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Financial performance analysis of primary cooperative agricultural and rural development banks; with special reference to Ernakulum district of Kerala

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Abstract
The primary cooperative agricultural and rural development banks in Kerala have been assigned a vital role in agricultural development in the State. It is through the branches of these banks that various programmes of the government are being implemented in agricultural sector. However, the performance of these banks in recent years shows a deterioration owing to its structural and functional limitations. Therefore, the study has come up with the objective of studying the financial performance of Aluva primary cooperative agricultural and rural development bank located in Ernakulum district of Kerala. The study period covered financial data for ten years from 2008-09 to 2017-18 and the data was analysed with the help of financial ratios. The study found that performance of the bank is financially sound but with minimum possible disfigurements which is suggested to wrestle with appropriate management practices.

Keywords: financial ratio analysis, efficiency in mobilisation, deployment and operations, profitability

1. Introduction
Agricultural sector has been playing an important role in Indian economy with the dependency of majority of India's population. It provides employment to 54.5 percent of the population (CSO, 2012). In spite of being the largest employer, agriculture contributes only 17.4 percent of GDP which is said to be declining over the years (Economic Survey, 2015-16). Credit plays a significant role in the development of agriculture. In our country, agriculture is dominated by small and marginal farmers which intensifies the problem of availability and accessibility of these farming community to sources of institutional credit.

The sources of agricultural credit are of two types: i) institutional agricultural credit agencies ii) non-institutional agricultural credit agencies. Institutional agricultural credit is disbursed through a multi-agency network consisting of Scheduled Commercial Banks (SCBs), Regional Rural Bank's (RRBs) and Cooperatives. Of these, cooperatives are the major lending agency in rural areas (Shah, 2008). The credit cooperatives that usually lends short term agricultural loans to the poor are most viable and vibrant in the country. However, the long term agricultural/investment credit needs are met through the cooperative agricultural and rural development banks.

The Cooperative Agricultural and Rural Development Banks were the pioneers in providing investment credit for agriculture and were started primarily for this purpose. However, recently the banks have been expanding their activities and diversified their lending portfolio not only for agriculture based activities but also for non-agricultural activities especially housing financing. The long term cooperative credit structure have a two tier structure comprising of the State Cooperative Agricultural and Rural Development Bank (SCARDB) at the state level and Primary Cooperative Agricultural and Rural Development Banks (PCARDBs) at the Taluk level.

2. Materials and Methods
The study was conducted at Aluva PCARDB of Ernakulum district in Kerala. The period of study was for a reference period of ten years from 2008-09 to 2017-18. The study was completely based on secondary data collected from various annual reports and audited reports. Additionally, secondary data collected from websites and journals were also used for substantiating and supporting the study whenever necessary. Ratio analysis and CAGR were administered for analysing the financial performance.

3. Statement of the problem
PCARDBs have been consigned a vivacious role in agricultural development of our country. It is through the branches of these banks that various programmes of the government are being executed in the agricultural sector. The basic mission of these banks is to develop agriculture sector, which is the main occupation of the majority of people in our country and a major contributor to national income. However, a good number of these banks are incurring loss and their overdue are rising over the years (Annual Report, RBI, 2015). Among the co-operative credit institutions, PCARDB's were enjoying the monopoly status in long-term agricultural lending till recently. However, at present, the short-term co-operative credit institutions have started lending for long-term credit requirements for agricultural and rural development. Moreover, the interest rates charged by the PCARDBs are not at all competitive and results in dwindling demands for long-term loans. Even in the case of existing loans, the bank faces the threat of takeover by the other lending agencies. Besides, these banks are also facing stiff competition from commercial banks and Regional Rural Banks, the new entrants in the field of long term agricultural credit. However, the need for survival and growth of PCARDBs are vital for the sustained

development of agricultural sector in Kerala. In this backdrop, the study aims at studying the financial performance of PCARDBs in Ernakulum district of Kerala, with special reference to Aluva Primary Cooperative Agricultural and Rural development Bank.

4. Scope of the study

Cooperative banks generally provide their members with a wide range of banking and financial services. The impositions of restrictions and regulations by RBI on cooperative banks such as introduction of prudential norms, strengthening of finance, liberalization of interest rates and new competitive environment has brought significant changes in the bank's attitude towards profitability, risk and overall performance. In this reformed global banking scenario, to get competitive advantage, the cooperative banks must have to work hard to improve their efficiency at the all level of banking operations. PCARDBs being the apex institutions in meeting the investment credit needs of the farmers plays a significant role in agricultural development in Kerala. Therefore, it will be right to study the financial performance of Aluva PCARDB which will help in suggesting the measures to improve the profitability of the bank.

5. Objective

To study the financial performance of Aluva Primary Cooperative Agricultural and Rural Development Bank in Ernakulum district of Kerala

6. Review of literature

Rachana (2011) [3] in her study "Financial inclusion and performance of rural cooperative banks in Gujarat" with the objective of assessing the performance of banks working in rural areas conducted her study in Gujarat. Chi-square test, ANOVA and Tabulation were used to analyze the data and hypothesis testing. The study found that as deposit mobilisation by PCARDBs banks are quite low, they depend heavily on borrowings for their resources. Deposits constituted only a small percentage of total liabilities of PCARDBs, while borrowings constituted a major chunk of the total liabilities. Also deposits of both SCARDBs and PCARDBs were very low as compared with their borrowings. This indicates that long-term cooperative credit institutions need to improve their deposit mobilisation efforts.

Sharma and Pathania (2010) [8] in their study of the Ratio Analysis aspects of the H.P. State Co-operative Agricultural and Rural Development Bank found that the financial position of the bank was not sound. The liabilities of the bank were on a higher side in comparison to owner's equity. The current liabilities of the bank has increased sharply and therefore, it was suggested that in order to improve the financial health of the bank, efforts are to be made to increase the volume of the business and the management should also curtail unnecessary expenditure.

Raveesha *et al*. (2010) [6] in their Growth Rate Analysis of Primary Co-operative Agricultural and Rural Development Banks (PCARDBs) in Karnataka has stated that the problem of overdue was acute in the banks and it requires bilateral attention on the part of the government in implementing policies and greater skills on the part of the management for loan recovery to provide sustainable services to the farmers. Further, the study suggested that the bank should increase the loan amount advanced.

Sapna (2003) [7] in her study of Lending Pattern and Recovery Performance of Investment Credit in Agriculture through PCARDBs in Thiruvananthapuram District analyzed the recovery performance of PCARDBs and found that increase in overdue is higher in non-agricultural sector than in agricultural sector. Further, the study concluded that declining prices of agricultural products and defective government policies are reasons for mounting overdue.

Rajni and Dhaliwal (2013) [4] have done a research on the "Growth of loans and advances and recovery performance of State Agricultural Development Banks in Punjab" to analyze the growth of total loans and advances issued by Punjab State Agricultural Development Bank (PSADB). The study applied statistical tools over the period of twelve years (1999-2000 to 2010-2011). They found that the growth rate of total loans advanced by the bank during the study period was inconsistent due to chronic overdues, government waiver and increase in the willful defaulters' loan outstanding. The study resulted a positive correlation between recovery of loans, loans disbursed and loans outstanding. The study also recommended that heed must be given to increase in collection of loans and advances by the Punjab state cooperative agricultural and rural Development Bank.

Harisha (2018) [2] in her research "Performance of primary co-operative agriculture and rural development banks in Karnataka" intended to analyze the financial performance of PCARDBs in Karnataka. The secondary data which was extracted from various journals, books, reports and research articles were used to interpret that the financial activities and banking sector reforms are very well functioning in Karnataka when compared to other state in recent years. And the PCARDBs have made a commendable progress in quantitative terms i.e., loans recovery. However, as they are suffering from high over dues due to poor recovery and heavy accumulated losses over the years, the need to increase the recovery to improve the financial strength of the banks and to render good services to rural people in a country like India is questionable.

7. Results and Discussion

The present study examined the financial performance of Aluva PCARDB and categorised the results into following three heads:

7.1 Efficiency in mobilisation
7.2 Efficiency in deployment
7.3 Efficiency in operation

7.1 Efficiency in mobilisation

While considering a bank, deposit mobilisation is having vital importance. However, the Primary Cooperative Agricultural and Rural Development Banks (PCARDB) which are having another status. These are the individual autonomous bodies and members of Kerala State Cooperative Agricultural and Rural Development Bank (KSCARDB). These banks borrow funds from KSCARDB and lends directly to farmers. The major source of funds of these banks constitute owned fund and borrowed fund. The former consist of share capital, reserves and undistributed profit whereas, the latter consist of only borrowings because PCARDBs have restriction in mobilising funds from the members. However, these banks are permitted to mobilise deposits from the members as agent of KSCARDB. The

Following ratios were administered to study the efficiency of Aluva PCARDB in deposit mobilisation.

Table 1: Ratios showing efficiency in mobilisation of funds

Year	Owned fund to working capital ratio	Borrowed fund to working capital ratio	Owned fund to borrowed fund ratio
2008-09	9.49	92.18	10.29
2009-10	7.96	94.91	8.39
2010-11	8.36	95.44	8.76
2011-12	7.56	96.45	7.84
2012-13	9.56	97.34	9.82
2013-14	10.84	96.59	11.23
2014-15	11.81	96.29	12.26
2015-16	11.72	97.53	12.01
2016-17	11.21	97.63	11.48
2017-18	11.45	96.25	11.89
CAGR	0.02	0.00	0.01

***Source*:** Audit reports of the banks from 2008-09 to 2017-18.

Owned fund to working capital ratio: This ratio explains the share of owned funds in working capital of the bank. A higher ratio indicates higher share of owned funds and a lower ratio indicates lower share of owned funds in working capital. From the table, it is clear that the sample bank showed a progressive growth during the study period. The Average ratio was 10 percent for the bank which reveals that only 10 percent of the working capital of the bank is constituted by owned funds and the rest by borrowed funds. The CAGR was 0.02 which states that no considerable progress has been made during the course of time.

Borrowed fund to working capital ratio: The ratio indicates the extent of working capital constituted by borrowed fund. A higher ratio indicates higher share of borrowed funds and a lower ratio indicates lower share of borrowed funds in working capital. It is clear from the table that the average ratio was 97.63 percent which depicts that the working capital comprises more of borrowed fund than the owned fund. Thus, the bank had showed a higher ratio indicating the banks' efficiency in mobilising funds.

Owned fund to borrowed fund ratio: This ratio shows the proportionate share of owned funds to borrowed funds. A higher ratio indicates increased share of owned fund and a lower ratio indicates increased use of borrowed funds by the bank. Normally for a banking institution the proportion of owned fund to borrowed funds will be low. From the table, it is clear that the average ratio was 10.40 percent for the sample bank which clearly states that more than 10.4 percent of the funds of the bank is composed of borrowed funds than owned funds. Therefore, it is understood that the sample banks has shown its efficiency in mobilising funds for the functioning of bank.

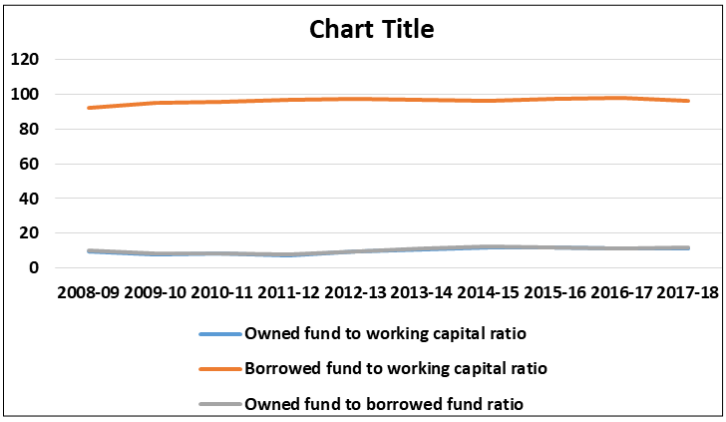

Fig 1: Ratios showing efficiency in mobilisation of funds

7.2 Efficiency in deployment of funds

Like mobilisation of funds, deployment of funds is also equally important because revenue generation of any banking institution solely depends on deployment of funds, cooperative banks are also not an exception to this. As such, long term sustainability of PCARDBs too largely depends on the effective and efficient utilisation of funds. The PCARDBs deploy funds by means of loan and advances, investment in shares of other cooperatives, investment in fixed and other assets etc. In the present study, the efficiency in deployment of funds was examined with the help of following ratios.

Table 2: Ratios showing efficiency in deployment of funds

Year	Loans outstanding to total fund ratio	Investment to total fund ratio	Loans outstanding to borrowed fund ratio	Loans outstanding to working capital ratio	Investment to working capital ratio
2008-09	94.77	4.39	104.53	96.36	4.46
2009-10	95.50	4.55	103.51	98.24	4.68
2010-11	91.79	9.27	99.83	95.27	9.62
2011-12	96.01	4.74	103.53	99.86	4.93
2012-13	90.67	9.55	99.58	96.93	10.21
2013-14	91.11	8.54	101.34	97.89	9.17
2014-15	89.88	9.64	100.90	97.16	10.42
2015-16	92.91	11.55	104.07	101.50	12.62
2016-17	88.70	9.14	98.88	96.54	9.95
2017-18	88.74	9.76	99.30	95.57	10.51
CAGR	-0.01	-0.01	0.09	0.00	0.08

***Source*:** Audit reports of the banks from 2008-09 to 2017-18.

Loans outstanding to total fund ratio: The ratio is significant in measuring the efficiency of banks in deployment of its funds which highlights the quantum of loan outstanding to total funds. A higher ratio implies that most of the funds was delivered as loans and advances and hence it is favourable to the bank whereas, a lower ratio indicates idle funds and hence unfavourable. From the table it is clear that a decreasing trend has been observed during the study period. However, there exists no major variation in the ratio throughout the study period which means the sample bank was efficient and prudential in deployment of funds. The CAGR has shown a negative value.

Investment to total fund ratio: This ratio, which is a good indicator to evaluate the efficiency of the banks in deployment of the funds shows the amount of total funds set out as investments. Investment by the bank refers to the subscription to debentures floated by KSCARDB, subscription to shares of RAIDCO, KERAFED and investment in cooperative building complex and so on. A higher ratio always indicates better performance of the bank and vice-versa. It is very clear that the overall ratio depicted a smaller percentage which implies that only a small portion of the total funds were deployed as investment and a good portion was utilised for other purposes including loans and advances. Since idling of funds result in huge loss to the banks, investment is the second best option for deployment, first being loans and advances.

Loans outstanding to borrowed fund ratio: The ratio is indicative of the share of loans outstanding in the borrowed fund. As borrowed funds represents borrowings in the case of PCARDBs, the ratio helps in assessing the efficiency of these banks in turnover of borrowings into loans. Higher ratio represents better performance of the banks and vice-versa. It is evident from the table that the average ratio was 101.55 for the sample bank which indicates that the bank had advanced loans from funds other than borrowings. Since the ratio was more than 90 percent, it could be concluded that the selected bank was efficient in deployment of funds.

Loans outstanding to working capital ratio: This ratio shows the proportion of loans outstanding to working capital of the bank. The ratio substantiates the effectiveness of banks in deploying the funds. High ratio shows that bank is efficiency in deploying its working capital as loans and advances and a lower ratio implies poor performance of the banks. It is very clear that the average ratio was 97.53 for the sample bank which says more than 90 percent of the working capital were deployed as loans to the members of the bank which in turn shows its productivity and capability in deployment of funds.

Investment to working capital ratio: This ratio is significant in measuring the efficiency of the selected banks in deployment of funds as it indicates what percentage of working capital is deployed by the banks in sources other than loans and advances. A higher ratio is an indicator of efficiency in deployment and lower ratio marks inefficiency. Average ratio was 8.66 percent for the bank which is comparatively lower and that indicates that a small portion of the working capital had been deployed in other investments. Therefore, it could be concluded that the ratios of the selected bank was increasing which in turn shows that bank is in the safe zone of deploying the funds mobilised effectively.

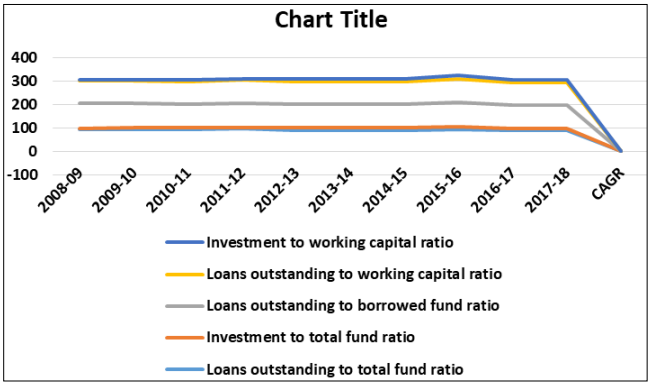

Fig 2: Ratios showing efficiency in deployment of funds

7.3 Efficiency in operation

Table 2: Ratios showing efficiency in operations

Year	Interest income to loans outstanding	Interest expense to borrowed fund	Interest expense to interest income	Manpower expenses to total expenses	Total expenses to total income	Net profit to working capital	Net profit to interest income	Spread ratio	Burden ratio	Profitability ratio
2008-09	9.42	7.62	77.36	16.45	87.64	0.29	3.21	2.02	0.86	1.17
2009-10	9.85	8.20	80.46	12.34	88.14	-0.17	-1.75	1.84	0.68	1.16
2010-11	10.36	8.05	77.85	14.17	84.43	0.59	5.99	2.11	0.52	1.59
2011-12	6.45	6.43	96.19	10.53	104.31	0.75	11.66	0.24	0.51	-0.28
2012-13	11.88	9.36	79.13	15.90	85.11	1.50	13.04	2.25	0.48	1.77
2013-14	12.40	10.08	80.21	14.77	85.55	0.07	0.59	2.24	0.44	0.34
2014-15	13.02	10.53	80.20	14.71	84.37	0.50	3.97	2.32	0.28	2.04
2015-16	12.92	10.41	77.40	18.82	85.85	0.44	3.39	2.71	0.83	1.89
2016-17	12.90	10.92	85.57	17.18	93.03	-0.07	-0.53	1.65	0.77	0.89
2017-18	13.01	10.68	82.69	17.11	89.47	-0.40	-3.20	2.00	0.64	1.36

***Source*:** Audit reports of the banks from 2008-09 to 2017-18.

Interest income to loans outstanding: This ratio highlights the quantum of interest income on the loans and advances or in other words it expresses the major income generation capacity of the banks. A higher ratio is an indicator of the quality of loan portfolio and ability of the bank in recovery management. A lower ratio is a negative indicator of loan recycling which ultimately results in higher level of non-Performing assets of the bank. The average ratio for the bank was 11.22 percent for the bank which depicts that the bank has an average earning capacity of 11.22 percent on its loan and advances granted. Although the bank has faced a bifurcation during the year 2011-12, the bank had successfully accomplished to revive and maintain their performance. Therefore, the bank is efficient in its operations.

Interest expense to borrowed fund: This ratio highlights the proportion of interest expense incurred on borrowed fund of the banks. As far as banking institution is concerned interest expense on deposits and borrowings are its main expense as the deposits is the major constituent of borrowed fund. However, the sample banks mobilise deposits only as agents of KSCARDB and hence cannot be used for lending. Thus, interest expense incurred under study is exclusively borrowings. Higher the ratio, higher will the cost of funds and hence deter the performance. Thus a lower ratio is preferred. It is evident form the table that the average ratio was 8.47 for the sample bank which is lower which says the bank is efficient in controlling the cost of funds within a controllable level so that it does not adversely affect the profitability.

Interest expense to interest income: This ratio highlights the relation between two major components of banking business viz., interest expense (expense component) and interest income (income component) which decides the results of the overall performance of a banking institution. A lower ratio indicates better performance of the bank and a higher ratio implies that interest expense on borrowings are higher and will adversely affect the profitability of the bank. The average ratio was 81.71 for the bank which means the growth of interest expenses were higher compared to the interest income which is a cause of concern as it would adversely affect the performance of the bank.

Manpower expenses to total expense: This ratio deals with the proportion of manpower expenses in the total expenses of the bank. Manpower expenses include expenses for salary, bonus, leave salary, medical allowance, provident fund contribution, gratuity, and staff security contribution etc. for the employees. Total expenses are the sum total of all the operational expenses of the bank which includes interest expenses, contingency and establishment expenses. A lower ratio is ideal for the banks to maintain the profitability. On an average, the ratio was 15.20 for the sample bank which says the bank spends 15.20 percent of its total expenses for human resources. It could be concluded that the bank is on a safer side regarding its human resource expenses which again proved its efficiency in operations.

Total expenses to total income: The proportion of total expenses to total income of the banks as well as the profitability is indicated by this ratio. The ratio and profitability are inversely related in the sense that when the ratio increases profitability decreases because expenditure will be higher than income and when the ratio decreases profitability increases because income will be more than expenses. From the table, it is well clear that the ratios showed a steady growth throughout the study period expect the year 2011-12, which was the year of bifurcation where the bank faced a crisis when the ratio was higher. However, the bank maintained its previous position even after bifurcation. The average ratio was 88.79 for the sample bank which says the income earned by the bank is enough to meet the expenses and thereby showing its efficiency in operations.

Net profit to working capital ratio: The ratio which says whether the working capital of the bank has profitably deployed or not indicates the earning capacity of the bank. Earning a reasonable amount of profit and effective Management of working capital is the most important task of the bank. The table shows that the ratios were less than one percent and for few years it was negative which means that the profit could not be earned during these years from the deployment of working capital. The average ratio was 0.35 for the sample bank. The highest ratio was during the year 2012-13 (1.50 percent) nevertheless the ratios were trivial for the bank throughout the study period. Thus, it could be concluded that the sample bank is in the safer side when it comes to its earning capacity.

Net profit to interest income: The ratio measures the banks' profitability in terms of the quantum of interest income contributing to the net profit. The interest income on loans and advances and investment are the major source of income of banks. Net profit is the final operating result of the bank and interest income is the major component contributing to it. The table shows a varying growth over the years. The years 2011-12 and 2012-13 were the highest profit making years for the bank and rest of the years showed a lower ratio. However, the bank is making profit out of its income from interest to cover the expenses. Nevertheless, it is suggested to improve its operations to make a better profit.

Spread ratio: Spread is the net difference between interest income and interest expenses. Interest income includes interest earned from loans and advances and interest income from investment. Interest expense is the expense incurred by the bank on borrowings. Total fund of the bank constitutes its owned fund and borrowed fund. Higher ratio is preferable and is possible only if interest income on loans and advances is more than interest expense on borrowings. Here, the table shows a varied spread ratio. The average ratio was 1.94 for the sample bank which is satisfactory. It could be concluded from the ratios that the sample bank had excess of interest income over interest expenses which indicates the efficiency of bank in mobilisation and deployment of funds.

Burden ratio: Burden ratio is the proportion of burden to total funds of the bank. The net difference between the non-interest expense and non-interest income is labelled as burden. As such any efforts in reducing the burden have direct impact on efficiency and will improve the profitability of the bank. Maintaining a lower ratio always favours the bank. It is clear from the table that the ratio is less than one percent throughout the study period which is a positive indicator. Therefore, it is concluded that the bank is on the safer side in maintaining profitability by keeping its burden ratio at a minimum level.

Profitability ratio: Profitability is a relative concept different from profit. The former is expressed as a relation between spread ratio and burden which also explains the operational efficiency and effectiveness of the bank whereas, the latter is the absolute result of the financial operations of the bank. The average ratio for the sample bank is 1.19 percent. Though the bank witnessed a loss during the year 2011-12 due to bifurcation, it up swung the position in the succeeding years. However, it could be concluded that the bank should initiate efforts to maintain The spread margin, decrease the burden and improve the profitability level so as to ensure sustainability.

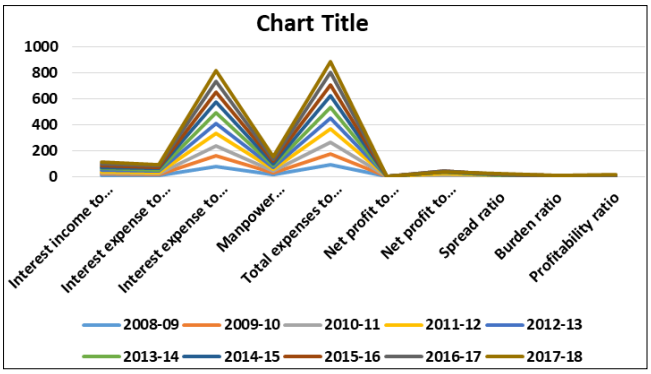

Fig 3: Ratios showing efficiency in operations

8. Conclusion

Cooperative banking sector plays an important role in providing credit to the agricultural sector. The two tier long term cooperative credit structure which includes cooperative agricultural and rural development banks at state and taluk levels aims at satisfying the investment credit needs of the farmers. Though these banks in Kerala are designed in lending long term loans, at present lot of problems are faced by these banks. These problems and constraints include poor recovery of loans, differential rate of interest when compared to commercial and private banks, restricted area of operation etc. The financial performance analysis was done under three heads viz, efficiency in mobilisation, efficiency in deployment and efficiency in operations with the help of financial ratios. The study on efficiency of the sample bank in mobilisation of funds analysed by using three ratios namely, owned fund to working capital ratio, borrowed fund to working capital ratio and owned fund to borrowed fund ratio concluded that the PCARDBs in Ernakulum district of Kerala were efficient in mobilising resources within the restricted framework and despite other structural changes witnessed. The study on effectiveness and efficiency in deployment of funds examined with the help of selected ratios concluded that the Bank was efficient in deployment in the form of loans and advances and other investments. Finally the study operational efficiency concluded that the Bank was efficient in ensuring adequate interest income to cover the interest expenses, could maintain a reasonable spread ratio and lower burden ratio thereby ensuring a reasonable level of profitability despite of various exogenous and endogenous constraints faced by the co-operative banks of Kerala.

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