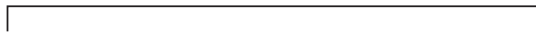


Maclagen Committee, in 1915 to study the problems and prospects of Cooperative Credit. On the recommendations of this committee a three-tier organisation (See Fig.1) of cooperatives for short term loans was setup comprising Primary Agricultural Credit Societies at the village level District Central Cooperative Banks at district level and State Cooperative Banks at state level. Government supported the cooperatives in the initial stages by supplying finance and guidance. The Cooperative Reforms Act of 1912



Cooperatives were institutionalised in India through the enactment of the Cooperative Credit Societies Act. 1904. This Act covered primary cooperative credit societies only. Subsequently all types of credit and non-credit societies were brought under the ambit of Cooperative Credit Societies Act. 1912. Government appointed an expert Committee, called

and operates in District Jammu. State Cooperative Agriculture & Rural Development Bank was established in 1962. In contrast to the above banks it commenced its operation in the entire State in 1964. It has the status of apex bank with 35 branches mainly provides credit for agricultural development to farmers.

Non-Urban Cooperative Banks comprise of J&K State Cooperative Bank (established in the 1954), Jammu Central Cooperative Bank (established in the year 1914), Baramulla Central Cooperative Bank (established in the year 1920) and Anantnag Central Cooperative Bank (established in 1923). In spite of consistent and concerted efforts to scale up the reach and spread of commercial banks and regional rural banks (RRBs) cooperative banking sector remains an important source of credit in the rural areas. Cooperative Credit Institutions provide cheap and decentralized credit services at low rate of interests [see Muley, 2007]. By the end of March 2007 these banks transacted business worth Rs. 22426 million out of which deposits accounted for 70.58%. Loan Outstanding worked out to be Rs. 6598.8 million and cost of management was Rs. 329.1 million. Under Kisan Credit Card Scheme 48872 farmers benefitted by the end of March 2007. The total number of Kisan Credit Cards issued was 65350 ending March 2007 out of which the relative share of cooperative banks worked out as 75 per cent. Regardless of these impressive gains the failures are equally disquieting. Aside other factor Cooperative Credit Structure has suffered heavily due to political instability in the State particularly since 1989. Increasing Non-Performing Assets (NPAs), mounting overdue, unsound governance, unethical lending and high incidence of defaults are other major factors which have adversely affected the functioning of these institutions. Rise in NPAs in particular has crippled their financial solvency, productivity and profitability. The proportion of overdues to outstanding loans of cooperative banks was more than 30 per cent during 1997 [see Gulati and Bathla, 2002]. During 2000-01 the average recovery performance was 58 percent which increased to 67 percent during 2006-07. The proportion of overdues to the loans outstanding was 42 percent in 2000-01 and 37 percent in 2006-07. The Cooperative Banks have failed to make recovery from over 46,800 defaulters whose outstanding stood at Rs. 1550 million. Table-1 shows the amount of NPAs of both non-urban and urban cooperative banks operating in the State. The amount of NPAs has increased but its proportion to the total loan outstanding has shown decreasing trend during the period (2000-01 to 2006-07). The NPAs of J&K State Cooperative Bank, Baramulla Central Cooperative Bank and Jammu Central Cooperative Bank as a percentage of outstanding loans and advances decreased by 26.9, 29.3 and 30.2 from 2000-01 to 2006-07 respectively. NPAs of Anantnag Central Cooperative Bank, Devika Urban Cooperative Bank, Citizen Cooperative Bank Limited and Jammu and Kashmir Mercantile Cooperative Bank Limited Sopore as a percentage of outstanding loans and advances worked out below 20 percent during the same period. Overall there has been a decreasing trend of NPAs of these banks during the period 2000-01 to 2006-07.

mulative default of around Rs. 2350 million up

part of weak performance or bankruptcy zone and were suffering from financial mismanagement and underutilization of resources.

Above illustrative review suggests that the researchers have attempted to:

- t Delineate the determinants of profitability, productivity and efficiency of banking system;

- t

methodology based on the concept of relative efficiency and is widely used in the productivity and efficiency analysis of financial institutions [see Brockett et al., 1997, Taylor et al., 1997, Saha and Ravisankar, 2000, Portela and Thanassoulis, 2007]. It enables us to compare several service units with each other and determine their relative efficiency. This technique produces a single score for each unit thereby making the comparison easy. Unlike ratios it can accommodate multiple inputs/outputs. These inputs and outputs can be in different units of measurement. DEA provides greater flexibility since it does not require a priori assumption on the functional relationship of inputs and outputs. However, it does not provide a mechanism for improving the performance of the best practice units that form the frontier. Therefore, for efficient decision making units (DMUs), no further improvement can be considered based on DEA results. Those DMUs indicated as efficient are only efficient in relation to others in the sample. It may be possible for a unit outside the sample to achieve a higher efficiency than the best practice DMU in the sample.

DEA converts multiple inputs and outputs into a scalar measure of efficiency. Production frontier/envelopment has Constant Returns to Scale in the CCR model meaning thereby that proportional increase in inputs result in a proportionate increase in outputs. BCC model identifies whether a DMU is operating in increasing, decreasing or constant returns to scale [see Coelli et al., 1998]. The Decision Making Units under BCC model forms a convex combination by adding the convexity constraint $\sum_{j=1}^n \lambda_j = 1$ [see Zhu, 2003]. Moreover, VRS specifications permit calculation of Technical Efficiency (TE) decomposed into two components e.g. Scale Efficiency

(SE) and Pure Technical Efficiency (PTE).

The present study first uses the CCR model to assess TE and then applies BCC model to identify PTE and SE in each DMU. Overall bank efficiency can be decomposed into scale efficiency, scope efficiency, pure technical efficiency and locative efficiency. However, the technical efficiency is the major criteria for measuring efficacy of banks. When a bank maximizes the output from the given level of inputs technical efficiency occurs. It is defined as a ratio of minimum costs that could have been expended to produce a given output bundle to the actual costs incurred. Its score varies between 0-100 percent. DEA measuring the technical efficiency of a given bank by calculating an efficiency ratio equal to a weighted sum of outputs over a weighted sum of inputs. For each DMU these weights are derived by solving an optimization problem which involves the maximization of the efficiency ratio for that DMU subject to the constraint that the equivalent ratios for every DMU in the set is less than or equal to 1. In this method any units on the efficiency frontier are said to be efficient and their efficiency rates equal 1. Units below the efficiency frontier line have efficiency rates less than 1 which show a level of their inefficiency. Efficiency rate defined in this way takes the values from 0 to 1. Optimal weights are obtained by solving the mathematical programming problem:

Subject to the constraints:

$$(j = 1, 2, \dots, n)$$

$$\text{For } (r = 1, 2, 3, \dots, s); (i = 1, 2, 3, \dots, m)$$

Where h_0 is the ratio of virtual outputs to virtual inputs, the u_i and the v_j are the weights

Anantnag Central Cooperative Bank and Devika Urban Cooperative Bank Udhampur recorded a decreasing trend. Technical efficiency of Jammu Central Cooperative Bank decreased from 80% (0.801) in 2000-01 to 75% (0.754) in 2006-07. Similarly in case of Anantnag Central Cooperative Bank and Devika Urban Cooperative Bank Udhampur technical efficiency declined from 75% (0.752) in 2000-01 to 66% (0.664) in 2006-07 and from 100%

Table-2: Input-Oriented Technical Efficiency (Constant Returns to Scale)

DMU No.	Decision Making Units (DMUs)	Input-Oriented Technical Efficiency (CRS)						
		2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	Baramulla Gen tral Cooperative Bank	0.765	0.725	0.900	1.000	1.000	1.000	1.000
2	Jammu Central Cooperative Bank	0.801	0.789	0.811	0.815	0.783	0.815	0.754
3	J&K State Coop erative Bank	1.000	1.000	1.000	1.000			

Input-Oriented Scale Efficiency

Scale Efficiency (SE) score for each bank can be obtained by taking a ratio of technical efficiency (TE) score to pure technical efficiency (PTE) score. Decomposing technical efficiency into pure technical efficiency and scale efficiency allows us to gain insight into the main sources of inefficiencies. The value of scale efficiency (SE) turned out to be 1 implying that the bank is operating at Most Productive Scale Size (MPSS). This corresponds to constant returns to scale. At MPSS, the bank operates at minimum point of its long-run average cost curve. Further, $SE < 1$ indicates that the bank has experienced Overall Technical Inefficiency (TIE) because it is not operating at its optimal scale size. An assessment of Table-4 reveals that mean SE for cooperative banks has increased from 91.4% to 95.5%, and SE scores range from a minimum of 0.687 to maximum of 1. Average level of Scale Inefficiencies (SIE) in the cooperative banking sector in the study area is to the tune of about 4.9 percent. Only two banks attained SE score equal to 1 and are, thus, operated at MPSS. The remaining six

banks are operated outside the frontier had either Decreasing Returns to Scale or Increasing Returns to Scale. In addition, the majority of banks were operating with scale efficiency above 80 percent.

Summary and Concluding Remarks

The present study attempted to assess the financial performance of cooperative banks operating in Jammu & Kashmir and to highlight the factors which are affecting their performance. In its formative years the objective of the cooperative credit movement had been to advance loans to farmers and save them from the clutches of money lenders. Cooperatives have been operating in J&K for more than nine decades. Though their achievements are quite substantial yet failures are equally disquieting. The rising trend in membership, working capital and deposits show are indeed encouraging. But inadequate own fund as a percentage of the working capital has progressively declined from 54.47% in 1948-49 to 9.60% in 2007-08. It clearly reflects the dependence of these banks on external borrowings and less participation of business community in the activities of banks which needs serious attention by the management. The study has employed Data Envelopment Analysis (DEA) to estimate the relative efficiency of 8 cooperative banks operating in Jammu & Kashmir during the period 2000-01 to 2006-07. Using the intermediation approach, two inputs variables used were: customer deposits and number of employees. Output variables included loans advanced and investments to calculate the Technical Efficiency (TE), Pure Technical Efficiency (PTE) and Scale Efficiency (SE) scores. The estimated results show that 3 banks are relatively efficient when their efficiency is measured in terms of 'constant

returns to scale' and 5 banks are relatively efficient when their efficiency is measured in terms of 'variable returns to scale' which indicates that the scale ineffectiveness is the main reason for the inefficiency among reviewed cooperative banks. Overall, the analysis leads to the conclusion that the efficiency of cooperative banks from the perspective of intermediaries is not very high but somewhat volatile with the average efficiency about 90 percent under constant returns to scale and about 97 percent under variable returns to scale during the reference period. The reasons for this are: poor recovery of loans, the very bad experience with NPAs and lack of skilled staff. So there is need to eliminate the problem of NPAs and poor recovery rate of loans from the cooperative banking sector. Urgent attention should be accorded to: test out the diversion and misuse of cooperative bank credit; ensure effective supervision of loans; strengthen the share capital base; boost banking investment operations; employ skilled manpower and mobilize deposits and advances through more innovative deposits and loan advances schemes. In order to regenerate rural credit delivery system through cooperatives, mismanagement, poor recovery performance, and NPAs, need to be tackled with more fiscal jurisprudence. These ineffectiveness's can be worked out through state government policy intervention e.g., proper implementation of the Revival Package from NABARD and conforming to the rules and regulations specified by RBI from time to time for restructuring the credit cooperatives. The findings of the present study may help to provide some directions for developing efficient financial services in the rural financial sector which is one of the ways of poverty alleviation in the country. Moreover, the findings may provide motivation to policymakers to restructure/rebuild the cooperative banking

