation of RRBs in 2005-06, as per the recommendations of Advisory Committee on Flow of Credit to Agriculture and Related Activities (Vyas Committee II, 2004). In order to improve the operational viability of RRBs and take advantage of the economics of scale, the process of amalgamation of RRBs, sponsor Bank-wise within a state, was initiated in September, 2005 at all India level. It was envisaged that new entities would be benefitted by having a larger area of operation, and enhanced credit exposure limits and would be able to provide better customer services due to better infrastructure, computerized branches, experienced workforce, common publicity and marketing efforts etc. The banks would be able to diversify their banking operations in a better way and the process of amalgamation would help in strengthening the weak RRBs as well. As a result of the process of amalgamation, number of RRBs, at all India Level reduced from 196 in March 2005 to 82 in March 2012 during phase-I and further to 57 in March 2014, during phase-II. As on 31st March 2014, there were 57 RRBs working in India having 19082 branches, covering 642 districts throughout

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the country.

In Rajasthan, first phase of amalgamation of RRBs began on 24th January 2006, with amalgamation of two RRBs of the state which were, Alwar Bharatpur Anchlik Gramin Bank (ABAGB) and Shekhawati Gramin Bank (SGB). Both the banks were being sponsored by Punjab National Bank (PNB). By amalgamating these two entities a new RRB was formed and was named as Rajasthan Gramin Bank (RGB) sponsored by PNB. This process of amalgamating RRBs sponsor bank-wise within a state continued till June, 2006 in Rajasthan. At the end of June 2006, There were only 6 RRBs ( Four amalgamated and two standalone RRBs) working in Rajasthan as 12 out of 14 old RRBs had been amalgamated to form 4 new RRBs. During phase-II, this number further reduced to only 3 RRBs (2 amalgamated RRBs i.e. Baroda Rajasthan Gramin Bank (BRGB) and Marudhara Gramin Bank (MGB) 1 stand alone RRB i.e. Mewar Anchlik Gramin Bank) in the state of Rajasthan as on 31st March 2014. These 3 RRBs were having 1236 branches covering all the districts of Rajasthan. Around 95 percent of the total branches of these three RRBs were operating in rural and semi urban areas of the state.

#### Objective of The Study :

(1) The objective of this paper is to analyze the performance of RRBs particularly in the State of Rajasthan during both pre and post amalgamation period.

(2) To investigate whether the process of amalgamation of RRBs initiated in 2005-06, has helped to improve their performance.

(3) To make important suggestions to further improve the performance of RRBs in Rajasthan.

#### Methodology :

The performance of RRBs in Rajasthan has been analyzed on the basis of Key performance indicators such as structural growth capital composition, deposit mobilization, credit deployment, recovery performance credit-deposit ratio, NPAs and profit position. The period covered is 2000-01 to 2013-14 which is divided between pre-amalgamation period (2000-01 to 2004-05) and post-amalgamation period (2005-06 to 2013-14). The study is diagnostic and exploratory in nature and makes use of Secondary data. The relevant data has been collected mainly from the databases of Reserve Bank of India (RBI) and National Bank of Agricultural and Rural Development (NABARD) and other published and unpublished literature related to the subject. Compound annual growth rates have been calculated by fitting exponential trend line in order to analyze the data and draw conclusions.

#### Performance of RRBs in Rajasthan :

Table-1 shows performance of RRBs in Rajasthan on the basis of their basic operations like growth of capital funds, deposit mobilization, credit deployment and CD ratio from

**Table 1 : Key Performance Indicators of RRBs in Rajasthan (Rs. in lakhs)**

Year	No. of RRBs	Capital Funds	Deposits	Loans and Advances (O/S)	C-D Ratio
2000-01	14	18590.79	234896.17	96608.93	41.13
2001-02	14	19470.47	273959.67	113881.00	41.57
2002-03	14	20928.19	308941.00	137625.00	44.57
2003-04	14	23809.00	352874.00	158785.29	45.00
2004-05	14	29552.00	384277.45	209089.00	54.41
2005-06	8	30281.57	438276.08	258070.20	58.87
2006-07	6	33590.23	512130.09	328718.56	64.06
2007-08	6	38127.86	604319.90	414761.64	68.62
2008-09	6	46962.86	770416.17	453819.51	58.90
2009-10	6	52503.02	863371.96	545500.86	63.18
2010-11	6	60529.81	990849.32	687784.34	69.41
2011-12	6	70770.01	1141891.29	800747.83	70.12
2012-13	3	102370.67	1246183.58	926605.64	74.35
2013-14	3	114759.31	1377603.43	1035343.24	75.16
CAGR					
Pre-Amalgamation period		11.94	13.17	20.79	6.60
Post-Amalgamation period		18.46	15.74	18.92	2.76
Total period		15.04	15.24	21.02	4.99

**Note :** CAGR- Compound Annual Growth Rate.

**Source :** Reports of NABARD and RBI.

2000-01 to 2013-14. Table depicts that up to March, 2005, a total of 14 RRBs were operating in the State but this number reduced to 8 in 2006 and further to 3 RRBs in March 2014.

That capital funds increased from Rs.18590.79 lakhs during 2000-01 to Rs.114759.31 lakhs during 2013-14 having an increase of around 6 times. Compound annual growth rate of capital funds was higher in post amalgamation period (18.46%) than in pre-amalgamation period (11.94%) which indicates a better performance of RRBs during post amalgamation period. Deposit mobilization by the RRBs play a key-role in promoting savings and banking habits among the rural people. It is an important source of funds also for these banks. Table 2 reveals that total deposits of RRBs in Rajasthan increased from Rs.234896.17 lakhs in 2000-01 to Rs. 1377603.43 lakhs during 2013-14 registering an increase of around 5.86 times. Table further shows that growth rate of deposits was higher during post amalgamation period (15.74%) than during pre-amalgamation period (13.17%).

Total outstanding loans and advances of RRBs in the state have increased steadily in absolute terms from Rs.96608.93 lakhs in 2000-01 to Rs.1035343.24 lakhs in 2013-14 at a compound annual growth rate of 21.02 percent. Thus, RRBs have been successful in meeting the credit requirements of untapped sectors of the state. They increased at a comparatively faster rate in pre-amalgamation period (20.79%) than in post-amalgamation period (18.92%). Though, the rate of growth was higher than the rate of growth

of deposits during both the periods.

The RRBs were conceived to develop rural economy by providing credit and other facilities for the purpose of development of agriculture, trade and other productive activities to the targeted people. The credit-deposit ratio of these banks indicates the creation of credit out of the deposits mobilized by them. It is evident from the table above that CD ratio of RRBs in Rajasthan increased from 41.13 percent during 2000-01 to 75.16 percent in 2013-14. Thus there has been a consistent and significant growth in the context of credit-deposit ratio of these banks. Though the growth rate (CAGR) of CD ratio was higher during pre-amalgamation period (6.60%) than during post-amalgamation period (2.76%).

#### Recovery Performace, NPAs and Profit Position :

Table-2 presents the performance of RRBs in Rajasthan on the basis of their recovery position and gross NPA Position. Table reveals that overall recovery performance of RRBs in Rajasthan has improved steadily in the state during both pre and postamalgamation periods. RRBs were having around 90 percent recovery in June, 2012. Though, the compound annual growth rate of recovery % of RRBs in Rajasthan was higher during pre-amalgamation period (3.38%) than during post-amalgamation period (0.16%). Table further reveals that gross NPAs as percentage to total loans and advances of RRBs in Rajasthan decreased during the pre-amalgamation period and showed a negative CAGR (9.38

**Table 2 : Recovery Performance, NPA Position and Profits of RRBs (Rs. in lakhs)**

Year	Recovery % (June Position)	Gross NPA %	Net Profit
2000-01	72.20	12.84	1533.24
2001-02	76.17	10.71	2608.84
2002-03	77.19	8.42	3170.24
2003-04	80.05	8.38	3990.00
2004-05	83.17	8.87	5220.00
2005-06	86.06	5.26	5500.07
2006-07	86.34	4.47	5973.31
2007-08	88.61	4.30	6840.89
2008-09	84.48	2.68	7911.90
2009-10	84.81	2.68	8907.35
2010-11	89.06	2.28	9832.42
2011-12	89.48	2.64	10220.41
2012-13	90.19	6.87	8400.37
2013-14	83.81	5.99	14299.97
CAGR			
Pre-Amalgamation period	3.38	-9.38	33.31
Post Amalgamation period	0.16	1.12	10.27
Total period	1.31	-8.90	14.76

**Note :** CAGR- Compound Annual Growth Rate.

**Source :** Reports of NABARD and RBI.

%) during that period. During post-amalgamation period the process of the reduction of the level of gross NPA (%) continued till 2010-11 but it increased thereafter and showed positive compound annual growth rate of 1.12 percent during the period. It shows that RRBs in the state still need to improve their NPA position. Table further reveals that the RRBs in Rajasthan as a whole have been making profits throughout the period of study. Their profits were Rs. 1533.24 lakhs during 2000-01 and increased to Rs.14299.97 lakhs during 2013-14 showing an increase of around 9.33 times. Growth rate of profits was lower during post- amalgamation period (10.27%) than that in pre-amalgamation period (33.31%).

#### Conclusion :

In the present study, an attempt has been made to analyze performance of RRBs in Rajasthan during pre and post amalgamation period on the basis of their structural growth, growth of capital funds, and mobilization of deposits, credit deployment, C-D ratio, recovery performance, NPA position, productivity performance and profits. The performance of RRBs in Rajasthan has improved during post-amalgamation period. Though the number of RRBs decreased, the total number of branches has increased during this period. Total capital funds have also been increased significantly after the amalgamation took place in 2005-06 due to the continuous capital support by the Government. While analyzing the compound annual growth rates during pre and post amalgamation periods it becomes clear that RRBs need to take corrective steps to raise the CD ratio of the banks. The process of amalgamation has not been beneficial in improving the recovery position, NPA position and Profits of RRBs in the state as the compound annual growth rates remained lower during post amalgamation period. Though, in absolute terms they have shown remarkable performances. The process of amalgamation alone is not sufficient in improving the performance of these banks. Other policy initiatives by the Government are also needed. Necessary steps should be taken by bank management to improve CD ratio and NPA position of these banks. In the present competitive environment RRBs need to concentrate on fast and qualitative banking services. The findings may be of considerable use of rural banks and policy makers in the area of banking performance evaluation.

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