CONCLUSION AND SUGGESTIONS

Credit is the lifeblood of modern economic system, in absence of which no system can survive. It plays the role of lubricating oil, which moves swiftly the wheels of economic development in a country. In economic development of India, agriculture still forms the base, which is not away from the need of credit. A majority of the cultivators in India find borrowings necessary, as their own farm savings are inadequate for both financing their various agricultural activities, and in carrying out improvements in productivity of their agricultural operations. A developed and modernised agriculture is fully commercialised and operates for profit motive with the use of new inputs and technologies. The traditional agriculture is basically a technologically motionless phase in which attempted changes usually produced small increase in the production. In the absence of new techniques, any injection of credit will be used primarily to finance non-productive expenditure. Thus, what is required is not state sponsored expansion of rural credit, but a land augmenting technological progress associated with fertilizer-fed hybrid seeds and controlled irrigation facilities to increase productivity per unit of area. Once new technology has been introduced and new inputs are made available in the market, credit will play a significant role in increasing agriculture productivity. The provision of formal credit to agriculture has been, therefore, central to the concern of planners and development economists in post-independent India. A number of policies have been made to infuse social responsibility in the formal financial institutions to extend credit to rural households, in general and farm households, in particular. These policies have succeeded in establishing a vast network of financial institutions in the countryside, and helped to spread the banking culture among in rural areas. But, quantitative progress at the cost of quality, high cost structure of operations in rural areas and mounting overdues became a threat to the viability of the financial institutions. Consequently, the policy of competitive financial system was adopted from 1991 onwards in the provision of agricultural credit to improve the viability of financial agencies. This policy may have direct or indirect influence on the credit flow to agriculture.

As expounded by the Report of the Narasimham Committee on the Financial System (1991), the financial reforms were primarily concerned with the decline in productivity and efficiency of the banking sector. The Report pointed out that the
directed credit had negative effects on the income of banks through concessional interest rates and high administrative costs of such loans. To improve the efficiency, the Committee recommended to reduce the directed credit from the prevailing 40 per cent to 10 per cent of net bank credit over a three-year period. The government did not officially accept this recommendation but followed the strategy of keeping the overall share of priority sector at 40 per cent of net bank credit, and broadening the scope of priority sector lending to encourage diversion form it to the new ranges added to this sector. Consequently, assumption of cross-subsidisation of agricultural credit was relaxed and the lending rate to the ultimate borrowers was rationalised in terms of reduction in the number of concessional slabs and the enhancement of some rates. The other important recommendations include the gradual reduction of cash reserve ratio (CRR) and statutory liquidity ratio (SLR), abolition of branch licensing, closing down of loss making bank branches. Therefore, the banking sector reforms have positive as well as negative influences on the credit flow to agriculture.

The present study has analysed the trends in the credit flow to agriculture and contributing factors during the period 1980-81 to 2009-10 to show the impact of reforms. The analysis was earned out at all-India level and in 17 major states.

For evaluating the effects of the banking sector reforms on agricultural credit in India, the study has tried to analyse the performance of the scheduled commercial banks, regional rural banks and co-operative banks during pre and post-reform periods. For this purpose study period has been divided into three sub-periods namely:

- First Phase (P1)– 1980-81 to 1991-92 (Prior Reforms Period);
- Second Phase (P2)– 1992-93 to 1998-99 (First Reforms Period); and
- Third Phase (P3)– 1999-00 to 2009-10 (Second Reforms Period).

(I) Scheduled Commercial Banks (SCBs):

For evaluating the performance of SCBs, the parameters such as branch expansion, deposit mobilisation, credit lending, credit-deposit ratio, sectoral distribution of credit, and priority sector lending have been undertaken.

In case of branch expansion of scheduled commercial banks over the thirty years, the analysis is carried out to identify the mean percentage variation of expansion in different rural, urban, semi-urban and metropolitan commercial banks branches
during the three periods and alternative hypothesis is accepted in case of rural branches as it is found that the difference between at least two time periods is statistically significant with $P$ value less than 0.001. This shows that there is significant variation in rural bank branches between different time periods. In case of other bank branches the variations are not statistically different having $P$ value more than 0.05 in all cases. It means the expansion in the branches of SCBs other than rural is having similar pattern.

The analysis further found that there is statistically different pattern of expansion of rural branches between P1 and P2, and P1 and P3 as their $P$ values are less than 0.05. The expansion of rural branches of SCBs is having similar pattern in P2 and P3. The expansion in P1 i.e., in pre-reform period, is higher than both the other periods as the mean value of number of rural branches of SCBs in pre-reform period is 8.20, which is greater than the values in first and second reform periods as -0.94 and -0.08 respectively. It is meant that rural bank branch expansion before banking reform was more in comparison to first and second reform periods. In other words, as a result of banking reforms in India rural branches are not benefited in terms of branch expansion.

It is also found that, during the pre-reform period, the share of the rural sector in the total number of branches of the SCBs had increased from 46.59 percent in 1980 to 58.46 percent in 1991, due to the state incentives for expanding rural branches. The expansion of rural branches was halted thereafter. Reclassification of the areas based on the 1991 Census also brought down the number of rural branches, from 35,329 in March 1994 to 33,004 in March 1995. Since then, the number of rural branches has steadily come down, to as low as 31,646 by September 2009, by mergers and swapping of rural branches and the share dwindled to 38.40 percent by 2010. The fall in the absolute number of rural branches is in sharp contrast to the rise in the number of branches in the metropolitan area where the number of branches has increased from 4014 in 1980 to 14855 in 2010. Hence, it can be concluded that the performance of the SCBs in the disbursement of rural sector credit has been deteriorated in the post-reform period due to “high street” commercial banking, where the urban and especially the metropolitan areas have been flooded by the foreign banks and private banks. The greater concentration of the banking sector in the urban areas and metropolitan areas has curtailed the branch expansion in rural areas. According to Dr. S.L. Shelly, “even
as public sector banks have slowed down their banking activities in rural areas, the foreign banks and the new private sector banks have given a decisive thrust to high street commercial banking (Shelly, 2005). In addition to this the study also found that the average, SD and CV of rural branches are 2.75, 6.12 and 222.28 respectively. In comparison with other branches, rural branches have highest CV which shows maximum variation over the years.

The period-wise analysis of compound annual growth rate (CAGR) exhibits that the rural branches has shown a declining trend in second and third period i.e., post-reform period as compared to first period of pre-reforms. The CAGR of rural branches in the first period (1980-1991) was 7.57 percent, which declined to -1.50 percent in second period (1992-1998), and further it declined to -0.43 percent in third period (1999-2010). As far as semi-urban and metropolitan branches are concerned, both have shown an upsurge in CAGR in second period compared to first one but declined in third period by some percentage. The urban branches on the other hand depicted a decrease in the second period from the first period but again increased substantially in the third period. On the other hand, the CAGR of total branches has substantially declined from 5.79 percent in the first period to 0.97 percent in the second period but enlarged in the third period to 2.22 percent. Thus, after banking reforms, for two decades there had been massive branch expansion, primarily with the objective of covering the unbaked rural and semi-rural areas, coupled with intensive branch network in metro-urban areas to sustain profitability. But from analysis, it is clear that the benefits to rural areas have deteriorated in post-reform period.

The analysis of bank deposits in different branches during the study period has been undertaken. The calculated result shows that $P$ value of percentage change rural deposits is 0.013 i.e. less than $\alpha$ (0.05), which shows the significant difference in variation of rural deposits only, variations in other branches are non-significant with $P$ value more than 0.05 in all cases. Hence, alternative hypothesis is accepted in case of rural branches.

Further, multiple comparisons of rural deposits between three periods found that the period one is significantly higher than period 3 as $P$ values are less than $\alpha$ (0.05). Period 1 and period 2 as well as period 2 and period 3 are having similar pattern with $P$ values more than $\alpha$ (0.05). The mean value of deposit mobilisation of SCBs in rural areas in pre-reform period is 20.63, which is greater than the values in first
reform and second reform periods as 15.92 and 14.02 respectively which shows that deposit mobilisation in rural bank branches before banking reform was more in comparison to first and second reform periods. Thus, banking reforms in India has reduced the deposit mobilisation in rural branches.

The analysis further found that deposit mobilised in rural branches has revealed an increasing trend in absolute terms but in terms of percentage change over the years it shows fluctuating figures. It has fallen from 18.21 percent in 1991 to 9.24 percent in 2005 but increased quite sharply to 19.93 percent in 2009. In the semi-urban branches, the fall in percentage change is from 13.94 percent to 10.24 percent and sharp improvement to 23.12 percent in 2009 over the same period. As far as percentage change in total deposit mobilised is concerned, the trend shows a stable phenomenon except two or three years. The average, SD, CV and CAGR of total deposit mobilisation are Rs. 94099.98 crores, 99412.98, 105.65 and 16.34 percent respectively during 1980 to 2010. During the same period the average, SD and CV of mobilisation are 16.98, 5.63 and 33.13 percent respectively. In comparison with other branches, rural branch has highest CV which shows maximum variation over the years.

The percentage share of different branches in total deposit mobilised has also been analysed during the study period and depicted that in the pre-reform period, the share of the rural branches in the total deposit mobilised had increased from 11.93 percent in 1980 to 15.46 percent in 1991. In post-reform period till 1998, it declined to 14.54 percent. After second generation reforms the percentage share varied between 12 percent to 14 percent till 2005, but from 2006 the share started declining sharply and reached to 9.28 percent in 2009. The metropolitan branches have managed the highest share in deposit mobilisation between 37 percent to 57 percent. The share was 39.84 percent in 1980 which slightly increased to 38.91 percent in 1991, again to 43.46 percent in 1998 and rose up highest in post-reform period to 56.23 percent in 2009. Thus, the metropolitan branches have highest share and rural branches have lowest share in the deposit mobilisation during the study period. This concludes that banking habit is more in metros than the villages and rural share has declined from the first year of study period to last year of the study period.

The period-wise analysis of compound annual growth rate (CAGR) of deposit mobilisation indicates that the rural deposits have a declining trend in second and third period as compared to pre-reform period. The CAGR of rural branches in the first
period was 20.01 percent, which declined to 15.48 percent in the second period, and further to 12.23 percent in the third period. As far as semi-urban, urban and metropolitan branches are concerned, semi-urban has also shown a declining trend but the decline rate is lesser than that of rural areas, it has marginally declined from 16.67 percent in pre-reform period to 16.24 percent during first reforms period and further to 13.10 percent during the second generation reforms. Urban deposits and metropolitan deposits have shown a declining trend in the second period but an increasing trend in CAGR in the third period. Thus, above analysis clarifies that the reforms were not in favour of deposit mobilisation in rural areas because of reclassification of the areas based on the 1991 Census and closing down of loss making branches in the rural areas which had a considerable share in deposit mobilisation.

In case of credit lending, the calculated values show that credit lending in rural, semi-urban and urban areas is significantly different between at least two time period as \( P \text{ value} \) is less than \( \alpha \) (0.05). Whereas, in case of metropolitan area credit lending shows similar pattern over the period as the \( P \text{ value} \) is higher than \( \alpha \) (0.05). As the \( P \text{ value} \) in case of rural areas is less than \( \alpha \) (0.05) therefore, alternative hypothesis is accepted. Rural credit in period 1 and period 2 are significantly different as \( P \text{ value} \) is less than \( \alpha \) (0.05), periods P1 and P3, and periods P2 and P3 are not significantly different as the \( P \text{ values} \) for both are greater than \( \alpha \) (0.05). The mean value of credit lending of SCBs in rural areas in pre-reform period is 22.14, which is greater than the values in the first and second reform periods as 10.66 and 16.95 respectively which shows that lending in rural areas before banking reform was more in comparison to first and second reform periods. Thus, banking reforms in India have adversely affected the credit lending in the rural areas.

The study also shows that after reforms in banking sector, credit of all branches has displayed rising trend in absolute terms but it has shown fluctuations in terms of percentage change. It is found that rural credit lending was Rs. 37598.08 crores in 1998 which increased to Rs. 207926.13 crores in 2009 with CAGR of 15.16 percent. As far as percentage change over the years is considered it was 15.75 in 1991, which dropped to 2.04 percent in 1995 but again improved to 15.60 percent in 1998 at the time of second generation reforms and with fluctuating momentum it declined to 13.55 percent in 2009. The average credit lending of rural branches is Rs. 48498.92 crores, SD is 55611.31 and CV is 114.67 percent which is lower than credit lending of other
branches showing that in absolute terms variations in rural credit lending was lowest during 1980 to 2010. During the same period the average, SD and CV of percentage change in rural credit lending are 17.40, 9.66 and 55.50 percent respectively. In comparison with other branches, rural branches have highest CV.

The share of the rural areas in the total credit lending of the SCBs as found through the study had increased from 9.67 percent in 1980 to 14.97 percent in 1991 during the pre-reform period but declined to 11.40 percent in 1998 and to 7.30 percent in 2009. Rural areas, semi-urban areas also showed declining share of credit lent over the study period but the decline are more rapid after the second reforms in 1998. The urban area has also faced the decline in the share of credit lending after both reforms but lesser than the rural and semi-urban areas. The metropolitan area has highest share in credit lending from the very beginning and continued till the end with 67.33 percent share in 2009. Thus, the credit from rural offices as a proportion of the total credit supplied by all offices has deteriorated as a result of lesser deposits available for lending purposes.

It is found that compound annual growth rate (CAGR) of rural credit in the first period (1980-1991) was 20.74 percent, which declined to 9.95 percent in the second period (1992-1998) due to the restriction on directed credit lending but it improved substantially to 17.83 percent in the third period (1999-2010), might be as a result of doubling of agricultural credit programme of the government. Semi-urban and urban branches have also shown a declining trend from 16.39 percent and 16.24 percent in the first period to 12.29 percent and 11.59 percent respectively in the second period, but increased in the third period to 19.20 percent and 21.66 percent respectively. Metropolitan area has shown an increasing CAGR in all the three periods. Thus, it can be concluded that every area has got the enlargement of credit during the study period, but the highest share is of the metropolitan areas and rural areas has lowest but rising share over the period.

When viewed from the credit-deposit ratio perspective, it is found that the ratio in all areas is significantly different between at least two time periods as P value is less than α (0.05) for all the concerned area. In case of rural areas the P value is <0.001, for semi-urban area it is 0.001, for urban areas the value is 0.001 and the P value for metropolitan area is 0.004. As the P value in case of rural areas is less than α (0.05), the alternative hypothesis is accepted. Moreover, credit-deposit ratio in rural areas in
the period 1 has highly different mean ratio than the period 2 and period 3 i.e. higher than the two periods. The multiple comparison between period P1 and P2 and between period P1 and P3, found that there exists significant differences as the *P values* for both the period are lesser than \( \alpha \) (0.05). But the period P2 and period P3 have similar pattern as *P value* is higher than \( \alpha \) (0.05).

The mean value of credit-deposit ratio of SCBs in rural areas in pre-reform period is calculated as 62.41 percent, which is greater than the mean values in the first reform and second reform periods as 49.50 percent and 48.69 percent respectively which shows that credit-deposit ratio in rural areas before banking reform was more in comparison to first and second reform periods. Thus, banking reforms in India were not in favour of rural areas in terms of credit-deposit ratio.

The total credit-deposit ratio has found to be declining in pre and first reform periods but after second reforms it followed an opposite trend and increased. On the other hand the rural area’s credit-deposit ratio holds an increasing trend till the initiation of first reforms but after 1990 it declined sharply and reached to 43.36 percent in 1998. Even after second reforms credit-deposit ratio in rural areas has declined till 2004 but from 2005, the ratio increased substantially and reached to 57.14 percent in 2009. Almost same trend holds true even for the semi-urban areas over the same period with little difference in year-wise change. The average, SD, and CV of number of offices in rural areas are 30292, 5242.38, and 17.31 percent respectively of credit-deposit ratio in rural offices are 54.37, 9.32 and 17.15 percent respectively during 1980-2010. In comparison with other areas, rural area has highest CV in credit-deposit ratio. In the post-reform period there were signs of decline in the activity of commercial banks in rural areas, like changes in branch licensing policy, which permitted banks to relocate their offices and opened up the option for them to shift their business away from rural areas. This resulted in a fall in the number of rural bank offices. Furthermore, credit supplied to rural areas was not commensurate with deposits mobilised from these areas, which is the main reason for fall in the credit-deposit ratio for rural offices during this period. This implied a diversion of deposit mobilised by banks at rural branches to other branches.

The study likewise found that the CAGR of number of rural offices of SCBs was 7.75 percent in the first period which declined sharply to -1.51 percent in the second period and in the third period although it declined but remained with the
negative value of -0.69 percent displaying the negative after effects of both the reforms. The number of offices has shown increasing growth rates in urban and metropolitan areas in both the periods. The CAGR of credit-deposit ratio of SCBs in rural areas was 0.61 in pre-reform period, which declined to -4.79 after first reforms but after second reforms it increased substantially to 4.99 percent because of increase in credit-deposit ratio after 2004-05. Semi-urban and urban credit-deposit ratios have shown a declining trend in the second period but an increasing trend in CAGR in the third period. Metropolitan areas showed a negative CAGR in the pre-reform period but increased after first reforms but again after second reforms it declined to some extent.

The impact of banking sector reforms on SCBs outstanding has also been analysed through sectoral distribution of credit and recognised that there is significant difference in sector-wise credit outstanding percentage change. The study shows that credit lending to agriculture sector is significantly different between at least two time periods as $P$ value is 0.010 which is less than $\alpha$ (0.05). Whereas the pattern in case of other sectors is showing similar over the period as the $P$ value is higher than $\alpha$ (0.05). Moreover, the total credit outstanding has also a significant difference with $P$ value 0.030 i.e. less than 0.05. As the $P$ value in case of agriculture sector is less than $\alpha$ (0.05) therefore, alternative hypothesis is accepted. Additionally, agricultural credit outstanding in periods P1 and P2 and periods P2 and P3 are significantly different as the $P$ values for both are 0.040 and 0.003 respectively which are less than $\alpha$ (0.05). The period P1 and period P3 are not significantly different as $P$ value is greater than $\alpha$ (0.05).

The calculated mean value of credit outstanding of SCBs to agriculture in second reform period is 22.12, which is greater than the pre and first-reform periods values as 17.74 and 9.63 respectively which shows that credit outstanding to agriculture sector after second banking reform was more in comparison to pre and first-reform periods. Thus, second generation banking reforms in India did not harm credit outstanding to agriculture sector.

The percentage share of different sectors in total SCBs’ credit outstanding during the study period reveals that the industry has fetched the highest share in total credit outstanding for whole period of the study and financial institutions’ share in total is minimal in pre-reform period but in post-reform period, transport has shown the minimum share in total. The share of the agricultural sector in the total credit
outstanding of the SCBs had increased from 14.79 percent in 1980 to 17.34 percent in 1989, but declined after reforms and amounted to 10.69 percent in 1998, and further declined to its lowest value of 9.61 percent in 2001 even after second reforms. The year 2002 indicated a minor rise to 9.76 percent and kept on increasing throughout the period but the agriculture could not procure the share as it had in the pre-reform period. It improved maximum to 11.82 percent in 2007. This concludes that agriculture sector has been neglected by SCBs in terms of percentage share in credit outstanding in post-reform period.

The analysis of compound annual growth rate shows that credit to all the sectors have declined in the second period, except trade sector, the CAGR of credit outstanding to agriculture declined sharply from 16.93 percent in first period to 9.80 percent in the second period but it increased substantially to 24.66 percent in the third period which can be explained by the doubling of agricultural credit programme during 2004-07. One of the important contributing factors for rapid growth rate during the reform period was the policy decision to slash CRR and SLR to increase funds availability to the banking sector and additionally the borrowings from RBI was stepped up after 1991 to facilitate more funds to the SCBs. Thus, the rate at which credit was disbursed to agriculture has increased at the all-India level which was mainly because of doubling of agricultural credit programmes.

The effect of banking sector reforms with regard to priority sector lending in general and agriculture in particular, analysis shows that there is significant difference between the three periods as the results show that $P$ value for priority sector lending is 0.025 and for agricultural lending is 0.004 which are less than $\alpha$ (0.05), thus the alternative hypotheses have been accepted in both the cases. Further, both priority sector lending and agricultural lending had statistically different pattern in the periods P1 and P3 and periods P2 and P3 as the $P$ value is less than $\alpha$ (0.05), but in periods P1 and P2 they moved with the same pattern.

The mean value of priority sector lending is found to be more in the second reform period with 23.29 percent in comparison to first reform and pre-reform periods as 14.19 percent and 16.60 percent respectively. The scenario is same on the part of agriculture; the mean value of agricultural lending is 16.10 in pre-reform period and during first and second reform periods are as 11.83 percent and 24.08 percent.
respectively. It means first reforms adversely affected the priority sector as well as agriculture lending, but not the second banking reforms.

The study also reveals that the average credit to priority sector and agricultural sector are Rs. 203018 crores and Rs. 73419.17 crores respectively for the study period of thirty years. The priority sector lending increased to Rs. 1118513 crores in 2009 from Rs. 8504 crores in 1980 with a CAGR of 16.91 percent and agricultural lending increased from Rs. 3584 crores in 1980 to Rs. 415414 crores in 2009 with a CAGR of 15.95 percent. The CV for percentage change of both the priority sector and agricultural lending are 42.03 percent and 47.59 percent respectively which show their volatile nature. The SD for priority sector and agricultural lending are 7.80 and 8.62 respectively.

The period-wise compound annual growth rate analysis of priority sector lending and agricultural lending are having similar pattern during three periods. They have shown a declining trend in the second period and increasing trend in the third period. The CAGR of priority sector lending in the first period (1980-1991) was 17.01 percent, which declined to 15.38 percent in the second period (1992-1998), and it enlarged to 25.55 percent in the third period (1999-2010). The CAGR of agricultural lending in the first period was 16.24 percent, which declined to 12.60 percent in the second period and further it enlarged to 26.84 percent in the third period. The pattern of change is similar for both but the decline in second period and improvement in third period is larger in case of agriculture.

(II) Co-operative Banks:

For evaluating the performance of co-operative banks, the progress of various segments of rural cooperative credit banks in terms of growth in their business and financial performance, soundness and balance sheet indicators, both short-term and long-term, over the period of 1980-81 to 2009-10 with a comparative study of three periods, P1, P2, and P3 have been done. For this purpose following parameters as growth indicators, loans and advances have been undertaken.

The state co-operative banks (StCBs), the apex body of the three-tier short term co-operative credit structure has found to grow very insignificantly during the study period. There were 27 StCBs in pre-reform period which increased to 28 in the second
period and further to 31 in the third period. The compound annual growth rate calculated for the entire period is 0.44 percent showing an insignificant growth.

In case of the total working capital of StCBs the analysis found an increasing trend with a growth rate of 13.93 percent, in the year 1980-81 was Rs. 2749 crores whereas in the year 1991-92 it amounted to Rs. 13349 crores and further to Rs. 105906 crores in 2008-09. The mean value of working capital for the study period is found to be Rs. 32315.37 crores, the SD and CV are 29488.30 and 91.25 percent respectively showing the high variation over the years.

In case of owned-funds of StCBs the analysis shows that it has increased over the study period but at a slower rate of 15.28 percent. Owned-funds contribution in the total working capital found to be very low, the share declined in pre-reform period from 12.55 percent 1980-81 to 8.43 percent in 1991-92, it started increasing after first reform and continued in the second reform period till 2005-06, but again it shows a declining trend and contributed to 11.07 percent in the working capital in 2008-09. The average, SD and CV for owned-funds are calculated as Rs. 3822.62 crores, 3839.14 and 100.43 percent respectively which shows that the owned-funds have grown with more than 100 percent variation.

Borrowings of StCBs from RBI/NABARD/appex banks have also shown an upward trend and it grew from Rs. 462 crores in 1980-81 to Rs. 20874 crores in 2008-09 with CAGR of 14.77 percent. In 1980-81, its share was 16.81 percent which increased to 20.83 percent in 1991-92 and to 24.80 percent in 1998-99, but declined somewhat to 19.71 percent in 2008-09. The average share of borrowings in working capital is 23.69 which have shown a variation of 18.58 percent over the years which show the greater reliance on outside sources than its own resources.

The analysis found an increasing trend of loan outstandings of StCBs during the study period with CAGR of 12.93 percent. It increased from Rs. 1836 crores in 1980-81 to Rs. 7381 crores in 1991-92, to Rs. 21902 crores in 1998-99, and further to Rs. 48079 crores in 2009. The loan outstandings per bank has also showed growing trend and reached to Rs. 1550.94 crores in 2008-09 from Rs. 68.00 crores at CAGR of 12.44 percent in1980-81. The calculated value of average loan outstandings for the study period is Rs. 18542.62 crores, the SD and CV are 15667.24 and 84.49 percent respectively showing the substantial variation over the years.
In case of loans advanced by StCBs and loans advanced per StCB, the study found an increasing trend. The total loans advanced have increased with 11.88 percent CAGR and loans advanced per bank have increased at 11.39 percent of CAGR. The average of loans advanced for the study period is calculated as Rs. 25031.86 crores, the SD and CV are 21217.06 and 84.76 correspondingly showing the substantial variation over the years in total loans advanced also.

The ratio of outstanding to advanced loans of StCBs has shown a minimum change over the years with CAGR of 0.86 percent, it was 0.64 percent in 1980 which increased to 1.03 percent which was the maximum in 2003-04, but again declined to 0.51 percent in 2008-09.

The number district central co-operative banks (DCCBs), second tier of short term rural co-operative credit structure, has been found to increase marginally from 337 in the year 1980-81 to 370 in 2008-09 by compound annual growth rate of 0.31 percent, and CV of 2.79 percent. The average number of banks and standard deviation are found 359 and 10.00 respectively.

In case of working capital of DCCBs, the study found an increasing trend in all three periods with CAGR of 14.52 percent but the variation rate is very high as 95.06 percent which shows a major change within the years. The average working capital for the entire period is found as Rs. 56087.93 crores and deviation from mean i.e. the SD is calculated as 53319.83.

In case of owned-funds of DCCB the study also found an increasing trend with CAGR of 16.11 percent showing the worthy growth rate and 111.74 percent CV displaying high variation. The owned-funds component in the total working capital has exhibited very low share and declining trend at a sharp rate till 1993-94 which indicates too much reliance on outside resources. The share started improving and reached to 20.67 percent in the year but declined marginally to 16.19 percent in 2008-09. The average share is calculated as 12.66 percent with 24.25 percent CV. The deposits have increased significantly at the rate of 15.60 percent CAGR.

The analysis shows that there is tremendous increase in the total amount of loans advanced by DCCBs as well as loans advanced per DCCB. These have increased from Rs. 3211 crores in 1980-81 to Rs. 14226 crores in 1991-92, to Rs. 40097 crores in 1998-99, and further to Rs. 90105 crores in 2008-09, and from Rs. 9.53 crores in
1980-81 to Rs. 40.53 crores in 1991-92, to Rs. 109.26 crores in 1998-99, and further to
Rs. 243.53 crores in 2008-09 respectively.

Total loans outstanding and loans outstanding per bank of DCCBs have also
increased by 34 times and 31 times in that order from pre-reform period to second
generation reform period. Ratio of outstanding to advanced loans has shown an
increasing trend of 0.91 in 1980-81 to 1.22 in 1988-89, but it declined to 0.96 in 1999-
00 and thereafter it improved and reached to 1.10 in 2008-09.

The primary agricultural co-operative societies (PACS), the grass root level
institutions in the short term co-operative credit structure, found to be showing no
significant growth in expansion of societies during the study period as CAGR is
calculated as 0.50 percent during this period, the average number of societies found to
be 95 thousands and SD is 6.99. The CV for the same period calculated is 7.40 percent
which shows normal variation.

In case of the owned-funds of PACS, the analysis has found increasing trend in
the entire period. It increased from Rs. 758 crores in 1980-81 to Rs. 1885 crores in
1991-92, to Rs. 4900 crores in 1998-99 and further to Rs. 11806 crores in 2008-09
with 11.31 percent CAGR and 42.85 percent CV. The average owned-funds of PACS
for the same period have been calculated as Rs. 93643.00 crores.

The total borrowings of these societies show increasing trend with CAGR of
12.09 percent and CV 89.34 percent. The total deposits of PACS also showed growing
trend with the growth of 19.58 percent in terms of CAGR. The CV of the deposits for
the entire study period is calculated as 112.33 percent, which shows a high level of
variation in deposits of PACS. The average deposits over the years are calculated as
Rs.7912.38 crores. The deposits per bank is found as marginal but shows increasing
trend from Rs. 0.003 crores in 1980-81 to Rs. 0.274 crores in 2008-09 at 18.99 percent
CAGR.

The loans outstanding of PACS have showed increasing trend with 13.19
percent CAGR. The average loan outstandings over the period is calculated as Rs.
21421.07 crores and CV as 98.08 percent indicating towards high variation. The
number of banks has declined in pre-reform period gradually from 94 thousand in
1980-81 to 83 thousand during 1991-92, but it has shown an increasing trend after
reforms and rose to 112 thousand in 2002-03, but further declined to 96 thousand
2008-09. The number of borrowers has increased with CAGR of 0.50 percent during
the reference period. The average number of banks is calculated as 95 thousand which has been varying at the rate of 7.40 percent showing marginal deviations.

The state co-operative agriculture and rural development banks (SCARDBs) at the apex level under the long-term co-operative structure has marked a rising trend in advances and outstandings after 1991-92, the ratio of loan outstandings to advance has also jumped manifold in the case of SCARDBs. The amount advanced with the CAGR of 14.40 percent and CV of 66.24 percent. The loans outstanding has also showed unstable values before 1991-92 but after that it retained on increasing trend at the rate of 28.27 percent CAGR. The calculated average loans outstanding and CV are Rs. 8821.87 crores and 79.70 percent respectively.

Primary co-operative agriculture and rural development banks (PCARDBs) as the bottom layer of the long-term structure of co-operative credit institutions has showed a consistently increasing trend of loans advanced at the rate of 8.54 percent. In 1980-81 it was just Rs. 362 crores and the same has touched the level of Rs. 444 crores in 1991-92, to Rs. 1692 crores in 1998-99, and further to Rs. 2045 crores in 2008-09.

The analysis found that outstanding of loans from PCARDBs has also shown an increasing trend at the rate of 10.10 percent from Rs. 1609 crores in 1980-81 to Rs. 2143 crores in 1991-92 and to Rs. 6819 crores in 1998-99, and further to Rs. 11229 crores in 2008-09. The CV of percentage change of loans advanced is calculated as 253.38 percent and of loans outstanding as 464.91 percent showing a much extensive alteration. The ratio of loans outstanding to advance has also increased for PCARDBs during the study period.

(III) Regional Rural Banks:

The study found that the amount of deposits mobilised by the RRBs has shown an increasing trend over the entire study period with a compound annual growth rate of 23.30 percent. It increased from Rs. 232 crores in 1980-81 to Rs. 5271 crores in 1991-92 i.e. the year of first reforms and reached to Rs. 20977 crores in 1997-98 the year of second reforms, further it increased to Rs. 135814 crores in 2009-10. The average deposit mobilisation over the years is calculated as Rs. 29479.67 crores, SD is 36863.77 and CV is 41.35 percent.

In case of credit disbursement through RRBs the study has found a declining trend in annual growth rate in pre-reform period and reached to minimum of 2.58
percent. After first generation reforms it improved somewhat but again declined in the later years of first reform period. In the third period i.e. after second generation reforms, the percentage change enhanced. The average credit disbursement for entire study period is calculated as Rs. 16126.90 crores, SD is 20992.04 and CV is 48.25 percent. The compound annual growth rate of credit disbursement is calculated as 18.92 percent.

The credit-deposit ratio of the RRBs has shown a declining trend in pre-reform and first reform periods but after second reforms it started increasing, however, could not reach to the prior reforms level. The CAGR of credit-deposit for the study period is -3.56 percent showing the average decline.

(IV) Institution-wise Comparative Analysis:

The study has also analysed the comparative performance and share of different credit lending institutions to agriculture during the study period.

(a) Direct Institutional Credit:

In case of scheduled commercial banks it is found that there is significant percentage mean change of short-term direct loans outstanding through commercial banks as the difference between at least two time periods is statistically significant with \( P \text{ value} \) less than 0.0001 which is less than \( \alpha \) (0.05), so the alternative hypothesis has been accepted. In case of co-operatives the variation of short-term direct loans outstanding have not found statistically different because of \( P \text{ value} \) 0.305 which is more than \( \alpha \) (0.05). It means the direct short-term loans outstanding of co-operatives is having similar pattern between three periods, therefore, null hypothesis may be accepted. The \( P \text{ value} \) for regional rural banks is 0.052 which also showed the significant difference in at least two time periods and alternative hypothesis has been accepted in case of regional rural banks also.

Further, the multiple comparisons found that there is statistically different pattern of SCBs’ direct short-term loans outstanding between P1 and P3, and P2 and P3 as their \( P\text{-values} \) are less than \( \alpha \) (0.05) but have similar pattern in P1 and P2. The loans outstanding in P3 i.e., in the second reform period, is higher than both the other periods as the mean value of short-term loans outstanding of SCBs in the second reform period is 27.6857, which is greater than the mean values in pre-reform and the first reform periods as 14.7885 and 12.9915 respectively. It is found that in the years
after the second banking reforms in India, SCBs’ direct short-term loans outstanding have expanded. In case of both co-operatives and regional rural banks, there is no significant change in different periods as there is no change in overall period considered.

The total short-term credit outstandings disbursed by all the SCBs shows compound annual growth rate of 16.29 percent, reflecting decreasing trend after first reforms. However, after second banking reforms short-term direct credit increased with moderate growth rate, which picked up a swing from 2003-04 might be because of Government of India’s programme of doubling of agricultural credit in three years (2004-05 to 2006-07). The average credit outstandings of SCBs is calculated as Rs. 16489.93 crores and SD 24099.30. The CV is 52.92 percent showing a high variation in credit outstandings per year.

In case of co-operatives the growth rate has been found moderate during the study period showing no visible influence of two reforms and doubling of agricultural credit programme. The average loans outstanding of co-operatives is Rs. 12872 crores and SD 12482.82. The CV is 88.91 percent showing a much higher variation in loans outstanding per year than that of SCBs.

The average loans outstanding to agriculture and allied activities through RRBs for the entire study period is calculated as Rs. 4055.50 crores with SD 6053.09. The CV of percentage change is 38.48, which is showing comparatively less variation. The credit outstanding of RRBs has grown with CAGR of 21.89 percent from Rs. 109 crores in 1982 to Rs. 22748 crores in 2007-08.

It is revealed through analysis that there is significant mean change of long-term direct loans outstanding through commercial banks between at least two time periods as it is statistically significant with \( P \text{ value} \ 0.027 \) which is less than \( \alpha \ (0.05) \). Thus, alternative hypothesis has been accepted. In case of co-operatives and regional rural banks both, the mean change of long-term direct loans outstanding is found not statistically different because of \( P \text{ values} \ 0.867 \) and 0.541 respectively which are more than \( \alpha \ (0.05) \). It shows the direct long-term loans outstanding of co-operatives and RRBs are having similar pattern between three periods. Therefore, null hypotheses have been accepted.

The analysis further found that there is statistically different pattern of SCBs’ direct long-term loans outstanding between P1 and P2 and P2 and P3 as their \( P \text{ values} \)
are less than $\alpha$ (0.05), 0.034 and 0.027 respectively. The outstandings of SCBs are having similar pattern in P1 and P3. The outstandings in P3 i.e., in the second reform period, is found higher than both the other periods. The mean value of short-term loans outstanding of SCBs in the second reform period is 21.7657, which is greater than the mean values in pre-reform and first reform periods as 18.4539 and 6.3925 respectively. It can be concluded that after first banking reforms in India, SCBs direct long-term loans outstanding has declined sharply but after second reforms credit outstanding has gained its previous momentum. In case of co-operative and RRBs there is no significant change in different periods.

It is found that the first banking reform has adversely affected the annual growth rates of total direct long-term loans outstanding. After second reforms the long-term loan outstanding growth rates have shown decent and stable growth rate. The average direct long-term loans outstanding through SCBs is Rs. 42211.75 crores, SD is 42755.75, and CV is 72.64 percent which is found substantially higher than the CV of total short-term loans outstanding directly, it means there has been more variations in the long-term credit lending.

In case of SCBs’ direct long-term loans outstanding the annual growth found to be declining drastically in the period of first reform from 17.31 percent in 1989-90 to 5.74 percent in 1990-91, but after second banking reforms it increased substantially and reached highest growth of 45.96 percent in 2005-06, which year comes under the programme of doubling of agricultural credit (2004-07). The average credit outstandings of SCBs is Rs. 23579.93 crores and SD 26838.40. The CV is 71.47 percent showing a normal variation in credit outstanding per year.

It is found that the long-term direct credit outstandings to agriculture and allied sector through co-operatives has increased from Rs. 2407 crores in 1980-81 to Rs. 21970 crores in 2007-08 with CAGR of 12.36 percent. The entire period long-term loans outstanding has not been following any particular pattern and fluctuated between 3 percent to 17 percent but in 1999-00, growth rate depicted an abnormal increase of 119.04 percent because this year and following years cover not only PACS but also SCARDBs and PCARDBs, and in 2007-08, a high decrease of -57.49 percent which shows that doubling of agricultural credit had no impact on co-operatives short-term direct loan outstandings. The average credit outstandings of co-operatives is calculated as Rs. 15982.21 crores and SD 15671.93. The average loan in the form of long-term is
found greater than that of short-term. The CV is calculated as 229.46 percent showing a multiple variation in credit outstandings per year than that of SCBs.

The direct long term loans outstanding of RRBs have found to be grown at CAGR of 13.15 percent from Rs. 286 crores in 1980-81 to Rs. 10468 crores in 2007-08. The annual change of loans outstanding have shown comparatively stable trend in the pre-reform and first reform period but the second reform period has depicted more fluctuations. The average direct long-term loan outstanding to agriculture and allied activities through RRBs for entire study period is calculated as Rs. 2761.15 crores with SD 2640.72. The CV is 70.56 showing comparatively less variation during the entire period.

The analysis of composition of direct institutional credit flow to agriculture sector for short-term during the study shows that there is declining share of co-operatives in the total direct short-term lending, the SCBs’ share enlarged continuously during both the pre and post-reform period and the share of RRBs has shown an increasing trend over the years but the comparative share is much lesser than that of commercial banks and co-operative banks. The agency-wise share reveals that in the pre-reform period, co-operative banks had greater share than the other two, but in post-reform period the SCBs has embodied highest share. The RRBs has shown minimum share in both the periods than the others.

In case of long term direct institutional credit flow, the analysis found that the co-operatives’ share has decreasing trend in pre and first-reform period but after second reforms it increased till 2003-04 but again started decreasing. In case of SCBs the share in long-term credit has shown an increasing trend in pre-reform period, after initiation of first generation banking reforms the share started declining but after second reforms the improvement took place and share increased even larger than that of pre-reform period. In case of RRBs no specific trend is visible as comparatively it has lesser share than both the other institutions in both pre and post-reform period.

(b) **Indirect Institutional Credit:**

In case of indirect institutional credit through commercial banks the analysis found that there is significant mean change between at least two time periods so, the alternative hypothesis is accepted with $P\text{ value}$ less than $\alpha (0.05)$. 
In case of co-operatives and RRBs similar pattern of movement have been found between three periods as the mean change of indirect loans outstanding are not statistically different because the \( P \) values for these changes are 0.434 and 0.799 respectively which are more than \( \alpha \) (0.05). Therefore, null hypothesis may be accepted.

The \( P \) value for rural electrification corporation ltd. is calculated as 0.011, which shows the significant difference in at least two time periods and alternative hypothesis has been accepted in case of rural electrification corporation ltd. also.

The analysis further found that there is statistically different pattern of SCBs’ indirect loans outstanding between periods P1 and P2 and periods P1 and P3 as their \( P \) values are less than \( \alpha \) (0.05) but similar pattern in periods P2 and P3. The loans outstanding in P3 are found higher than both the other periods as mean value of indirect loans outstanding of SCBs in the third period is 31.0234, which is greater than the values in pre-reform and first-reform periods as 2.2132 and 27.3672 respectively. It can be concluded from the above that in pre-reform period SCBs’ indirect loans outstanding was grimmer which improved after the first and second banking reforms.

In case of co-operatives and regional rural banks, no significant change in different periods has been found. The rural electrification corporation ltd. has revealed significant differences in indirect loans outstanding in periods P1 and P2 and periods P2 and P3 with \( P \) values 0.003 and 0.012 respectively which are less than \( \alpha \) (0.05), and have same pattern of movement in P1 and P3. The average loan outstandings is highest in third period and the lowest in second period which showed higher flow in third period.

The total indirect loans outstanding from the four institutions have increased substantially from Rs. 2584 crores to Rs. 280040 crores with the CAGR of 19.87 percent during the study period. In pre-reform the indirect loans outstanding has showed moderate growth rate but after both the first and second reforms growth rate improved. Improvement is due to the reason that the year 1999-00 and following years cover not only PACS but also SCARDBs and PCARDBs, in total loans outstanding of co-operatives, while the earlier period covers PACS only. The average indirect loan outstanding through all institutions is calculated as Rs. 63216.18 crores, SD is 81731.02, and CV is 148.77 percent which showed substantially high variation.

Same growth pattern has also been found in case of SCBs’ indirect loans outstanding, the average credit outstandings of SCBs is calculated as Rs. 11995.89
crores and SD is 19526.06. The CV is 99.77 showing a high variation in credit outstanding per year.

In case of co-operatives indirect loans outstanding has shown a declining trend during pre-reform period. It declined sharply from 59.29 percent change in 1982-83 to 5.61 percent in 1991-92 with two negative percentage change in the years 1986-87 and 1989-90 also. After reforms it has depicted an irregular movement and did not follow any particular pattern. In 1993-94, it flew up to 417.64 percent annual growth rate, but it came down to minimal of 5.38 percent in 1995-96. Again in 1999-00 the change vastly moved to 205.88 percent, might be because of inclusion of two more agencies PCARDBs and SCARDBs in co-operative loans outstanding from that very year and also in succeeding years but the same decline is visible in case of co-operatives outstanding in subsequent years. In 2007-08, the growth rate is 8.50 percent. This shows that doubling of agricultural credit had no impact on co-operative indirect loans outstanding even. The analysis found that average credit outstandings of co-operatives is Rs. 38630.36 crores and SD is 49162.04. The CV is 250.22 showing a manifold variation in credit outstanding than that of SCBs.

In case of RRBs the annual growth rate of loans outstanding have not shown stable trend in the pre and post-reform period. The loans outstanding of RRBs have found to grown be at CAGR of 1.10 percent from Rs. 16 crores in 1980-81 to Rs. 29 crores in 1999-00. The data after 1999-00 is not available. The average indirect loan outstanding to agriculture and allied activities through RRBs for the period from 1980-81 to 1999-00 is calculated as Rs. 31.55 crores with SD 9.71. The CV is 340.72 showing high variation.

The study shows that the loans outstanding through rural electrification corporation ltd. have displayed a stable percentage change or annual growth in the pre-reform period, but it has declined sharply after the first-reforms in 1990-91. It has declined from 14.27 percent in 1990-91 to 9.06 percent in 1997-98. From 1998-99 onwards, it maintained the annual growth and reached to 23.52 percent in 2007-08. The loans have increased from Rs. 932 crores in 1980-81 to Rs. 38615 crores in 2007-08 with a CAGR of 13.65 percent. The average loan outstanding is found as Rs. 9657.43 crores for the study period. The CV of loans outstanding is 49.22 that showed comparatively less variation than the other institutions and the SD is 9706.83.
The analysis found that SCBs share in indirect institutional credit has increasing trend during the post-reform period but it was decreasing during the pre-reform period. The share of SCBs was 32.10 percent in 1980-81 and decreased to 7.32 percent in 1993-94. During the post-reform period the share increased to 16.24 percent in 1998-99, and again it increased to 29.48 per cent in 2007-08. The share of co-operative has increased in early years from 24.69 percent in 1980-81 to 46.50 percent in 1985-86, but after 1986-87 the share has been continuously declined. After first reforms, the share of co-operatives in indirect finance drastically increased to 63.27 percent, later on the fluctuations prevailed in the percentage share of co-operatives but carried on with substantial percentage. It showed the maximum share of 72.28 percent in 2001-02 after the inclusion of SCARDBs and PCARDBs in 1999-00. The share of RRBs in total indirect credit is found minor in the entire period showing almost stable share in total but it started declining from after first reform, it came down to 0.03 percent in 1999-00 from 0.62 percent in 1980-81.

The share of rural electrification corporation ltd. in total indirect loans outstanding before reforms is found maximum and presented an increasing trend; it jumped from 36.07 percent in 1980-81 to 55.11 percent in 1992-93. After first reforms it started declining and came down to 12.60 percent in 2000-01 and stuck to almost same share afterwards till 2006-07, it has enhanced a little to 13.79 percent in 2007-08.

(V) Institutionwise-Statewise Credit Flow to Agriculture:

An analysis of the regional variations in the distribution of credit flow to agriculture supplied by commercial banks, RRBs and cooperatives reveals that the percentage share of agricultural credit to various states bears a high level of unevenness. Six states viz., Haryana, Punjab that are more prosperous and four southern states Andhra Pradesh, Karnataka, Kerala and Tamil Nadu which are historically well banked states have found to possess about 25 percent of the NSA and received 46.92 percent of agricultural credit from SCBs, RRBs and co-operatives in 1980-81, 50.54 percent in 1990-91, 47.72 percent in 2000-01, and 48.66 percent in 2007-08. Six other states viz., four Eastern region including Assam, Bihar, Orissa, West Bengal and Madhya Pradesh and Rajasthan which are relatively less developed and less banked found to have about 40 percent of NSA but could avail only 20.51
percent, 21.19 percent, 18.08 percent, 20.62 percent of total agricultural credit in the corresponding years.

From region-wise analysis it is found that the southern region (AP, Karnataka, Kerala, Tamil Nadu) wherein the share of NSA varies between 20 to 21 percent over the period is entertained with 34.89 percent of total agricultural credit in the 1980-81, 38.71 percent in 1990-91, 36.82 percent in 2000-01, and 38.13 percent in 2007-08. On the other hand, the Eastern region (Assam, Bihar, Orissa and West Bengal) in which the share of NSA varies between 14 to 16 percent received about 9.89 percent of the total credit in 1980-81, 10.01 percent in 1990-91, 8 percent in 2000-01 and 9.61 percent in the corresponding years. Central region has also received less credit with respect to their share in NSA. North-Western region is the only region where the percentage share of agricultural credit is more or less varies equally with percentage share of NSA.

SCBs credit per hectare at all India level shows increasing trend in pre-reform period and declined after first reforms but in the third period it has shown substantial increase. SCBs credit per hectare found to grow at the annual compound growth rate of 9.20 percent in the pre-reform period (1981-1992), 1.43 percent in the first reform period (1993-1999) and 23.07 percent in the period 2000-2008. While the growth rate for the entire study period (1981-2008) was 5.91 percent. The calculated value of CV showed a decline from pre-reform period to first-reform period but again vastly in the third period. It declined from 84.15 percent in 1980-81, to 71.94 percent in 1999-00, but increased to 131.64 percent during the third period.

From state-wise analysis it is found that Assam has shown the highest growth with 21.86 percent in the period 1981-1991 thereby leading to the credit per hectare from Rs. 216 to Rs. 1110. In the second period all the states have shown decline in growth, among them highest place is of West Bengal (WB) with 6.29 percent and three states Bihar, Haryana, Uttar Pradesh have shown negative growth rate. In the third period, which is called the period of revival for agriculture credit, the growth is found more than 13 percent in all the states and Kerala is the state which has demonstrated 36.34 percent with the highest position followed by Bihar with 36.15 percent.

In case of co-operatives credit per hectare, the analysis shows, the states like Haryana, Himachal Pradesh, Punjab, Gujrat, Andhra Pradesh, Kerala, and Tamil Nadu are well developed in PHC outstanding over all the period while the state like Assam,
Bihar, Orissa, Jammu and Kashmir, MP, and Rajasthan were among the inadequate flow of credit. The CV at all India level shows that in the pre-reform period the inequality in the distribution of agricultural credit by co-operatives increased, in the first-reform period it declined but again increased in the third period. The credit disbursement through co-operatives found to be in a very poor condition in the first period, which managed some improvement in the second and third period but not impressive, mainly because of the fact that the co-operative societies have failed to mature effectively.

The distribution of agricultural credit by RRBs shows increasing trend in pre-reform period which declined after first reforms but in the third period it got the same momentum. The annual growth rate calculated as 18.23 percent in pre-reform period, 6.34 percent in 1992-2000, and 15.24 percent in 2000-08.

The distribution of loans by RRBs follow the fair-pattern as CV which was 109.32 percent in 1980-81 declined to 71.03 percent in 2007-08. Punjab is at the highest position with growth rate of 49.09 percent and Tamil Nadu at the lowest with 5.45 percent growth rate in the first period. In the second period the first position is bagged by Gujarat with 12.70 percent growth rate and Assam with 1.06 percent at the lowest position. In the third period all the states have shown more than 10 percent growth rate except Uttar Pradesh, Madhya Pradesh and Maharashtra. Bihar claimed the highest position with the growth rate of 29.63 percent followed by Tamil Nadu with 21.49 percent.

(VI) Suggestions:

Several committees in the recent past have come out with suggestions to improve the flow of institutional credit in rural areas. These include Expert Committee on Rural Credit (V.S. Vyas), Committee on Agricultural Credit though Commercial Banks (R.V. Gupta), Committee on Cooperatives (Vikhe Patil), and Advisory Committee on Flow of Credit to Agriculture (V.S. Vyas) etc. The government has implemented several of the suggestions made by these committees. However, based on the analysis of current status and identification of concerns in the study, some suggestions are as follows:
(a) Suggestions for Improving Repaying Capacity of Borrowers:

As the basic problem with rural borrowers is of repayment, efforts should be made to provide a complete package consisting of both financial and non-financial help to the borrowers to make the best use of credit, improve their repayment capacity.

- Rural financial institutions (RFIs) should provide non-financial assistance or should guide the farmers and rural borrowers in technical and economic matters to avoid misutilisation of loans.

- Bank officials should try to maintain personal rapport with the borrowers and also motivate them to enhance their earnings and repayment of loans.

- Consumption loans should be provided only after taking into account the loan repaying capacity of the borrowers.

- In case of term-loans, necessary arrangement should be made to provide working capital finance which is necessary to make the investment productive.

- RFIs should also help their clients in marketing of their products. In many cases, ‘local haat’ is the only outlet for them to market their products.

- The effect of education can be useful for capacity building of borrowing farmers. Imparting training to borrowers regarding procedural formalities of financial institutions could be helpful in increasing their access to institutional credit.

- Procedure for loan disbursement could be made simple so that it may not be difficult for the less-educated and illiterate households to access institutional financing agencies for credit. The weaker sections of the society like SCs, STs and OBCs and small holders are more exposed to non-institutional sources for their borrowings and thus end up paying higher rates of interest, which have a negative bearing on their economic situation. This needs to be ameliorated by strengthening the on-going special schemes for these groups.

(b) Suggestions for Improving Viability of Rural Credit System:

It has been observed that the incidence of overdues in the rural credit system has been increasing over the years and has been steadily eroding the financial soundness of the system. There is an urgent need to check overdues and non-performing assets (NPAs) to improve recovery performance of RFIs.
• Recovery of loans should be insisted upon during the harvesting season.

• Extending second and subsequent loan should be considered sympathetically so that the production effort is not hampered.

• Lending institutions may be given the discretion to determine the mode of disbursement of credit. Wherever feasible, it may be in ‘kind’, which will reduce misutilisation of loan.

• A credit institution should undertake case by case analysis of overdues, with a view to provide relief to the borrowers.

• Loans should be reviewed periodically after a short interval of time to ensure viability.

• In case of chronic and high overdues a time bound programme should be followed for recovery of loan.

• The focus of credit appraisal should be on evaluation of the income stream of the borrower and a comprehensive assessment of their credit needs taking into account the track record, credit worthiness as well as technical viability of the proposal.

• The accounting system in banks needs to be such by which recovery can be disaggregated by loan purpose as well as by time so that, it can be determined as to loans for which purpose and time schedule is more viable.

• Documentation procedures should be simplified for the convenience of illiterate borrowers. Bank staff should assist the borrowers in fulfilling necessary formalities.

(c) Suggestions for Improving Operational Deficiencies:

• RRBs should be given more autonomy and flexibility in planning and lending policies, so that their comparative advantage in rural lending is restored.

• Initiative should be taken in organising farmers into homogeneous groups or farmers companies for linking credit with input supply and output marketing.

• The cooperative credit system should be rejuvenated by recapitalisation and giving them greater autonomy and infusing more professionalism.

• Cooperative credit system should be delayered i.e., where DCCBs are week, StCBs should finance directly to PACS and where PACS are weak, DCCBs
should finance directly to farmers. Non-viable DCCBs and PCARDBs should be liquidated. Also weak DCCBs should be taken over by StCBs.

- PACS should be asked to mobilise deposits, conduct open forum meetings, take initiatives in nurturing SHGs of their areas and introduce a system of audit by professionals.

(VII) Major Findings of the Study:

1. The period-wise analysis of CAGR exhibits that the rural branches of SCBs have shown declining trend during the post-reform periods as compared to the pre-reform periods.
2. The CAGR of deposit mobilisation by SCBs also reflects declining trend during the post-reform periods as compared to the pre-reform periods.
3. It has been found that the rural credit lending by SCBs has declined from 20.74 percent during pre-reform periods to 9.95 percent during first generation reform periods but it improved substantially to 17.83 percent during second generation reform periods.
4. The share of agriculture sector in the total credit outstanding of SCBs had increased from 14.79 percent in 1980 to 17.34 percent in 1989, but declined after reforms and amounted to 10.69 percent in 1998, and further declined to its lowest level of 9.61 percent in 2001 even after second reforms. However, it improved to 11.82 percent in 2007 but could not procure the pre-reform share.
5. The analysis reflects that both priority sector as well as agriculture sector lending by SCBs follow similar pattern. Their share has declined during first generation reform but increased during second reform periods.
6. The study reveals that the share of SCBs as well as RRBs in the total short-term credit to agriculture sector has continuously increased during both the pre and post-reform periods, although the comparative share of RRBs is much lesser than that of SCBs. On the other hand, the share of co-operatives has been declining over the study period.
7. It has been found that the share of SCBs in the total long-term credit to agriculture sector has increased during pre-reform periods, but it declined during first reform periods. However, during second reform period, improvement took place and the share increased even greater than that of pre-
reform period. Moreover, the RRBs do not reflect any specific trend and it has lesser share than that of SCBs.

8. The share of institutional agricultural credit for various states reveals a high level of unevenness when it is compared on the basis of net sown area (NSA) of the states. The legacy of southern region in getting agricultural credit which aroused in the colonial period is still prevailing in today’s scenario. North-western region is the only region where the share of agricultural credit is more or less equal with the share of NSA.

9. It has been found that the degree of inequality in the distribution of agricultural credit to various states by SCBs and RRBs has declined during pre-reform period but later on it was increased during the post-reform periods.

10. Finally, the degree of inequality in the distribution of agricultural credit by co-operatives increased during pre-reform periods, but thereafter it declined during first reform periods and unfortunately again it started increasing during the second reform period.