

Full Length Research Paper**Analyzing the Financial Performance of Co-operatives Union East Shoa Zone Oromia Regional State, Ethiopia.**¹V.Natarajan, ²O. Chandra Sekhara Reddy and ³Hiwot Bekele¹Assistant Professor, Department of Co-operatives, Ambo University, Ambo, Ethiopia.²Associate Professor, Department of Statistics, Ambo University, Ambo, Ethiopia.³Head of Department, Department of Co-operatives, Ambo University, Ethiopia.*** Corresponding author: V. Natarajan****Abstract**

Analyzing the Financial Performance of Cooperatives Union is more imperative to Members, Board of directors, various committees of cooperatives, non-governmental organizations and Government. However, financial performance of cooperatives studied by many researchers, but may have not studied in the East shoa zone, Oromia regional state of Ethiopia. Hence, the present study was analyzing the financial performance of Lume Adama Farmer's cooperative union. To achieve the objectives of the study efficiency ratios, profitability ratios and Altman Z Score analysis used to assess the financial performance of the Union. In the analysis section of the study Altman's Z score model value was compared with the union's financial information. In result, the Financial Performance of Cooperatives union was very weak during the study of 2009 to 2013.

Key words:- Financial performance, Ratios, Z score analysis, weak.

Introduction

Throughout human history, groups rather than individuals have always undertaken some activities simply because this was a better and economic way of doing things (Parnell, 1999: p.1). The interdependent and mutual help among human beings have been the essentials of social life. History tells us that man cannot successfully live by himself and for himself alone. The spirit of association is important to human progress. Since the beginning of human society man has cooperated first in foraging and then in hunting, later in agriculture and still in manufacturing. There is practically nothing which a man by himself alone can achieve but much acting together with others (Kulandaiswamy and Krishnaswamy, 2000). When people carry out their economic activities individually, benefits dissipate and costs accumulate. The economic impact becomes insignificant and results in costs overrun (Destahun, 2007:p.28). Collective actions of cooperatives are more effective than separate actions of individuals. Through cooperatives, individual households and communities can create opportunities for themselves. To find a productive work that not only facilitate their wellbeing and stability but also give them the support they need to improve their lives and remain active in civil rights and political arenas (Taimini, 2001 cited in Destahun, 2007). Data compiled by International Cooperative Alliance (ICA) indicated that cooperatives have increasingly become the sources of secured employment and income for millions of the world's population. Over 800 million people are members of different cooperative societies in the world (ICA, 2000 cited in Mekonnen et al., 2007).

The United Nations (UN) has also estimated that in 1994, the livelihood of nearly half of the world's population, 3 billion people, was secured by cooperative enterprises (Mekonnen et al., 2007). Likewise, the cooperative societies in Ethiopia are playing multi-functional role both in rural and urban areas. Primary cooperatives created 76,956 employment opportunities in the country (FCA, 2009). The free market economic system posed challenges of poor bargaining power and competitiveness for smallholder farmers, resource poor youth (who aim to enter into business operation) and poor consumers (due to limited financial resources, limited skill and capacity, fragmented efforts, etc.). Thus, collective efforts through cooperative organization have been chosen by many of the disadvantaged groups to increase their benefits from the liberalized market system. Cooperatives in Ethiopia are mainly economic entities performing economic functions, contributing a lot to economic development of the country and are believed to contribute more to the living standard of members and the community as a whole. The regional and federal government of Ethiopia is assisting all types of Cooperative Unions in different aspects like financially, materially, technically and giving training of their personnel. However, there are a number of problems in all aspects of the cooperatives in Ethiopia as identified (Demelash, 2004) like, weak bargaining power of members, Poor cooperative accounting skills, poor financial management, lack of knowledge in cooperatives education and infrastructure problems are the major one.

Rural cooperatives are organized to serve their farmer-members mostly weak in their economic status. The major financial sources are; members-owners (member's capacity to finance is low due to background of production system), the regional government for specific objective on contractual base mostly for purchase of fertilizer and farm inputs, from different NGOs, for training and revolving fund for individual farmers. The external source has limitation to be used according to the cooperative desire and objective. This will have negative impact to increase the volume of business (Sirak, 2011).

Rural farmers cooperative involve multifaceted financial and operational planning to run their organization; however, they are facing a big challenge from their members, management and employees that forces them to low earning. Financial management is the most important functional area of management requiring through investigation; financial management in cooperative has some distinguish feature. The high solvency ratio is generally have an advantage to the private enterprise, as it enable them to pay higher rate of dividend on equity capital; on the other hand, it is harmful to cooperative at maximizing the rate of dividend on paid-up capital, however, to render service to members at a minimum cost. But unfortunately this is not be realized by the cooperative management. (Tekalign, 2012).

Bearing in mind the above problems; measuring the level of cooperative performance analysis focusing on their financial conditions and identifying those factors influencing the effectiveness of financial performance and efficiency of LAFCU. Therefore the researcher needed to analyze the financial situation of the cooperative to evaluate the financial performance, efficiency and effectiveness and earning capacity of the society, in order to examine the presiding year performance of the union and the existing time and to recommend suggestion in the activities of LAFCU.

Materials and Methods

Description of the study area

Lume Adama farmer's cooperative union (LAFCU) was found in Oromia regional state of Ethiopia. The union is located in the central part of the country at 70km south east of Addis Ababa, the capital city of the country, and at 25km North West of Adama, the capital city of the zone respectively. The head office of the union is located in Modjo town of Lume woreda, which is located on the Djibouti-Addis Ababa rail way line and on the major asphalt road that connects the capital city to southern eastern broader countries. The union being a pioneer cooperative union is regarded as a role model for all subsequently established cooperative union in the country. In addition the place is suitable for both primary and terminal market. Many industries such as skin and hides factories, Addis- Modjo food oil complex, textile factory, flower, cement factory are the potential terminal market in the area. Moreover, the dry port established at Modjo town is great opportunity for the union. The union was established as the first cooperative union in the country by 4 primary cooperative societies holding 3975 individual member in Lume district of eastern shoa zone on 29th July 1997, with the initial capital of birr 150,000. By now union has more than 37 permanent based employees and 157 daily laborers and 36 primary cooperatives as member with the total membership of 20,221 male and 2,845 female totally 23,066. Who are living in three woredas of the zone namely, Lume, Adama and Bosat district currently the total net capital reached more than 32million. The major services provided by this union includes:

- Improve bargaining power of members
- Procure inputs and services at a lower cost
- Enable members' product get better market access
- Add value to members' products (packing, cleaning etc)
- Promote modern agricultural techniques
- Involve natural resource management in order to improve the life standard of the members and community.

(Source:-LAFCU, 2013 annual report)

Sampling Design

LAFCU was selected purposively among three multi-purpose farmers cooperative union existed in the area because of it is the first cooperative union in the country. Based on availability of five years audited financial reports and documents LAFCU selected purposively. Five years information of financial statements such as balance sheet, income statement, fund flow and cash flow statement can be taken from audit report of the union.

Sources and methods of data collection

Sources of data

The sources of data for this study were mainly secondary sources. So it was collected from audited financial statements, by- low (basically balance sheet, income statement, profit and loss account) of the cooperative union for the past five years (2009-2013).

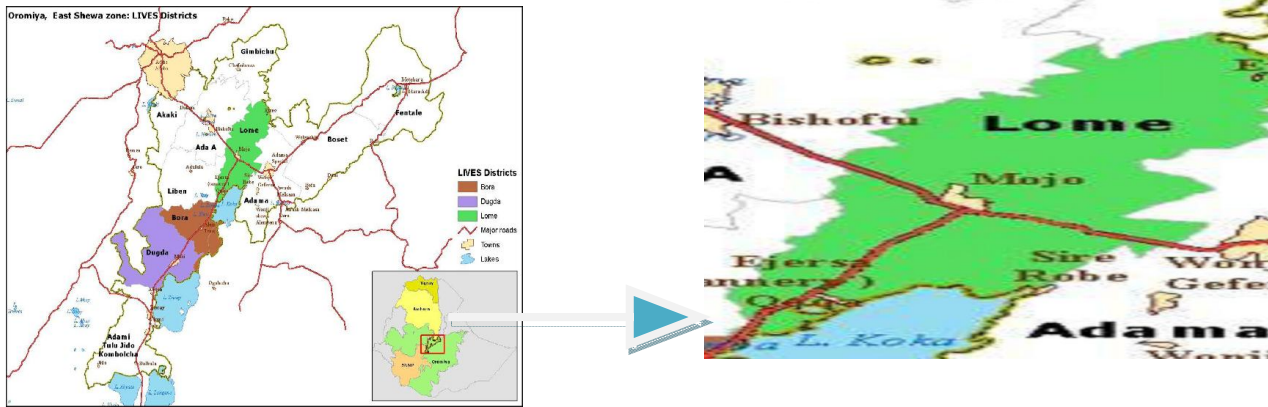


Figure 1. Map of the study area (lume Adama, east shoa zone, oromia)

Data collection

Data collection is an important aspect of any- type of research study. So, appropriate attention was given for it while inaccurate data collection can impact the result of a study an ultimately lead to invalid results. For this research study, the researcher used mainly quantitative methods for data collection. So, the researcher collected secondary data from audited financial statements mostly the balance sheet, income statement, fund flow and cash flow statement, annual reports, audit and inspection results, published and unpublished documents, cooperative promotion office documents of the union for the consecutive five years (2009-2013) for the purpose of this research study by using data sheet.

Data analysis

After the collection of the required data, proper Financial Analysis and techniques were employed for classification and analysis. Systematic approaches involving quantitative methods were used. The quantitative method that involve the generation of data in quantitative form which is subjected to rigorous quantitative analysis in a formal and rigid fashion to evaluate the effectiveness of financial Performance of the union. The data from audited balance sheet, income statement, fund flow and cash flow statement of the union could be analyzed by using ratio analysis, trend percentage, fund flow analysis, cash flow analysis to assess the financial efficiency, effectiveness and earning capacity of the union. Finally, the Z- score model was used to predict financial risk of the union.

Results and Discussion

Efficiency (Asset Management) Ratios: - Efficiency ratios measure the quality of the cooperatives union' receivables and how efficiently it uses and controls its assets, and how effectively the firm is paying suppliers on its equity (using borrowed funds). Efficiency ratios include inventory turnover ratio (ITOR), debtors' turnover ratio (DTOR), average debt collection period ratio (ADCPR), creditor's turnover ratio (CTOR) and average payment period ratios (APPR).

Table 1. Efficiency Ratio Analysis

Ratios	Years					Standard
	2009	2010	2011	2012	2013	
ITOR	32.20	25.20	9.69	4.43	3.19	8 times
DTOR	4.68	3.82	1.01	1.14	0.92	5 times
ADCPR	7.80	112.01	417.39	37.43	40.94	45 days
CTOR	3.57	3.01	1.14	1.16	0.96	5 times
APPR	25.35	2.77	40.11	43.39	23.49	30 days

Source: Audited Report of LAFU (2009-2013)

Table 1 illustrates that the inventory turnover ratio of the union was 32.20 in year 2009, 25.20 in year 2010, 9.69 in year 2011 which indicates a high inventory turnover ratio was a sign of efficiency. But it was 4.43 in the year 2012 and 3.19 in year 2013 which shows the union was not efficiently managing and more inventories were not sold since the average standard is 8 times a year. Generally, the inventories turnover was not a sign of efficiency, since the inventory turnover ratio of the union's in the years under the study period was not wholly high. So that the union did not efficiently managing and more inventories were not sold during the study period.

Debtors' turnover ratio

Debtor's Turnover Ratio is also termed as Receivable Turnover Ratio or Debtor's Velocity. Receivables and Debtors represent the uncollected portion of credit sales. Debtor's Velocity indicates the number of times the receivables are turned over in business during a particular period. In other words, it represents how quickly the debtors are converted into cash. It is used to measure the liquidity position of a concern. This ratio establishes the relationship between receivables and sales.

Profitability Ratios

The term profitability means the profit earning capacity of any business activity. Thus, profit earning may be judged on the volume of profit margin of any activity and is calculated by subtracting costs from the total revenue accruing to a firm during a particular period. Profitability Ratio is used to measure the overall efficiency or performance of a business. Generally, a large number of ratios can also be used for determining the profitability as the same is related to sales or investments. Profitability includes gross profit margin, operating profit margin, net profit margin, return on net asset and return on equity.

Table 2. Profitability Ratio Analysis for the year ended 2009-2013

Ratios	Years					Standard
	2009	2010	2011	2012	2013	
GPMR	4.91%	5.48%	18.68%	2.68%	7.41%	25%
OPMR	0.32%	3.19%	14.72%	1.11%	(0.01%)	75% -78%
NPMR	1.49%	1.14%	13.55%	0.02%	2.98%	> 5%
RONAR	5.65%	5.05%	21.69%	0.03%	2.51%	2 - 3%
ROE	23.54%	19.34%	68.83%	0.15%	12.50%	15 - 20%

Source; Audited Report of LAFUCU (2009-2013)

The above table, revealed that the union's gross profit margin ratio was 4.91% in year 2009, 5.48% in year 2010, and 18.68% in year 2011 which indicates in increasing trend, and it decreased to 2.68% in year 2012, again it increased to 7.41% in year 2013. In all the years the gross profit ratio of the union was under the standard. Therefore revenue in these years were not financial efficient. It indicates that the cooperative pricing policy and the cost of goods offered for sales. This shows that due to Increase in cost of goods sold, Decrease in selling price. Decrease in sales volume, High competition, Decrease in sales mix obtained during the study period.

Operating Profit Margin Ratio

Operating profit ratio is also known as EBIT and is found on the Cooperative income statement. EBIT is earnings before interest and taxes. The operating profit margin ratio is a measure of overall operating efficiency, incorporating all of the expenses of ordinary, daily business activity. The calculation is: operating profit/Net Sales. Both terms of the equation come from the Cooperative's income statement. Terms used to describe operating profit margin ratios this includes operating margin, operating income margin, operating profit margin or return on sales (ROS).

$$\text{Operating profit margin Ratio} = \frac{\text{Operating profit}}{\text{Net Sales}} \times 100$$

The above table illustrates that the operating margin ratio of the union was 0.32% in year 2009, and it creased to 3.19% in year 2010, again it increased to 14.72% in year 2011, and it decreased to 1.11% in year 2012 and again it decreased to negative 0.01% in year 2013. This shows that the union operating profit margin ratio was very poor. The standard ratio for manufacturing concern is 75% to 85%, this reveals that the union has lower operating margin ratio, by this value of ratios it is difficult for the union in order to fulfill the needs of the concern during the study period.

Net profit margin ratio

Net Profit Ratio is also termed as Sales Margin Ratio (or) Profit Margin Ratio (or) Net Profit to Sales Ratio. This ratio reveals the firm's overall efficiency in operating the business. Net profit Ratio is used to measure the relationship between net profit (either before or after taxes) and sales. This ratio can be calculated by the following formula:

$$\text{Net profit margin ratio} = \frac{\text{Net profit}}{\text{Net Sales}} \times 100$$

The above table No 2; analyses shows that the net profit margin ratio of the union was 1.49% in year 2009, and decreased to 1.14% in year 2010, and also increased to 13.55% in year 2011 and it decreased to 0.02% in year 2012, again it increased to 2.98% in year 2013. In all the years these values are under the standard ratio except in year 2011. Therefore, it is concluded that the net profit margin ratio of the union revealed considerable decreased, Society sales has increased in year 2011 to 2012 for two years but the management could not controlled operating expenses under the study period.

Return on net asset ratio

It measures the rate of return on total investment. It is calculated by dividing net income by total assets. This ratio is a measure of performance. This ratio, like all the ratios, is better applied over an extended period so that results of long- term plans are measured. Long term returns are quite volatile and vary significantly based on the prevailing level of inflation.

$$\text{Return on net asset ratio Ratios} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

Altman Z-Score analysis

Altman (1968) coined a multivariate Z-score analysis to assess financial health and to predict financial risky. It has been considered a powerful diagnostic tool that forecasts the financial risky. The model is defined as: $Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 0.999X5$. Wherein, the variables X1 to X4 are computed as percentage values. While X5 variable is obtained in number of times and signify as: X1 is the ratio of working capital to total assets. X2 is the ratio of retained earnings to total assets, X3 is the ratio of earnings before interest and tax to total assets, X4 is the ratio of market value of equity to book value of debt, X5 is the ratio of sales to total assets

Table 3. Z-score analysis of LAFCU during 2009 to 2013

Years	Z Score Value					Z-score value	Average Ratio
	WCTAR	RETAR	REBI &TTA	MVEDR	STAR		
2009	0.13	0.03	0.01	0.31	3.72	4.13	2.79
2010	0.12	0.02	0.09	0.29	2.88	3.52	
2011	0.14	0.18	0.19	0.35	1.32	2.58	
2012	0.08	1.01	0.01	0.19	0.92	2.56	
2013	0.10	0.03	-0.01	0.27	0.88	1.17	

Source: Audited report of LAFCU (2009-2013)

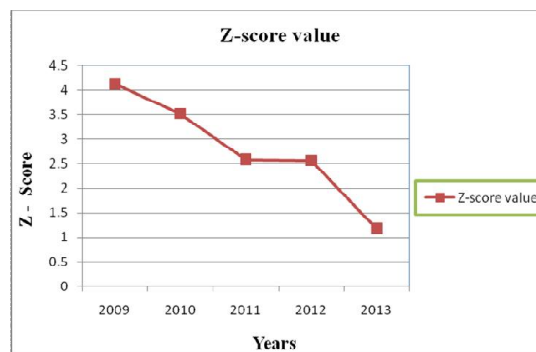


Figure 2. Graphical presentation of Z-score values of LAFCU

The financial performance picture of the union has been clear without doubts and to validate the results by checking the financial risk level Altman’s Z-score analysis has been applied. The ‘Z’ scores with respect to LAFCU under study have been computed in the above table 4.33 depicted here under. Table 3 analysis shows that the Z- score model value. The value of Z score model of the union was 4.13 in the year 2009 and 3.52 in the year 2010 which analyses shows strong /sound healthy financial performance. Because of Z-score value is greater than 3.00. In the year 2011, the value was decreased to 2.58 and 2.56 in the year 2012 which shows health performance. Because of Z score value between 1.8-3.00. But the value was decreased to 1.17 in the year 2013. It shows the union has been weak performance because of the valve was below 1.8. Over all the derivation from the Z-score, analysis reveals that the cooperative union has been declined, to become a part of health performance zone. In generally score depicts that LAFCU has best in the year 2009 and in year 2010 and better in the year 2011 and in the year 2012, but in the year 2013 worst. From this information, the union has been suffering from financial mismanagement and underutilization of resources.

Summary

- By evaluating the financial statement of the union one can able to measure the effectiveness of financial performance of the union. For the above reasons the researcher was used financial analysis tools like ratio analysis, common size analysis, funds flow analysis and cash flow analysis and Z- Score model analysis have supreme important. As per the data analysis of study, the following findings were concluded from the results.

- The study reveals that the total Current Assets of the union were fluctuating. It increased from 89.09% in year 2009, to 89.14% in year 2010, and decreased 88.08% in year 2011, which indicates the union, was paid current obligation and again increased to 92.04% in year 2012 and decreased to 89.38% in year 2013 in the case of common size analysis during the study period.
- The study also shows investment of the union in other cooperative was increased from 1.63% in year 2009, 2.65 % in year 2010 and 4.12% in year 2011. This indicates that the society invested more money in other cooperatives, but it decreased to 2.83% in year 2012 this is because of increased in total assets and increased 3.81% in year 2013 this also indicate that the society invested more money in others cooperatives during the study period.
- The finding also reveals that, owner's equity shows increased trend from 18.37% in year 2009, 21.01% in year 2010 and 24.53% in year 2011 of total assets. It was decreased to 24.11% in year 2012, and 23.12% in year 2013 during the study period.
- The union net sales were decreased from 256.3 million in year 2009 to 143.2 million in years 2013 year by year because of the services given by the society was decreased during the study period.
- The union Cost of goods sold was also fluctuating between 97.32% - 81.31% during the study period. This revealed that the management of the union in controlling the pricing policy of the material is not as such effective.
- The growth margins of the union were 4.91% in year 2009, 5.45% in year 2010 and 18.68 in the year 2011 in increasing trend for three years, because the management of the union controlled supplying cost. In year 2012 it decreased to 2.68% these also revealed that control of supplying cost the management was poor, again it increased to 7.41 in year 2013.
- Operating expenses such as employees' salary, administrative expense, general expense and interest expense were the expenses of the union. It changes during the study period from 6.69% to 2.26% during the study period.
- Net income of the union was increased from 1.50 in year 2009, 1.53 in year 2010 and 13.55 in the year 2011. But it decreased to 0.02 in year 2012, and again increased to 2.98 in year 2013. This reveals that operational activity of the management of the union was good during the study period except in year 2012.
- The finding of the study shows that the total membership in year 2009 was 22896 it increased to 23729 in the year 2013.
- The growth share capital of the union was 1,119,793 in the year 2009 to 2,331,663.50 in the year 2013. And by percent it also increased from 100% in year 2009 to 208.22% in year 2013. Which shows double increased trend year by year.
- Current ratios of the union was 1.17:1 in year 2009, 1.15:1 in year 2010, 1.19:1 in year 2011, 1.09:1 in year 2012 and 1.13:1 in year 2013 which shows in all years these ratios was below the standard. Which indicates the short- term solvency of the union was unsatisfactory to fulfill its short- term obligation in all the years under the study period because of the standard of current ratio is 2:1.
- Inventory turnover ratio of the union was 32.20 in year 2009, 25.20 in year 2010, and 9.69 in year 2011 which indicates a high inventory turnover ratio is a sign of efficiency. It was 4.43 in the year 2012 and 3.19 in year 2013 which shows the union did not efficiently managing and more inventories were not sold. Since the average standard is 8 times a year. Generally, the inventories turnover is not a sign of efficiency, since the inventory turnover ratio of the union's in the years under the study was not wholly high.
- Debtor turnover ratio the union was 4.68:1 in year 2009, 3.82:1 in year 2010, 1.01:1 in year 2011, 1.14:1 in year 2012 and 0.92:1 in year 2013. This indicates that the debtor turnover ratio was below the standard in all years which is good because it tells us that union was managed debtors in better ways and money from debtors are collected on time. So the employees of the union were strong in collecting debt during the study period.
- Creditor turnover ratio of the union was 3.57 times in year 2009, 3.01 times in year 2010, 1.14 times in year 2011, 1.16 times in year 2012 and 0.96 times in year 2013, which is less than the average ratio. This indicates that the union was paid its account payable because it decreased the average payment period. So it is concluded that the union made the payment with more speed to the creditors during the study period.
- Average payment period ratio of the union was 25.35 days in year 2009, 2.77 days in year 2010, and 23.49 days in year 2013 which indicates, in light of this information, it is evident that payment of accounts payable is effectively managed. But it was 40.11 days in year 2011 and 43.39 days in year 2012 which indicates the accounts payable is inadequately managed.
- Debt-to-asset ratio of the union was 77.67% in year 2009 and 77.21% in year 2011. Which shows that the union has lower Debt-to-asset ratio it shows union may not have trouble borrowing any more money and 79.31% in year 2010, 86.81% in year 2012 and 82.14% in year 2013, which shows that the union has higher debt-to-asset ratio for three years under the study period.
- Fixed asset to net worth ratio of the union was 0.39 in year 2009, 0.36 in year 2010, 0.29 in year 2011, 0.33 in year 2012 and 0.32 in year 2013 this demonstrates that below the average ratio and it is desirable.
- The study also reveals gross profit margin ratio of the was 4.91% in year 2009, 5.45% in year 2010, and 18.68% in year 2011 which indicates in increasing trend, and it decreased to 2.68% in year 2012, again it increased to 7.41% in year 2013. In all the years the gross profit ratio of the union is under the standard, which is less than average ratio. So, this indicates that with this amount the union could not cover its fixed charges.

- Net profit margin ratio of the union was 1.49% in year 2009, and decreased to 1.14% in year 2010, and also increased to 13.55% in year 2011 and it decreased to 0.02% in year 2012, again it increased to 2.98% in year 2013. In all the years these values are under the standard ratio except in year 2011. Therefore, it is concluded that the net profit margin ratio of the union revealed considerable decreased.
- The return on net asset ratio of the union was better during the study period. Because the return on net asset ratio of the union was within and above the standard.
- Return on equity ratio of the union was 23.54% in year 2009, 19.34% in year 2010. But it increased to 68.83% in year 2011, and again decreased to 0.15% in year 2012 and increased to 12.57% in year 2013. So it is concluded that the management of the union utilizing the equity share capital efficiently and the return for the investor was better during in the year 2009 to 2011 and in the year 2013. But in year 2012 the values of these ratio was under the standard which indicates poor management of the union utilizing the equity share capital efficiently.
- From the Z-score analysis the cooperative union has been declined to become a part of health performance zone. In generally score depicts that LAFUCU has best in the year 2009 and 2010 and better in the year 2011 and in the year 2012 but in the year 2013 worst. In fact, the union has been suffering from financial mismanagement and underutilization of resources.

Conclusions

- Cooperatives unions are established for the benefit of members in particular and for the community in general and their performance depends mainly on members' participation. Regarding the trend of membership of LAFUCU, there was increasing trend of both individual members and primary member cooperatives union during the study period. This increasing trend of membership is attributed to the promotional efforts of the *Woreda's* Cooperative Promotion Office in organizing cooperative as part of the government's strategy for poverty reduction. Moreover, lower prices of agricultural inputs and dividend were also important pull factors for attracting new members to the union.
- Most of the values of asset management ratios of the union are less than the average ratio, this demonstrate that the union operate the activities in efficient way.
- The value of leverage ratio of the union such as debt-to-asset and debt-to-equity ratios were within and above the level of the standard. This indicate most value of asset of the union is financed by outside creditors but the union has very low proprietary ratio this show that the share capital of the union is financed by outside creditors and most of the value of fixed asset to net worth ratio of the union below the average ratio this reveals the utilization of fixed asset made by the union is strong.
- The profitability ratios of the union such as gross profit margin ratio, operating profit margin ratio and net profit margin ratios have the value less than the level of the standard, so by these values of ratios it is difficult for the union to cover the need of the concern. However, as the return on net asset ratio and return on equity ratios of the union are better and so that the return on investment and the equity position of the union is better during the study period.
- Finally, the union has poor financial liquidity position, leverage position, profitability position and has not operating the activities in financial efficiency and effective way. This causes that the union has not maintained satisfactory level of financial performance; this is because most of the financial ratios of the union are below the level of its standard.
- The derivation from the Z-score analysis reveals that the union has been declined to become a part of health performance zone. In general score depicts that LAFUCU has best in the year 2009 and 2010 and also better in the year 2011 and in the year 2012 but in the year 2013 worst.

References

- Altman, E.I. 1968, "Financial Ratios, Discriminates Analysis and the Prediction of Corporate Bankruptcy/ Financial Risk". Journal of Finance, Pp. 189-209.
- James M. Reeve, Car. S Warren, Jonathan E. Duchac, (2009). Principles of financial accounting, South-Western Cengage Learning in China Pp. 710-714.
- M.E. Thukaram Rao (2003), Management Accounting, New Age International Publishers, Sri Sai Institute of Higher Learning Bangalore . Pp 42-224.
- Metcalf, R. W. and P. L. Titard, Principles of Accounting, W. B. Saunders, (Philadelphia) 1976, Pp-157
- Nakkiran. S, (2002), *A Treatise on Cooperative Management*, Rainbow Publications, Coimbatore, Pp.385.
- Pandey I.M, (2006), *Financial Management*, Vikas Publishing House Pvt. Ltd., Masjid Road, Jangpura, New Delh-14. Pp 550-576.
- Ramachandran R & Srinivasan R, (2010), *Financial Management*, Sriram publications, 1-G kalyanapuram, Tennur, Trichy-17.
- Risk Antle and Atanlay J. Garstka,(2004). Financial Accounting South -Western, 5191 Natrop,in Canada Pp.22-78.
- Spiceland, Sepe, Tomassini (2004). Intermediate Accounting, 3rd edition, published by McGraw-Hill/ Irwin, A Business Unit of the Mc Graw-Hill Companies, Inc., 1221 Avenue of Americas, New York, Nny, 10020 Pp.85,-174