

**MEASURING THE CONSISTENCY OF LIQUIDITY AND ITS
FINANCIAL HEALTH: A STUDY ON TRIBAL CO-OPERATIVE
MARKETING DEVELOPMENT FEDERATION OF INDIA**

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ABSTRACT

The present study of the paper aims to show the consistency of the liquidity and its effects on the financial health of Tribal Co-operative Marketing Development Federation of India (TRIFED). The objective of the study is to examine the extent of association between the variables and to show the consistency of the liquidity position of the TRIFED. For examining the significance of the value of W, Chi-square (χ^2) and Altman's Z-score has been used to check the organization monetary position. The result of the analysis concludes that Kendall's coefficient of concordance (W) among the given six ratios are found to be statistically significant at the 5 % level. In addition, one sample t-test portray a remarkable difference in the Altman's Z-score of Tribal Co-operative Marketing Development Federation of India (TRIFED) during the study period. The study leads to significant conclusion based on the study's result.

KEYWORDS: *Liquidity, Altman Z Score, TRIFED, Kendall's Coefficient Of Concordance, T-Test.*

INTRODUCTION

A Co-operative Society is an artificial voluntary association of people who work together to promote their economic interest and in order to achieve common goals. These societies are incorporated with some social motives and they often have separate legal body and common seal. The main aim of such a society is to self help each other by using the resources gathered by the society and do not depend on anyone and to eliminate the unnecessary profit of middlemen in trade and commerce. For this purposes, Tribal Co-operative Marketing Development Federation of India is an apex organization under Ministry of Tribal Affairs in 1987 was brought into existence with the main objective of institutionalization the trade of [Minor forest products](#)(MFP) and to provide the tribal of India a fair price for the surplus agricultural products produced by them.

Liquidity is the term used to describe the liquid assets in order to cover current and future liabilities, including others, like expenditure on goods and services. Liquid assets can be readily available whenever it is required. But other types of assets, like long-term investments can take more time to convert to cash. If such an asset is to be sold very quickly because of an unexpected shortfall, there is a risk that the company will lose some of its value.

Profitability indicates the profit earning capacity of the business enterprise in the process of business. This capacity is expressed in relation to investments or level of operation (sales). Profitability analysis is employed to measure the organizational efficiency during the year. In some cases, the technique of cost-benefit analysis may also be used. It is helpful for the purpose of planning and control. Critical analysis of the profitability is also required to test the viability of the company.

In this background, the present study concentrates on the measuring of the consistency and liquidity position of TRIFED. The effects of profitability on the liquidity have also been analyzed in the study.

Review of Literature

Chellasamy & Kannamudaiyar (2019)¹ The Altman Z score is used to predict distress of companies two years prior to the happening of the event. The main objective of this paper is to check the efficiency of this model in predicting financial distress of Indian footwear companies five years prior to the occurring of the event. Five companies have been selected to check the efficiency and accuracy of this model. The study concludes that the overall financial health of footwear industry is in healthy zone. Because from the five selected companies, four companies (Bata India, Relaxo, Mirza International and Khadim's) are in healthy zone. Only the Z score values of Liberty Footwear are found below 1.80, which indicating Distress zone.

Swarankar, J & Jain, O.P (2020)² conducted a study on the measurement of the fiscal situation of Rajasthan Dairy Co-Operative firm. The aim of this article is to ascertain the financial conditions of the Kota dairy in Rajasthan for a period of eight years from 2011-12 to 2018-19 by using Altman Z score model along with one sample t-test. But the findings of the study portray that the financial performance of the selected dairy co-operative firm was in the gray zone in the year 2011-12 and 2018-2019 was stabled as per financial health.

Naskar, A & Guha, P (2017)³ studied the relationship between the financial performance and working capital management of the listed Indian company. The findings indicate that profitability has an important impact on the management of working capital. In addition, Debtors Turnover Ratio (Days), Creditors Turnover Days (Days), Inventory Turnover Ratios, Current ratios, Quick ratio, Cash cycle has a strong negative relationship with the prosperity of the company.

Statement of Problem

Change is inevitable. It is very important to understand that the only thing that is constant in the world of business environment is change. Co-operatives play an important role of uplifting living conditions of low and middle income groups of the society. In order to serve themembers well, a co-operative society must ensure that the business is run efficiently and this must be reflected in its financial performance. TRIFED charges reasonable prices for all of its products.

However, due to poor management, a lack of cooperative democracy, corruption and embezzlement, a lack of working capital, and the weakness of supporting institutions, cooperative marketing development societies are unable to perform well. Thus, profit is essential for co-operative marketing societies' survival, as is providing more and better services to their members in order to keep them from turning to money lenders or intermediaries.

Objectives

1. To examine the consistency on the liquidity management of Tribal Co-operative Marketing Development Federation of India (TRIFED) □
2. To study the financial health of the Tribal Co-operative Marketing Development Federation of India (TRIFED)

Research Methodology

The impact of profitability on the liquidity and its consistency on TRIFED has been analyzed based on the secondary data. The company's yearly accounting statement from 2016-17 to 2019-20 have been considered for the study. The Kendall's

Coefficient of concordance (W) has been adopted to examine the extent of association between the variables and to show the consistency of the liquidity position of the TRIFED. For examining the significance of the value of W, Chi-square (χ^2), regression analysis, Altman's Z-score Model applied by Altman's has been used to check the organization monetary position.

Result and Discussions

The ratios considered in the study have been used as the financial indicators of TRIFED. C.R (Current Ratio) measures the organization's liquidity. Asset Turnover Ratio) measures a company's ability to manage its wealth. ITR (Inventory Turnover Ratio) measures the level of inventory management. ROE (Return on Equity) measures the effectiveness of the management in utilizing equity financing provided by shareholders. ROCE (Return on Capital Employed) to assess a company's profitability and capital efficiency. To Know is there any consistency among the liquidity management of TRIFED different financial ratios have been calculated for the five years, which is shown in table 1.1

TABLE 1.1 FINANCIAL RATIO

Year	CR	LR	ATR	ITR	ROE	ROCE
2015-16	2.8	1.9	0.08	0.45	0.05	0.03
2016-17	3.1	2.4	0.07	0.38	0.13	0.03
2017-18	3.0	2.3	0.11	0.64	0.05	0.04
2018-19	2.1	1.5	0.17	0.78	0.08	0.07
2019-20	9.8	7.4	0.13	0.68	0.06	0.02
Mean	4.16	3.1	0.112	0.58	0.07	0.03
S.D	3.18	2.43	0.04	0.17	0.03	0.02
C.V	0.76	0.78	0.36	0.28	0.45	0.51
CAGR	0.28	0.31	0.10	0.09	0.04	-0.08

Source: TRIFED Annual Report

With regard to Liquidity ratios, C.R and L.R shown in the financial ratio of TRIFED is performed better during the period 2015-16 to 2019-20. As shown in the table 1.1, the Mean of the liquidity ratio are 4.16 and 3.1 respectively and the CAGR also been 0.28 and 0.31. The activity ratios, ATR and ITR are been fluctuating during the study period and the Mean and CAGR of the activity ratio also been 0.11, 0.58 and 0.09 and 0.04 respectively. In the profitability ratios, ROE and ROCE is also been fluctuating during the study period and the CAGR of ROCE shows the negative trend of -0.08 during the study period.

Kendall’s Coefficient of Concordance

Kendall’s Coefficient of Concordance (W) is a suitable formula to examine the extent to which more than two classes of the series are associated. It is usually denoted by W. W may be computed by:

$$W = \frac{12R}{m^2(k^3 - k)}$$

Kendall’s Coefficient of Concordance (W) =

$R = \sum (R_i - R)^2$, R stands for the Sum of grades allocated to each case, R_i is the average value of R, K is the number of groups of rankings, N stands for the number of cases graded (Rank).

The Kendall’s Coefficient of Concordance, the most preferred formula for assessing liquidity management for the years 2016-17 to 2019-20 using the financial indicators shown in table no 1.2.

TABLE 1.2 KENDALL’S COEFFICIENT OF CONCORDANCE

TRIBAL MARKETING CO-OPERATIVE DEVELOPMENT FEDERATION OF INDIA	Variables	2015-16	2016-17	2017-18	2018-19	2019-20
	CR	4	2	3	5	1
	LR	4	2	3	5	1
	ATR	4	5	3	1	2
	ITR	4	5	3	1	2
	ROE	5	1	4	2	3
	ROCE	3	4	2	1	5
	Sum = R_i	24	19	18	15	14
	K	5				
	M	6				
	W	0.572				
	r	-0.027				
	X² (Chi-Square)	4.133				
	d.f	4				
P-value	0.388					

Kendall's coefficient of concordance (W) indicates the degree of association of ordinal assessments made by multiple appraisers when assessing the same samples. Usually Kendall's coefficients of 0.9 or higher are considered very good. Here, W shows the 0.572 using Kappa Scale, it shows a good or significant Kendall's coefficient means that the appraisers are applying essentially the same standard when assessing the samples

Analysis of the Financial Position of Tribal Co-operative Marketing Development Federation of India

For the purpose of verifying the financial position, Z-score Model proposed by Prof. Edward Altman in 1968 has been used. The Z - score may be calculated considering the five ratios as stated for predicting the possibility, when a business can go bankrupt. The discrimination function is set out as below:

$$Z=1.2X_1+1.4X_2+ 3.3X_3+.6X_4 + .999X_5$$

Where, X1=Working Capital/Total Assets

X2=Net Operating Profit/Total Assets

X3=EBIT/Total Assets

X4=Market Value of Equity/Book value of Total Debt

X5=Sales/Total Assets

TABLE 1.3 FINANCIAL RATIOS FOR ALTMAN’S Z SCORE MODEL

Year	WC/TA *1.2	NOP/TA *1.4	EBIT/TA *3.3	MV/TD *.6	Sales/TA *.999	Z-score
2015-16	0.26	0.04	0.11	0.39	0.08	0.87
2016-17	0.37	0.04	0.25	0.35	0.07	1.81
2017-18	0.38	0.07	0.09	0.34	0.22	1.10
2018-19	0.39	0.13	0.14	0.30	0.16	1.89
2019-20	0.62	0.06	0.05	0.15	0.10	0.97

Table no 2.1 makes it clear that the value of Z-score is above 2.99, then the organization is likely in safe in regards the financial conditions. In this particular case, it is observed that the Z score value for the year 2015-16, 2017-18 and 2019-20 is lower that 1.81. The financial position of the company is not good enough to show its ability. The financial condition is stable in 2016-17 and 2018-19, which looks better financial position as the Z score value is more that 1.81.

To measure the significance level of the company Altman’ Z score is analyzed with the help of one sample ttest shown in table 2.2.

TABLE 1.4 ONE SAMPLE STATISTICS

	Test Value = 3						
	t	df	Sig. tailed	(2-	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Zscore	-7.720	4	.002		-1.67200	-2.2733	-1.0707
N	5						
Mean	1.3280						
Std. Dev	0.48427						
Std. Error	0.21657						

A significant difference in the value of Altman’s Z score, shown in table 2.2 of the company is $p < 0.01$.

Findings

1. It is observed that the financial ratio (liquidity management) using Kendall's coefficient of concordance (W) considering all six ratios is 0.172, whereas the tabulated value at the 5% level is 11.067. The result is significant at the 5 % level. There is a strong relationship among the financial ratios, which indicates that there is a consistency of the liquidity among the selected financial ratios.
2. The miserable situation is found during the year 2016-17 and 2018-19 and 2015-16, which indicates that the financial health of Tribal Co-operative Marketing Development Federation of India has gone down during the periods. The financial condition of the company is comparatively better during the period from 2017-18 to 2019-20.
3. One sample t-test portrays that there is a significant difference in the financial health of TRIFED in several years, calculated using the Altman's Z-score during the five year period, since the p-value < 0.01.

CONCLUSION

Co-operative is an important tool of the economic development in the rural india. In same way, TRIFED in India, gives an idea of collective efforts to achieve specific objective to carry out marketing strategy for tribal products. Profitability and liquidity are interlinked with each other that are useful in measuring a company's financial soundness. Profitability measures the financial performance and liquidity to measure the cash flow position of the company, primarily in response to its short term obligation. The study implies that the consistency among the financial ratios is sustained as proved by using the Kendall's Coefficient of Concordance. On the other side, the economic strength of the company is not a remarkable one as analyzed by applying Altman's Z-score. It also implies that there was a close and significant association among the different aspects of financial performance of TRIFED. It is also found that the Return on Capital Employed (ROCE) has an overall positive influence on the four independent variables i.e. C.R, L.R, ITR and DTR, which is insignificant. A significant difference in the financial soundness of the company is noticed. The study also reveals that there is needed a remarkable improvement in the overall liquidity of TRIFED in the coming years.

REFERENCES

1. Annual Report of TRIFED.
2. **Agarwal, A & Chaudhary, R (2015)**, "Effect of Working Capital Management on the Profitability of Indian Firms". IOSR Journal of Business and Management (IOSR-JBM), Volume 17, Issue 8. Ver. IV, PP 34-43
3. **B.Rabi Kumar (2015)**, In his article, "Financial performance evaluation-A case study of Bharat Heavy Electrical Ltd, EPRA International Journal of Economic and Business Review, Vol-3, Issue-11, pp-207-211
4. **Naskar, A & Guha, P (2017)**, in their article, "Working capital management and firm profitability: a study of listed companies in India" International Journal of Management (IJM), Volume 8, Issue 6, pp. 152-162.