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## 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 ( $\chi^2$ ) 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

## **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 society 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 organisation 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.

## **METHODS**

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 ( $\chi^2$ ), regression analysis, Altman's Z-score Model applied by Altman's has been used to check the organization monetary position.

## **RESULTS AND DISCUSSION**

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.

Table 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: Kendall's Coefficient of Concordance (W) =

$$R = \frac{\sum (R_i - R)^2}{R^2}$$

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 2.

Table 2. Kendall's Coefficient of Concordance

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
<b>K</b>	5				
<b>M</b>	6				
<b>W</b>	0.572				
<b>r</b>	-0.027				
<b>X<sup>2</sup> (Chi-Square)</b>	4.133				
<b>d.f</b>	4				
<b>P-value</b>	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:

$$Z=1.2X1+1.4X2+ 3.3X3+.6X4 + .999X5$$

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 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	<b>1.81</b>
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	<b>1.89</b>
2019-20	0.62	0.06	0.05	0.15	0.10	0.97

Table no 2.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 than 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 than 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.

Table 4. One Sample Statistics

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Z score	-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  $p < 0.01$ .

## 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

- Annual Report of TRIFED.
- 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
- 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
- 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
- Kalaivani,A (2019), "Profitability and Consistency of Ceramics Industry- A Financial and Statistical Analysis of Selected Ceramic Companies of India". Journal of Emerging Technologies and Innovative Research, Volume 6, Issue 12,pp-745-751
- Swarnakar.J & Jain.O.P (2020), "Measuring Financial Health of Dairy Co-Operative in Rajasthan: A Case Study of Kota Dairy" , Purakala (UGC Care Journal), Vol-31-Issue-34- May-2020 (online)