AN ECONOMIC EVALUATION OF THE PERFORMANCE OF INSTITUTIONAL FINANCE TO AGRICULTURE IN JUNAGADH DISTRICT, GUJARAT

BY

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DEDICATED
my beloved parents and elder brother

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A THESIS SUBMITTED TO THE JUNAGADH AGRICULTURAL UNIVERSITY IN PARTIAL FULFILMENT OF REQUIREMENTS FOR THE AWARD OF THE DEGREE OF

DOCTOR OF PHILOSOPHY (AGRICULTURE)

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ABSTRACT

Agricultural sector play a dominant role in improving living standard of people and employment generation in rural India. It also plays a key role in economic growth of the country. Regional Rural Banks are providing credit to farmers, however, it is essential to evaluate its performance to enhance the smooth flow of credit to this sector. Keeping this in view, an attempt was made to undertake the study on “An economic evaluation of the performance of institutional finance to agriculture in Junagadh district, Gujarat”.

The primary data from 148 borrowers (75 defaulters and 73 non-defaulters) were collected for the year 2007-08 by personal interview with the help of pre-tested questionnaire. The secondary data were collected, compiled and analyzed for the period from 1992-93 to 2007-08 for various banking parameters. Tabular analysis and ratio analysis techniques were used to achieve the objectives of the study.
An Economic Evaluation of the Performance of Institutional Finance to Agriculture in Junagadh District, Gujarat

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ABSTRACT

Agricultural sector play a dominant role in improving living standard of people and employment generation in rural India. It also plays a key role in economic growth of the country. Regional Rural Banks are providing credit to farmers, agricultural labour and artisans for the development of rural India. So it is essential to evaluate its performance and viability regarding agricultural sector to enhance the smooth flow of credit to this sector. Keeping this in view, an attempt was made to undertake the study on “An economic evaluation of the performance of institutional finance to agriculture in Junagadh district, Gujarat”.

The primary data from 148 borrowers (75 defaulters and 73 non-defaulters) were collected for the year 2007-08 by personal interview with the help of pre-tested questionnaire. The secondary data were collected, compiled and analyzed for the period from 1992-93 to 2007-08 for various banking parameters. Tabular analysis and ratio analysis techniques were used to achieve the objectives of the study. To study the
factors discriminating defaulters and non-defaulters, discriminant function analysis was used.

The major findings emerged from the study revealed a significant increment in deposit, total outstanding and agricultural outstanding. The amount of deposit increased from Rs.913.55 lakhs to Rs.84154.88 lakhs, total outstanding from Rs.562.67 lakhs to Rs.54495.91 lakhs and agricultural outstanding from Rs.331.44 lakhs to 44825.29 lakhs during the period from 1992-93 to 2007-08. Similarly, total loan disbursed and agricultural loan disbursed increased from Rs.307.21 lakhs to Rs.43717.18 lakhs and Rs.233.17 lakhs to Rs.38518.33 lakhs respectively, during the same period. The share of agricultural sector in total loan disbursed was found very high i.e. it more than 75 per cent during the study period. The business of bank also increased considerably.

The results of performance and viability through various ratios indicated a considerable improvement and sound position of credit delivery system of the bank. Current ratio and quick ratio for JAGB were found, on average, 1.53 and 1.25, respectively. While the gross profit ratio was found 3.87. The turnover ratio and net capital ratio indicated sound performance and long term financial safety over a period of time. Working capital ratio and capital employed turn over ratio were found 4.57:1 and 6.68:1, and 4.50:1 and 6.63:1 for JAGB and SGB, respectively, while the net capital ratio was found more than unity during study period. Economic performance ratio and
operational performance ratio showed expected performance and improvement in size and volume of business. Productivity per staff and per branch increased from Rs.10.40 lakhs to Rs.287.66 lakhs and from Rs.36.02 lakhs to Rs.969.59 lakh respectively, during the study period.

The average total cost of credit was found 9.49 per cent of the face value of loan (Rs.27000). It ranged from 6.88 per cent for crop loan to 12.59 per cent for the other agricultural loan. Among various costs, the cost of obtaining revenue and other records were found quite higher in all types of loan than non-monetary transaction cost.

The amount of overdue of the bank continuously increased from Rs. 343.72 lakhs in 1992-93 to Rs. 7318.97 lakhs in 2007-08. However, the overdue to loan outstanding and loan disbursed by the bank showed decreasing trend both in case of total loan and agricultural sector during the period. The total overdue to loan outstanding ranged from 63.81 (1993-94) to 6.65 per cent (2006-07) and 103.71(1992-93) to 6.72 per cent (2006-07) for total loan and farm sector, respectively. While the overdue to loan disbursed ranged from 112 (1992-93) to 8.00 per cent (2006-07) and 147.00 (1992-93) to 7.00 per cent (2006-07) in case of total and farm sector, respectively. Highest recovery percentage of 92.87 and 92.50 was noticed in 2005-06 for overall and agricultural sector, respectively. In case of defaulter borrowers, the proportion of overdue to outstanding was
found higher as it was 75.07 per cent inspite of profitability of crops.

The discriminant function analysis indicated higher mean difference in case of consumption expenditure, percentage of irrigated area to total area and nitrogen consumption. On the basis of relative importance of characteristics in discriminating two groups (defaulters and non-defaulters), nitrogen consumption, potash consumption and consumption expenditure were found the most important factors. Their contributions were 65.62, 13.21 and 10.09 per cent, respectively.

The amount of NPA continuously increased from Rs.198.29 lakhs (1996-97) to Rs.842.71 lakhs (2007-08) while the net NPA showed mix trend during study period. The proportion of NPA to advance showed a decreasing trend and it was quite negligible in 2007-08 (1.55%).

Simplification in loan procedure, seasonal programmes of recovery at village level, educating the borrowers about positive impact of bank credit, setting-up of research and development cell at the zonal/central office of the bank, and identification of prospective borrowers were the major suggestions of the study.
This is to certify that Mr. GADHANI BALDEV KESHBHAI has successfully completed the comprehensive/preliminary examination held on 29-09-2007 as required under the regulation for Post Graduate studies.

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Date: 17-07-2009

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Junagadh:
Date: 4th April, 2009

(B.K. Gadhavi)
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CHAPTER 1

INTRODUCTION

Agriculture is the basic growth engine of Indian economy. It is true that still agriculture plays a crucial role in the development of our economy. Agriculture accounts for nearly 19 per cent of Gross Domestic Product and provides employment to around 65 per cent of the rural workforce. Though agriculture is the backbone of Indian economy, today, it is one of the slowest growing sectors of our economy with growth rate ranging between 2 to 3 per cent. This has led to a decline in overall growth of the economy.

For achieving the desired growth rate of 4 per cent, and to improve the standard of living, modern technology has become an essential. The modern technology has now become capital intensive by attracting huge amount of capital for investment, for various inputs, like seed of high yielding varieties, fertilizers, pesticides, irrigation facilities and other infrastructure facilities. All these led to intensive demand for credit because of lack of owned fund with the farmers to fulfill the demand of credit. The increasing commercialization, modernization and diversification in agriculture have enhanced the credit need of this sector. A large number of agencies, including co-operatives, regional rural banks, commercial banks, non-banking financial institutions, and others, provide credit in agriculture.
CHAPTER - I

INTRODUCTION

Agriculture is the basic growth engine of Indian economy. It is true that still agriculture plays crucial role in the development of our economy. Agriculture accounts for nearly 19 per cent of Gross Domestic Product and provides employment to around 65 per cent of the rural workforce. Though agriculture is the backbone of Indian economy, today, it is one of the slowest growing sectors of our economy with growth rate ranging between 2 to 3 per cent. This has led to a decline in overall growth of the economy. As compared to industrial sector and service sector, agricultural sector has not only shown low but also an inconsistent growth.

For achieving the desired growth rate of 4 per cent, and to improve the standard of living, modern technology has become an essential. The modern technology has now become capital intensive by attracting huge amount of capital for investment, for various inputs, like seed of high yielding varieties, fertilizers, pesticides, irrigation facilities and other infrastructure facilities. All these led to intensive demand for credit because of lack of owned fund with the farmers to fulfill the demand of credit. The increasing commercialization, modernization and diversification in agriculture have enhanced the credit need of this sector. A large number of agencies, including co-operatives, regional rural banks (RRBs), commercial banks, non-banking
financial institutions, self-help groups (SHGs) and a well-spread informal credit outlet, together constitute the Indian rural credit delivery system. Provision of adequate, timely, and liberal credit to the farmers has become an integral part of the agricultural development policy in India. In fact, the credit needs of the agricultural sector have vastly expanded in the wake of its modernization and commercialization. There is a need to expand the production based of agriculture with emphasis on small and marginal farmers so as to integrate them with mainstream development. Thus there is large scope for institutional agencies to expand the credit base of farm sector further.

In 1972, the Banking Commission observed in their report that, despite large expansion of network of commercial and cooperative banks and their emphasis on priority sector lending, there would still be the need and possibility of having specialized network to bank branches to cater the need of rural poor. Thus, the concept of Rural Bank as a part of Government 20 points Programme was originated and the Government of India constituted a working group on establishment of rural bank under the Chairmanship of Shri M Narsimham. The working group in its report on 31st July, 1975 recommended the setting up of state sponsored, region-based, rural oriented bank. As a result, first batch of five RRBs was set-up on 2nd October, 1975 in the states of Uttar Pradesh, Haryana, Rajasthan and West Bengal. The rapid branch expansion now resulted into 196 RRBs with over 14446 branches in 518 districts
across the country. The RRBs have a large network of branches in the rural area forming around 43 per cent of the total rural branches of commercial banks. The rural orientation of RRBs is formidable with rural and semi urban branches constituting over 97 per cent of their branch network.

During last two five year plans, inspite of the growth and development in industry and service sectors, agricultural sector has suffered a lot. With a view to face challenges of agricultural sector, there is an urgent need to achieve a growth rate of 4 per cent per annum. Keeping this fact in mind, in 2004, Government of India, announced the target of doubling the farm credit in three years. During these three years, as an association of, the regional rural banks, the cooperative banks and the scheduled commercial banks, in a close coordination with National Bank for Agriculture and Rural Development (NABARD) have disbursed credit to the farm sector and the target has been achieved even before time.

The Union Finance Minister in his budget speech for 2006-07 had urged the banks (including co-operative banks and RRBs) to disburse Rs.1,75,000 crores as credit to agricultural sector during 2006-07. The overall achievement during 2006-07 was Rs.2,03,296 crores. With also new farmers covered under the institutional credit system of 8.35 million as against the target of 5 million. Encouraged by the achievement, budget 2007-08 set a higher target of Rs.2,25,000 crores for disbursement of credit and further
more addition of 5 million new farmers as borrowers to the banking system. Upto November 2007, the flow of credit to agricultural sector was Rs.1, 37,760 crores which was about 61 per cent of the target. And also in the Union Budget 2008-09 has taken into consideration the issues of agriculture in India. The Reserve Bank of India (RBI) issued “No Due Certificate” dated 30-04-07 for small loans upto Rs.50000 for small and marginal farmers. The State Bank of India (SBI) had launched Krishak Utthaan Yojana for the benefit of farmers. Moreover Capital Investment Subsidy Scheme was also introduced by Government of India, in 2008-09 targetting institutional credit to agricultural sector to the tune of Rs.2,80,000 crores.

**Credit Agencies in Gujarat**

Gujarat state has 53 Commercial Banks (26 private sector banks), 3 RRBs, 1 State Cooperative Bank, 18 District Central Cooperative Banks (DCCBs), and one State Cooperative Agriculture and Rural Development Bank. The total branches of all these banks in the state were 5070 at the end of June, 2004. As on 31 March, 2004 the total number of rural and semi-urban branches of Commercial Banks was 3278, DCCBs-1138 branches, Regional Rural Banks, 415 and Gujarat State Co-operative Agriculture and Rural Development Bank (GSCARDB)-18 branches. The population per branch was 10076. Among the 415 Regional Rural Banks’ branches in Gujarat. Dena Gujarat Gramin Bank and Baroda Gujarat Gramin Bank have 142 and 130 branches respectively, while Saurashtra Gramin Bank (SGB)
have 133 branches and 10 satellite branches with 482 staff members in 2007-08. It has three regional offices viz. Jamnagar, Surendranagar, Junagadh and the head office is located at Rajkot.

The total deposit, total outstanding and outstanding of agricultural sector of Saurashtra Gramin Bank during 2007-08 were Rs.841.55, Rs.544.96 and Rs.448.25 crores, respectively, with 64.76 per cent credit deposit ratio. The loan disbursed to farm sector was Rs.385.52 crores during 2007-08, which was 88.11 per cent of total loan disbursed.

**Statement of the Problem**

There has been substantial expansion in the volume of agricultural credit advanced by financial institutions during the last decade. It is however, to be assessed whether the expansion is adequate, considering the farmers’ need of agricultural sector. As a result of liberalization of agricultural credit, the system has undergone a structural transformation in both quantitative and qualitative terms.

The mobilization of scarce resources, especially financial resource, in a planned manner is given due attention. As the available resource base and the capacity to generate sufficient levels of financial resource within the rural sector, particularly in the agricultural sector is limited at present. Institutional finance to agriculture plays an important role in accelerating the growth of agriculture and overall economy of the country. All these depend on the good financial health of the banking institutions.
It is a fact that overall profit position of a bank is dependent on degree of performance efficiency of its individual branches as they are the basic operating units. Profitability is also a function of the internal efficiency of the bank and the volume of the business to be handled. Agricultural Credit Review Committee (ACRC) (RBI, 1989) described the profitability as a function of spread available to the banks between the rate of income and expenses.

Transaction cost at bank level has been continuously increasing which leads to high cost of lending. Timely and adequate availability of credit with low cost of credit and its proper utilization tends to become a pre-requisite for sustained agricultural growth. At the same time, the prompt recovery of loan is also crucial importance for the viability of banks as well as to instill confidence among the depositors.

The increasing overdue in agricultural credit year after year is causing serious problem to policy makers. It can paralyze the country's agriculture credit structure designed for increasing productivity. The increasing overdues restrict the flow of credit and consequently affect the investment in agriculture. The loanable resources at the disposal of credit institutions will dry up, bringing down the pace of agricultural development. The steady decline in recovery rate of agriculture credit has many responsible factors. Among them, the announcement of the programme to write-off agricultural dues had created a tendency to increase willful default among the borrowers. The natural
calamities and yield uncertainty, political interference in lending and recovery activities of financial institutions, which induce the farmers to postpone the repayment with the hope that their overdues would be written-off by Government, are often listed as the major factors contributing to the overdues in agricultural advances.

Problem is to identify those borrowers who have the ability, resources and honesty for repayment of loans. Generally, the staff members’ decisions are based on experience and result. The problem of selecting appropriate criteria is made difficult, by the inter-relationship among the factors which may affect debt repayment. The size of Non Performing Assets (NPA) is now given due attention. Ever since, the introduction of financial sector reforms, the non performing assets of the banking system, have received greater attention. Poor recovery by the bank and stringent rules of assets classification has increased the non performing assets of the banking system. The gross NPAs in the Indian banking system is pegged at about Rs.1,00,000 crores representing about 8 per cent of advances. The net NPAs are about 5 per cent of total advances. The NPAs of the RRBs in absolute term stood at Rs.3,299 crores as on March 31, 2004. The percentage of gross NPAs was 12.60 during the year ending on March 31, 2004, while 103 RRBs had gross NPAs less than the national average, and 93 had NPAs more than it.

As Saurashtra Gramin Bank (SGB) has wide network of branches in Junagadh district, this study is confined to
Junagadh district. The SGB has 25 branches in Junagadh district. In this backdrop, the present study was undertaken to evaluate the performance of institutional finance to agriculture in Junagadh district of Gujarat with following specific objectives.

Objectives

1. To examine the performance of flow of institutional finance to agricultural sector.

2. To study the financial performance and viability of selected banks.

3. To assess the cost of agricultural credit for different agricultural loans.

4. To analyse the extent of overdue among different categories of farmers.

5. To identify the factors discriminating defaulters and non-defaulters of agricultural loans.

6. To study Non-Performing Assets of RRBs.

Limitations of the study

The observations made and findings obtained would be continued only to area of study in particular, however, it can be extended to the area akin to study area for its gainful implication.

As no farm records were maintained by households, the data likes cost of credit, cost of cultivation, yield, income, consumption expenditure, other income etc. were collected by survey method based on their memory and past experience. Though, efforts were made to extract accurate
information, however the possibility of few slips from the memory of respondents could not be ruled out.

The study was carried out only for one year due to limitation of time and resources constraint with the investigator.

**Organisation of the study**

The thesis has been divided into five chapters. The first chapter deals with the introduction, objectives and limitations of the study. A brief resume of the earlier work carried out by various researchers in the concerned field has been discussed in the second chapter. The details of sampling framework and analytical techniques used to achieve the objectives of study are presented in the third chapter. The fourth chapter is devoted to results and discussion part of this investigation. The last chapter contains the summary and conclusions of the study.
CHAPTER II

REVIEW OF LITERATURE

Determining the work done in past and assisting in delineation of problem area is part of the scientific investigation. Determining the work done in past and assisting in delineation of problem area is to provide a basis for theoretical framework, to provide an insight into methods and procedures, to suggest operational definitions of major concepts and to provide a basis for interpretation of the findings.

A brief account of a direct or indirect benefit to the reader of the present study, is attempted in this chapter. Commensurate with the objectives of the present study, the available literature was scanned and is briefly reported in this chapter under following heads:

2.1 Performance of financial institutions

Kumar et al (1989) in their study on the impact of institutional credit on income and employment in Dakshina Kannada district of Karnataka revealed that on the whole, the loan and or owned capital were important factors, in conditioning the income generation potential. Further, the borrowed capital gave better results in term of increasing gross return per unit area when provided in
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A brief review of studies, which have a direct or indirect bearing on the objectives of the present study, is attempted in this chapter. Commensurate with the objectives of the present study, the available literature was scanned and is briefly presented in this chapter under following heads:

2.1 Performance of financial institutions

2.2 Cost of agricultural credit

2.3 Extent of overdue and non-performing assets

2.1 Performance of financial institutions

Kumar et al (1989) in their study on impact of institutional credit on income and employment in Dakashina Kannada district of Karnataka revealed that on the whole, the loan and or owned capital were important factors, in conditioning the income generation potential. Further, the borrowed capital gave better results in term of increasing gross return per unit area when provided in combination with different types of loan as in the case of
irrigation + crop loan and dairy + crop loan groups as against a single purpose loan.

Kardian and Kaushik (1992) in their study on impact of institutional finance under IRDP on rural poor in Mahendergarh district of Haryana revealed that the banks’ assistance improved the income of landless labourers and rural artisans marginally.

Singh et al (1992) in their study of availability and utilization of loan in Agra district of Uttar Pradesh observed that overall average production and investment credit together were worked out to be Rs.15694. They further revealed that the overall average availability of investment credit was Rs.14760 of the total investment loan availed by farmers, of which, 55 per cent was for tube-well/pumpsets, 16 per cent for livestock and 29 per cent for tractor and tractor implements.

Pothuluru (1993) in his study in Telangana region of Andhra Pradesh found that about three-fourth of sample respondents were in debt. Among them, agricultural labourers have borrowed more and stood at the top of the borrowers’ list. The institutional facilities were inadequate in the area surveyed. Procedure for obtaining loan was cumbersome, causing much delay. Therefore, the rural poor families largely depended on the private source, money lenders / traders etc., who in turn exploited the farmers in different ways.

Reddy (1993) studied the performance of Public Sector Banks in India and found that the total advances increased,
but the proportion of priority sector lending to total credit declined. The major share was contributed to agriculture, followed by small scale industries and other sectors. The percentage of priority sector lending to bank credit was above the target (40%) upto June 1991 but in June 1992, it was below the target. This was mainly, due to loan waiver scheme.

Parmar and Patel (1994) in their study of two districts viz. Valsad and Surat of Gujarat state observed that the recovery to demand in agriculture sector varied between 30 per cent and 59 per cent. The performance of the banks with respect to recovery varied significantly. The variation in the performance across the years appeared to be an increasing trend in recovery per cent over the years. They also observed that the field staff was inadequate at the branch level to keep pace with the pre-sanction appraisal and post disbursement supervision for increased agricultural advances and they gave first priority to routine business. About 91 per cent branches did not conduct any recovery studies and no attempt had been made by them to organize recovery camps.

Reddy (1994) found that the financial position of the banks was improving from year to year as it was seen that all the components of funds had an increasing trend. It can be said that the performance of Mulkanoor Cooperative Rural Bank (MCRB) in relation to mobilization of resources was fairly well. The composition of funds revealed that the bank has been depending more on borrowed funds than
own funds for its business. Assets composition showed that current assets of the bank accounted for more than 71 per cent to total assets. The funds flow analysis revealed that there were diversion of long term funds to short term uses as a result there was an increase in working capital of the bank. Cash flow analysis indicated that during the years under reference, the bank had a positive cash balance. The net working capital was positive in all the years. The liquidity position of the bank as revealed by current ratio and quick ratio was sound. The solvency ratio showed that the bank has been following the policy of low capital gearing with regard to long-term debt and high capital gearing with regard to total debt. The performance of the bank in relation to its profitability and turnover was not upto the expected level in view of its size and volume of operations.

Sheila Sinha (1994) analyzed the financial viability of a Central Co-operative Bank and a RRBs in Singhbhum district of Bihar. They found that the financial performance of the Co-operative Bank was found relatively better than the RRBs.

Gopalakrishnan (1996) studied the credit recovery performance of institutional finance under agricultural sector in Tiruchirapalli district of Tamil Nadu and revealed that the credit disbursal for agricultural sector has been increasing every year. The commercial banks ranked first (63.32%), followed by co-operative (29.83%) and private banks (6.85%) in the disbursement of agricultural loans. In recovery performance, co-operative banks ranked first (87%),
followed by the private sector banks (73%) and public sector banks (70%).

Abate et al (2005) in their study of Karnataka found that the incremental capital output ratio showed a positive trend in efficiency of agricultural credit. The analysis of the marginal value product of credit along with other factors using the principal component analysis showed that the credit significantly contributed to the agricultural state domestic product. Though the efficiency of agricultural credit in the state from the point of view of its contribution to the agricultural state domestic product was found to be promising, its allocation had not reached the optimum level.

Adinew-Abate et al (2001) in their study of Karnataka found that financial sector reforms have significant positive impact at the state level except for term loan, direct agricultural advances and weaker section advances. The significant effect was seen in the improvement of recovery performance of agricultural advances and profitability and thereby viability of commercial banks and Regional Rural Banks. The qualitative assessment of financial reforms inferred that some of the major problems in the pre-reform period were improved during the post-reform period.

Kalra and Singh (2001) indicated that the bank's earnings from the large farmers, who are economically more viable, was better. The improvements in productivity per staff, especially with more increases in advances per account, helped the Malwa Gramin Bank (MGB) of Punjab to improve the recovery percentage and to overcome the
losses and earn profits over time. The break-even levels of the volume of business, deposits, advances, and income per branch were estimated at Rs.215, Rs.137, Rs.78, and Rs.16 lakhs, respectively. The recovery percentage for these small branches was as high as 94 per cent. Almost all the branches of MGB satisfied one or the other break-even level criteria, as they were all viable. The principal component analysis clearly showed that it would be more relevant to address the parameters in the first principal component, such as deposits, expenditure, advances, income, etc., which in turn would help to improve the profitability parameter.

Patel (2001) revealed that micro finance operation reportedly growing by 30 per cent \( p^\text{year} \) and repayment rates as high as 97 per cent in many parts of the world. He also observed that out of 49 Micro Finance Institutions in Asia Pacific Region studied, only six were found to be financially self-sufficient. Other six were more than 80 per cent financially self-sufficient and 37 were less than 80 per cent financially self-sufficient. In India, the average each Self Help Group covered about 17 poor rural households and the average credit disbursed per SHG amounted to as low as Rs.11,372 in 1992-93 and Rs.17,296 in 1998-99.

Thingalaya (2001) in his study in Karnataka optimistically highlighted the role of Co-operative, Commercial and RRBs, which played in casting the net of credit in the rural areas, particularly in the remotest parts. They have created a wide network of branches, mostly in
remote areas. Their deposit accounts constituted 11 per cent of the deposit accounts and 28 per cent of rural deposits landed by all the banks in India. Advance accounts formed about 20 per cent of the total borrowing accounts of the banking system. They have promoted self help groups in rural areas, taught saving habits, and addressed the credit needs of the group. Among the challenges these agencies encountered are: dismal recovery performance and accumulated losses faced by weaker banks.

Adinew-Abate et al (2002) in their study in Karnataka observed that in expansion of the agricultural credit during the study, the number of bank branches and primary agricultural credit societies per lakh of population has shown a declining trend. However, agricultural loans and advances have shown significant growth. Recovery performance of agricultural advances especially in the post-reform period was significantly improved in commercial banks, regional rural banks, and district central co-operative banks. Only the recovery performance of primary co-operative agricultural and rural development banks has continued to decline.

Kanjukunju and Mohanan (2003) revealed that 11.1 per cent of the loan was misused and the predominant reason for such misuse was insufficient loan amount. They also found that the overdue was 23 per cent of the loan extended on the sample. About 44 per cent of the borrowers repaid the loan from the income of their activity for which borrowing was made and 41.5 per cent of the
borrowers did not repay the loan on account of inadequate generation of income.

Devaraja (2003) in his study of Karnataka found that most of the respondents did not favour extending/obtaining loans through Primary Co-operative Society (PCSs) and Frameis Service Society (FSSs). The reasons of not adopting many PCSs and FSSs by RRBs in Karnataka were also identified.

Krishna et al (2003) found that Malaprabha, Tungabhadra, Cauvery Bijapur and Kolar Gramin Banks were relatively good performing banks in Karnataka. However, they also need to think about optimizing their manpower in relation to business and reduce expenditure on staff, continuous monitoring, credit deposit ratio and, income to expenditure ratio.

Patel (2003) studied the role of Regional Rural Banks (RRBs) in improving the level of rural life in India. With statistics and arguments, and commitment from all stakeholders of RRBs, there is possibility to make at least 180 out of 196 RRBs financially sustainable. Policies to enable the RRBs to lead the socioeconomic development process in the area where they are established were also presented.

Suchitra-Mohanty and Haque (2003) revealed that despite substantial increases in the flow of institutional credit to agriculture in India in recent years, inter regional and inter-class disparities seemed to have widened. The eastern and central regions of the country, which are
starved of capital for agricultural modernization, also suffered from inadequate supply of institutional credit. The poorer section of the rural population continued to borrow largely from private agencies like moneylenders, traders and relatives, as cooperatives and commercial banks mainly cater to the needs of the better off. In other words, the relatively backward region and poorer section of the population in India have not benefited much from existing credit institutions.

Sahu and Rajasekhar (2005) revealed that the share of credit to agriculture in the total net bank credit had significantly declined after the introduction of banking sector reforms in India. The provision of credit subsidy adversely affected the supply of agricultural credit. Increasing the lending rate may not be a suitable measure to reduce the rate of credit subsidy. The interest rate served the usual a lucrative role of equating supply and demand for loanable funds. The closure of rural bank branches might have resulted in the reduction of credit flow to agriculture.

Goyal et al (2006) observed that overdue picture in Haryana was quite dismal. The high growth rate of overdue is not healthy sign for the viability of financial institutions and may jeopardize the viability and hence the strength of institutions. They further observed that there was significant growth in share capital owned, working capital and loan advanced. The membership growth was observed to be 4.10 per cent and seemed reasonably good. As far as
viability is concerned, large-scale variation was found in various indicators of the societies across districts and regions. The variability in membership per society, loans advanced per society, proportion of societies under profit was more in western region as compared to those of eastern region.

Prasad (2006) examined the recovery performance and overdues of selected Primary Agricultural Co-operative Societies in West Godavri district of Andhra Pradesh and found that the Primary Agricultural Co-operative Societies’ recovery performance was 70 per cent during the period of study. The considerable high overdue found in case of short-term loan. The most of the overdue was below one-year duration period of loan. The poor repaying capacity was due to factors like crop failure, delays in disbursal of loan and uneconomic holding with little or no marketable surplus. The other factors were willful default, misutilisation of loan, diversion of fund, inefficient assessment of credit needs and lack of strict vigilance.

Rakesh Mohan (2006) indicated that overdues can be minimized, if the expected size of credits related on a scientific basis to production outlay and the loan are effectively supervised in regard to there utilization and finally, the cultivator is approached at the right time of repayment. There are several measures like converting short term loans, repayable over a period of 3 to 5 years. Double and over financing has become one of the major factors in the accumulation of overdues. To overcome this, he
suggested to accept one borrower one financing institution system and Kisan Credit Card to all eligible farmers.

Reddy (2006) examined total factor productivity and technical and scale efficiency changes in regional rural banks by using data from 192 banks for the period 1996 to 2002. Rural banks showed significant economies of scale in terms of assets and number of branches under each bank. Total factor productivity growth of rural banks was higher in profitability than in service provision during liberalization. Banks located in economically developed as well as low banking density regions exhibited significantly higher productivity growth. Overall, there is a convergence of efficiency of rural banks during the study period. There is a justification for opening new banks in low banking density regions as efficiency and productivity growth of rural banks in these areas were high.

Awasthi (2007) found an average 1 per cent decline in the ratio of investment credit to production credit which caused value of agricultural output per unit of production credit to fall by 2.5 per cent. It is estimated that the ideal range of investment credit is around two-thirds to three-fourths of the production credit. He demonstrated that substantial downward deviation from the ideal range beyond 1995-96 significantly decelerated growth of capital formation and adversely affected growth rate in the Ninth Plan period. A more systematic approach of agricultural lending was advocated.
Manik (2007) found that Indian agriculture became competitive in the backdrop of globalization and consequent reforms. The overall growth rate of about 9 per cent proposed in the 11th Five Year Plan could be achieved only if agricultural growth is maintained around 4 per cent while the current rate is only 2.7 per cent.

Andharia (2008) observed that during last two Five Year Plans, inspite of growth and development in industry and service sectors, agricultural sector has suffered heavily. There is an urgent need to achieve a growth rate of 4 per cent in agricultural sector. Increased investment in the field of agriculture is essential. Long term, sustainable and comprehensive measures were suggested to develop agricultural sector in India.

Singh (2008) observed that rising allocations for agriculture reflected growing importance of this sector on national agenda. To solve the problem of credit in agricultural sector, the recommendations of various committee have been implemented. The rural credit market is rapidly changing with increasing number of players. Micro finance institutions have also come to stay. It is important that our plans and policies focus on all the problems of agriculture so as to speed up its growth for overall development of the economy.

Ramakrishna and Aiyanna (2008) found that in spite of adopting Service Area Approach, there existed the problem of double finance due to lack of coordination among different institutions and agencies operating in the
transaction cost, cost of obtaining records and other non-monetary transaction cost in India. He also found that total non-monetary transaction cost in case of small, medium and other farmers was 5.84, 6.15 and 1.40 per cent of loan, respectively.

Shiyani and Bhatt (1990) in their study of Commercial Bank in Junagadh district found that the average cost of credit was 3.82 per cent of face value of the loan. The average actual credit availed was 96.18 per cent, which acts as an obstacle in the path of progress in agriculture.

Kumbhare et al (1994) have evolved a methodology to derive the service cost and transaction cost and tested the same for the rural financial institutions in three districts namely, Thane district of Maharashtra and South Arcot as well as Kanarajar districts of Tamil Nadu. The transaction cost in respect of RRBs, LDB and PACS ranged between 2.59 and 7.38 per cent, between 3.20 and 4.22 per cent and between 1.53 and 6.15 per cent, respectively. Service cost for RRBs and PACS varied between 2.40 and 3.88 per cent and between 0.71 and 1.81 per cent, respectively. High transaction cost in Thane district was due to low business. One alternative suggested to reduce both these costs was linking of Self-Help Groups with credit institutions.

Poddar et al (1994) in their study of Dhulakhed branch of Bijapur Grameen Bank in Karnataka found that among the various cost items, the cost incurred towards the production of records was the highest constituting more than 35 per cent of the total non-interest costs. In the cases
of small and large farmers in both the unirrigated and irrigated villages, they also found that it was slightly higher in small farmers than large farmers.

Puhazhendhi (1995) studied 19 SHGs and 5 Bank Branches in the Southern states of India and commented that the intermediation of SHGs virtually eliminated the time spent by bank personnel on identification of borrowers, documentation, follow-up and loan recoveries, effecting 40 per cent reduction in transaction costs of banks and the transaction costs of borrowers could also be reduced up to 85 per cent as compared to direct lending. The default risk was estimated to be negligible through SHGs.

Srinivasan (1995) in her study on Group Approach to Empowerment of Rural Women – IFAD Experience in Tamil Nadu, observed that the group provided the women a base for self-employment and empowerment through group dynamics. The peer pressure on group members had ensured proper utilization of credit and repayment of loans. Savings provided self-insurance and self-assurance to the group members.

Wadhwa (1995) in his study found the SHGs as effective and economical approach for disbursement of credit to the poor and recovering loans at a reduced transaction cost. The utilization and repayment of the loans were generally excellent. The interest rates charged varied from purpose to purpose as also depending upon the joint decision of the formal credit system. Further, it was also observed that the transaction cost of the bank was reduced.
by about one-third when the lending was done through the SHGs.

McGuire and Conory (1997) studied on “Banks – NGO linkage and the transaction costs of lending to the poor through groups”, in India and in Philippines. The Indian study revealed that the transaction costs were much lower where banks used NGOs and SHGs as intermediaries. The transaction costs faced by borrowers were also significantly lower. The Philippines study looked at the question from the perspective of NGOs. It was found that NGOs could channel credit to the poor with lower transaction costs, as a proportion of loans granted, than most other institutions. But the small loans granted and short maturities inherent in lending to the poor inevitably led to transaction costs being relatively high compared to the value of loans outstanding at any one point of time. The study also highlighted the need for NGOs to minimize the costs as far as possible.

Patel (1997) observed that the transaction cost at bank level has been continuously increasing and marketing cost of credit at borrower level became costlier leading to increase in cost of production.

Srinivasan and Satish (2001) found the high transaction costs in the Indian rural credit system which critically affected the viability of the rural banking system. They concluded that the search for viable alternatives to reduce the transaction costs in rural lending has led bankers and development finance experts to the model of
SHGs where the work relating to borrower identification, loan processing, loan disbursement, monitoring and recovery is externalized to groups of clients. In these groups, peer pressure acted as a resource for internalizing the information needs and also for exerting a positive influence on loan repayment. The study revealed that lending through SHGs and NGOs incurred the least cost to the lenders when compared to other types of banks lending. The risk cost also reduced to between 0.03 and 0.27 per cent in case of lending through SHGs, whereas it is as high as 7.88 per cent in normal bank lending.

Singh (2001) in his study of Uttar Pradesh highlighted that the SHGs has now been functioning in the place of moneylenders because loan could be taken at any time as and when needed for any purpose. There are no formalities involved and the transaction cost is low.

Shah (2005) studied the rural credit delivery system in Maharashtra. The analysis showed slower growth in institutional finances through commercial banks, credit cooperatives, RRBs and Land Development Banks (LDBs), particularly during the decade of 1991-2000 which was mainly due to adverse environment created by the financial sector reforms. He found that high transaction costs and poor repayment performance were the twin root causes of the moribund state of rural credit delivery system.

Singh et al. (2008) studied the overall debt position of the farmers in Punjab and identified the factors of indebtedness. The important policy recommendations that
emerged were the need to improve the institutional agricultural credit system, to regularize and continuously monitor the functioning of non-institutional sources of finance, to reduce farmers fixed cost in heavy machinery and equipment for which loans should also be based strictly on economic feasibility.

2.3 Extent of overdue and non-performing assets.

Bhavani and Sutaraman (1985) in their study of Indukurupet Taluka of Nellore district of Andhra Pradesh found that income from farming as well as off farm income had positive effect on the repayment capacity of the borrower.

Bisaliah and Nagaraj (1985) in their study in Chintamani Taluka of Kolar district observed that the age of the borrowers and farm business income were negatively related to overdues, while the size of holding, farm size and non-farm expenditure showed positive relationship.

Chand and Sidhu (1985) Opined that application of discriminant function was quite efficient in classifying the borrowers into defaulters and non-defaulters. It was found that higher value of dependent on family, capital expenditure and total borrowings placed the borrowers into defaulter group and vice-versa. Whereas high level of education contributed toward non-default. Similarly, the defaulters with higher size of operational holding, capital expenditure and lower level of education, ratio of dependence, family consumption expenditure and net cash income were prone to willful default and vice-versa.
Singh et al (1985) in their study on repayment performance of borrowers in Punjab indicated that, economic and social characteristics like household and farm assets, consumption expenditure and repayment which affected the repayment of loan were certainly favourable to defaulters than non-defaulters.

Raj (1985) study in Puri district of Orissa and observed that the diversion of credit towards non-productive purposes was more among medium and large farmers than small farmers.

Viswanathan (1985) stated that the overdues to a large extent were on account of willful default which was either due to ineffective recovery machinery or because of unfavourable recovery climate.

Dangat et al (1986) reported that the amount of overdues had positive relationship with the amount borrowed and family expenditure and negative relationship with the net income from the crop production. It had no significant relationship with the total land holding as well as the total irrigated area.

Dhyani and Tewari (1986) used discriminant analysis to identify the variables discriminating defaulters and non-defaulters. Behavioural characteristics, irregularity of borrowers in bank customership, farming efficiency, out-standing debt in the year, per acre value of farm assets and social status turned out to be the significant discriminator between two groups. The results indicated higher farming efficiency and greater employment of farm
assets per unit of higher behavioural score, irregularity of bank customership of the borrower, other outstanding debts, social status make a prospective borrower a bad credit risk.

Hanumanthaiah and Venkateshwaralu (1986) in their study on agricultural credit versus rural indebtedness in Andhra Pradesh clearly found that small farmers were more conscious of their debts when compared to medium and large farmers.

Ike (1986) opined that main reason for high incidence of defaulter was low income of farmers and their consequent lack of security. It was suggested that the village adoption scheme should be adopted on wide scale to reduce the incidence of default.

Mahlan et al (1986) in their study in Ludhiana district of Punjab used discriminant function to examine the relative importance of different characteristics influencing the repayment of loans. It was observed that extension contracts and technology in use were the dominant factors which contributed maximum (63%) to the total distance between defaulters and non-defaulters. It was observed that age of the borrower, ratio of dependent to total family members, percentage of gross cash expenses to gross income and percentage expenditure on beverages to net cash income had negative impact on the repaying capacity of the borrower.

Narayana (1986) observed that inadequate bank staff, vast area operation, inadequate transport facilities and
target oriented deployment of fund accounted for escalation of overdues.

Eshwar Prasad (1987) in his study in Ananthapur district of Andhra Pradesh used the discriminant analysis to find the relative importance of different variables with regard to their power to discriminant between the group of respondents. The study revealed that the percentage of repayment was relatively higher among scheduled tribe, followed by weaker section; and per capita income has emerged as the major discriminating factor which discriminate the respondents’ economic status.

Thingalaya (1989) reported that the periodical announcement of the programme to write-off the agricultural dues based on political expediencies had a tendency to increase willful default among the borrowers and tended to influence the borrower who were prompt in their repayment and induced the farmer to postpone the repayment with the found hope that their overdues would be wiped off by the Government order.

Balishter and Singh (1990) in their study of Integrated Rural Development Programme (IRDP) loan overdues, in Etah district of Uttar Pradesh showed that on the whole, the proportion of overdues to demand was about 30 per cent. Small farmers, marginal farmers and landless labourers, respectively accounted for 34, 47 and 19 per cent of the total overdues. They also observed that the percentage of overdues was higher in case of loans taken for agricultural
purposes as compared to loan taken for non-agricultural purposes.

Elumali (1990) reported that the waiver of loan and other grant of financial relief to the people by the political parties are not new to Indian party politics but during 1990, the scheme was advocated only on one reason that its commitment to the people in election manifestoes in November 1989, and opined that the election manifestoes are to be scrutinized by judicial body so that the implementation of unlawful manifestoes on the ground of commitment to the people would be avoided.

Sundram (1990) in his study of revamping Regional Rural Banks in India observed that at the end of June, 1989, 196 Regional Rural Banks in the country had total advanced of Rs.2428.64 crores. The overdues of RRBs had been mounting, every year greatly eroding the uneconomic viability. The overdues have also risen sharply from Rs.507 crores as on June 30, 1987 to Rs.651 crores in June, 1988.

Reddy and Rao (1996) found that the recovery rate of Sri Saraswathi Grameena Bank (SGB) in Andhra Pradesh with respect to agriculture and allied agricultural term loans declined from 70 per cent to 50 per cent during 1983-84 to 1992-93. Average recovery rate in respect of agricultural cash credits, agricultural and allied agricultural term loans and non-agricultural loans was 63.5, 55.6 and 63.2 per cent, respectively.

Vedini (1996) after studying the performance of SHGs in two villages organised by MYRADA indicated that, the
women groups had a better recovery (58 %) compared to men groups (42 %). The results of twelve SHGs studied in Kolar district indicated that the recovery was 75 per cent. The average amount lent by bank was Rs.15,000 and the savings of SHGs were between Rs.4,000 to Rs.9,000 and the maximum was Rs.31,800.

Biswas and Dash (1997) studied the recovery phenomenon of Rural Bank Credit in Orissa and observed that 42.31 per cent of the rural bank loans was in default and the amount of default stood at 48.26 per cent of loan amount outstanding. Higher asset holders and higher income group borrowers were regular in repayment. It was found that 61.8 per cent of the defaulters failed to repay due to misutilisation of their loan, 30.9 per cent because of inadequacy of income and 7.3 per cent were willful defaulters.

Gupta and Awasthi (1997) in their study of district Central Co-operative Bank Shahdol in Madhya Pradesh found that co-operative bank in the region played a more dynamic role in bringing about development of agriculture, through disbursement of credit besides as catalytic agent. Utilization of loan is one of the prime factors in the field of rural finance to boost up agricultural production. Thus, appropriate steps should be taken to educate the farmers for proper utilization of loans. Economic concepts, should strictly be adhered during the processing of loan proposal and the norms fixed by the bank be periodically revised for reducing
the mounting overdues. Wilfull defaulters must also be dealt with stern action.

Hosamani et al (1997) in their study of Malprabha Gramin Bank in Dharwad district of Karnataka found that, the recovery position of the bank in the later period shown an increasing trend due to the concerted efforts of the bank. The implementation of loan waiver scheme has resulted into increased in overdues age wise, category wise and sector wise. From the view point of strengthening the financial sector, government could reconsider such policies for modification. The study has shown that the application of discriminant function was quite efficient in classifying the borrowers into willful and non-willful in which education level and income earned were the most important variable. The education level and family size were positively related to the willful defaulter. The study suggested that loan have to be advanced based on technical feasibility and economic viability coupled with proper supervision and stringent action against willful defaulters.

Mishra et al (1997) in their study of Raigarh district of Madhya Pradesh reveled that the share of small farmers was very small in availing crop loan in the study area. The quantum of crop loan increased with the increase in size of holding. Positive relationship between size of holding and the diversion of loan for social purpose was noticed. The scale of finance particularly for vegetables need to be rationalized.
Patani and Antani (1997) in their study in Banaskatha district of Gujarat state found that the percentage of recovery and overdues were 53 and 47 per cent respectively on all farms. About 45 per cent of the total borrowers did not repay their crop loan due to the lower income from their farm produce. About 69 per cent of the total repaid borrowers repaid their loan after selling the farm produce of crop. By and large, it was observed that, though the large farmer had capacity to repay, the proportion of defaulters was more in case of large size group. With the highest recovery percentage, medium farmers were found to be more particular in repaying loan.

Vyas and Shiyani (1997) in their study of Junagadh Amreli Gramin Bank in Gujarat revealed that the share of agricultural advance and priority sector lending to total advance was 68 and 88 per cent respectively. A significant increase was found in deposit and advance of JAGB during development period. Annual growth rate of overdue for different purposes were quite higher than those of credit disbursed and the proportion of overdues for crop loan was less during the study period.

Bhatia and Bhatia (2002) in their study of few case highlighted that recovery of SHGs was higher than other credit extended to borrowers. Moreover, involvement of SHGs had helped the bank branches in recovery of old dues. They observed that there has been a perceptible change in the living standards of the SHGs members, in terms of ownership of assets, increase in savings and
borrowing capacity, income generating activities and income levels as well.

Kalra and Singh (2000) found that the RRBs advances in India increased from Rs.2428.64 crores in 1988 to Rs.7505.02 crores in 1996, showing a compound growth rate of 14.41 per cent per annum. Overdues for all the 196 RRBs increased from Rs.197 crores in 1986 to Rs.1928 crores in 1996, more than ten fold increase in ten years. It is a matter of great concern that the overdue in the aggregate increased at the rate of 28.76 per cent during the period from 1986 to 1996.

Datta and Raman (2001) studied the SHGs under Rastriya Seva Samiti (RASS) at Tirupati in Andhra Pradesh. Intermediate performance measures of SHGs were discussed in terms of saving mobilizations, lending operations, sources of finance, recovery, and income. The major determinants of SHGs i.e. net income per member and average monthly income of members were analysed by fitting two regression models. The SHGs under study were characterized by heterogeneity in terms of social and economic indicators. Social cohesiveness among members arose not only from their diverse background of knowledge base, skills, occupations and income levels, but also due to the dynamic incentive system of progressive lending to the groups on the successful completion of loan repayment.

Vallabhan (2001) in his study of Tiruchillapalli district in Tamil Nadu showed that the predominant reason for default or overdue was the expectation of waiver of loan or
interest by the borrowers. This was followed by the practice of diverting funds earmarked for agricultural purposes to other priorities; the prevailing low agricultural prices; and crop failure. Other findings of the study indicated that the default was more among educated agricultural loan borrowers than illiterate agricultural borrowers. The attitude of default was more among the borrowers who were in the age group of 35-50 years, and default was least among those who were 35 years of age and below; and political affiliations of the borrowers have significant impact on their repayment pattern.

Wadhwa (2002) observed that NGOs played a crucial role in helping banks in enhancing and intensification as well as recovery of rural loan particularly to the poor. They can also help in recovery of NPAs and prudentially written off accounts based on suitable strategy and action plan.

Shah (2003) found slower growth in institutional finance through rural financial institutions in Maharashtra during the decade of 1991-2000, which was mainly attributed to mounting non-performing assets, high transaction cost and poor repayment performance. The study came out with several strategies to overcome the moribund state of the rural credit delivery system of Maharashtra, which not only encompass issues relating to sustainability and viability, operational efficiency, recovery performance and small farmer coverage but also balanced sectoral development.
Vivek-Bansal et al (2003) in their study in Punjab found an increasing trend in the recovery of overdues, but the problem of overdues in these Primary Agriculture Co-operative Societies (PACS) still existed. An increasing trend in the amount of overdues was also observed.

Mishra and Pattanaik (2006) studied repayment performance of borrowers with respect to agricultural loan in Khurda block of Khurda District, Orissa and found that on an average, the amount of overdue per term in small, medium and large size groups was Rs.113.37, Rs.2082.76 and Rs.2640.85, respectively. Their corresponding share in the total overdue was 19.07, 35.68 and 45.24 per cent respectively. The overdue on loan advanced to small, medium and large size groups was 56.16, 49.85 and 46.11 per cent, respectively. This showed that the percentage of overdue decreased with the increase in total loan advanced. Out of the total 80 borrowers, 46 were defaulters. Among the defaulters, 55.50 per cent were small, 28.75 per cent were medium and 16.25 per cent were large farmers. The overdue per defaulter was Rs.2033.16, Rs.3273.39 and Rs.4694.89 in small, medium and large farms, respectively.

Teli (2005) evaluated performance of Urban Co-operative Banks in Kolhapur district of Maharashtra and concluded that the progress of different indicators of Urban Co-operative Banks in Kolhapur district showed a considerable growth in their membership, share capital, reserves owned funds, deposits, loans and net profits. But at the same time, increases in overdues and number of
banks making losses reflected an urgent need for further investigation of the working of the Urban Co-operative Banks in Kolhapur district.

Raikar (2006) made an attempt to assess the impact of measures related to Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), asset classification and provisioning, capital adequacy etc. on the performance of the co-operative credit institution in India. He concluded that as far as broad indicators like owned funds, deposits, borrowings, working capital, loans advanced and loans outstanding are concerned; the trend showed a healthy picture. However, areas of concern are the low or negative gross and net profits, high Non-Performing Assets (NPAs), falling interest income, low non-interest income etc.

Thus, it can be concluded from the review of literature that borrowers are suffering from problems like high cost of credit, inadequate guidance and insufficient loan amount. Financial institutions have the problems like low recovery rate, misutilization of loans, inadequate field staff at branch level etc. The foregoing review of literature indicates that there is dearth of such study particularly in Saurashtra region. The findings of earlier reports would be highly useful in the present investigation.
CHAPTER III
METHODOLOGY

Investigation using appropriate methods and procedures in order to arrive at reliable, unbiased and practical conclusion. Beginning with a general description of the study area, the indicators selected for the study, the database and the analytical tools and techniques used in the present study are discussed in this chapter. This chapter is arranged into following three broad heads:

3.1 Description of the study area

The study area is part of Gujarat state of India, bounded by Arabian Sea in the West, the state of Rajasthan in the North and North-East, by Madhya Pradesh in the East and by Maharashtra in the South and South East. The state has an international boundary and has a common border with the Pakistan at the north-western fringe. The two deserts, one north of Kachchh and the other between Kachchh and the mainland Gujarat are saline wastes.

Geographically, the Junagadh district is situated at 21° 8' N latitude and 70° 5' E, longitudes with an altitude of
CHAPTER - III
METHODOLOGY

Scientific study of any problem requires a systematic investigation using appropriate method and procedures in order to arrive at reliable, unbiased and practical conclusion. Beginning with a general description of the study area, the indicators selected for the study, the data base and the analytical tools and techniques used in the present study are discussed in this chapter. This chapter is arranged into following three broad heads:

3.1 Description of the study area
3.2 Nature and sources of data
3.3 Analytical framework

3.1 Description of the study area

3.1.1 Geographical location

Gujarat state is situated on the west coast of India between 20°-6' to 24°-42' N latitude and 68°-10' to 74°-28' E longitude. It is bounded by the Arabian Sea in the West, by the state of Rajasthan in the North and North-East, by Madhya Pradesh in the East and by Maharashtra in the South and South East. The state has an international boundary and has a common border with the Pakistan at the north-western fringe. The two deserts, one north of Kachchh and the other between Kachchh and the mainland Gujarat are saline wastes.

Geographically, the Junagadh district is situated at 21° 5' N latitude and 70°-5' E. longitudes with an altitude of 60 meters above the mean sea level on the western side at
the foot hills of mount Girnar. The average rainfall of this area is 848.4 mm. The major crops grown are groundnut, wheat, cotton, bajra, sesameum, gram, onion and garlic.

3.1.2 Demographic features

As per Population Census of 2001, the population of Gujarat stood at 5.06 crore. The decadal growth rate of population during the decade 1991-2001 has increased in comparison to that of 1981-1991 from 21.19 per cent to 22.48 per cent.

The density of human population in Gujarat was 258 persons per sq.km. in 2001. The literacy rate in the state (excluding children in the age group of 0-6 years) has increased from 61.29 per cent in 1991 to 69.97 per cent in 2001. About 38 per cent population of Gujarat resides in urban areas. Out of the total population in the state, 42.10 per cent are workers and 57.90 per cent are non-workers.

3.2 Nature and sources of data

The Regional Rural Banks (RRBs) are India’s state-owned development finance vehicle charged with serving the rural peoples. In Gujarat, after merger in February 2006, three RRBs have been functioning with the wide network of 415 branches. As Saurashtra Gramin Bank (SGB) has wide network of branches in Junagadh district, SGB was purposively selected for the study. SGB have 133 branches and 10 satellite branches, with 482 staff. It has three regional offices at Jamnagar, Surendranagar and Junagadh with head office at Rajkot.
The sampling technique adopted for this study was multistage random sampling design. As SGB has wide network of branches in Junagadh district, it was purposively selected for the study. From this district, 3 talukas, 11 villages and 73 respondents from Non-defaulters and 75 from defaulters were selected on the basis of highest numbers of defaulters considering taluka as primary sampling unit, villages as secondary sampling unit and respondents as tertiary sampling unit. Thus, the total sample size was 148 respondents.

3.2.1 Nature of the data

The study was conducted by utilizing both primary and secondary data collected and compiled from the various sources. The analysis of advances, deposit, overdue, non-performing assets, loans, business, total and net income, expenditure, profit and other quantitative aspect were made by using the secondary data.

3.2.2 Sources of data

3.2.2.1 Primary data

The primary data were collected on various aspects viz., resource availability, land use, crop enterprises, levels and cost of input use in different crops, credit amount for various purposes like crop loans, irrigation facilities, investment for land development and adopting new technology, monetary and non-monetary transaction cost, repayment amount etc. with the help of pretested questionnaire. The data were collected by survey method for the year 2007-08.
3.2.2 Secondary data

Secondary data were collected from the records of the Saurashtra/Junagadh-Amreli Gramin Bank for the period from 1992-93 to 2007-2008.

3.2.3 Sampling Techniques and collection of data

Primary data were collected using pretested questionnaire which was developed for the study. The households schedule sought information in details on farmer’s cash expenses, borrowing, total income, cropping pattern, livestock income and expenditures etc.

Secondary data were collected using tabulated formats designed for the study. Farmers/borrowers were selected by employing the three stage random sampling techniques. Primarily, respective district and offices of bank selected on a prior ground were approached. Secondly, the selected Saurashtra /Junagadh-Amreli Gramin Bank was requested to provide addresses of three branches of the bank each at different block of Junagadh district. Thirdly, a list of defaulters and non-defaulters was obtained from the three selected branches of RRB. In all, 75 defaulters and 73 non-defaulters from different villages under these branches were ultimately selected.

3.2.4 Concepts and estimation procedure

Credit flow

This refers to the amount of agricultural credit that is made available to beneficiaries in Junagadh district. It mainly refers to the amount of credit made available to farmers channeled through the formal credit institutions in
the district. It is assumed that the credit disbursed by this institution to farmers is used for the agricultural purpose or the other.

**Agricultural credit**

The term agricultural credit includes the short term, medium term and long term credit used in the agriculture and allied sectors. The credit per hectare of gross cropped area is taken as an indicator of the level and pattern of agricultural credit for further analysis.

**Loan**

It refers the quantum of fresh credit disbursed during that specific year.

**Crop loan/short term agricultural credit**

Crop loan refers to the amount of agricultural credit made available to farmers for seasonal agricultural operations.

**Term loan/agricultural credit**

This refers to both medium and long term investment credit made available per hectare of gross cropped area.

**Non monetary transaction cost**

It includes traveling expenses, incidental expenses (for food and other miscellaneous expenses) and opportunity cost.

**Cost of obtaining records**

Cost incurred for various certificates and records.

**Other costs of credit**

It includes insurance charges and inspection charges etc.
Gross cropped area (GCA)

It refers to the total hectares of the net sown area in all seasons and the area sown more than once in a year.

Gross irrigated area (GIA)

It refers to the total hectares of net irrigated area and area irrigated more than once in a year.

Consumption expenditure

It refers to the total money spent on education, fruits, vegetables, food grain, entertainment, social purpose and miscellaneous items.

Fertilizer consumption

Fertilizer consumption affects the flow of credit to agriculture. It is taken as one of the factors. It refers to the combined consumption levels of nitrogen, phosphorus, and potash fertilizer per hectare of gross cropped area in kilogram.

Total income (Rs.)

This is calculated from the sum of the earnings by all the members in the household from all sources.

Other income (Rs.)

This is calculated from the sum of the earnings by all the members in the household from all sources excluding crop production.

Family size

The variable includes male, female and children in a household.
Percentage of literacy

The total education score of family members obtained by following the method given by Trivedi (1963) was divided by the family size and multiply by 100.

Defaulter

The defaulter was one who availed a loan during the study period for agricultural purpose, but had not paid the loan amount/installment before the due date and was considered to be defaulter.

Non-defaulter

Non defaulter was one who availed a loan during July 2006 to June 2007 for the agricultural purpose and had paid the loan amount/installment in full before the due date and the loan account was regular as on 30-06-2008.

3.2.5 Discriminating variables

In the study, the following discriminatory variables were considered to be good discriminators between defaulters and non-defaulters.

Total owned land

Land area owned by the farmers during the year, including the leased out area if any, and excluding the leased in area in hectares.

Cultivable area

Land suitable for cultivation during the year including the leased in area and excluding the land left fallow in hectares.
Irrigated area

Area under assured irrigation out of total cultivable area in hectares.

Total cost of cultivation

The cost incurred per hectare by the borrowers in cultivating different crops during the year from primary tillage to harvesting including threshing and transportation.

Non Performing Asset (NPA)

In the case of agricultural advances, two harvest seasons or two half years is the period allowed for realization of interest/installment dues, before regarding the assets as Non performing asset.

Net Non Performing Asset

It is the remaining amount of gross NPA after deducting the provisions against NPA, pending adjustment of DICGS (Deposit Insurance and Credit Guarantee Corporation) claims and NPA interest.

3.2.6 Ratio analyses

Ratio analyses is a powerful tool of financial analysis. "The relationship between two accounting figures expressed mathematically is known as financial ratio" A ratio helps the analyst to make qualitative judgment about the financial position and performance. In financial analysis, a ratio is used as an index or yardstick for evaluating the financial position and performance.
(A) Liquidity ratio

It is extremely essential for a bank to be able to meet its obligation as they become due. Liquidity Ratio measures the ability of the bank to meet its immediate obligation since lack of sufficient liquidity will result in bad credit rating, loss of creditor’s confidence etc. A very high degree of liquidity will result in idle assets. There should be proper balance between liquidity and use of assets.

(i) Current ratio

Current Ratio is calculated by dividing current assets with current liabilities. Current assets include cash and those assets which can be converted into cash within a year. All obligations which are maturing within a year are included in current liabilities. A relatively high value of the current ratio is considered as an indication that the bank is liquid and has the ability to pay dues. As a conventional rule, a current ratio of 2:1 or more is considered satisfactory.

\[
\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
\]

(ii) Quick ratio or acid test ratio

Quick ratio or acid test ratio is a more refined measure of bank liquidity as this ratio measures the relationship between Quick assets and Quick liabilities. Generally a Quick Ratio of 1:1 is considered to represent a satisfactory to current financial condition.

\[
\text{Quick ratio or acid test ratio} = \frac{\text{Quick assets}}{\text{Quick liabilities}}
\]
It indicates net income per rupee of average fixed assets. Higher the ratio, the better is the utilization of assets.

\[
\text{Return on assets} = \frac{\text{Net profit after taxes}}{\text{Average total assets}} \times 100
\]

(5) **Return on capital employed (ROCE)**

Total Earnings = earning after taxes + interest on debt funds + non operating adjustment.

Capital Employed = fixed assets + net working capital.

It indicates overall profitability of the business on the total funds employed, and also indicates how management has used the fund supplied by the creditors and owners. Higher the ratio, the more efficient is the bank using fund entrusted to it. If ROCE is greater than interest rate, the use of debt fund is justified.

\[
\text{Return on capital employed} = \frac{\text{Total Earnings}}{\text{Capital Employed}}
\]

(C) **Economic performance ratio**

(1) **Burden efficiency ratio:**

This ratio indicates the degree of effectiveness of resources, and the burden of operating expenses on business. So, lower ratio indicates good performance of the bank.

\[
\text{Burden efficiency ratio} = \frac{\text{Burden}}{\text{Business(source + uses)}}
\]

Burden= Operating Expenses-Other income

Business= Deposit + Borrowing
(2) Business growth ratio

\[
\text{Business growth ratio} = \frac{\text{Current period business}}{\text{Previous period business}}
\]

(3) Operating expenses growth ratio:

\[
\text{Operating expenses ratio} = \frac{\text{All operating expenses}}{\text{Sales}}
\]

It indicates a relationship between expenses to sales. A lower ratio indicates better management of fund.

(4) Efficiency ratio: This ratio indicates the cost incurred to earn one rupee of income so lower ratio indicates efficient performance of the bank.

\[
\text{Efficiency ratio} = \frac{\text{Total cost}}{\text{Total income}}
\]

(D) Operational performance ratio:

(1) Productivity per staff/ branch

Productivity per staff especially with more increase in advances per account helps bank to improve the recovery percentage and come out of losses to earn profits overtime. Productivity per staff is one of the physical performance indicators. This is closely associated with other financial performance indicators, viz. percentage of overdues to demand, fixed assets and proportion of time deposits to total deposits. The resource position and effective utilization greatly influence the working efficiency of the bank. Thus, in order to achieve faster growth in physical and financial
resources, there is need to maintain the tempo of resources mobilization for investment purposes.

**Productivity per staff** = \( \frac{\text{Volume of business}}{\text{Total bank staff}} \)

**Productivity per branch** = \( \frac{\text{Volume of business}}{\text{Total bank branch}} \)

(2) **Uses to sources ratio:** This ratio indicates fund development with the help of present sources.

\[
\text{Uses to sources ratio} = \frac{\text{Uses}}{\text{Sources}}
\]

Uses = Advances + Cash, and
Sources = Deposit + Borrowing

(3) **Non performing advances:** This ratio indicates an increase in non-performing assets per every unit increase in advances. Lower ratio indicates good operational performance.

\[
\text{Non performing advances} = \frac{\text{Non performing assets}}{\text{Advances}}
\]

(E) **Turnover/active and solvency ratio**

(1) **Working capital turnover ratio**

This ratio indicates the efficiency of the bank in utilizing the working capital in business. A higher ratio denotes more efficient use of working capital in the business. It signifies the ability to generate sales per rupee of working capital.
Working capital turnover ratio = \frac{\text{Turnover}}{\text{Net working capital}}

(2) Capital employed turnover ratio

Capital employed may be defined as non-current liabilities plus owner's equity or permanent capital or long term fund. The ratio indicates the ability of bank in generating sales per rupee of long term investment.

\text{Capital employed turnover ratio} = \frac{\text{Turnover}}{\text{Capital employed}}

Turnover = Sales net of returns, and

Capital employed = Fixed assets + net working capital.

(3) Debt equity ratio

It is calculated by dividing the debt with equity. It shows the relation between debt and equity. The Ideal ratio is 2:1.

\text{Debt equity ratio} = \frac{\text{Debt}}{\text{Equity}}

Debt = Borrowed fund, and

Equity = Share capital + Reserve and surplus - loss (as per profit and loss account).

(4) Net capital ratio

This ratio measures the degree of financial safety over a period of time. It indicates the long liquidity position of the firm business.

\text{Net capital ratio} = \frac{\text{Total assets}}{\text{Total debt}}

Total debt = Current liability + term liability.
(F) Credit deposit ratio (CDR)

This ratio indicates the disbursement of credit per unit of deposit.

\[
\text{Credit deposit ratio} = \frac{\text{Total amount of credit}}{\text{Total amount of deposits}} \times 100
\]

**Actual credit**

It is the amount availed to borrower by deducting total cost of credit from amount of face value of loan. It is calculated using following formula.

\[ C = F - X \]

Where,
\[ C = \text{Actual credit availed in rupee} \]
\[ F = \text{Face value of loan i.e. amount of loan granted in rupee} \]
\[ X = \text{Cost incurred in getting the loan sanction, in rupee} \]

**3.3 Analytical framework**

The data collected for the period 2007-08 were scrutinized, tabulated and analyzed as per objectives of the study, employing tabular analysis, linear discriminant function analysis, etc. A brief description of the different analytical techniques used is presented below.

**3.3.1 The linear discriminant function analysis**

In order to examine the relative importance of different factors in discriminating the defaulters and non-defaulters, discriminant function was used. The linear form of the function is as follows:

\[ Z = I_1X_1 + I_2X_2 + I_3X_3 + \cdots + I_nX_n \]
Where,

\[ Z = \text{Total discriminating score for the defaulter and non defaulter}, \]

\[ I_1, I_2, I_3 \cdots \text{In} = \text{The coefficients of linear discriminant function}. \]

\[ X_1 = \text{Literacy index} \]

\[ X_2 = \text{Type of farmer: upto 1 ha = 0, above 1 ha = 1} \]

\[ X_3 = \text{Main occupation of borrower non-agriculture=0 and agriculture=1} \]

\[ X_4 = \text{Percentage of irrigated area to total area}. \]

\[ X_5 = \text{Operating area (ha)}. \]

\[ X_6 = \text{Percentage of crop production income to total income} \]

\[ X_7 = \text{Percentage of other income to total income}. \]

\[ X_8 = \text{Consumption expenditure (Rs.)} \]

\[ X_9 = \text{N}_2 \text{fertilizer consumption kg/ha} \]

\[ X_{10} = \text{P}_2\text{O}_5 \text{fertilizer consumption kg/ha} \]

\[ X_{11} = \text{K}_2\text{O} \text{fertilizer consumption kg/ha} \]

The literacy index was calculated as under,

\[ L = \sum S_i/n : (i = 1, 2, 3 \cdots, n) \]

Where \( n \) = total number of family members above five years and \( S \)-literacy score of an individual household, the literacy score allotted to different levels of education is as follows;
<table>
<thead>
<tr>
<th>Level of education</th>
<th>Literacy score allotted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>0</td>
</tr>
<tr>
<td>Primary</td>
<td>1</td>
</tr>
<tr>
<td>Middle</td>
<td>2</td>
</tr>
<tr>
<td>High school</td>
<td>3</td>
</tr>
<tr>
<td>Intermediate and above</td>
<td>4</td>
</tr>
</tbody>
</table>

For the application of discriminant function, two groups were considered. Thus, the sample comprised of 75 defaulters and 73 non-defaulters in the present study. The function was constructed by choosing values of linear discriminant coefficient in such a way that the ratio: (variation of Z between the groups) / (variation of Z within the two groups) is maximized.

The calculation of discriminant function involves the solution of the following equations shown in the matrix notations (Brandow & Potter, 1953).

\[
\mathbf{I} = \begin{bmatrix}
I_1 \\
I_2 \\
I_k
\end{bmatrix}
\quad \mathbf{D} = \begin{bmatrix}
d_1 \\
d_2 \\
d_k
\end{bmatrix}
\]

\[
\begin{bmatrix}
S_{11} & S_{12} & S_{1k} \\
S_{21} & S_{22} & S_{2k} \\
S_{k1} & S_{k2} & S_{kk}
\end{bmatrix}
\]

Where,

- \( K \) = Variables number
- \( \mathbf{I}_k \) = Vector of coefficients of discriminant function

\( \mathbf{d}_k \) was used as a measure of disparity between the two groups. It is the best of chosen variables for the two groups. For this, the statistic \( \mathbf{F} \) was computed as under:

\[
\mathbf{F} = \frac{(\mathbf{I}_k \mathbf{D}^{-1} \mathbf{I}_k - 1)/K}{(\mathbf{I}_k \mathbf{I}_k - \mathbf{I}_k)/K}
\]
S = Pooled dispersion matrix, and
D = Vector of differences between the mean values of different characteristics for two groups.

\[ S11 = \{ 1/((N_a + N_b - 2)) \} \bigg[ \Sigma X_1^2 \bigg\{ \Sigma X_1^2 / N_a \bigg\} + \Sigma X_1^2 - \{(\Sigma X_1)^2/N_b\}\bigg] \]

\[ S12 = \{ 1/((N_a + N_b - 2)) \} \bigg[ \Sigma X_1 X_2 - \{(\Sigma X_1)(\Sigma X_2)/N_b\}\bigg] \]

where,

\[ N_a = \text{Number of members and} \]

\[ N_b = \text{Number of non members} \]

The discriminant function was tested for the significance to know whether or not the variables considered together were significantly discriminating the two groups or not. The Mahalanobis \( D^2 = \sum_{k=1}^{n} I_k d_k \) was used as a measure of distance between the two groups. It is the test of the hypothesis that there are no differences in the mean values of chosen variables for the two groups. For this, the statistic \( F \) was computed as under:

\[ F = \frac{N_a N_b (N_a + N_b - P - 1)}{P(N_a + N_b)(N_a + N_b - 2)} X D^2 \]

Where,

\[ P \] is the number of variables considered in the function. The values of \( F \) was tested for its significance at \( (P) \) and \( (N_a + N_b - P - 1) \).

The product of coefficients of discriminant function and the differences between the mean values of different
characteristics of the groups was multiplied by 100 and then divided by the value of \( D^2 \) which ultimately gives the percentage contribution of individual characteristics to the total distance measured.

In order to predict whether a borrowers likely to be a defaulter or non-defaulter of the Saurashtra Gramin Bank, on the basis of his information on the characteristics under study, the following calculation were made:

(i) \( Z_1 \) was estimated by multiplying the mean values of the significant characteristics to their respective coefficients for the group of defaulter and adding them.

(ii) Similarly \( Z_2 \) was computed for the group of non defaulter.

(iii) \( \overline{Z} \) was calculated by adding \( Z_1 \) and \( Z_2 \) and then dividing it by 2. The value so obtained is 'critical \( Z \) value' which was used to classify the borrowers into two groups.

The following table makes it more clear:

<table>
<thead>
<tr>
<th>Mean ( Z ) scores for non defaulters</th>
<th>Mean ( Z ) scores for separating the two groups</th>
<th>Mean ( Z ) scores for defaulters</th>
</tr>
</thead>
<tbody>
<tr>
<td>( Z_2 )</td>
<td>( \overline{Z} )</td>
<td>( Z_1 )</td>
</tr>
</tbody>
</table>

Any borrower whose \( Z \) value is more than the critical '\( Z \)' value is most likely to be a member of the Saurashtra Gramin Bank and vice-versa.
The above Z function was applied to the sample borrowers to see what proportion of respondents considered in the study was rightly classified by the Z function.


Chart: Structure of Agricultural Credit System in India

- Government of India
  - Reserve Bank of India
  - NABARD
    - Commercial Banks
    - Rural Co-operative Credit Institutes
      - Long term credit structure
        - State co-operative agriculture and rural development Banks
        - Primary co-operative agriculture and rural development Banks
    - Regional Rural Banks
      - Short term credit structure
        - State co-operative Banks
        - District Central co-operative Banks
        - Primary agricultural credit

- Depositors and borrowers
CHAPTER IV

RESULTS AND DISCUSSION

Junagadh Amreli Gramin Bank (JAGB)/Saurashtra Gramin Bank (SGB) could succeed as an institutional reform in the field of rural credit and what are the important factors that influence the profitability of JAGB/SGB, so that one can improve upon those parameters to further enhance their viability and profitability. It has been examined in detail with reference to the functioning and performance of JAGB, SGB, and various other rural banks. Pertaining to various objectives of the study are critically discussed in this chapter. The chapter is presented under the following broad heads:

(4.1) Performance of flow of institutional finance to agricultural sector.

(4.2) Financial performance and viability of the bank.

(4.3) Cost of credit for different agricultural loans.

(4.4) Recovery and overdue position.

(4.5) Factors discriminating defaulters and non-defaulters of agricultural loans.

(4.6) Non-performing assets of JAGB.
CHAPTER - IV
RESULTS AND DISCUSSION

This study is an attempt to evaluate how far the Junagadh Amreli Gramin Bank (JAGB)/Saurashtra Gramin Bank (SGB) could succeed as an institutional reform in the field of rural credit and what are the important factors that influence the profitability of JAGB/SGB, so that one can improve upon those parameters to further enhance their viability and profitability. It has been examined in detail with reference to the functioning and performance of JAGB, Junagadh. Since its establishment, JAGB has played an important role in enhancing rural credit system. Its recovery performance was higher and it continuously increased from 31.32 per cent (1992-93) to 89.06 per cent (2004-05).

The results derived from the analysis of the data pertaining to various objectives of the study are critically discussed in this chapter. The chapter is presented under the following broad heads:

(4.1) Performance of flow of institutional finance to agricultural sector.

(4.2) Financial performance and viability of the bank.

(4.3) Cost of credit for different agricultural loans.

(4.4) Recovery and overdue position.

(4.5) Factors discriminating defaulters and non-defaulters of agricultural loans.

(4.6) Non-performing assets of JAGB.
4.1 Performance of flow of institutional finance to agricultural sector

The problems of farmers vary from area to area, but one of the major common problems is the institutional credit which plays a key role in adoption of modern farm technology and facilitates effective and timely use of agricultural inputs. This requires to evaluate the credit flow of JAGB/SGB in relation to farm sector with a view to enhance smooth flow of credit.

The yearwise progress of deposits and advances of JAGB/SGB is furnished in Table 4.1 and also depicted in Fig. 4.1. It is evident from the table that the amount of deposit of JAGB has increased from Rs.913.55 lakhs (1992-93) to Rs.9578.78 lakhs (2004-05). It has reached to the level of Rs.84154.88 lakhs during 2007-08 when all the RRBs of Saurashtra merged and came into existence as Saurashtra Gramin Bank. The amount of total loan outstanding increased from Rs.562.67 lakhs (1992-93) to Rs.4890.12 lakhs (2004-05) and in case of SGB, it has increased from Rs.36848.71 lakhs (2005-06) to Rs.54495.91 lakhs (2007-08). In case of agricultural sector, the amount of advances increased from Rs.331.44 lakhs (1992-93) to Rs.38941.19 lakhs (2004-05) for JAGB and from Rs.30042.71 lakhs (2005-06) to Rs.44825.29 lakhs (2007-08) in respect of SGB. A considerable increase in advances to agricultural sector implies that this RRB has played significant role to cater the needs of rural poor. In total loan outstanding, the share of agricultural sector was very high in all the years. The table also indicates that credit
Fig. 4.1: Yearwise deposit, total outstanding and farm sector outstanding of JAGB / SGB
deposit ratio was found ununiform and ranged between 34.47 per cent (1995-96) to 66.99 per cent (2005-06). The C.D. ratio of SGB was more than 60 per cent in all the years. This shows a healthy sign. The number of staff and branches showed a declining trend in case of JAGB.

Vyas and Shiyani (1997) found a significant increase in deposit and total advance of JAGB.

Adinew Abate et al (2002) also found that agricultural loan and advances has shown significant growth in commercial and regional rural banks in Karnataka.

**Table 4.1: Progress of Junagadh Amreli Gramin Bank/Saurashtra Gram in Bank in various banking parameters**

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of branch</th>
<th>Staff</th>
<th>Deposits (Rs.'000)</th>
<th>Total outstanding (Rs.'000)</th>
<th>Outstanding of agricultural loan (Rs.'000)</th>
<th>CD ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>41</td>
<td>142</td>
<td>91355</td>
<td>56267</td>
<td>33144</td>
<td>61.60</td>
</tr>
<tr>
<td>1993-94</td>
<td>41</td>
<td>141</td>
<td>126531</td>
<td>63758</td>
<td>41447</td>
<td>50.38</td>
</tr>
<tr>
<td>1994-95</td>
<td>41</td>
<td>141</td>
<td>152559</td>
<td>65808</td>
<td>36628</td>
<td>41.11</td>
</tr>
<tr>
<td>1995-96</td>
<td>41</td>
<td>141</td>
<td>218118</td>
<td>81526</td>
<td>48408</td>
<td>34.47</td>
</tr>
<tr>
<td>1996-97</td>
<td>41</td>
<td>138</td>
<td>303792</td>
<td>116011</td>
<td>90614</td>
<td>38.19</td>
</tr>
<tr>
<td>1997-98</td>
<td>37</td>
<td>138</td>
<td>389720</td>
<td>178746</td>
<td>131506</td>
<td>46.00</td>
</tr>
<tr>
<td>1998-99</td>
<td>38</td>
<td>135</td>
<td>476905</td>
<td>223966</td>
<td>165628</td>
<td>47.00</td>
</tr>
<tr>
<td>1999-00</td>
<td>38</td>
<td>135</td>
<td>562062</td>
<td>277760</td>
<td>209588</td>
<td>49.00</td>
</tr>
<tr>
<td>2000-01</td>
<td>36</td>
<td>134</td>
<td>588752</td>
<td>323310</td>
<td>247376</td>
<td>55.00</td>
</tr>
<tr>
<td>2001-02</td>
<td>35</td>
<td>132</td>
<td>652652</td>
<td>349125</td>
<td>272454</td>
<td>53.50</td>
</tr>
<tr>
<td>2002-03</td>
<td>34</td>
<td>131</td>
<td>744728</td>
<td>375306</td>
<td>294363</td>
<td>50.30</td>
</tr>
<tr>
<td>2003-04</td>
<td>34</td>
<td>129</td>
<td>811339</td>
<td>395333</td>
<td>307116</td>
<td>48.70</td>
</tr>
<tr>
<td>2004-05</td>
<td>34</td>
<td>130</td>
<td>957878</td>
<td>489012</td>
<td>389199</td>
<td>51.05</td>
</tr>
<tr>
<td>(B)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>141</td>
<td>487</td>
<td>5500915</td>
<td>3684871</td>
<td>3004271</td>
<td>66.99</td>
</tr>
<tr>
<td>2006-07</td>
<td>142</td>
<td>484</td>
<td>6813200</td>
<td>4490758</td>
<td>3809040</td>
<td>65.91</td>
</tr>
<tr>
<td>2007-08</td>
<td>143</td>
<td>482</td>
<td>8415488</td>
<td>5449591</td>
<td>4482529</td>
<td>64.76</td>
</tr>
</tbody>
</table>
Table 4.2 reveals the yearwise trend of total loan disbursed and the loan disbursed to agricultural sector. It has also been supported by Fig. 4.2. The table shows that the disbursement of total loan increased from Rs.307.21 lakhs (1992-93) to Rs.4435.67 lakhs (2004-05) and after merged, it increased from Rs.31900.00 lakhs (2005-06) to Rs.43717.18 lakhs (2007-08). In case of agricultural sector, it increased from Rs.233.17 lakhs (1992-93) to Rs.3914.39 lakhs (2004-05) in case of JAGB, while in respect of SGB, it increased from Rs.28022.00 lakhs (2005-06) to Rs.38518.33 lakhs (2007-08). The share of agricultural loan in the total loan was more than 75 per cent in all the years. It was as high as 91.02 per cent during the year 2006-07. This implies that the SGB has given due weightage to agricultural sector which is a backbone of our economy.

Further, it can also be seen that per cent increase in loan disbursed to agricultural sector over the previous year was relatively higher as compared to that of total loan disbursed in 11 years. This was mainly due to the change in attitude of farmers from subsistence farming to commercial farming and favourable reforms in banking sector.

These results corroborate the findings given by Vyas and Shiyani (1997). Gopalakrishnan (1996) in his study found that credit disbursal for agricultural sector has been increasing every year.
<table>
<thead>
<tr>
<th>Year</th>
<th>Total loan disbursed (Rs.'000)</th>
<th>Increase over previous year (%)</th>
<th>Loan disbursed to farm sector (Rs.'000)</th>
<th>Increase over previous year (%)</th>
<th>% of agricultural loan to total loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) JAGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>30721</td>
<td>--</td>
<td>23317</td>
<td>--</td>
<td>75.9</td>
</tr>
<tr>
<td>1993-94</td>
<td>39831</td>
<td>29.65</td>
<td>31895</td>
<td>36.79</td>
<td>80.08</td>
</tr>
<tr>
<td>1994-95</td>
<td>43472</td>
<td>9.14</td>
<td>34869</td>
<td>9.32</td>
<td>80.21</td>
</tr>
<tr>
<td>1995-96</td>
<td>63348</td>
<td>45.72</td>
<td>54771</td>
<td>57.08</td>
<td>86.46</td>
</tr>
<tr>
<td>1996-97</td>
<td>105005</td>
<td>65.76</td>
<td>80885</td>
<td>47.68</td>
<td>77.03</td>
</tr>
<tr>
<td>1997-98</td>
<td>156976</td>
<td>49.49</td>
<td>119116</td>
<td>47.27</td>
<td>75.88</td>
</tr>
<tr>
<td>1998-99</td>
<td>169212</td>
<td>7.8</td>
<td>132214</td>
<td>11</td>
<td>78.14</td>
</tr>
<tr>
<td>1999-00</td>
<td>188503</td>
<td>11.4</td>
<td>147535</td>
<td>11.59</td>
<td>78.27</td>
</tr>
<tr>
<td>2000-01</td>
<td>220691</td>
<td>17.08</td>
<td>182977</td>
<td>24.02</td>
<td>82.91</td>
</tr>
<tr>
<td>2001-02</td>
<td>245280</td>
<td>11.14</td>
<td>210254</td>
<td>14.91</td>
<td>85.72</td>
</tr>
<tr>
<td>2002-03</td>
<td>272130</td>
<td>10.95</td>
<td>230619</td>
<td>9.69</td>
<td>84.75</td>
</tr>
<tr>
<td>2003-04</td>
<td>342984</td>
<td>26.04</td>
<td>291502</td>
<td>26.4</td>
<td>84.99</td>
</tr>
<tr>
<td>2004-05</td>
<td>443567</td>
<td>29.33</td>
<td>391439</td>
<td>34.28</td>
<td>88.25</td>
</tr>
<tr>
<td>(B) SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>3190000</td>
<td>-</td>
<td>2802200</td>
<td>-</td>
<td>87.84</td>
</tr>
<tr>
<td>2006-07</td>
<td>3915678</td>
<td>22.75</td>
<td>3564205</td>
<td>27.19</td>
<td>91.02</td>
</tr>
<tr>
<td>2007-08</td>
<td>4371718</td>
<td>11.65</td>
<td>3851833</td>
<td>8.07</td>
<td>88.11</td>
</tr>
</tbody>
</table>

Perusal of Table 4.3 and Fig. 4.3 reveals yearwise progress of JAGB and SGB in relation to its business, total income and total expenditure. It is apparent from the data that the business of JAGB/SGB showed a continuous increasing trend. It increased from Rs.1476.82 lakhs (1992-93) to Rs.14468.90 lakhs (2004-05) for JAGB and from Rs.91857 lakhs (2005-06) to Rs.138651 lakhs (2007-08) in case of SGB. An increasing trend in income was noticed up to the year 2002-03 but it has declined in the subsequent two years. Almost similar trend was noticed in case of expenditure too.
Fig. 4.2: Yearwise farm sector and total loan disbursement by JAGB / SGB
The resulted lead to conclude that there was a considerable increase in the magnitude of deposits, loan disbursement to agricultural sector, total income and also in total expenditure of the bank. The share of agricultural loan in total loan was found quite high.

**Table 4.3: Trend in financial performance of JAGB/SGB**

<table>
<thead>
<tr>
<th>Year</th>
<th>Business (Rs.'000)</th>
<th>Total income (Rs.'000)</th>
<th>Total expenditure (Rs.'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) JAGB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>147682</td>
<td>13806</td>
<td>19728</td>
</tr>
<tr>
<td>1993-94</td>
<td>190281</td>
<td>17961</td>
<td>24652</td>
</tr>
<tr>
<td>1994-95</td>
<td>218366</td>
<td>17000</td>
<td>27519</td>
</tr>
<tr>
<td>1995-96</td>
<td>299587</td>
<td>25132</td>
<td>35850</td>
</tr>
<tr>
<td>1996-97</td>
<td>419799</td>
<td>36594</td>
<td>40259</td>
</tr>
<tr>
<td>1997-98</td>
<td>568466</td>
<td>57506</td>
<td>46269</td>
</tr>
<tr>
<td>1998-99</td>
<td>700871</td>
<td>79340</td>
<td>64646</td>
</tr>
<tr>
<td>1999-00</td>
<td>839822</td>
<td>99667</td>
<td>79905</td>
</tr>
<tr>
<td>2000-01</td>
<td>912062</td>
<td>108435</td>
<td>87456</td>
</tr>
<tr>
<td>2001-02</td>
<td>1001777</td>
<td>114451</td>
<td>98964</td>
</tr>
<tr>
<td>2002-03</td>
<td>1119534</td>
<td>118357</td>
<td>103859</td>
</tr>
<tr>
<td>2003-04</td>
<td>1206672</td>
<td>108150</td>
<td>93322</td>
</tr>
<tr>
<td>2004-05</td>
<td>1446890</td>
<td>97666</td>
<td>89696</td>
</tr>
<tr>
<td>(B) SGB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>9185700</td>
<td>121706</td>
<td>113670</td>
</tr>
<tr>
<td>2006-07</td>
<td>11304000</td>
<td>629699</td>
<td>600392</td>
</tr>
<tr>
<td>2007-08</td>
<td>13865100</td>
<td>746349</td>
<td>708152</td>
</tr>
</tbody>
</table>

**4.2 Financial performance and viability of the bank**

The financial performance of a bank greatly influences its operational results and business efficiency. Therefore, it is highly needed to evaluate the financial performance of JAGB/SGB in relation to efficiency in mobilizing the required resources and effectiveness in utilizing these resources. In order to study, the financial performance of
Fig. 4.3: Yearwise total income and expenditure of JAGB/SGB

- Total income (Rs. in '000)
- Total expenditure (Rs. in)

Years: 1992-93 to 2007-08
the bank, the ratio's analysis technique was regarded as useful tool in the hand of the bank. The ratios indicate improvement over the past performance and satisfactory positions. Various ratios were used in the study to examine the performance and viability of bank.

**4.2.1 Liquidity ratio**

The short term financial position of the bank is assessed on the basis of liquidity ratio. It is expected that the bank should be in a position to satisfy his day to day commitment in the form of current liabilities out of the current assets. Liquidity ratio indicates the financial liquidity of the bank.

**The current ratio:** The ratio of current assets to current liabilities termed as current ratio which shows the ability of the bank to meet its short term (one year’s time) obligation.

**The quick ratio:** The ratio of quick assets to quick liabilities termed as quick ratio which shows the ability of the bank to meet its very short term obligation.

Quick ratio provides better measure of liquidity than current ratio while, current ratio in effect reflecting liquidity within one year’s time. So there is a need to know quick assets and liabilities position of bank which is provided by quick ratio.

The yearwise results of current ratio and quick ratio are presented in Table 4.4 and depicted in Fig. 4.4. An ununiform trend of current ratio was noticed for the entire period. It ranged between 1.28:1 (2003-04) to 1.91:1 (1993-94) with an overall average of 1.53:1 for Junagadh
Amreli Gramin Bank and 1.50:1 in case of Saurashtra Gramin Bank. This implies that, on an average, every one rupee of current liabilities, the bank has been maintaining asset of more than Rs.1.50. It is obvious that the minimum level of current assets should be equivalent to current liability. Ideally, this ratio must be at least 1.33 as per the guideline on priority sector and special credit schemes, provided by S. Rajendran-2002. Keeping in view these guidelines it can be concluded that financial position of the bank was found satisfactory.

**Table 4.4: Liquidity ratios of Junagadh Amreli Gramin Bank/Saurashtra Gramin Bank**

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Asset</th>
<th>Current Liability</th>
<th>Current Ratio</th>
<th>Quick Asset</th>
<th>Quick Liability</th>
<th>Quick Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(A)</strong> JAGB</td>
<td>1992-93</td>
<td>124364</td>
<td>71236</td>
<td>1.75</td>
<td>63189</td>
<td>33622</td>
</tr>
<tr>
<td></td>
<td>1993-94</td>
<td>171917</td>
<td>89808</td>
<td>1.91</td>
<td>98146</td>
<td>44887</td>
</tr>
<tr>
<td></td>
<td>1994-95</td>
<td>190582</td>
<td>1132277</td>
<td>1.68</td>
<td>106232</td>
<td>63870</td>
</tr>
<tr>
<td></td>
<td>1995-96</td>
<td>239986</td>
<td>148806</td>
<td>1.61</td>
<td>136301</td>
<td>86712</td>
</tr>
<tr>
<td></td>
<td>1996-97</td>
<td>341569</td>
<td>209961</td>
<td>1.63</td>
<td>205489</td>
<td>126981</td>
</tr>
<tr>
<td></td>
<td>1997-98</td>
<td>379071</td>
<td>259573</td>
<td>1.46</td>
<td>202108</td>
<td>151499</td>
</tr>
<tr>
<td></td>
<td>1998-99</td>
<td>415760</td>
<td>305734</td>
<td>1.36</td>
<td>201894</td>
<td>171653</td>
</tr>
<tr>
<td></td>
<td>1999-00</td>
<td>472083</td>
<td>343592</td>
<td>1.37</td>
<td>220337</td>
<td>202293</td>
</tr>
<tr>
<td></td>
<td>2000-01</td>
<td>548669</td>
<td>378539</td>
<td>1.45</td>
<td>247890</td>
<td>227303</td>
</tr>
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<td>2001-02</td>
<td>638523</td>
<td>412329</td>
<td>1.55</td>
<td>265815</td>
<td>270096</td>
</tr>
<tr>
<td></td>
<td>2002-03</td>
<td>618912</td>
<td>415580</td>
<td>1.49</td>
<td>243790</td>
<td>301008</td>
</tr>
<tr>
<td></td>
<td>2003-04</td>
<td>550933</td>
<td>429336</td>
<td>1.28</td>
<td>161499</td>
<td>353817</td>
</tr>
<tr>
<td></td>
<td>2004-05</td>
<td>579613</td>
<td>411380</td>
<td>1.41</td>
<td>136632</td>
<td>321327</td>
</tr>
<tr>
<td><strong>(B)</strong> SGB</td>
<td>2005-06</td>
<td>4843390</td>
<td>2649589</td>
<td>1.83</td>
<td>1713258</td>
<td>2385416</td>
</tr>
<tr>
<td></td>
<td>2006-07</td>
<td>5942628</td>
<td>4537962</td>
<td>1.37</td>
<td>1951735</td>
<td>3089690</td>
</tr>
<tr>
<td></td>
<td>2007-08</td>
<td>5992865</td>
<td>4413284</td>
<td>1.36</td>
<td>1128570</td>
<td>3617936</td>
</tr>
<tr>
<td>Average of JAGB</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average of SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fig. 4.4: Yearwise current and quick ratios of JAGB/SGB
No uniformity was observed in quick ratio of the bank. It ranged between 0.43:1 (2004-05) and 2.19:1 (1993-94) with an overall average of 1.25:1 for Junagadh Amreli Gramin Bank, whereas for SGB, it ranged between 0.31:1 (2007-08) and 0.72:1 (2005-06) with an overall average of 0.52:1. It shows that, on an average, every one rupee of quick liabilities, the bank has been maintaining asset of Rs.1.25 and 0.52 for Junagadh Amreli Gramin Bank and Saurashtra Gramin Bank, respectively. The desirable level of quick ratio is greater than or equal to one. Thus, it can be concluded that the short term solvency and liquidity position of JAGB was sound. This ratio measures the relationship between cash and near cash items on one hand, and immediately maturing obligation on the other. It signifies that liquid assets were sufficient for meeting short term liabilities. On the other hand, the position of SGB was found relatively weak as the average quick ratio was only 0.52.

Reddy (1994) also indicated that the liquidity position of the Mulkanoor co-operative rural bank as revealed by current and quick ratios was sound.

4.2.2: Profitability Ratio
4.2.2.1 Gross profit ratio

This ratio indicates the margin available to the bank which covers indirect expenses. It is a relative term, it should be adequate and it is explained in percentage.

Table 4.5 and Fig. 4.5 revealed year wise profitability ratios like gross profit, net profit and return on assets and
return on capital employed ratio. Gross profit ratio ranged from 1.75:1 (1994-95) to 5.32:1 (2000-01) with an overall average of 3.87 for JAGB and for SGB, it ranged between 0.52:1 (2005-06) and 2.51:1 (2006-07) with an overall average of 1.41. It showed ununiform trend during the period under study.

### 4.2.2.2 Net profit ratio

This ratio indicates the efficiency of the bank considering all the expenses. Net profit ratio was found negative during the period from 1992-93 to 1996-97 and in remaining years, it was positive.

#### Table 4.5: Profitability and return on investment ratios of JAGB/SGB

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross profit ratio</th>
<th>Net profit ratio</th>
<th>Operating profit ratio</th>
<th>Return on assets</th>
<th>Return on capital Employed ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) JAGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>2.57</td>
<td>-4.42</td>
<td>-3.81</td>
<td>-6.13</td>
<td>0.26</td>
</tr>
<tr>
<td>1993-94</td>
<td>2.53</td>
<td>-3.88</td>
<td>-2.88</td>
<td>-7.25</td>
<td>0.22</td>
</tr>
<tr>
<td>1994-95</td>
<td>1.75</td>
<td>-5.22</td>
<td>-3.69</td>
<td>-12.40</td>
<td>0.24</td>
</tr>
<tr>
<td>1995-96</td>
<td>2.11</td>
<td>-3.91</td>
<td>-2.64</td>
<td>-13.60</td>
<td>0.31</td>
</tr>
<tr>
<td>1996-97</td>
<td>2.75</td>
<td>-0.96</td>
<td>-0.04</td>
<td>-3.71</td>
<td>0.35</td>
</tr>
<tr>
<td>1997-98</td>
<td>5.07</td>
<td>2.20</td>
<td>2.09</td>
<td>11.45</td>
<td>0.69</td>
</tr>
<tr>
<td>1998-99</td>
<td>5.15</td>
<td>2.36</td>
<td>2.37</td>
<td>12.91</td>
<td>1.02</td>
</tr>
<tr>
<td>1999-00</td>
<td>5.26</td>
<td>2.67</td>
<td>2.86</td>
<td>16.19</td>
<td>1.06</td>
</tr>
<tr>
<td>2000-01</td>
<td>5.32</td>
<td>2.61</td>
<td>2.88</td>
<td>16.72</td>
<td>0.90</td>
</tr>
<tr>
<td>2001-02</td>
<td>5.11</td>
<td>1.75</td>
<td>1.83</td>
<td>5.90</td>
<td>0.78</td>
</tr>
<tr>
<td>2002-03</td>
<td>5.00</td>
<td>1.45</td>
<td>1.76</td>
<td>8.05</td>
<td>0.75</td>
</tr>
<tr>
<td>2003-04</td>
<td>4.56</td>
<td>1.35</td>
<td>1.30</td>
<td>3.15</td>
<td>1.00</td>
</tr>
<tr>
<td>2004-05</td>
<td>3.14</td>
<td>0.59</td>
<td>0.59</td>
<td>1.96</td>
<td>0.72</td>
</tr>
<tr>
<td>(B) SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>0.52</td>
<td>0.09</td>
<td>0.12</td>
<td>0.57</td>
<td>0.07</td>
</tr>
<tr>
<td>2006-07</td>
<td>2.51</td>
<td>0.27</td>
<td>0.80</td>
<td>2.47</td>
<td>0.47</td>
</tr>
<tr>
<td>2007-08</td>
<td>2.21</td>
<td>0.29</td>
<td>0.72</td>
<td>3.64</td>
<td>0.48</td>
</tr>
<tr>
<td>Average</td>
<td>3.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fig. 4.5: Yearwise gross profit and net profit of JAGB/SGB

Amount Rs. in thousand

Net profit Rs. In '000
Gross profit Rs. In '000

Year

4.2.2.3 Operating profit ratio
It indicates a relationship between expenses to sale. The lower ratio indicates better management of funds. This ratio was found negative during 1992-93 to 1996-97 and in remaining years, it was positive. It was greater than one during 1997-98 to 2003-04 but less than unity from the year 2004-05 onwards.

4.2.2.4 Return on assets
The return on assets was found negative during the period from 1992-93 to 1996-97 and in remaining years, it was positive. The return on investment shows an improvement over a period of time. This implies that the assets of the bank are properly and prudentially utilized to generate income.

4.2.2.5 Return on capital employed ratio
This ratio was found less than one in all the years under study, except for the year 1998-99, 1999-00 and 2003-04. Profitability ratio was found low because regional rural banks advanced its larger share to priority sectors with relatively lower rate of interest.

4.2.3: Turnover and solvency ratio
4.2.3.1 Working capital and capital employed turn over ratios
The fund of creditors and owners are invested in various kinds of assets to generate sales and profits. The better the management of the assets better would be the
performance of the business. Active ratios are employed to evaluate the efficiency in utilization and management of assets. These ratios are called turnover ratio because they indicate the speed with which assets are being converted or turned into sales.

The data furnished in Table 4.6 indicate year wise working capital turn over ratio, capital employed turn over ratio, debt equity ratio and net capital ratio. It is evident from the table that working capital turn over ratio and capital employed turn over ratio were found greater than unity in almost all the years. In both the ratios, the lowest values were noticed in 1993-94 due to low share capital of bank in beginning and the highest was reported during the year 2003-04 due to rapid increase in share capital of the bank. The results of these ratios indicate that on an average, a rupee invested in current assets could able to create Rs.4.57 and Rs.4.50 in JAGB and in case of SGB, it was Rs.6.68 and Rs.6.63 respectively. There were fluctuations in ratios eventhough reflecting sound performance of the bank.

4.2.3.2 The debt equity ratio:

This ratio measures the long term solvency and ability of the bank to meet long term liabilities. Under Indian conditions 34 per cent equity is considered as reasonable as per the guideline on priority sector and special credit schemes, provided by S. Rajendran-2002.

The debt equity ratio was found ununiform and it ranged from 1.08 (1993-94) to 4.26 (2003-04). It indicates
that more funds required by the bank are provided by creditors.

**4.2.3.3 Net capital ratio:**

It measures the degree of financial safety over a period of time. This is probably the most important measure of the overall financial position of the business because it reflects the likelihood that the sale of all assets would produce sufficient cash to cover all debt outstanding. If the ratio is more than one, the fund of institution agencies is safe. Net capital ratio was found more than unity in all the years. On an average, it was 1.09:1 which showed long term financial safety over a period of time.

**Table 4.6: Turnover/active ratios and solvency ratio of JAGB/SGB**

<table>
<thead>
<tr>
<th>Year</th>
<th>Working capital turnover ratio</th>
<th>Capital employed turnover ratio</th>
<th>Debt equity ratio</th>
<th>Net capital ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(A) JAGB</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>2.52</td>
<td>2.47</td>
<td>1.16</td>
<td>1.06</td>
</tr>
<tr>
<td>1993-94</td>
<td>2.10</td>
<td>2.08</td>
<td>1.08</td>
<td>1.06</td>
</tr>
<tr>
<td>1994-95</td>
<td>2.60</td>
<td>2.58</td>
<td>1.26</td>
<td>1.06</td>
</tr>
<tr>
<td>1995-96</td>
<td>3.01</td>
<td>2.98</td>
<td>1.58</td>
<td>1.05</td>
</tr>
<tr>
<td>1996-97</td>
<td>2.91</td>
<td>2.89</td>
<td>1.48</td>
<td>1.12</td>
</tr>
<tr>
<td>1997-98</td>
<td>4.28</td>
<td>4.24</td>
<td>2.17</td>
<td>1.10</td>
</tr>
<tr>
<td>1998-99</td>
<td>5.65</td>
<td>5.59</td>
<td>3.08</td>
<td>1.09</td>
</tr>
<tr>
<td>1999-00</td>
<td>5.76</td>
<td>5.71</td>
<td>3.22</td>
<td>1.07</td>
</tr>
<tr>
<td>2000-01</td>
<td>4.72</td>
<td>4.69</td>
<td>2.58</td>
<td>1.09</td>
</tr>
<tr>
<td>2001-02</td>
<td>3.92</td>
<td>3.88</td>
<td>2.05</td>
<td>1.10</td>
</tr>
<tr>
<td>2002-03</td>
<td>4.92</td>
<td>4.88</td>
<td>2.57</td>
<td>1.12</td>
</tr>
<tr>
<td>2003-04</td>
<td>9.03</td>
<td>8.70</td>
<td>4.26</td>
<td>1.12</td>
</tr>
<tr>
<td>2004-05</td>
<td>8.02</td>
<td>7.83</td>
<td>3.72</td>
<td>1.12</td>
</tr>
<tr>
<td><strong>(B) SGB</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>4.13</td>
<td>4.11</td>
<td>1.42</td>
<td>1.27</td>
</tr>
<tr>
<td>2006-07</td>
<td>7.60</td>
<td>7.54</td>
<td>2.65</td>
<td>1.07</td>
</tr>
<tr>
<td>2007-08</td>
<td>8.31</td>
<td>8.25</td>
<td>3.04</td>
<td>1.07</td>
</tr>
<tr>
<td>Average JAGB</td>
<td>4.57</td>
<td>4.50</td>
<td></td>
<td>1.09</td>
</tr>
<tr>
<td>Average SGB</td>
<td>6.68</td>
<td>6.63</td>
<td></td>
<td>1.07</td>
</tr>
</tbody>
</table>
Reddy (1994) concluded that the solvency ratio showed that of more fund required by Mulkanoor co-operative rural bank was provided by creditors.

4.2.4: Economic performance ratios

4.2.4.1 Burden efficiency ratio:

It indicates burden of operating expenses on business, so lower ratio indicates good performance of the bank.

4.2.4.2 Efficiency ratio:

It indicates the amount of cost incurred for every one rupee of income. Hence, lower ratio is always desirable.

Table 4.7 reveals year wise various economic performance ratios of the bank, viz, burden efficiency ratio, efficiency ratio, business growth ratio and operating expenses growth ratio. The data indicated that burden efficiency ratio was not uniform during the period of study. It ranged between 0.003 (2005-06) to 0.059 (1994-95). This implies good efficiency of the bank.

4.2.4.3 Business growth ratio:

It also indicates ununiform trend and it remained more than unity in all the years. This ratio ranged between 1.08:1 (2003-04) to 1.40:1 (1996-97). On an average, the business increased by 22 per cent for the JAGB indicating a significant a growth in business.

4.2.4.4 Operating expenses growth ratio:

It also showed an ununiform trend and ranged between 0.96:1 (2004-05) and 1.49:1 (2001-02) for JAGB. In case of SGB, it varied between 1.07:1 (2007-08) and 5.08:1 (2006-07).
Table 4.7: Economic performance ratios of JAGB/SGB

<table>
<thead>
<tr>
<th>Year</th>
<th>Burden efficiency ratio</th>
<th>Efficiency ratio (cost-income)</th>
<th>Business growth ratio</th>
<th>Operating expenses growth ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>0.057</td>
<td>2.72</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>1993-94</td>
<td>0.053</td>
<td>2.54</td>
<td>1.29</td>
<td>1.18</td>
</tr>
<tr>
<td>1994-95</td>
<td>0.059</td>
<td>3.98</td>
<td>1.15</td>
<td>1.27</td>
</tr>
<tr>
<td>1995-96</td>
<td>0.041</td>
<td>2.36</td>
<td>1.37</td>
<td>0.97</td>
</tr>
<tr>
<td>1996-97</td>
<td>0.028</td>
<td>1.35</td>
<td>1.40</td>
<td>1.04</td>
</tr>
<tr>
<td>1997-98</td>
<td>0.022</td>
<td>0.57</td>
<td>1.35</td>
<td>1.03</td>
</tr>
<tr>
<td>1998-99</td>
<td>0.021</td>
<td>0.54</td>
<td>1.23</td>
<td>1.18</td>
</tr>
<tr>
<td>1999-00</td>
<td>0.020</td>
<td>0.49</td>
<td>1.20</td>
<td>1.11</td>
</tr>
<tr>
<td>2000-01</td>
<td>0.019</td>
<td>0.46</td>
<td>1.09</td>
<td>1.02</td>
</tr>
<tr>
<td>2001-02</td>
<td>0.026</td>
<td>0.64</td>
<td>1.10</td>
<td>1.49</td>
</tr>
<tr>
<td>2002-03</td>
<td>0.028</td>
<td>0.65</td>
<td>1.12</td>
<td>1.11</td>
</tr>
<tr>
<td>2003-04</td>
<td>0.020</td>
<td>0.71</td>
<td>1.08</td>
<td>1.10</td>
</tr>
<tr>
<td>2004-05</td>
<td>0.021</td>
<td>0.81</td>
<td>1.20</td>
<td>0.96</td>
</tr>
<tr>
<td>(B)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>0.003</td>
<td>0.77</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2006-07</td>
<td>0.013</td>
<td>0.68</td>
<td>1.23</td>
<td>5.08</td>
</tr>
<tr>
<td>2007-08</td>
<td>0.009</td>
<td>0.67</td>
<td>1.23</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Note: NA= Date not available

4.2.5: Operational performance ratios

Table 4.8 reveals year wise operational performance ratios like productivity per staff, per branch, uses to source ratio and non-performing advances (NPA) ratio of the bank. It can be seen from the table that productivity per staff and per branch increased continuously in all the years. After the merger of JAGB into newly formed Saurashtra Gramin Bank, a considerable increase in both the productivities was noticed. This implies that the efficiency of bank’s staff improved significantly in the era of competition. This is a healthy sign and the bank has to maintain this tempo in future as well to keep pace with the changed scenario at national and international levels.

Uses to source ratio indicates that progress in fund development were on an average, 40 and 62 per cent in
JAGB and SGB, respectively. Non performance advance ratio showed nearly decreasing trend except for the period 2000-01 to 2002-03. It is also good sign of operational performance.

On the whole, the performance and viability reveals by various ratios we have found sound and considerable improvement of the bank, in size and volume of business during study period.

**Table 4.8: Operational performance ratios of Junagadh Amreli Gramin Bank/Saurashtra Gramin Bank**

<table>
<thead>
<tr>
<th>Year</th>
<th>Productivity per staff</th>
<th>Productivity per branch</th>
<th>Uses to sources ratio</th>
<th>Non performing advances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992-93</td>
<td>1040</td>
<td>36112</td>
<td>0.46</td>
<td>NA</td>
</tr>
<tr>
<td>1993-94</td>
<td>1340</td>
<td>46411</td>
<td>0.38</td>
<td>NA</td>
</tr>
<tr>
<td>1994-95</td>
<td>1549</td>
<td>53266</td>
<td>0.33</td>
<td>NA</td>
</tr>
<tr>
<td>1995-96</td>
<td>2125</td>
<td>73187</td>
<td>0.30</td>
<td>NA</td>
</tr>
<tr>
<td>1996-97</td>
<td>3042</td>
<td>102339</td>
<td>0.31</td>
<td>0.187</td>
</tr>
<tr>
<td>1997-98</td>
<td>4119</td>
<td>153044</td>
<td>0.37</td>
<td>0.108</td>
</tr>
<tr>
<td>1998-99</td>
<td>5192</td>
<td>184444</td>
<td>0.38</td>
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<tr>
<td>1999-00</td>
<td>6221</td>
<td>221410</td>
<td>0.39</td>
<td>0.097</td>
</tr>
<tr>
<td>2000-01</td>
<td>6806</td>
<td>258315</td>
<td>0.43</td>
<td>0.128</td>
</tr>
<tr>
<td>2001-02</td>
<td>7589</td>
<td>206322</td>
<td>0.44</td>
<td>0.122</td>
</tr>
<tr>
<td>2002-03</td>
<td>8546</td>
<td>329227</td>
<td>0.43</td>
<td>0.152</td>
</tr>
<tr>
<td>2003-04</td>
<td>9354</td>
<td>354990</td>
<td>0.47</td>
<td>0.081</td>
</tr>
<tr>
<td>2004-05</td>
<td>11130</td>
<td>425556</td>
<td>0.49</td>
<td>0.031</td>
</tr>
<tr>
<td>2005-06</td>
<td>13862</td>
<td>65147</td>
<td>0.67</td>
<td>0.019</td>
</tr>
<tr>
<td>2006-07</td>
<td>23355</td>
<td>79606</td>
<td>0.56</td>
<td>0.017</td>
</tr>
<tr>
<td>2007-08</td>
<td>28766</td>
<td>96959</td>
<td>0.60</td>
<td>0.016</td>
</tr>
</tbody>
</table>

Note: NA= Date not available
4.3.1: Cost of credit for different agricultural loans.

The various expenses which incurred for getting loan from financial institutions *viz.*, obtaining needed records, traveling expenses, incidental expenses, *etc.* are termed as cost of credit. Even though uniform rate of interest may be charged, the farmers may find their loan costlier. Therefore, it becomes essential to examine the cost incurred in getting agricultural loan. It is also an important factor which affects the extent of utilization of credit. For this study, the loans granted by the bank were purpose-wise classified into following five groups.

(i) Crop loan: i.e. seasonal loan for various crops

(ii) Minor irrigation: e.g. loan for dug well, oil engine electric motor, *etc.*

(iii) Livestock: e.g. loan for milch buffalo, cow, sheep unit, *etc.*

(iv) Other agricultural loan: e.g. loan for bullock, tractor, power tiller, opener, thrasher, *etc.*

(v) Kisan Mitra: i.e. loan for two wheel vehicle

The details of purposewise average non-monetary transaction cost per borrower are given in Table 4.9. The table reveals that, on an average, total non-monetary transaction cost was to the tune of Rs.653.50 per borrower. The highest cost was noticed in case of loan granted for minor irrigation purpose (Rs.824.50), followed by other agricultural loan (Rs.707.38), livestock (Rs.663.13), Kisan Mitra (Rs.567.00) and the lowest was found in case of crop loan (Rs.505.50). In case of minor irrigation and other
Table 4.9: The purpose wise average non-monetary transaction cost

<table>
<thead>
<tr>
<th>Particular</th>
<th>No. of trips</th>
<th>Traveling expenses for each trip</th>
<th>Total traveling expenses</th>
<th>Total hours spent on each trip</th>
<th>Total hours spent</th>
<th>Opportunity cost of total hours spent</th>
<th>Incidental expenses for food and other items per trip</th>
<th>Total expenses on food and other items</th>
<th>Total expenses on food and other items</th>
<th>Monetary total expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop loan</td>
<td>4</td>
<td>15.75</td>
<td>63.00</td>
<td>7.15</td>
<td>29.00</td>
<td>332.50</td>
<td>27.50</td>
<td>110.00</td>
<td>505.50</td>
<td></td>
</tr>
<tr>
<td>Kisan Mitra</td>
<td>4</td>
<td>15.75</td>
<td>63.00</td>
<td>7.50</td>
<td>31.20</td>
<td>390.00</td>
<td>28.50</td>
<td>114.00</td>
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<td>31.15</td>
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<td>202.50</td>
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<td>129.50</td>
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<td>39.05</td>
<td>493.75</td>
<td>28.75</td>
<td>201.25</td>
<td>824.50</td>
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<tr>
<td>Other loan</td>
<td>7</td>
<td>18.50</td>
<td>129.50</td>
<td>4.25</td>
<td>30.55</td>
<td>381.88</td>
<td>28.00</td>
<td>196.00</td>
<td>707.38</td>
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<tr>
<td>Overall</td>
<td>5.4</td>
<td>16.55</td>
<td>91.25</td>
<td>6.16</td>
<td>32.19</td>
<td>377.38</td>
<td>27.45</td>
<td>148.75</td>
<td>653.50</td>
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</tr>
</tbody>
</table>
agricultural loan, the number of trips were more for various formalities which ultimately increased the transaction cost.

The break-up of average non monetary transaction cost indicated that the opportunity cost ranked first (Rs.377.38) among all the items of the cost, followed by incidental expenses (Rs.148.75) and traveling expenses (Rs.91.25). This type of cost may be minimized by simplifying the lending policy and procedure of the bank.

The data on cost of obtaining various records for getting the loan sanctioned are presented in Table 4.10. As can be seen from the table, the overall total cost of obtaining records was worked out to be Rs.1910. Among the various types of the loan, highest cost was incurred for minor irrigation (Rs.3040), followed by other agricultural loan (Rs.2440), livestock (Rs.1465), Kisan Mitra (Rs.1390) and crop loan (Rs.1215). This implies that the number of formalities to be observed in getting the loan sanctioned was relatively less in case of crop loan, Kisan Mitra and livestock. The table further shows that, among the different items of the cost, the average expenditure incurred in obtaining insurance ranked first (Rs.915). It was followed by the inspection charge (Rs.500), title clear certificate (Rs.200), no due certificate (Rs.115), quotation from dealers (Rs.80), geology certificate (Rs.60), revenue records (Rs.25) and photographs (Rs.15).
<table>
<thead>
<tr>
<th>Particulars</th>
<th>Corp loan</th>
<th>Kisan Mitra</th>
<th>Livestock</th>
<th>Minor irrigation</th>
<th>Other agricultural loan</th>
<th>Overall</th>
</tr>
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<tr>
<td>No due certificate</td>
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<td>150</td>
<td>75</td>
<td>150</td>
<td>150</td>
<td>115</td>
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<tr>
<td>Other revenue record</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
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<td>25</td>
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<tr>
<td>Title clear certificate</td>
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<td>-</td>
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<td>500</td>
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<td>Geologist certificate</td>
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<td>60</td>
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<td>Quotation from dealers</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>150</td>
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<td>80</td>
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<td>Photograph</td>
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<td>15</td>
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<td>15</td>
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</tr>
<tr>
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<td>600</td>
<td>750</td>
<td>1600</td>
<td>1000</td>
<td>915</td>
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<td>Inspection charges</td>
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<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1215</strong></td>
<td><strong>1390</strong></td>
<td><strong>1465</strong></td>
<td><strong>3040</strong></td>
<td><strong>2440</strong></td>
<td><strong>1910</strong></td>
</tr>
</tbody>
</table>
The data on purposewise amount of loan granted as well as all types of cost are furnished in Table 4.11. The table reveals that the average face value of the loan was to the tune of Rs.27000 per borrower. Among the various types of loan, the highest magnitude of Rs.49000/- was observed in case of minor irrigation, followed by crop loan, livestock, other agricultural loan (Rs.25,000 each) and Kisan Mitra (Rs.20,000). The overall total cost of credit was amounted to Rs.2,563.50 per borrower. Thus, the average actual credit availed by the borrower was worked out to be Rs.24,436.50. This implies that the borrower is in fact better off by Rs.24,436.50 and not by Rs.27,000, the face value of the loan. However, it is important to note that the borrower would be obliged to pay the interest charge on the face value of the loan. The average percentage of total cost of credit to face value of loan was 9.49 per cent. It was found the highest in other agricultural loan (12.59%), followed by Kisan Mitra (9.79%), minor irrigation (9.66%), livestock (8.51%) and the lowest in case of crop loan (6.88%).

Shiyani and Bhatt (1990) in their study of commercial bank in Junagadh district found 3.82 per cent average cost of credit. Srinivasan and Satish (2001) concluded that high transaction cost in the Indian rural credit system which critically affected the viability of the rural banking system.
Table 4.11: The purpose wise loan granted and various cost incurred

<table>
<thead>
<tr>
<th>Particular</th>
<th>Crop loan</th>
<th>Kissan mitra</th>
<th>Livestock</th>
<th>Minor irrigation</th>
<th>Other agricultural Loan</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face value of loan</td>
<td>25000.00</td>
<td>20000.00</td>
<td>25000.00</td>
<td>40000.00</td>
<td>25000.00</td>
<td>27000.0</td>
</tr>
<tr>
<td>Non monetary transaction cost</td>
<td>505.50</td>
<td>567.00</td>
<td>663.13</td>
<td>824.50</td>
<td>707.38</td>
<td>653.50</td>
</tr>
<tr>
<td>Cost of obtaining records</td>
<td>1215.00</td>
<td>1390.00</td>
<td>1465.00</td>
<td>3040.00</td>
<td>2440.00</td>
<td>1910.00</td>
</tr>
<tr>
<td>Overall total cost</td>
<td>1720.50</td>
<td>1957.00</td>
<td>2128.13</td>
<td>3864.50</td>
<td>3147.38</td>
<td>2563.50</td>
</tr>
<tr>
<td>Actual credit availed (P-X=C)</td>
<td>23279.50</td>
<td>18043.00</td>
<td>22871.87</td>
<td>36135.50</td>
<td>21852.62</td>
<td>24436.5</td>
</tr>
<tr>
<td>Percent of total cost to face value of loan</td>
<td>6.88</td>
<td>9.79</td>
<td>8.51</td>
<td>9.66</td>
<td>12.59</td>
<td>9.49</td>
</tr>
</tbody>
</table>

4.4.1 Recovery and overdue position

The increasing quantum of overdue clearly indicates that, the utilization of the loans has not been in right direction. In reducing overdue amount, the recovery operation plays a dominant role. Recovery is an important component upon which the success and prosperity of the bank depends. A higher degree of recovery would lead the bank to increase the flow of credit to agriculture sector, and other sectors. Poor performance may reduce the capacity of the bank. A higher degree of loan recovery is therefore essential for any bank. For this, it is essential to evaluate overdue position and recovery performance of JAGB/SGB with a view to enhance recovery performance and thereby reduce problem of overdue and unproductive use of fund.
The yearwise details of overdue and loan disbursed are furnished in Table 4.12 and also depicted in Fig. 4.6, 4.7 and 4.8. The table reveals that the overall overdue position indicated mixed trend during the entire period. The overdue of the bank increased from Rs.343.72 lakhs (1992-93) to Rs.7318.97 lakhs (2007-08). In case of per cent increase in total overdue over previous year, the highest increment was found 51 (2000-01) and 145 (2007-08) per cent for JAGB and SGB, respectively, while in case of agricultural sector, the corresponding figure was 53.50 (2000-01) and 171.0 per cent (2007-08). This implies that problem of overdue still needs due attention for to increase the recovery performance. The table also reveals overdue as a percentage to outstanding and loan disbursed. Total overdue to total outstanding has shown a decreasing trend in most of the years. It ranged from 63.81 (1993-94) to 9.29 per cent (2004-05) and 103.71 (1992-93) to 10.18 per cent (2004-05) for overall and agricultural sector, respectively for JAGB. In case of SGB, it ranged from 6.65 (2006-07) to 13.43 per cent (2007-08) and 6.72 (2006-07) to 15.48 per cent (2006-07). The same trend was observed for overdue to loan disbursed in overall and farm sector.

The yearwise demand, recovery and overdue position of the bank are given in Table 4.13 and also depicted in Fig.4.9. It revealed that the recovery of agricultural sector was Rs.15,670 crores (31.32%) in 1992-93. It increased to Rs.340.18 crores (89.57%) in 2004-05 and Rs.3761.67 crores in 2007-08. Highest recovery of 92.50 per cent was
Table 4.12: Yearwise overdue and percentage change over previous year

<table>
<thead>
<tr>
<th>Year</th>
<th>Overdue</th>
<th>Increase over previous year (%)</th>
<th>Farm sector overdue</th>
<th>Increase over previous year (%)</th>
<th>Total Overdue to total advance (%)</th>
<th>Farm sector overdue to total advance (%)</th>
<th>Total overdue to total loan disbursed (%)</th>
<th>Total farm sector overdue to farm sector loan disbursed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) JAGB</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1992-93</td>
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<td>-</td>
<td>34372</td>
<td>-</td>
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<tr>
<td>1993-94</td>
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<td>40681</td>
<td>18.36</td>
<td>63.81</td>
<td>98.15</td>
<td>102.00</td>
<td>128.00</td>
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<tr>
<td>1994-95</td>
<td>24246</td>
<td>-40.4</td>
<td>22438</td>
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<td>36.84</td>
<td>61.26</td>
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<td>64.00</td>
</tr>
<tr>
<td>1995-96</td>
<td>19797</td>
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<td>17928</td>
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<td>37.04</td>
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<td>33.00</td>
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<tr>
<td>1996-97</td>
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<td>22.73</td>
<td>22407</td>
<td>24.98</td>
<td>20.94</td>
<td>24.73</td>
<td>23.00</td>
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<td>24671</td>
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<td>22664</td>
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<td>13.8</td>
<td>17.23</td>
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</tr>
<tr>
<td>1998-99</td>
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<td>28310</td>
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<td>13.43</td>
<td>15.48</td>
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<td>18.00</td>
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</table>
Fig. 4.6: Yearwise total and farm sector overdue of JAGB/SGB

The bar chart shows the yearwise total and farm sector overdue of JAGB/SGB. The x-axis represents the years from 1992-93 to 2007-08, and the y-axis represents the amount in thousand Rs. The chart indicates a significant increase in the overdue amounts from 2006-07 onwards.
Fig. 4.8: Yearwise percentage of overdue to outstanding of JAGB/SGB

<table>
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<th>Year</th>
<th>Demand</th>
<th>Recovery</th>
<th>Overdue</th>
<th>Recovery %</th>
<th>Demand</th>
<th>Recovery</th>
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<td>15670</td>
<td>34372</td>
<td>31.32</td>
</tr>
</tbody>
</table>

- **Overdue percentage**
  - Farm sector overdue to outstanding (%)
  - Total overdue to outstanding (%)

**Legend:**
- Black: Farm sector overdue to outstanding (%)
- Gray: Total overdue to outstanding (%)

**Source:** Table 4.13: Year wise demand, recovery and overdue of JAGB/SGB.
<table>
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<th>Year</th>
<th>Total</th>
<th></th>
<th>Farm sector</th>
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<td></td>
<td></td>
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<td>Recovery</td>
<td>Overdue</td>
</tr>
<tr>
<td>(A) JAGB</td>
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<td>66640</td>
</tr>
<tr>
<td>2003-04</td>
<td></td>
<td>364393</td>
<td>304122</td>
<td>60271</td>
</tr>
<tr>
<td>2004-05</td>
<td></td>
<td>415544</td>
<td>370095</td>
<td>45449</td>
</tr>
<tr>
<td>(B) SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td></td>
<td>4220267</td>
<td>3919235</td>
<td>301032</td>
</tr>
<tr>
<td>2006-07</td>
<td></td>
<td>3677744</td>
<td>3318998</td>
<td>298466</td>
</tr>
<tr>
<td>2007-08</td>
<td></td>
<td>4832997</td>
<td>4101100</td>
<td>731897</td>
</tr>
</tbody>
</table>
Fig. 4.9: Yearwise percentage of recovery from total and farm sector by JAGB/SGB
observed in 2005-06. A closed association of bank staff with borrowers and higher production of crops resulted in better recovery performance.

The sizewise number of non-defaulters, gross cropped area, cost $C_2$ and income of selected borrowers are furnished in Table 4.14. The table reveals that among the 73 non-defaulters, there were 4 marginal, 27 small, 25 medium and 17 large size non-defaulters. The average cost $C_2$ per hectare of all the crops together was to the tune of Rs.31221. It ranged between Rs.29067 in case of large farmers and Rs.33535 in case of marginal farmers. On the other hand, average per hectare income was Rs.48855. It ranged between Rs.47022 in case of large farmers and Rs.50541 in case of medium farmers. This table implies profitability of crop enterprise to the borrowers in study area.

**Table 4.14: Gross cropped area, total cost and income of non-defaulters**

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of borrowers</th>
<th>Gross cropped area (ha)</th>
<th>Cost-$C_2$ (Rs.)</th>
<th>Income (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal</td>
<td>4</td>
<td>6.6374</td>
<td>222588 (33535)</td>
<td>314509 (47384)</td>
</tr>
<tr>
<td>Small</td>
<td>27</td>
<td>73.1713</td>
<td>2305588 (31509)</td>
<td>3624896 (49540)</td>
</tr>
<tr>
<td>Medium</td>
<td>25</td>
<td>95.0146</td>
<td>3165518 (33317)</td>
<td>4802110 (50541)</td>
</tr>
<tr>
<td>Large</td>
<td>17</td>
<td>109.3722</td>
<td>3179067 (29067)</td>
<td>5142893 (47022)</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>284.1955</td>
<td>8872871 (31221)</td>
<td>13884408 (48855)</td>
</tr>
</tbody>
</table>

(Figures in brackets indicate per hectare)
The data presented in Table 4.15 revealed that the average amount of overdue per defaulter was Rs.25129, which varied from Rs.15843 in case of marginal farmers to Rs.39280 in case of large farmers. It can also be observed from the table that the average amount of overdue per hectare was Rs.8765 which ranged from Rs.5477 in case of large farmers to Rs.14867 in case of marginal farmers. Percentage of overdue to outstanding was found as high as 75.07 per cent and it varied from 64.55 per cent in case of large farmers to 100.00 per cent in case of marginal farmers. The gross profit, on an average, per hectare was found Rs.7317 and it ranged Rs.5019 in case of large farmers to Rs.9790 in case of marginal farmers. Despite the profitability of the crops, the higher overdue could be attributed mainly to the tendency of borrowers not to repay the loan and higher expenditure on food and non food items.

Hosamani et al (1997) in their study of Malprabha Gramin Bank of Dharwad district in Karnataka concluded that an increasing trend in overdue was found due to concentrated efforts of the bank. Prasad (2006) in his study of Godavari district in Andhra Pradesh found 70 per cent recovery performance in Primary Agricultural Co-operative Societies.

Kalra and Singh, (2000) concluded that overdues for all 196 RRBs increased ten fold in ten years. Balishter and Singh (1990) in their study of IRDP in Etah district of Uttar Pradesh concluded that the percentage of overdue was
Table 4.15: Farm sizewise overdue, cost, income and gross profit of selected defaulters

<table>
<thead>
<tr>
<th>Size (No. of defaulters)</th>
<th>Gross cropped area (ha)</th>
<th>Total overdue</th>
<th>Overdue per defaulter</th>
<th>Overdue per ha.</th>
<th>Overdue as % to outstanding</th>
<th>Total amount of outstanding</th>
<th>Cost C₂</th>
<th>Income</th>
<th>Gross profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal (6)</td>
<td>6.3941</td>
<td>95059</td>
<td>15843</td>
<td>14867</td>
<td>100.00</td>
<td>95059</td>
<td>144644</td>
<td>207242</td>
<td>62598</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22622</td>
<td>32711</td>
<td>(9790)</td>
</tr>
<tr>
<td>Small (43)</td>
<td>85.0698</td>
<td>937081</td>
<td>21793</td>
<td>11015</td>
<td>72.40</td>
<td>1294380</td>
<td>2063263</td>
<td>2832808</td>
<td>769545</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24254</td>
<td>33300</td>
<td>(9446)</td>
</tr>
<tr>
<td>Medium (17)</td>
<td>59.0062</td>
<td>498994</td>
<td>29353</td>
<td>8457</td>
<td>87.03</td>
<td>573364</td>
<td>1535181</td>
<td>1952362</td>
<td>41781</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26017</td>
<td>33087</td>
<td>(7070)</td>
</tr>
<tr>
<td>Large (9)</td>
<td>64.5490</td>
<td>353524</td>
<td>39280</td>
<td>5477</td>
<td>64.55</td>
<td>547684</td>
<td>1363126</td>
<td>1687071</td>
<td>323945</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21118</td>
<td>26136</td>
<td>(5019)</td>
</tr>
<tr>
<td>All (75)</td>
<td>215.0191</td>
<td>1884658</td>
<td>25129</td>
<td>8765</td>
<td>75.07</td>
<td>2510487</td>
<td>5106214</td>
<td>6679483</td>
<td>1573269</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23748</td>
<td>31065</td>
<td>(7317)</td>
</tr>
</tbody>
</table>

Figures in brackets indicates per hectare
relatively higher in case of loan availed for agricultural purpose as compared to the loan taken for non-agricultural purposes.

4.5.1 Contribution of variables in discriminating defaulters and non-defaulters

From the institution’s point of view, it is essential to understand the factors responsible for default in repayment of loan so that necessary measures can be taken to reduce the extent of overdue. Thus, in order to examine the relative importance of different factors in discriminating the defaulters and non-defaulters, the discriminant function analysis was carried out. The co-efficients of the discriminant function measure the net effect of an individual variable when all other variables were taken as constant.

Table 4.16 reveals the values of mean and the mean differences in characteristics of defaulters. Relatively higher mean difference was observed in case of consumption expenditure, percentage of irrigated area to total area and in nitrogen fertilizer consumption. These were the major factors classifying the borrowers into defaulter and non-defaulter group.

The discriminant function fitted to the data for defaulters is as follows:

\[ Z = -0.4466X_1 -0.2402X_2 -0.0048X_4 -0.1955X_5 + 0.0006X_6 - 0.0044X_7 + 0.0000X_8 -0.0527X_9 + 0.0392X_{10} + 0.0655X_{11} \]
## Table 4.16: Means and mean differences in characteristics of defaulter and non-defaulter group

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Characteristics</th>
<th>Mean value</th>
<th>Mean of mean values (both groups)</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Defaulter</td>
<td>Non-defaulter</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Literacy index (X1)</td>
<td>1.42</td>
<td>1.59</td>
<td>1.505</td>
</tr>
<tr>
<td>2</td>
<td>Type of farmer (X2)</td>
<td>0.92</td>
<td>0.95</td>
<td>0.935</td>
</tr>
<tr>
<td>3</td>
<td>Percentage of irrigated area to total area (X4)</td>
<td>44.32</td>
<td>66.26</td>
<td>55.29</td>
</tr>
<tr>
<td>4</td>
<td>Operating area (ha) (X5)</td>
<td>2.1800</td>
<td>2.67</td>
<td>2.425</td>
</tr>
<tr>
<td>5</td>
<td>Percentage of crop production income to total income (X6)</td>
<td>62.18</td>
<td>65.47</td>
<td>63.825</td>
</tr>
<tr>
<td>6</td>
<td>Percentage of other income to total income (X7)</td>
<td>37.82</td>
<td>34.53</td>
<td>36.175</td>
</tr>
<tr>
<td>7</td>
<td>Consumption expenditure (Rs.) (X8)</td>
<td>32340.96</td>
<td>38429.54</td>
<td>35385.25</td>
</tr>
<tr>
<td>8</td>
<td>N₂ consumption (Kg.) (X9)</td>
<td>28.04</td>
<td>46.44</td>
<td>37.24</td>
</tr>
<tr>
<td>9</td>
<td>P₂O₅ consumption (Kg.) (X10)</td>
<td>37.50</td>
<td>40.11</td>
<td>38.805</td>
</tr>
<tr>
<td>10</td>
<td>K₂O consumption (Kg.) (X11)</td>
<td>0.00</td>
<td>2.98</td>
<td>1.49</td>
</tr>
</tbody>
</table>
In order to know the relative importance of each characteristic in its power to discriminate the two groups, the percentage of total distance was computed and it is shown in Table 4.17. The results indicated that the main factors discriminating defaulter and non-defaulter groups were nitrogen fertilizer consumption (-0.0527), potash fertilizer consumption (0.0655) and consumption expenditure (0.0000245), while phosphorus fertilizer consumption (0.0392) percentage of other income to total income (-0.0044) and percentage of crop production income to total income (0.0006) were bringing them closer. The value of F was tested with 10 and 138 degrees of freedom and was found to be highly significant since the table value of F at one per cent level of significance was 5.169. This indicates that ten variables considered in the function were of immense importance in discriminating the two groups under study. Their respective contribution in discriminating the two groups were 65.62, 13.21 and 10.09 per cent.

Chand and Sidhu (1985) and Hosamani et al (1997) opined that discriminant function analysis was quite efficient in classifying the borrowers into defaulter and non-defaulter groups. Chand and Sidhu also identified the factors such as consumption expenditure, fertilizer consumption and other income more responsible for discriminating defaulter and non-defaulter groups by employing linear discriminant function analysis.
Table 4.17: Percentage contribution of the individual characteristics to the total distance measured

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Characteristics</th>
<th>Mean difference</th>
<th>Co-efficient</th>
<th>Co-efficient x mean difference</th>
<th>Percentage to the total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Literacy index (X1)</td>
<td>-0.17</td>
<td>-0.4466</td>
<td>0.0755</td>
<td>5.1106</td>
</tr>
<tr>
<td>2</td>
<td>Type of farmer (X2)</td>
<td>-0.03</td>
<td>-0.2402</td>
<td>0.0062</td>
<td>0.4219</td>
</tr>
<tr>
<td>3</td>
<td>Percentage of irrigated area to total area (X4)</td>
<td>-21.94</td>
<td>-0.0048</td>
<td>0.1049</td>
<td>7.0985</td>
</tr>
<tr>
<td>4</td>
<td>Operating area (ha) (X5)</td>
<td>-0.49</td>
<td>-0.1955</td>
<td>0.0954</td>
<td>6.4510</td>
</tr>
<tr>
<td>5</td>
<td>Percentage of crop production income to total income (X6)</td>
<td>-3.29</td>
<td>0.0006</td>
<td>-0.0018</td>
<td>-0.1236</td>
</tr>
<tr>
<td>6</td>
<td>Percentage of other income to total income (X7)</td>
<td>3.29</td>
<td>-0.0044</td>
<td>-0.0146</td>
<td>-0.9867</td>
</tr>
<tr>
<td>7</td>
<td>Consumption expenditure (Rs.) (X8)</td>
<td>-6088.58</td>
<td>0.00000245</td>
<td>0.1492</td>
<td>10.0919</td>
</tr>
<tr>
<td>8</td>
<td>N consumption (Kg.) (X9)</td>
<td>-18.41</td>
<td>-0.0527</td>
<td>0.9700</td>
<td>65.6239</td>
</tr>
<tr>
<td>9</td>
<td>P₂O₅ consumption (Kg.) (X10)</td>
<td>-2.60</td>
<td>0.0392</td>
<td>-0.1019</td>
<td>-6.8956</td>
</tr>
<tr>
<td>10</td>
<td>K₂O consumption (Kg.) (X11)</td>
<td>-2.98</td>
<td>0.0655</td>
<td>0.1952</td>
<td>13.2085</td>
</tr>
<tr>
<td></td>
<td>D²</td>
<td></td>
<td></td>
<td>1.4789988</td>
<td>100</td>
</tr>
</tbody>
</table>
4.6 Non-performing assets of JAGB/SGB

The amount of non performing assets is one of the factors which influence banking efficiency in financing credit to priority sector. So it is essential to know the level of NPA and its effect on bank.

The position of non performing assets (NPA) of JAGB and SGB are furnished in Table 4.18 and also depicted in Fig.4.10 The table reveals that NPA has been continuously increasing from 1996-97 to 2002-03, except 1997-98. After this, a considerable decline was noticed in 2003-04 and 2004-05 for JAGB. The net NPA showed ununiform trend and it ranged between Rs.45.32 lakhs (1997-98) and Rs.319.44 lakhs (2002-03) for JAGB. It indicates significant fall in amount of net NPA. The NPA to advance indicating decreasing trend except between 2000-01 to 2002-03. It ranged between 7.87 per cent (2003-04) and 17.09 per cent (1996-97) for JAGB. Net NPA to advance share was quite less. It ranged from 1.46 per cent (2004-05) to 8.51 per cent (2002-03) for JAGB. In case of SGB, there was not a serious problem of NPA. Its share in advance was quite less and further can be minimized by well operational performance.

Shah (2003) reveals that slower growth in institutional finance due to mounting non performing assets.
### Table 4.18: Non-performing assets of JAGB and SGB

<table>
<thead>
<tr>
<th>Year</th>
<th>N P A (Rs.'000)</th>
<th>Net NPA (Rs.'000)</th>
<th>NPA to total advances (%)</th>
<th>Net NPA to total advances (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JAGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996-97</td>
<td>19829</td>
<td>5390</td>
<td>17.09</td>
<td>4.65</td>
</tr>
<tr>
<td>1997-98</td>
<td>18333</td>
<td>4532</td>
<td>10.26</td>
<td>2.54</td>
</tr>
<tr>
<td>1998-99</td>
<td>22779</td>
<td>8405</td>
<td>10.17</td>
<td>3.75</td>
</tr>
<tr>
<td>1999-00</td>
<td>25516</td>
<td>10688</td>
<td>9.19</td>
<td>3.85</td>
</tr>
<tr>
<td>2000-01</td>
<td>39119</td>
<td>20550</td>
<td>12.1</td>
<td>6.36</td>
</tr>
<tr>
<td>2001-02</td>
<td>40515</td>
<td>23258</td>
<td>11.6</td>
<td>6.66</td>
</tr>
<tr>
<td>2002-03</td>
<td>54067</td>
<td>31944</td>
<td>14.41</td>
<td>8.51</td>
</tr>
<tr>
<td>2003-04</td>
<td>31110</td>
<td>20427</td>
<td>7.87</td>
<td>5.17</td>
</tr>
<tr>
<td>2004-05</td>
<td>15083</td>
<td>7141</td>
<td>3.08</td>
<td>1.46</td>
</tr>
<tr>
<td>(B)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>69373</td>
<td>29395</td>
<td>1.88</td>
<td>0.8</td>
</tr>
<tr>
<td>2006-07</td>
<td>76830</td>
<td>4448</td>
<td>1.71</td>
<td>0.1</td>
</tr>
<tr>
<td>2007-08</td>
<td>84271</td>
<td>2225</td>
<td>1.55</td>
<td>0.04</td>
</tr>
</tbody>
</table>
Fig. 4.10: Yearwise total and net non-performing assets of JAGB / SGB
SUMMARY AND CONCLUSIONS
CHAPTER-V
SUMMARY AND CONCLUSIONS

Agriculture is backbone of Indian economy. It is the largest sector of the economic activity which provides not only food and raw material but also employment to a vast proportion of population of India. The improved technology has now become capital intensive by attracting huge amount of capital for investment in this sector. For achieving the desired growth to improve the living standard of peoples, institutional credit has been introduced as an instrument by various scheduled banks. The mobilization of scarce resources especially financial resources in planned manner is given due attention. Institutional finance is considered as principal source of external finance to support and accelerate the development of the agricultural sector. Provision of adequate, timely, and liberal credit to the farmers has become an integral part of agricultural development policy in India. Thus, it is necessary to provide credit to this crucial sector. Flow of credit to agricultural sector is the major common problem which plays dominant role in adoption of modern farm technology. For smooth and constant flow of credit, healthy institutional agency is essential so that it can provide needed credit to agricultural sector. All these led to evaluate the performance of institutional finance to agricultural sector. Keeping all these in view, the present study was undertaken to evaluate the
performance of institutional finance to agricultural sector in Junagadh district of Gujarat state with the following specific objectives:

1. To examine the performance of flow of institutional finance to agricultural sector.
2. To study the financial performance and viability of the bank.
3. To assess the cost of agricultural credit for different agricultural loans.
4. To analyze the extent of overdue among different categories of farmers.
5. To identify the factors discriminating defaulters and non-defaulters of agricultural loans.
6. To study Non-Performing Assets of RRBs.

The Saurashtra Gramin Bank (the erstwhile Junagadh Amreli Gramin Bank) of Gujarat state was purposively selected for the study. The study was conducted by utilizing both primary and secondary data collected and compiled from the various sources. The secondary data on various banks parameters were collected using tabulated formats, from the Saurashtra Gramin Bank for the period from 1992-93 to 2007-08. The analyses of advances, deposit, overdue, non-performing assets, loans, business, total income, net income, expenditure, profit and other quantitative aspects were made by using the secondary data.
Primary data were collected by using pretested questionnaire from 148 respondents (75 defaulters and 73 non-defaulters) during the year 2007-08. The households schedule sought information in detail on farmer's cash expenses, borrowing, total income, cropping pattern, livestock income, expenditures etc.

Farmers/borrowers were selected by employing the three stage random sampling techniques. Primarily, Junagadh district and the offices of bank located in Junagadh district were selected. Three talukas of Junagadh district viz., Bhesan, Mangrol and Malia were selected. Secondly, the selected Junagadh-Amreli Gramin Bank/Saurashtra Gramin Bank was requested to provide addresses of one branch of the bank from each selected taluka. Thirdly, a list of defaulters and non-defaulters was obtained from the three selected branches of SGB. In all, 75 defaulters and 73 non-defaulters from different 11 villages in the justification of three branches were ultimately selected.

Tabular and ratio analysis methods were extensively used. Besides, to analyze the data, discriminant function analysis was used in order to study the relative importance of different factors in discriminating defaulter and non-defaulter groups.

The major findings emerged from the study are summarized below:
Total loan disbursed by JAGB/SGB increased from Rs.307.21 lakhs (1992-93) to Rs.43717.18 lakhs (2007-08), while the disbursement of agricultural loan increased from Rs.233.17 lakhs to Rs.38518.33 lakhs during the study period. A quantum jump in the disbursement of agricultural loan could be attributed mainly due to the concentrated efforts of the bank’s staff and financial sector reforms. The volume of business was expanded from Rs.1476.82 lakhs to Rs.138651.00 lakhs, total income from Rs.138.06 lakhs to Rs.7463.49 lakhs and expenditure increased from Rs.197.28 lakhs to 7081.52 lakhs, during 1992-93 to 2007-08. The share of agricultural sector in total loan disbursed was found very high (more than 75 %) during the study period indicating the due emphasis of bank on priority sector lending. Considerable increase in loan disbursed to farm sector over previous year was found and it was the highest (57 %) in 1995-96. The C.D. ratio of SGB was found more than 60 per cent during the entire period which showed healthy sign of bank. Declining trend of number of staff and branches of the bank was noticed. Total staffs were declined from 142 (1992-93) to 130 (2004-05) while the branches were declined from 41 (1992-93) to 34 (2004-05). This implies better productivity of staff and bank which is essential in the era of competition.

Considerable increased was found in various indicators of bank like deposits from Rs.913.55 lakhs to
Rs.34,154.88 lakhs, total outstanding from Rs.562.67 lakhs to Rs.54,495.91 lakhs and agricultural outstanding from Rs.331.44 Lakhs to Rs.44,825.29 lakhs during the entire study period.

The liquidity position of the JAGB as revealed by current ratio and quick ratio was sound with the average of 1.53 and 1.25 of respectively. The corresponding figures for SGB were 1.50 and 0.52. Profitability and return on investment showed an improvement over a period of time which was reflected by the higher gross profit ratio (4.39). The capital turnover ratio indicates sound performance and long term financial safety of the bank over a period of time. Working capital and capital employed turn over ratios were found, on an average, 4.57:1 and 6.68:1 and 4.50:1 and 6.63:1 for JAGB and SGB, respectively, while net capital ratio was more than unity during the study period. Debt equity ratio indicates long term solvency which showed that higher fund requirement of the bank was provided by creditors. Economic performance ratios and operational performance ratios showed expected performance and improvement in size and volume of business. Productivity per staff and per branch increased from Rs.10.40 lakhs to Rs.287.66 lakhs and Rs.36.02 lakhs to Rs.969.59 lakhs during the study period indicating the expected level of bank performance. In operational performance, a
considerable improvement was found in term of size and volume of business.

The average total non-monetary transaction cost was Rs.653.50 per borrower. It was the highest in case of the loan for minor irrigation purpose (Rs.824.50) and the lowest in case of crop loan (Rs.505.50). Overall total cost of obtaining record was found to the tune of Rs.1910.00. It was the highest in case of minor irrigation loan (Rs.3040), while the lowest for crop loan (Rs.1215.00). It was also noticed that among the different items of costs, insurance cost (Rs.915) ranked first. The average total cost incurred per borrower in obtaining loan was Rs.2563.50, which was 9.49 per cent of the face value of loan amount. The highest cost in other agricultural loan was 12.59 per cent of the face value of loan amount and the lowest in case of crop loan (6.88 %).

Mix trend was noticed in overdue position of the bank during entire period of study. The overdue of the bank increased from Rs.343.72 lakhs (1992-93) to Rs.7318.97 lakhs (2007-08). In case of agricultural sector, it increased from Rs.343.72 lakhs (1992-93) to Rs.6939.90 lakhs (2007-08). Highest increment found in overdue over previous year was 51 per cent (2000-01) and 145 per cent (2007-08) for JAGB and SGB, respectively. In agricultural sector, the highest increment of overdue compared to previous year was noticed as much as 53.50 per cent
and 171.00 per cent (2007-08) for JAGB and SGB, respectively. In case of overdue as a percentage to loan outstanding and loan disbursed, a decreasing trend was observed. It declined from 63.81 per cent (1993-94) to 13.43 per cent (2007-08) and from 112.00 per cent (1992-93) to 8.00 per cent (2006-07) respectively for JAGB and SGB. While in case of agricultural sector, it was 103.71 per cent (1992-93) to 6.72 per cent (2006-07) and 147.00 per cent (1992-93) to 7.00 per cent (2006-07) respectively. There was higher degree of recovery with increased trend during the study period. Highest recovery percentage of 92.87 and 92.50 were noticed in 2005-06 for overall and agricultural sector, respectively. The average percentage of overdue to outstanding in defaulter farmers was found very high (75.07%). All the defaulters and non-defaulters earned lucrative profit over cost C2.

There were higher mean differences in case of consumption expenditure, percentage of irrigated area to total area and nitrogen consumption, which classified borrowers into defaulters and non-defaulters. The relative importance of characteristics in discriminating two groups revealed that nitrogen consumption, potash consumption and consumption expenditure were the major factors to discriminate borrowers into defaulters and non-defaulters. Their respective contribution was 65.62, 13.21 and 10.09 per cent.
Amount of NPA increased from Rs. 198.29 lakhs (1996-97) to Rs. 842.71 lakhs (2007-08). The net NPA showed mix trend during study period. NPA to total advances showed decreasing trend and become very less during the last period of study. Net NPA to advances become negligible in last period of study.

Overall performance of flow of institutional finance to agricultural sector reveals by various parameters indicated good performance of the bank during study period. It was also found that the share of agricultural sector in loan outstanding and disbursed was very high. Financial performance and viability of the bank as indicated by profitability return on investment and operational showed a considerable improvement. Liquidity position and capital turnover showed sound performance of the bank. The study of cost of credit indicated that lowest cost was incurred in crop loan for both non-monetary transaction, and obtaining records, while there were nearly double costs in case of other agricultural loans. The amount of overdues continuously increased during the study period, but after establishment of SGB, it increased at faster rate compared to previous year both in overall and agricultural sector. The recovery performance showed an excellent performance which was 92.37 per cent and 92.50 per cent for SGB in both, respectively. Discriminant function analysis revealed that factors like consumption expenditure and N₂
consumption discriminated borrowers into defaulter and non-defaulter groups. Amount of NPA and net NPA increased during study period but, its share in advance was less and negligible.

**Suggestions and policy implications**

(i) The institutional agencies should take timely seasonal programmes of recovery at village level to minimize problem of overdue, non performing assets and also end use of credit if any.

(ii) Adequate and continuous efforts should be made to educate the borrowers regarding end-use of credit for timely repayment of loans.

(iii) The simplification of loaning procedure is highly essential to increase flow of institutional finance to agricultural sector and reduce the cost of credit and to get rid off farmers from tedious and lengthy procedure.

(iv) The institutional agencies should arrange to provide adequate information about loan system and to educate borrowers about the positive impact of institutional credit.

(v) To improve the quality of lending, efficiency of personnel and other related matters, the banks should set up separate research and development cell at the Zonal and Central office levels.
(vi) Financing institutions should increase their agricultural lending without significant increment in the cost of credit.

(vii) Agricultural credit policy of the various banks should keep the poorer farmers as their target-group and drawn up an appropriate credit policy that caters to the need of the target-group. Also the cost of credit for target-group should be relatively lower than the cost of credit to the non-target group of borrowers.

(viii) The financing institutions should make use of the discriminant function as additional tool for classification of prospective borrowers in addition to their classification based on the past dealings.

(ix) The financing institutions should give more emphasis on social background and attitude towards credibility of the borrowers in evaluating the prospective borrowers.


REFERENCES


