CHAPTER -2
REVIEW OF
PREVIOUS STUDIES,
OBJECTIVES & RESEARCH
METHODOLOGY
The review of earlier studies is very essential and useful to give the right direction to any study. It explores the developments in the subjects of the study. It helps the researcher in formulating the methodology comprising framing hypotheses and selection of variables to be studied and seeks to explore research gap. It describes what has actually been done and what remains yet to be done on the specific subject/phenomenon. The present chapter deals with review of literature, need and objectives of the study and research methodology adopted for the present study.

Review of Related literature

Analysing bank performance has always been a popular research subject. Various researchers have analysed the performance of different types of co-operative credit institutions. The researcher has reviewed an exhaustive literature of co-operative sector. He has also reviewed the studies regarding performance evaluation of commercial banks to make the methodology clear and to identify the variables regarding evaluation of the performance of a bank. The studies reviewed are as the follows:

Rao (1975)\(^6\) compared the deposits mobilization by co-operative banks with scheduled commercial banks. The study was aimed to discover the growth trends in deposits between co-operative and commercial banks, the type of adjustment of deposit portfolio in co-operative vis-a-vis commercial banks and the ownership aspect of deposits in the co-operatives. It was found that there was no uniformity in the growth of deposits within any bank among the different years. The study revealed that the average per annual growth rate between 1967-68 and 1971-72 was the highest in the state co-operative bank (17.6%) and central co-operative banks (14.4%). The analysis also revealed that scheduled commercial banks kept a 46:54 ratio between demand deposits and time deposits. Central co-operative banks also maintained a 56:34 ratio but in case of state co-operative banks, it was 39:55. It was concluded that

though co-operative banks failed to match their deposits with those mobilized by commercial banks in absolute amounts, they did not fail to match their rate of growth achieved by commercial banks. It was also found that a large proportion of deposits came from within the co-operative sector.

**Goel (1977)** emphasized on organizational and managerial problems of apex co-operative organization. He concentrated on the activities of the Chandigarh State Co-operative Bank Ltd. It was found that there is need to consider organizational development as a subject of long range and continuous efforts and not an adhoc affair. It was suggested that planned change in one or more of the sub systems of an organization should be done in such a way so that it may introduce the flexibility and adaptability into the system to cope-up effectively with the complex external environment with maintaining its own dynamic forces.

**Singh (1978)** studied the performance of Gujarat State Co-operative Land Development Bank in a research paper. This bank started its business in 1951. By 1976, the bank opened 193 branches in 196 talukas. The performance of the bank under study was evaluated in terms of loan disbursement (year wise from 1957 to 1976) district wise membership, share capital, total advances, total overdues, recovery performance, and loans advanced for different purposes. It was observed that after 1966, LDB had shown good performance in the loan disbursement. After 1970, LDB’s performance in Mahsana and Kaira district had became good. It was also observed that the loan advanced by the LDB for irrigation was concentrated in the Saurastra regions. The LDB showed poor performance in Kutch, Panchmahals, Surat, Bulsar, and Brach districts. Further, the study concluded that the regional disparities in the state co-operative land development bank loan distribution were due to historical circumstances and features of agrarian situation.

**Goyal (1979)** studied the deposits mobilized by apex co-operative banks in India. The main objective of the study was to estimate average growth in deposits from different sources viz. co-operative societies, individuals and others as also their variability. This was a census study covering all 26 apex co-operative banks working

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at that time. The study period was from 1971 to 1977. The study revealed that the deposits from co-operative societies increased from Rs. 196 crores in 1971 to Rs. 643 crores in 1977 and the deposits from individuals and others increased to Rs. 192 crore from Rs. 83 crores during the same period. The variability in deposits from individuals and others remained low as compared to that of co-operatives societies. The study also showed that all types of deposits viz. current, fixed and savings accounts had been increased during the study period. It was concluded that total deposits mobilization were sufficiently satisfactory in all state co-operative banks in India during the time period under reference. The savings and fixed deposits recorded a steady growth.

Goel (1984)\textsuperscript{10} studied the overdues position of PACSs, DCCBs, State Co-operative Bank of Rajasthan. He made a comparative study of these institutions for the period from 1975-76 to 1980-81. He found that at primary level, the overdues of PACSs varied from 27 to 46 percent to outstanding loans, whereas in case of DCCBs, it varied from 26 to 39 percent. Overdues position of the Rajasthan State Co-operative Bank was better as compared to others. It fluctuated of between 9.5 to 15 percent. The overdues position of Primary Land Development Banks was worst. It fluctuated between 29 to 61 percent. The overdues position of The Rajasthan State Land Development Bank was relatively better than PLDBs with the range from 24 to 33 percent during the reference period. The author suggested taking corrective actions and the follow up supervision procedures to avoid division of funds.

Goyal (1985)\textsuperscript{11} analyzed debt-equity ratio of all the apex co-operative banks. The study revealed that the total outside liabilities increased with a growth of 298 percent in comparison with the growth rate of owned funds, which was 268 percent for the same period (from 1971 to 1979). The ratio of total outside liabilities to owned funds varied between 583 and 717 percent throughout the study period. The mean of the two series was Rs. 1026 crores and Rs. 154 crores and S.D. was Rs. 385 crores and Rs. 50 crores respectively. The co-efficient of correlation between outside liabilities and owned funds was .995 that should a perfectly positive relationship between these two variables under consideration.


Rao and Dakshinaurthy (1986)\textsuperscript{12} analysed the performance of Guntur District Central Co-operative Bank Ltd., A.P. (GDCCB). He examined the overdues and recovery performance of the bank. It was observed that the GDCCB had never maintained its overdues position above the controlled limit i.e. 20 percent prescribed by R.B.I. During the study, overdues percentage of the bank ranged between 28 and 46 except during the year 1975-76 in which it was 16 percent. The authors suggested adoption of sound and constructive activities. They also observed the problems encountered in the process of recovering the loans.

Prasad and Naidu (1988)\textsuperscript{13} made an attempt to study the adequacy of credit advanced by co-operative bank in their research paper. They found that the finance fixed by DCCB was not only inadequate to the total working capital needs of the borrowers but also the ratio of kind and cash (25:75) was misappropriate and the kind component was far below the needs of the borrowers with regards to commercial crops. It was also observed that the total amount of co-operative crop loan per farm left large credit gap unabridged in proportion to the size of holding.

Turan (1991)\textsuperscript{14} that an inter-institutional level comparison shows that the compound growth rates of reserves, owned fund, deposits and total business and working capital have the increasing tendency with the change in levels from low to high i.e. from ground level PACSs to DCCBs and from DCCBs to the apex level (Harco) in Haryana. It was also observed that the profits position has also the tendency to improve with the change in the levels of institutions in the upper direction. It should be noted here that co-operatives are not liable to distribute dividends to shareholders hence the share capital seems to be cost free. But the share capital carries on implicit cost in that if it is eroded due to constant losses, the creditors and the depositors would start losing confidence in the co-operatives and refrain from depositing their savings and extending credit facilities. Therefore, there is a strong point in having a strong financial base in the co-operative banks and it calls for the necessary remedial steps to overcome this crisis.


\textsuperscript{14} Turan, M.S. (1991), "Financial Base in Co-operative Bank – A study of three tier structure in Haryana", \textit{Indian Co-operative Review}, Vol. 24, No. 1, pp...
Desai and Namboodiri (1991) in their research paper analysed performance of farmers' service societies (FSSs) and Primary Agricultural Co-operative Credit Societies (PACSs) comparatively. PACSs came into being after the enactment of the co-operative credit societies act in 1904 and the first farmers service society was promoted in mid-1970s. It was found that FSSs had performed better than PACSs in respect of coverage, scale of operation, composition of credit and non-credit operations and scale economics in transaction costs. However, considering loan delinquency rate, average transaction costs and proportion of societies in profit, the performance of PACSs was better than that of FSS. In nutshell, it was concluded that FSSs had performed better than PACSs and hence FSSs type co-operative financial institutions might be preferred to PACSs. It was also observed that both FSSs and PACSs had not succeeded in undertaking agro-marketing and processing functions.

Shrivastava and Singh (1992) revealed that the role of the NABARD in strengthening co-operative credit institutions support the viewpoint of All India Rural Credit Survey Committee which wrote in 1954. “Co-operation has failed, but cooperation must succeed.” The efforts taken by the NABARD in rehabilitating, re-organising the co-operatives and inducting professionally qualified personnel in the management of these institutions will make co-operative credit institutions into a strong and viable multi-purpose units so that farmers, artisans and the self-employed get all the services at one point.

Verma and Garg (1992) found that co-operative movement in India has made remarkable growth quantitatively and qualitatively perhaps not. There are number of factors which are responsible for poor performance of co-operatives such as state control, lack of co-operative education, absence of professionalism in management, diversion of loans, accumulation of overdues, politisation of the movement, lack of dedicated leadership and unplanned growth of the societies. To make the co-operative movement effective and efficient, it needs to be talked on different fronts such as improving managerial ability, lesser state control, re-organization of non-viable

societies, strengthening recovery of loans, checking misutilisation and diversion of loans and mobilization of deposits.

Agarwal (1994),\(^{18}\) conducted a study to analyse the growth and functioning of co-operative and regional rural banks in India and to point out structural weakness. He analysed the growth and performance of co-operative banks. He found that business of co-operative banks, in terms of their deposits, advances and assets, increased significantly over time. Although the total income and spread also increased significantly, net profits have not gone up much. This was attributed mainly to rising overdues, establishment and operating expenditure and mismanagement of banks. Major weaknesses pointed out were failure to mobilize sufficient deposits, the maintaining overdues and lack of trained staff. PACSs were not strong or efficient enough to discharge their responsibilities. Co-operatives suffered from political as well as governmental interference and official bureaucracy in respect of resource mobilization, credit allocation and recovery of loans. There was a tendency of higher level institutions to look after their own interest often at the cost of primaries. In respect of RRBs, it was evident that the establishment of RRBs and their expansion of their branches had been more pronounced during the first of 1980s. The study revealed that RRBs had achieved a considerable degree of success in taking banking services to remote areas and providing institutional credit to the weaker sections. But at the aggregate level, the percentage of overdues in the total loans was very high (around 33 percent). These overdues had affected the working results of RRBs. Major weaknesses of RRBs were small size of business, high cost of servicing, huge overdues and low productivity etc. The study suggested that restructuring of RRBs is essential because in the near future they may face serious problems in terms of their profitability and recovery of bad debts. For co-operative banks, it was suggested that the government intervention and bureaucratization should be withdrawn as far as and at the earliest possible. There should be training programmes for secretaries and managers of the banks at some regular intervals and the financial position can be improved by strengthening the share capital and deposit mobilization.

Chattopadhyay (1997) discussed the status of computerization in state and central co-operative banks in a research article. He also observed that the state and central co-operative bank have kept themselves out of the electronic revolution, which has been properly exploited by the commercial banks and urban co-operative banks. He suggested a high level committee involving RBI/ NABARD/ NCUI for proper direction to computerization in the state and central co-operative banks. It was also recommended that the need of computerization of state co-operative banks and central co-operative banks would have to be studied from two broad analyses i.e. in area relating to banking and requirements for computerization for an organized MIS by state and central co-operative banks treating information as a major source.

Athma and Srinivas (1997) analyzed the productivity in commercial banks group-wise i.e. public sector banks, private sector Indian banks and private sector foreign banks before and after the banking sector reforms. It was found that productivity-both per branch and per employee showed a rise for three bank groups. But it was relatively higher in case private sector banks. The authors considered the time period 14 years i.e. from 1982 to 1995. They also studied the cost responsiveness ratio and profitability to study the productivity. It was observed that private sector Indian banks had been showing increase in profits except in the year 1992-93 where there was a marginal decline. In the same year i.e. 1992-93, private sector foreign banks had also registered a heavy loss owing to the losses of Standard Chartered Bank. It was concluded that by and large, all the three bank groups made efforts to improve their productivity. The authors suggested that efficient operation, prompt recovery, proper appraisal of credit risks and avoidance of risk investments are the keys to profitability in banking sector.

Suhag, Goyal and Grover (1998) evaluated the performance of co-operative credit institutions in Haryana. The study was based on secondary data. The authors took the figures for the years 1967, 1977, 1987 and 1993 of the state co-operative bank, district central co-operative banks, PACSs, farmers’ service societies, central land development banks and primary land development banks. The study concluded that

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certainly state co-operative banks had developed a network of officials overtime to improve CCBs accessibility. About 98-100 percent of villages under PACSs and about 90-100 percent of the population in the jurisdiction of PACS were served. In mobilization of deposits, savings dominated over fixed deposits in CCBs while in SCBs, fixed deposits had constituted the lion’s share. It was found that amongst three-tier co-operative credit institutions, the delinquency rate was higher in PACSs followed by FSSs during the earlier years of the study, while it was maximum in FSSs followed by PACSs in the latest years. It was also observed that absolute number of branches, membership, working and owned capital increased in CLDBs and PLDBs during the study period. Deposit mobilization was though at a low pace yet it was relatively greater in CLDBs as compared to PLDBs. Delinquency rate in CLDBs was between 85 and 94 percent while the same in PLDBs was between 73 and 93 percent during the study period.

Patnaik (1999)22 explored the various aspects of co-operative banking in India. He described the genesis and the structure of co-operative banks in brief. It was found that the total membership of PACSs as on 31st March 1997 aggregated Rs. 982.24 lakhs of which borrowing member stood at Rs. 387.09 lakhs constituting around 40.2%. It was highlighted that co-operative credit structure, both short term and long-term put together accounted for 69% of the rural. Though co-operative banks were not comparable with commercial banks in terms of resources mainly due to poor deposit base, they were comparable in terms of coverage and outreach. The author also described the major strengths and weaknesses of co-operative credit structure briefly. He also emphasized on the opportunities and challenged before co-operative banks in liberalized economy.

Ramesh (2003)23 presented a research paper in international conference on mapping co-operative studies in the new millennium. The paper identified several broad areas for the intervention of researchers under three categories viz. prudential standards, professional management and governance and supervision and regulation against the backdrop of financial sector reforms. It was argued that if co-operative character of credit co-operatives is to be preserved or promoted then areas said above, all should

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emenale from the guiding principles of co-operation. It was also highlighted that the increasing external intervention in the era of reforms, many a times beyond the functional aspects of co-operative banks had resulted in the dilution of co-operative character in terms of their adherence to co-operative principles.

Raju (2004)\textsuperscript{24} undertook a study to evaluate the performance of State Bank of India with special reference to NPAs. The main focus of this study was to evaluate the financial and operating performance of SBI in the light of the changing conditions emerging out of the implementation of financial sector reforms and to study the NPAs of the bank in depth. The period covered for the study was 1990-91 to 2000-01. For primary investigation, the author selected Vijayawada zone covering three districts of Coastal Andhra Pradesh viz., Krishna, Guntur and West Godavari. It was found that in SBI, Vijayawada zone, standard assets to total assets for all segments was high in agriculture and personal advances and NPAs segment as percentage of total NPAs of all segments showed that it was high in small scale industries and agriculture. It was suggested that reduction of NPAs is necessary to improve the profitability of banks and to solve the problem of existing NPAs, quality of appraisal, supervision, and follow up should be improved.

Teli (2005)\textsuperscript{25} evaluated the performance of urban co-operative banks in Kolhapur district. The time period was from 1991 to 2000. The number of UCBs increased from 42 in 1991 to 64 in 2000 in Kolhapur district. The author analysed the progress of different indicators of UCBs showed a considerable growth in the membership, share capital, reserves, owned funds, deposits, loans and net profits. But at the same time increase in overdues and number of making losses reflected an urgent need for further investigation of the working of the UCBs in Kolhapur district. It was suggested that owned funds of these banks needs to be strengthened, should consider their investment function as important as loaning diversity, their loan portfolio and proper training of employees should be imported.


Arora and Verma (2005) analyzed the operational and productivity efficiency of public sector banks in India. In their study, they studied the relative efficiency of public sector banks from 1991-92 to 2003-04 using ACGR. They studied total income, income earned, interest spread, net profit, interest income, non-interest income, NPAs, capital adequacy ratio, return on assets, business per employee, and profits per employee. It was found that corporation bank had higher growth rate in total income, higher capital adequacy ratio higher growth rate in case of interest earned and ranked higher with lower growth in case of NPAs. United bank of India topped in case interest spend and OBC ranked higher in terms of growth in interest income. Further, corporation bank had shown good performance in case of productivity indicators.

Raja (2005) made a study on evaluation of the financial performance of the MDCC Bank. The study was based on secondary data. The data had been collected for a period of 5 years from 1999 to 2003. He analysed the income and expenditure components along with spread and burden concepts in terms of macro mean and growth rate. He found that interest received from loans and advances ranged from 98% to 99% of the total income and interest paid on deposits and borrowings ranged from 74% to 84% during the study period. The study also revealed that the spread ranged from 91% to 95% with a minimum fluctuation. The growth rate in profits after appropriations was negative. The study also analysed the balance sheet variables. It was found that cash decreased year by year while investments were found stable, advances ranged from 65% to 70.6%, current and fixed assets formed only 6.5% of the total assets while after appropriation, net loss remained at 2% on an average. The study revealed that deposits and borrowings of the bank seemed to be decreasing. Fixed deposits ranged from 81% to 84% in total deposits. It was suggested that burden rate should be reduced and the bank should take necessary steps to improve the mobilization rate.

Misra (2006) undertook a empirical study to analyse the performance of primary co-operatives in India. The study was undertaken with the objective to enquire into

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the factors which impact financial health of co-operative. It was suggested that the government should allow the co-operative to evolve in a natural manner rather than through initial official encouragement and subsequent intervention and government's shareholdings should be declined. Large co-operatives should be avoided and there is great need to rethink about the appropriate member size for a co-operative institution.

Govindarajan and Robindero Singh (2006)\textsuperscript{29} analysed the profitability of the Tamilnadu State Apex Co-operative Bank Ltd. (TNSC Bank Ltd.). This bank was started in November 1905 and it has completed more than 100 years of useful service in the co-operative sector in Tamilnadu State. The main objective was to study the profitability and the factors affecting the profitability of the TNSC Bank Ltd. The study was based on secondary data. The ten years from 1995 to 2005 were taken. It was observed that interest earned to working funds fluctuated between 8.51 and 10.91 percent and interest paid to working funds varied between 5.76 and 8.13 percent during the study period. Spread to working funds ranged between 0.92 percent and 2.79 percent. It means that the bank had not properly maintained the balance between procurement of funds and utilization of available resources. The authors also analysed the three burden ratios viz. non interest expenditure to working funds (varied between 0.68 and 2.10 percent), non-interest income to working funds (varied between 0.08 and 0.47 percent) and burden to working funds (varied between 0.52 to 1.71 percent). Net profit to total income ranged between 0.90 to 18.15 percent while net profits to working funds fluctuated between 0.08 and 1.98 percent during the reference period. It was concluded that the profitability position of the TNSCB Ltd. was poor and declining year by year.

Tarawneh (2006)\textsuperscript{30} in his research paper "A Comparison of Financial Performance in the Banking Sector: Some Evidence from Omani Commercial Banks' classified the commercial banks in Oman in cohesive categories on the basis of their financial characteristics revealed by financial ratios. The main purpose of this study was to analyze the financial data of Omani commercial banks for the years 1999-2003 and to examine the relationships among bank size, operational efficiency, assets management, ROA, interest income and to discuss their impact on the bank’s


performance. The simple regression was used. The study revealed that the ranking of Omani commercial banks based on their total deposits, total credits, total assets, and total shareholders' equity was ranked as Bank Muscat (1st Rank), National Bank of Oman (2nd rank), Omani International Bank (3rd rank), Bank Dhofar (4th rank) and Alliance Housing Bank (5th rank). The regression analysis showed that financial performance of the banks was strongly and positively influenced by the operational efficiency and asset management.

Patil (2006) observed that most of the data about co-operative banking sector emanates from R.B.I. because most of co-operative banks do not have their own websites for disseminating information. He also observed that apart from computerization of basic operational systems, the co-operative banks particularly UCBs have also computerized major loans accounts, the investment operations and clearing systems have also been computerized at the head office levels, however, still there are gaps in technology upgradation in the co-operative banks. No doubt, staff of the co-operative banks at operational, middle and top level is not very keen in making use of the information technology to its fullest extent in their day to day activities which is the main reason for the gap in the use of information technology. The author also discussed the factors influencing technology initiatives in the banking sector. It was observed that the expenditure on IT by co-operative banks is very low than commercial banks. He suggested that co-operative banks have to have more attention on IT deployment.

Ganesan (2006) conducted a study on performance analysis of state co-operative banks in India. He examined the operational efficiency of 30 state co-operative banks in India for the year 2002-03 and 2003-04. The data envelopment analysis technique was used to find out the efficiency of StCBs. The inputs parameters taken in this analysis were membership, number of branches, labour and borrowed funds. The outputs used were investment and advances. The study revealed that 5 SCBs (Gujarat, Himachal Pradesh, Maharashtra, Tamil Nadu and West Bengal) were found to be efficient during 2002-03 and 6 StCBs (Andhra Pradesh, Delhi, Gujarat, Himachal Pradesh, Maharashtra and West Bengal) were found to be efficient during the year 2003-04.

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2003-04. The average efficiency for StCBs in the year 2002-03 was 0.46 and standard deviation was .35. The average efficiency of StCBs came out to 0.47 with S.D. 0.38 during 2003-04. Further, regional efficiencies were also found. It was also found that the efficiency of all the StCBs of south and west seemed to be good as compared to their best in their peer group as the mean efficiency and efficiency of StCBs of south and north east region was full as compared to other regions during 2002-03 and 2003-04. According to cross efficiency, the five worst performers were the SCBs of Arunachal Pradesh, Assam, Tripura, Nagaland, Mizoram.

Shrivastava (2006)\textsuperscript{33} evaluated the performance of UCBs in U.P. by strategic responses of employees and officers of UCBs. The main objective of this study was to do a systematic inquiry about the strategic responses of the UCBs of UP to the banking reform process and also examine the behavior of customers. Some regular customers were contacted to find out productivity. It was found that eighty five percent respondents agreed that the time taken in deposits of funds had declined in 2004 compared to 1997-98. Ten percent respondents favoured the time taken to issue to draft had been declined and ninety seven percent said that time taken to make entries in passbook had reduced. Fifty percent customers agreed that the overall service of the banks had improved. Employees were also contracted. It was found that almost all employees felt that procedures in UCBs were stereotyped and needed total modification. In the opinion of employees, norms should not be similar for big and small branches.

Pasiouras and Sifodaskalakis (2007)\textsuperscript{34} used the Malmquist index to examine the total factor productivity change in Greek co-operative banking. They used a panel dataset of 78 observations from 13 banks over the period 2000-2005. They observed that Greek co-operative banking industry had a history of about ten years and there were 16 banks with 126 branches at that time. They found that only two of these banks were qualified to operate all over the country while another four had reached the required co-operative capital allowing them to extend their operations in the neighbouring regions. It was also observed that though co-operative banks held a relatively small market share in the Greek banking sector, they played an important


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role in the development of local economy. Two models were estimated, one based on the intermediation approach and another based on the production approach. The first model indicated a small increase (3%) in total factor productivity while the second model showed an increase of 6.6%. It was also found that total factor productivity growth was higher for smaller banks on average over the reference period. It was also tested that the differences between the groups were not statistically significant.

Shah (2007)\(^{35}\) studied the various issues of co-operative credit institutions in Maharashtra in the light of banking sector reforms. The main objective of this study was to evaluate the credit delivery through co-operatives in Maharashtra state. The time period was from 1980-81 to 2002-03. The period was divided in two sub periods, viz. 1980-81 to 1990-91 and 1991-92 to 2002-03. The Songes and Buldana central co-operative banks were selected to evaluate the viability of credit institutions. It was observed that although there has been multi-agency set up for rural banking. The major institutional finance to farming community in Maharashtra comes from commercial banks and credit co-operatives. A slow speed of growth had been observed in institutional finance through credit co-operative during the decade of economic reforms (1991-2003) as against the 1980-1990, the reforms period was marked with higher growth in deposit mobilization of these credit institutions. The main business of PACSs in Maharashtra is crop loans. It was found that membership showed negative influence on loan advances through PACSs between 1980-81 and 1990-91, and positive influence 1991-92 and 2002-03. There were wide variations in total and crop loan advances across various districts and regions. The major problems facing credit co-operative system in Maharashtra state were high transaction cost, poor repayment performance, mounting NPAs, low coverage of SC/ST members.

Sapovadia (2007)\(^{36}\) conducted a study of Indian and USA co-operatives in comparative manner. He focused on financial performance. The main objectives of this study were to compare the performance and progress made by various types of co-operative societies in India and USA and to identify the limiting and facilitating factors of co-operatives in both countries. The author took the period of five years i.e. 1996 to 2000. Three type of co-operatives undertaken for the study under reference

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included credit and banking co-operatives, milk co-operatives, and marketing co-operatives. The study was mainly based on secondary data. He highlighted genesis and history of co-operatives in India and USA. He also discussed the role and importance of co-operatives of India and USA. He focused on the social, economic and legal environment of co-operatives working in both countries. It was found that the overall performance of the co-operatives in India since inception had been tremendous particularly, in terms of membership, own funds, deposit mobilization, credit deployment, consumer and marketing activities, and operational results had been found exemplary, but the growth of co-operatives sector wise and geographically had not been even and was marked by striking regional imbalance. It was found that farmers owned co-operatives in USA had set new business volume. But the numbers and memberships of co-operatives in USA were declining. The dairy co-operative movement of USA was relatively healthy and it was in a relatively strong market position. But comparatively, the performance of co-operatives in USA in terms of social, political and institutional.

Mittal and Dhade (2007) in their research paper compared various categories of banks on their productivity and profitability. The study focused on the achievement and performance of public sector banks vis-à-vis private sector banks and foreign banks. The time period for analysis had been chosen as 1999-2000 to 2003-04. The authors used ratio analysis to compare profitability and productivity. It was found that the public sector banks were less profitable than the private sector and foreign banks in terms of overall profitability ratio but their profitability was improving over the last five years. Foreign banks topped in terms of net profitability. It was found that deposit per branch, advance per branch, and business per branch of the public sector banks were much lower than private and foreign sector banks. It was observed that public sector banks had not been as profitable as the other banks because of low productivity and high burden ratio.

Rajkumar (2007) analysed the working results, NPAs and recovery performance of RRBs. In the 2004-05, aggregate reserves, loans and advances outstanding and loans issued increased by 23, 26 and 35 percent respectively while deposits and investments

increased by 10 to 2 percent respectively over the previous year. The net profits of RRBs as a group decreased by 2.7 percent during 2004-05 over the previous year. It was found that 116 RRBs showed improvement. As on 30 June 2005, recovery performance of RRBs improved as compared to the previous year. The number of RRBs having recovery of above 80 percent increased from 59 in 2004 to 88 in 2005. The recovery performance of RRBs in Northern and Southern regions was above 80 percent while in central, Western and eastern regions, it was 70 percent in the year 2005. The study revealed 155 RRBs as against 78 during 2003-04, registered decline in NPAs. However, 94 RRBs had NPA levels above the national average of 8.5 percent and 20 RRBs had high NPA level above 20 percent in 2005 as compared 42 RRBs in the year 2004. Low level of NPAs was observed in Northern (5.0%) and Southern (4.6%) regions. The major observation was that as on 31 March, 2006, 89 RRBs were amalgamated into 26 entities in 11 states. As per the findings of the analysis, financial performance of RRBs was at the satisfactory level.

Amin (2007) highlighted current co-operative situation in India in his research article. He explored the contribution of co-operative sector in national economy. He also discussed about National Co-operative Policy and Amended Multi-State Co-operative Societies Act 2002. But in detail, the study emphasized on the existing co-operative credit structure. The author, briefly, highlighted the various institutions of co-operative credit structure. The author, briefly, highlighted the various institutions of co-operative banking in India. It was found that the rural co-operative credit cooperatives were disbursing 38% of total rural credit at that time. At the end of March 2005, there were 31 StCBs, 367 DCeBs, 1,08,779 PACSs and 1853 UCBs approximately. It was also found that 117 UCBs out of 1853 UCBs were exclusively managed and controlled by women. It shows growth of entrepreneurship among women.

Roy (2007) conducted a micro study of Meghalaya Co-operative Apex Bank Ltd. as a success story. The bank was established in 1971. It has two tier structure. It serves through its 40 branches and 82 PACS. It extends both short-term and long term credit for agriculture and other purposes as well. The main objective of this research

paper was to evaluate the workings results of the bank. Ten years had been taken from 1996 to 2005 and an average method at an interval of 5 years was taken into account. It was observed that the share capital, on an average, stood at Rs. 242.6 lakhs during 1996-2000 had grown over the period to the extent of Rs. 406 lakhs during 2001-2005 with an incremented growth of Rs. 235.4 lakhs by 97.03 percent. The latest share capital position of the bank stood at Rs. 511 lakhs by 2005. The study revealed that there was a growth percentage of 102.5% over the period in total deposits. The quantum of deposits on the average at Rs. 182 crores during 1996-2000 increased to Rs. 358.54 crores during 2001-2005. Borrowings of the banks stood at March 2005 Rs. 27.74 crores. The average borrowings during 1996-2000 was Rs. 518.87 lakhs increased to Rs. 1427 lakhs (2001-2005) with an increase of Rs. 909 lakhs. The study reflected that the loans and advances had increased with an increase of Rs. 3468 lakhs i.e. 62.6 percent increase over the study period. It was also observed that the competency building of human resource at work was an ongoing process being adopted by the bank and all branches of the Meghalaya Co-operative Apex Bank Ltd. were in the process of computerization.

Kshirsagar, Sananse and Gorade (2007) conducted a study to appraise the performance of farmers service society of Janner Taluka in Pune. The Shiroli Budruk Krishak Sera Sahakari Sanstha Ltd. (A Farmers Service Society), sponsored by Bank of India is located in Shiroli Budruk village of Junnar Taluka, Pune District, Maharashtra. It was the most successful FSS in the state of Maharastra. The secondary data had been used. The study period was from 1990-91 to 2004-05. It was observed that the FSS was offering multiple services to its members under one umbrella. It was revealed that on an average the members loans (Rs. 850.64 lakhs) percentage to the total assets (Rs. 1128.05 lakh) of the FSS was 75.41 percent It was found that deposits and bank loans contributed more than 60% to total assets and the overall cost of funds worked out to 8.74 percent. It was also found that the FSS was earning yield on advances at 10.96 percent and by 10.84 percent on total funds deployed. On an average, the working capital worked out at Rs. 1107.74 lakhs. For the overall working of the society, it was concluded that the FSS was strictly working as per laid down rules and procedures of the Registrar of Co-operative Societies and

the members were benefited to great extent. It was suggested that sponsor bank should ensure that there are no delays in assessment and sanction of credit needs of the FSS and empowerment and capacity building of Board of Directors is very essential.

Ramu (2007)\textsuperscript{42} appraised the performance of urban co-operative banks in India. The main objectives of this study were to present policy developments in UCBs, to evaluate the performance of UCBs and to know the managerial and financial deficiencies of UCBs. The study was based on secondary data. The study period was from 1998-99 to 2003-04. The author described Narasimham Committee-I, Marathe Committee, and Narasimham Committee-II and their recommendations regarding UCBs. The study revealed that from 1307 UCBs in 1991, the number of UCBs had risen to 2105 in the year 2004. Deposits had increased by 12.8 times from Rs. 8600 crores to Rs. 1, 10,250 crores while advances had risen from Rs. 7800 crores to Rs. 67,900 i.e. 8.7 during the above 15 years. He found that the number of reporting UCBs had increased from 1587 in 1998-99 to 1917 in 2003-04. Owned funds and deposits constituted 88.91\% under the study period and loans and advances showed continuous increase i.e. from Rs. 33169 crores in 1998-99 to Rs. 67930 crores in 2003-04 but the annual growth rate of borrowings was 9.67\% only. The average credit-deposits ratio remained 63.87\% during the study period. The study also revealed that gross NPAs of reporting UCBs had increased from Rs. 3306 crores in 1999 to Rs. 11922 crores in 2004. Gross NPAs to total advances ratio was 1107\% in 1999 raised to 21.90\% in 2002 and slightly reduced to 17.36\% in 2004. It was found that the level of NPAs of UCBs had jumped during 2001-02, because of difficulties faced by a few banks in Gujarat. The study also exhibited that mobilization of deposits by UCBs over a period of six years was satisfactory. As per study, the major financial and managerial deficiencies of UCBs were as – high cost deposits, non-appraisal, lack of proper appraisal of loans, lack of training, computerization etc. The suggestions were like as enhance membership by motivating depositors, forecast the future interest rates, lending programmes should be more dynamic and in consonance with the general programme for economic development of the country as a whole etc.

Shivam (2007) evaluated the performance of DCCBs in Karnataka in general and Shimoga DCCB in particular between 1986-87 to 2005-06. He found that on an average, 15 percent of total owned funds came from internal sources and 85 percent from external sources (82 percent from deposits and 3 percent from borrowings & other liabilities). Hence, deposits were one of the components of borrowed funds. The share of borrowings in total working capital reduced during the study period and investments of the banks increased during this period. It was found that during pre- and post-reform period, the percentage of recovery of loans was 36 and 64 respectively. It was also concluded that on an average, the total agriculture loans issued by SDCCB varies between 97 percent (in 1988-87) to 66 percent (in 2005-06).

Sharma (2007) undertook an effort studied the capital formation in rural co-operative banks. The study revealed that during 2004-05, the deposits of state co-operative Bbanks grew at a meager rate of 1.9 while their borrowings increased sharply. As on 31st March, 2004, StCBs' borrowings accounted for 83.5% of their total resources and a major portion of these borrowings came from NABARD alone. The researcher found that StCBs and DCCBs had a good base (65-66%) but PACS, SCARDBs and PCARDBs depended on borrowings. Taking into account the overall profit level, the overall rate of return on capital employed in rural co-operative banks was virtually negative. The study exhibited that the process of capital formation in rural co-operative banks was seriously affected due to low resource base, huge accumulated losses, persistent levels of NPAs, lack of diversification and low recovery levels. As per the findings of the study, it was found that total accumulated losses of rural co-operative credit institutions amounted to Rs. 8746 crores as on 31 March, 2004 and as on 30 June, 2006, 7 out of 31 state co-operative banks and 134 of 367 DCCBs did not comply with the provisions of minimum requirement of paid up capital and reserves under B.R. Act, 1949. He suggested that co-operative banks should evaluate the risks associated with various assets and adopt safeguards measures against these risks. It was also suggested that co-operative banks should formulate proper recruitment policy and career development plans for motivating.

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human resources. The co-operative banks should be governed by solely by the RBI/NABARD especially for financially aspects.

Lokshmanan and Gowthaman (2008)\textsuperscript{45} analysed the performance of the banks under study in terms of the growth of membership, share capital, deposits, loans and advances and net profits. They used mean, S.D., correlation co-efficient and trend line for analysis. Seven year (2000-2006) had been taken. They found that the average level of membership in the UCB under study had been worked out at 182. There had been continuous increase in the number of membership during the study period. The average level of share capital had been worked out Rs. 204.01 lakhs. In the study, it was found that the average level of deposits had been worked out at Rs. 4989.91 lakhs, loans and advances at Rs. 2748.61 lakhs and net profit at Rs. 68.58 lakhs. It was evident from the analysis that all the selected variables of the bank had been increased during the study period.

Das (2008)\textsuperscript{46} viewed that co-operatives had contributed substantially to the national economy. He revealed that co-operatives had a very extensive network of rural outlets as compared to that of RRBs and commercial banks. He found that credit supplied by the co-operatives share of short-term seasonal agricultural operations accounted for around 70 percent whereas medium and long term investment credit accounted for 30 percent. He also highlighted the problems and challenges facing by co-operative banking. He found that as on 31 March, 2004, six StCBs and 133 DCCBs had negative net worth. The co-operative bank don’t have freedom for conducting their business as commercial banks. Poor recovery of loans by co-operatives was major obstacle in the growth of co-operatives. He suggested that co-operative banking should be considered as very suitable mechanism for financial inclusion.

Harishitha, Mahajanshetti, Vijaykumar, Basavaraj & Basavaraj (2008)\textsuperscript{47} undertook a study with an objective to analyze the growth in the performance indicators of DCCB, Shimoga. They found that the results of head office of the bank revealed that in physical indicators, the number of deposits accounts showed the


maximum growth followed by number of employees and number of members. Among financial indicators, the growth in the amount of advances had been highest. All other financial indicators also showed high positive growth. The study suggested that the bank would benefit if persons with high experience were put in the position of the chairman and managing director.

Solo and Pandey (2008) undertook a micro study of Assam Co-operative Apex Bank Ltd. They analysed various variables of the bank like membership, share capital, loans and advances, NPA, management cost and operational results. The study was totally based secondary data and the study was from 2001-02 to 2005-06. The study revealed that the membership of the bank had maintained a rising trend except in the year 2004-05 and the share of societies was the largest share in total pair up capital as compared to other individuals, firms & co., state govt. and DCCBs during the study period. It was also observed that fixed deposits and saving deposits were the main components of total deposits. The share of current deposits was very small and showed increasing trend. It was concluded that overall total deposits was satisfactory but growth rate was low. The study indicated the deposits were the main source of working capital of the bank. The working capital increased every year. The bank advanced credit facilities to needy farmers, artisans, weavers, traders and some other village based economic activities like partly, piggery, fishery and plantation, agro based industries, tea industries etc. The study showed that the short term loans were fluctuating and in terms of percentage to total loans. Medium term and long-term loans and advances maintained an upward trend. Broadly, loan disbursements were made under three major heads like as tea advances, agriculture and allied advances and general advances. The recovery performance of the banks remained very poor and NPAs of the bank was also mounting during the study period. It was also observed that during the five years period, the banks had earned a little profit in year 2005-06 and in the rest four years the bank had made loss. It was suggested the management of the bank needed to appoint banking professionals and existing employees must have be given proper training to the face new challenges in the banking business.

Chalam and Rao (2008)\textsuperscript{49} analyzed the financial performance of nine selected primary agricultural co-operative societies working in west Godavari district of Andhra Pradesh. The data for a period of 15 years starting from 1992-93 to 2006-07 has been taken for the study. Various ratios have been computed under four brand groups viz., liquidity, operational, productivity and profitability ratio. The study revealed that majority of the selected PACSs were maintaining a high percentage of cash to deposits, the depositors were in a very safe position because the percentage of investment to deposits was very high. The credit to deposit ratio of the selected societies was very high. The study also revealed the cost of management of the selected societies was less than 3 percent, which was reasonable. The study showed that on an average 90\% of societies' income came from interest earned on the advances and investments and the societies were paying more than 70\% of their total income in the form of interest on borrowings and deposits. The study exhibited that the average per employee deposit of the selected societies was very low while the average per employee advance is very high. The study revealed that average return on assets of the societies was less than one percent which means the earning capacity of the assets of the societies was very meager and the return on equity of the selected co-operative societies was insignificant. The researchers suggested that the societies should take effective steps for profitable deployment of funds and take necessary steps to enhance their income base from non-credit activities like sale of agriculture inputs and consumer goods.

Sharma and Kumar (2008)\textsuperscript{50} critiqued the package initiated by the government of India that aimed at reviving the rural term co-operative credit structure in the country. It was observed that asset quality and recovery performance of the RTCCS were not satisfactory. NPAs level in the RTCCS was very high as compared to that in the commercial banks in India. The credit-deposit ratio was 82 percent, 87 percent and 265 percent respectively for StCBs, DCCBs and PACSs in the year 2005-06 higher than the C-D ratio of commercial banks in India for the same period which was 70 percent. In this article, recommendations of Task Force also known as the Vaidyanathan Committee were discussed. The major suggestions of this committee were financial


\textsuperscript{50} Sharma, Mandira and Kumar, Rajiv (2008), " Rural Short-term Co-operative Structure", \textit{Economic & Political Weekly}, March 1, pp. 13-18
revival, issues relating to CRAR, retirement of government share capital, technical assistance, legal and regulatory reforms. It was found that the correlation co-efficient between government shareholding and NPAs was 0.07 and that between government shareholding and profitability was −0.20. Both the values were insignificant. So it was observed that there was no significant relationship between government shareholding and performance of the PACSs.

Kumar (2008)\textsuperscript{51} undertook a study to analyse the financial performance of scheduled commercial Banks in India. He divided the banks in different groups such SBI, SBI associates, SBI group, nationalized banks, public sector banks, private sector banks and private sector banks. Secondary data from 2001-02 to 2007-08 was used. He used marginal efficiency and ratios to analyse the performance of SCBs. On the basis of efficiency analysis, it was concluded that foreign sector banks were performing better than any other bank-groups followed by new private sector banks, SBI associates & nationalized banks. New private sector banks topped in terms of growth rate of deposits, advances, investments, other income and net profits. The study also revealed that foreign sector banks were more efficient followed by private sector banks & public sector banks. The author suggested policies and strategies to reduce high level of NPAs, risk management and to focus on quality of services.

Ramu (2008)\textsuperscript{52} conducted a study about issues and challenges of HRM in co-operative banks in India. He emphasized on the importance of HRM. He observed that employees of co-operative banks play an vital role in managing not only the transaction of customer but also future long-term relationship with them. He described about HR policies for co-operative banks. He highlighted that in practice there is no specific written document of HR policies in many co-operative banks. Though the co-operative banks come under the financial discipline of RBI, NABARD and the Apex bank, they enjoy autonomy in personnel matters. Political interferences in the activities of co-operative banks were another drawback for the absence of good governance. He observed that co-operative banks preferred to recruit local candidate particularly for managerial cadre post due to the fact that they were well adjusted to local environment. But they were not able to get attract professionally qualified workers.

\textsuperscript{51} Kumar, Parveen (2008), "An Inter Group Financial Performance Analysis of Scheduled Commercial Banks in India", \textit{M.Phil. Dissertation}, Department of Economics, Kurukshetra University, Kurukshetra.

candidate because poor salary structure. It was also observed that women employees at both clerical and officer level in co-operative banks were quite insignificant. The author concluded that as compared to other management functions, HRM in co-operative banks is more sensitive, personalized, context dependent and cannot be managed through a set of predefined techniques.

**Dutta and Basak (2008)**\(^5\) appraised the financial performance of Nabapally Co-operative Bank Ltd. Barasat, West Bengal. The study was based only on secondary data and the time period was from 1995-96 to 2004-05. The Nabapally Co-operative Bank Ltd. was registered on 17th April, 1962 and started its function form 6\(^{th}\) May, 1962. The bank had no branch when the study had been carried out. It was established with the working capital of Rs. 800. The study revealed that the membership of the bank had increased from 4772 in 1995-96 to 6678 in 2004-05 and at the same time the paid up share capital had increased from Rs. 9.70 lakhs to Rs. 50.15 lakhs. Total deposits increased from Rs. 563.22 lakhs in 1995-96 to 2056.77 lakhs in 2004-05 showing an increase of 265.18 percent during this period and total outstanding loans and advances of the bank increased with an increase of 195.28 percent during this period. The study revealed that the total working capital was Rs. 682.13 lakhs in 1995-96 which increased to Rs. 2723.28 lakhs in 2004-05. The gross NPAs to total loans and advances had gone up from 13.07% in 2001 to 15% in 2004-05. The net profits of the bank increased from Rs. 7.88 lakhs in 1995-96 to Rs. 36.55 lakhs in 2004-05. The bank has never suffered loss since its inception. The author suggested some drastic steps needed to be taken to reduce mounting doubtful assets.

**Pandey (2009)**\(^5\) conducted a study to highlight the role of Nagaland State Co-operative Bank Ltd. (NSCB). NSCB is the only financing agency in the co-operative sector. The main activity of the bank is to cater the credit needs of farmers through co-operative societies and also through Kisan Credit Card. The bank is also making all possible efforts in creating banking awareness by in calculating the habit amongst people. It was registered as an Apex Bank on 4\(^{th}\) Nov. 1966. It is serving the people of Nagaland through its branches spread all over the state. The state has two tier co-operative structure with state co-operative bank at the apex level and PACs at the

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grass root level. The study revealed that NSCB had issued loans to farmers under three heads Khaki, Rabi and KCC. The bank implemented KCC in the year 2001-02. Though the amount of overall loan between 2001-02 to 2005-06 increased considerably, but the amount of loan for Kharif crops declined significantly. The loans issued under Rabi crops was very small but showing an increasing trend during the study period. NSCB had been playing an active role in developing rural housing and had extended credit facilities to state Road transport organization (STRO) through various agencies. The loans issued to SSI were of Rs. 28.28 lakhs in the year 2001-02 declined to Rs. 5.52 lakhs in 2005-06. The loans issued to consumer co-operative societies by the NSCB indicated a fluctuating trend. The bank also extended financing facilities for business and non-agricultural purpose. It was concluded that NSCB was playing an important role in the overall development of the state with more emphasis on rural areas by providing credit facilities to various agencies.

Prasad (2009)\(^{55}\) discussed the status of HRM in co-operative institutions. He said that an attituditional change in leaders, members and employees was very important for co-operatives. He suggested that the main focus of co-operatives should be on accelerating economic reforms, participation and competition in the development process along with other agencies, emphasis on professionalism. The managerial effectiveness was the another important factor in this study. It was suggested that the board members must reflect top leadership qualities based on clear understanding of the issues of the concerned organization and human resource policy for the middle level management should focus on appropriate recruitment with suitable placements. It was also found that there was absence of structured human resource policy. At the grass root levels, HRD was more neglected because there was lack of infrastructural facilities. It was found that the present training approach in co-operatives was not innovative due to lack of scientific and well researched assessment of the professional’s needs of the employees. It was suggested that there should be adequate budgetary provisions for strengthening human resource management in co-operatives.

Chakrabarthy and Ghosh (2009)\textsuperscript{56} undertook an empirical study on the appraisal of a rural co-operative in a research paper. He appraised the co-operative in the light of rural development. The main objective of this paper was to study the progress of rural development through the performance of a rural co-operative. They selected a random sample of 100 members of the co-operative. The study revealed that the rural co-operative had been able to improve the living standard of the rural people of the studied area. Hence the rural co-operative accelerated the process of rural development in remote India. They suggested a smooth and active system of loan issuance and loan recovery may uplift the living standard of the rural population.

Verma and Naidu (2009)\textsuperscript{57} undertook a micro study of primary agricultural credit society, Taduku in the Puttur Mandal of Chittor District of Andhra Pradesh. The authors evaluated the performance of that society for the period of five years from 2004 to 2008. They studied socio-economic composition, capital generation, loan operations, recovery performance and non-credit services of the society. The study revealed that number of members, population covered and families covered had increased during the study period. The study explored that there had been a significant growth in members, share capital, loans operations and non-credit services during the same time period and recovery performance of the society was quite unsatisfactory and did not undertake extension, marketing and welfare services. The study also concluded that there was heavy dependence on borrowings for working capital rather than owned funds.

Pujari, Suhag and Malik (2009)\textsuperscript{58} undertook a study to evaluate the performance of PACSs in Karnataka state. They took a period of ten years (1996-97 to 2005-06). The study revealed that about 98.93 percent of villages and more 82.78 percent of families were covered in the state by PACSs. Further, it was observed that a majority of the borrowers were small cultivators. The share capital per member increased from Rs. 501 to Rs. 887 during the study period. The deposits attracted by these societies


increased double but were still low. The amount of overdues of PACSs increased significantly. The study also showed that C-D ratio revealed increase in deposits and credit in same proportion. The authors suggested that the government should increase share in looking capital to advance more credit to rural people to meet their capital requirement and PACSs should take steps to recover the amount of overdues for increasing the efficiency of societies.

Amunathan (2010)\(^5\) studied the performance of Cuddalore District Central Co-operative bank in Tamil Nadu with various financial ratios like solvency ratios, liquidity ratios, efficiency ratios, and profitability ratios. He used secondary data for a period of ten year i.e. 1999 to 2008 to carry out the study. The study resulted that solvency ratios of the bank indicated the bank’s inability to meet its medium and long term delegations and as per liquidity ratios, the bank lent more then its deposits in the recent years. Current ratio of the bank was not satisfactory and gross profit ratio indicated a net profit of 1 percent only. Further, net profit to owned funds ratio was also very meager. It was also found that the total assets were not sufficient to satisfy the total liabilities of the banks throughout the period under reference.

Gawada and Bhosale (2010)\(^6\) evaluated inflow deposits management of Kolhapur District Central Co-operative Bank. The study found that the bank could not maintain proper inflow deposits management because bank had to pay high interests on deposits which left adverse impact on bank profitability. The standard ratio of net profit to total income could not be maintained because the bank had to pay interest more than 64.45 percent on deposits out of total income.

Singh and Rani (2010)\(^7\) analysed NPAs both in absolute and relative terms of Sonepat Central co-operative Bank Ltd. (SCCBL) and Jind Central Co-operative Bank Ltd. (JCCBL). The secondary data from 2004-05 to 2008-09 were used. They found that the position of SCBBL in respect of doubtful assets was better as compared to JCCBL during the period under study period. It was also found that the banks under study were not successful in restricting the level of NPAs. It was concluded that the overall performance regarding NPA management of SCCBL was better as compared

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to JCCBL during the study and ‘t’ test also favoured SCCBL for better performance of managing their NPAs. They study suggested ‘one time settlement’ scheme, efficient credit appraisal system and risk management policy to improve the profitability and financial stability of co-operative banks.

Chander and Chandel (2011)\textsuperscript{62} analysed the financial performance and viability of four DCCBs operating in Hisar Division in Haryana. They took various financial parameters like profitability, liquidity, efficiency, solvency, risk and bankruptcy. They considered twelve year (1997-98 to 2008-09) for their study. They used 20 financial ratios to analyse the performance of four DCCBs of Hisar division viz Hisar, Bhiwani, Fatehabad and Sirsa. They also used Alman Z-score model to assess financial viability of those four banks. They found that Sirsa and Fatehabad DCCBs scored first and second position respectively by performing well profitability, solvency, efficiency and risk parameters but critical on liquidity. Bhiwani DCCB performed best on liquidity, average on solvency and efficiency but critical on profitability and risk parameters. Hisar DCCB had been at lowest position and worst performer on all parameters except solvency. They also concluded that as per z-score analysis, all four DCCBs were in weak performance (bankruptcy) zone throughout the study period. They concluded that this was due to financial mismanagement and underutilization of resources.

Pillai & Johnson (2011)\textsuperscript{63} examined the short term liquidity and long term solvency status of The Kerala State Co-operative Bank Ltd. They used three ratios to analyse liquidity position namely current ratio, quick ratio and absolutely liquid ratio. They found all three ratios showed a positive trend in this regard. In order to analyse the long term position, six ratios have been used. The results showed a very high debt equity ratio that led to high interest burden to the bank. The solvency ratio and the fixed assets to net worth ratio seemed to be quite satisfactory.

Rakshit and Chakrabarti(2012)\textsuperscript{64} analyzed the factors influencing the financial performance of The West Bengal State Co-operative Bank. They took both pre and

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post liberalization period (from 1973 to 2008). They used regression model to measure the impact of internal factors. They found that loans and advances had a negative impact on net income of the bank but to a low extent. They suggested that control of operating expenses would improve net income of the bank.

Research Gap: It is clear from past studies reviewed by the researcher that though analyzing the performance of co-operative credit institutions has been the common area of research but, these studies were limited to PACSs, DCCBs, UCBs, SCARDBs and PCARDBs. Further, the related literature reveals that very little research work has been done on StCBs in the form of research articles. Hence, the present study is an attempt to fill this research gap.

Justification of the Present Study

Co-operative banks are important constituents of the Indian Financial System. They have contributed substantially to the national economy. They have a very extensive network of outlets as compared to that of regional rural banks and commercial banks. Co-operative banking is most suitable mechanism to bring the rural and semi-urban under privileged into total financial inclusion as well. To make the financial inclusion a success and to increase the share of co-operative banks in total agriculture credit particularly, StCBs require more attention of governments and policy markers because they are main pivot because they direct, coordinate and control functioning of all organs of co-operative movement in their respective states. The only aspect needed is to manage them effectively and bring transparency in their working. Co-operative banks do banking business mainly in the agriculture and rural sector. However, StCBs, DCCBs and UCBs operate in semi-urban, urban and metropolitan areas also. The urban and non-agricultural business of these banks has grown over the years.

In short term rural co-operative credit structure, State Co-operative Apex Banks(StCBs) are playing a significant role of being linkage between R.B.I on top and DCCBs with PACSs at the bottom and working as a balancing centre for the central co-operative banks and doing banking business in their territory. They are the main constituent of the co-operative banking system. They fiancé farmers, rural artisans, agricultural labourers, entrepreneurs, etc. through DCCBs and their own branches in their respective states. They provide the short-term and medium-term loans for agricultural as well as non-agricultural purposes. They provide short-term agricultural loans for seasonal agricultural operations, marketing of crops and others including supply and distribution purposes. They advance short-term non-agricultural
loans for industrial purpose, consumption loans and other loans. They provide medium-term agricultural loan for the purpose of minor irrigation, animal husbandry etc. and they provide medium-term non-agricultural loans for the purpose of purchase of shares. They mobilize the deposits through various types of attractive schemes. They are playing a significant role in income generation, employment generation and up lifting the standard of living of their beneficiaries. Against this backdrop it becomes essential to evaluate their performance from time to time. Hence, the researcher has decided to conduct a study for evaluating performance of State Co-operative Banks (StCBs) in India.

Scope of the Study
There are 31 StCBs (with their 1015 branches) in India. As per NAFSCOB, these banks are categorized in six regions viz. Central, Eastern, North-easter, Northern, Southern and Western regions. It is very difficult to appraise the performance of all these StCBs in detail. So, the researcher has decided to study the performance of StCBs of Northern region only. In the Northern region, there are six StCBs - Chandigarh, Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab and Rajasthan State Co-operative Banks. Further, a region-wise comparison of StCBs in India has also been done to make this study more workable.

Objectives of the Present Study:
The present study focuses mainly on the evaluation of performance of six State Co-operative Banks of Northern region. More specifically, the objectives of the study are as follows:

- To evaluate the financial performance of state co-operative banks of Northern region in India,
- To measure and analyse the efficiency (productivity) of employees of state co-operative banks of Northern region,
- To make a region-wise comparison on the performance of all state co-operative banks in India,
- To identify the challenges faced by state co-operative banks in present competition era and
- To impart some workable suggestions to boost the performance and efficiency of these banks on the basis of findings of research.
Research Methodology

Research Design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance of the research purpose with economy in procedure. The present study is descriptive-cum-analytical in nature. It describes functioning and importance of state co-operative banks in India. Hence, it is descriptive. It has evaluated the performance of state co-operative bank. So, it is analytical by nature.

Sampling Design (Universe, Sample size and Sampling Technique)

There are 31 StCBs. In the present study, 6 StCBs of Northern region have been considered. To achieve first two objectives, these six StCBs have been taken. For third objective, all 31 StCBs under six regions have been considered to infer some aspects in brief. To identify the challenges faced by StCBs, two banks namely-the Haryana and Rajasthan State Co-operative Banks have been selected from six StCBs of Northern region because only these two banks from Northern region signed on MOU with NABARD to implement the provisions regarding revival package suggested by Vaidyanathan committee in 2005.

To know the responses about the challenges, and problems of StCBs top management officials like president, managers directors, general manager, manager and deputy/assistance managers are selected. Further, the researcher has also decided to interact with the employees for getting more informations about their attitude and satisfaction level. So, the respondents from these two StCBs are selected in the following manner:

<table>
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<tr>
<th>Designation</th>
<th>Total Proposed to be selected</th>
<th>Total Selected Respondents</th>
<th>The Rajasthan State Co-operative Bank Ltd.</th>
<th>The Haryana State Co-operative Bank Ltd.</th>
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<td>Officials (Top Mgt.)</td>
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<td>Chairman/President M.D./G.M.</td>
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<td>Deputy Manager/Assistant Manager</td>
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<td>20</td>
<td>543</td>
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<td>Total</td>
<td>(5+4) + (20+40) = 69</td>
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These respondents have been selected on the basis of chunk non-probability sampling technique.
Hypotheses
To achieve the objectives in an effective manner, the following hypothesis were framed:

1. $H_0$: There is no significant difference among growth rates of per employee amount of deposits of StCBs of Northern region during the study period.

2. $H_0$: There is no significant difference among growth rates of per employee amount of advances of StCBs of Northern region during the study period.

3. $H_0$: There is no significant difference among growth rates of per employee amount of profits of StCBs of Northern region during the study period.

4. $H_0$: There is no significant difference among the growth rates of per employee amount of deposits of StCBs of different regions during the study period.

5. $H_0$: There is no significant difference among the growth rates of per employee amount of advances of StCBs of different regions during the study period.

6. $H_0$: There is no significant difference among the growth rates of per employee amount of profits of StCBs of different regions during the study period.

Variables/ Indicators studied
In the present study, the concept of performance evaluation has been taken in quantitative form. Here, performance evaluation includes evaluation of financial performance and analysis of employees’ efficiency. The efficiency has been measured in terms of staff productivity. The following variables have been considered for the study:

(a) The financial performance of StCBs of Northern region have been evaluated in following two manners:

(i) Financial indicators in absolute term: These include share capital, reserves, liquid assets, investments, deposits, borrowings, working capital, loans issued, loans outstanding, overdues, cost of management and profits.
(ii) *Financial Indicators in relative terms:* Twenty financial ratios have been calculated and analysed under six categories viz. financial health, investment performance, liquidity performance, operational performance, recovery performance and profitability performance by keeping the ratios of CAMEL approach in mind.

(b) The efficiency\(^{65}\) of employees of the selected two StCBs has been measured on the basis of the following variables:

- Deposits per Employee.
- Credit (Loans Outstanding) per Employee
- Business (Deposits + Credit) per Employee
- Profits per Employee
- Compensation (Salary) per Employee
- Cost of Management per Employee

(c) The performance of StCBs under different regions of India has also been evaluated and compared on the basis of various financial ratios discussed above.

*Nature, Sources and Collection of Data*

In the present study, both types of data-secondary as well as primary have been used. The secondary data was mainly collected from NAFSCOB publication *i.e.* Basic Data on Performance of State Co-operative Banks (as on 31\(^{st}\) march). Beside this, RBI Bulletin and Report on Trend and progress of Banking in India(RBI), NABARD publications and various journals like Indian Co-operative Review, The Cooperator, NCDC Bulletin, Bank Quest, Prajnan, Management Accountant etc. and various Ph.D. thesis relating to banking area have been the main sources of information required for the present study. To collect the primary data, two different types of questionnaires were designed. One questionnaire is constructed to know responses of top management officials of selected StCBs regarding the present challenges and problems faced by their StCBs and second questionnaire has been constructed to know the satisfaction level of working employees (operational employees) of the selected StCBs of Northern region. Both types of questionnaires have been prepared

\(^{65}\) In the banking sector, it is very difficult to differentiate between productivity and efficiency of employees/staff. In the previous researches, some authors have used productivity and some of them considered it as efficiency to check the performance of employees of banks. After discussion, the researcher has considered efficiency for studying the performance of employees. In this study efficiency has been considered in terms of productivity i.e. per employee.
on the basis of five-point likert scale consisting options from strongly-agree to strongly-disagree. The scores given to these options are:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree Nor disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5)</td>
<td>(4)</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td></td>
</tr>
</tbody>
</table>

(Please see the annexure for the same)

**Time-Period of the Study**

The period of eleven years from 1999-2000 to 2009-10 has been taken to carry out the present study.

**Statistical Techniques/Tools used:**

To analyse the collected data, various simple statistical techniques like average, standard deviation, minima, maxima as well as advanced models like Annual Compound Growth Rate, Friedman’s Test, Karl Pearson Correlation Coefficient, z-test and t-test have been used.

*The statistic of ACGR is:*

\[ Y = ab^t \]

Where \( Y \) = dependent variable (like Deposits, advances etc.)

\[ a = \text{constant} \]
\[ b = \text{slope of trend lines (growth rate)} \]
\[ t = \text{time}. \]

But, the researcher has calculated this rate by using MS-Excel. The calculated ACGRs have been used for assigning the ranks to the banks understudy. Sometimes, the ranks are assigned on the basis of ACGRs and sometimes on the basis of mean value of the given variable.

**Karl Pearson Correlation Coefficient:**

To quantify the degree of relationship between two variables, coefficient of correlation is used. It is denoted by ‘\( r \)’ which always lies between -1 and 1. There are various method for calculating correlation co-efficient. But in the present study, Karl Pearson Coefficient of correlation is used to see the relationship between various variables of employees’ efficiency, the formula for computing co-efficient of correlation (\( r \)) is:
The significance of r is checked at both 5% level and 1% level of significance by using SPSS software.

**Friedman's Test:**

In this study, Friedman's test has been used to test the hypotheses. It is a non-parametric test. This test was developed by M. Friedman in 1937. It requires less restrictive assumptions conceding the level of data measurement. It is used whenever the number of sample is greater than or equal to 3 and ranked data is available. The first step

**Friedman's test statistic is**

\[
F = \frac{12}{nk(k+1)} \left( \sum_{i=1}^{k} R_j^2 \right) - 3n(k+1)
\]

Where

- \(n\) = number of years
- \(k\) = number of sample (say banks)
- \(R_j\) = total of ranks assigned to the sample (like bank) during “n” years

**z-test (Large Sample):**

This test is used when there are two samples and number of observations is more than 30 and to see whether the difference between the mean values of two samples is significant or not. Here, this test is used to see the differences between the responses given by the employees from the two selected banks regarding the selected indicators related to their attitude and satisfaction about their banks.

**z-test statistics is:**

\[
z = \frac{(\bar{x}_1 - \bar{x}_2)}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}
\]

where \(\bar{x}_1\) and \(\bar{x}_2\) = means of two samples

\(\sigma_1\) and \(\sigma_2\) = standard deviation of two samples

\(n_1\) and \(n_2\) = number of observations of two samples
Critical value at 5% level of significance = ± 1.96

**t-test (small sample):**

This test is used to find out whether the difference between means of two small samples is significant or not. Small sample means where observations are less than 30. Here, this test is used to see the differences between the responses given by the top officials from the two selected banks regarding the selected indicators related to challenges and problems about their banks.

Formula of t-test is:

\[
t = \frac{x_1 - x_2}{S \sqrt{\frac{n_1 n_2}{n_1 + n_2}}}
\]

where \( \bar{x}_1 \) and \( \bar{x}_2 \) = means of two samples

\( n_1 \) and \( n_2 \) = number of observations of two samples

\( S \) = combined standard deviation

where \( S \) is calculated by the following formula

\[
S = \sqrt{\frac{\Sigma(x_1 - \bar{x}_1)^2 - \Sigma(x_2 - \bar{x}_1)^2}{n_1 + n_2 - 2}}
\]

Here degree of freedom is determined by

\[
d.f. = n_1 + n_2 - 2
\]

Further national level average is also calculated by considering the amount of the given variable of all the 31 StCBs taken together and used for comparing with the figures of mean and ACGR for the same variable of the selected banks.

**Limitations of the Study**

1. The study could not consider very important aspect of the financial performance of StCBs i.e. non-performing assets due to non-availability of data required as such.

2. The study is mainly limited to Northern region of India.

3. Branch-wise efficiency/productivity of the selected StCBs has not been analysed.

4. Non-availability of required data and repetition of data for some banks like J&K have been the problem for carrying out the study.
Format of Writing Bibliography

Broadly, in the area of research, two main styles of bibliography viz. American Psychological Association (APA) and Modern Language Association (MLA) are used. In this study, APA style has been used for writing bibliography.