

## A COMPARATIVE STUDY ON LIQUIDITY PERFORMANCE OF SELECTED FERTILIZER COMPANIES IN GUJARAT

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### ABSTRACT

*The purpose of the study is to know the liquidity of the selected fertilizer companies and to see how efficiently the operations of the business are carried out. In this study, two companies i.e. Indian Farmers Fertilizers Cooperative Limited. And Krishak Bharati Cooperative Limited are selected. The primary objective of the study is to measure significant difference if any in the performance of selected fertilizer companies in terms of Liquidity. In this study t-test is conducted for Liquidity ratios of selected fertilizer companies in Gujarat for the period of 2010-11 to 2019-20. In these Liquidity ratios include Current Ratio, Liquid Ratio. The statistical tool t-test is used to test the hypothesis regarding liquidity of two selected companies in fertilizer industry. From the analysis of the data it is concluded that there is a significant difference in Current Ratio and Liquid Ratio. Overall the performance of KRIBHCO is better than IFFCO for the study period.*

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**Keywords:** Liquidity, Fertilizer Companies, t-Test, Current Ratio, Liquid Ratio.

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### Introduction

#### Financial Statement – Meaning

“The end product of financial accounting process is a set of reports which are called financial statements.”

In other words, the statements prepared and presented by a business enterprise at the end of accounting year i.e. balance sheet and profit and loss account are called financial statements.

#### Needs of Financial Statement Analysis

- **Owners and managers** require financial statements to make important business decisions that affect its continued operations. Financial analysis is then performed on these statements to provide management with a more detailed understanding of the figures. These statements are also used as part of management’s annual report to the stockholders.
- **Employees** also need these reports in making collective bargaining agreements (CBA) with the management, in the case of labour unions or for individuals in discussing their compensation, promotion and rankings.
- **Prospective investors** make use of financial statements to assess the viability of investing in a business. Financial analysis are often used by investors and are prepared by professionals (financial analysts), thus providing them with the basis for making investment decisions.
- **Financial institutions** (banks and other lending companies) use them to decide whether to grant a company with fresh working capital or extend debt securities (such as a long-term bank loan or debentures) to finance expansion and other significant expenditures.
- **Government entities** (tax authorities) need financial statements to ascertain the propriety and accuracy of taxes and other duties declared and paid by a company.
- **Vendors** who extend credit to a business require financial statements to assess the creditworthiness of the business.

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### Review of Literature

The review of literature guides the researcher for getting better understanding of methodology used, limitations of various available estimation procedures and interpretation of the conflicting results.

**Patel Vijay S. & Mehta Chandresh B. (2012)<sup>i</sup>** in their study entitled "A Financial Ratio Analysis of Krishak Bharati Co-operative limited" has mainly focused on relationship between gross profit & net sales, net profit & net sales, cost of goods sold & net sales, profit after tax & number of equity shares and EBIT & capital employed for the period of 2000-01 to 2008-09. Coefficient of correlation used to find linear relation and that value is tested by t test and found that there is positive linear relation between gross profit & net sales, net profit & net sales, profit after tax & number of equity shares and EBIT & capital employed and negative relation between cost of goods sold & net sales.

**Kapoor Suri Deepali and Singhal Shilpi (2013)<sup>ii</sup>** in their study on "Comparative Analysis of Financial Performance of Indian Farmers Fertilizer Co-operative Ltd (IFFCO)" tried to identify the financial performance and how the performance is going on for last five years of IFFCO on the basis of establishing relationship between the items of balance sheet and profit and loss account by using various types of ratios such as solvency, liquidity, activity and profitability for five years period ending on 2011-12. After analyzed five year data, the researchers concluded that maximum number of financial indicator like Company's return on capital employed, profit before tax to turnover etc of IFFCO were undesirable as compare to previous years whereas operating profit to turnover ratio, fixed assets turnover ratio, debt equity ratio, current ratio, liquidity ratio etc. were at a desirable position.

**Patel Ankit D. (2015)<sup>iii</sup>** has used six Profitability ratios (Operating Profit Margin Ratio, Gross Profit Margin Ratio, Net Profit Margin Ratio, Return on Capital Employed Ratio, Return on Net worth Ratio and Return on Assets Ratio) to analyze financial performance of selected fertilizer companies in India for the period of 2004-05 to 2013-2014. From the analysis, the researcher concluded that there is significant difference in Profitability of selected fertilizer Companies.

- The Operating Profit Ratio of GNFC, GSFC and Deepak fertilizer company was satisfactory because Operating Profit Ratio of these companies was higher than Industry Ratio.
- Gross Profit Margin Ratio of the Industry was 10.76. As compare to all selected companies only three companies are on satisfactory level and other three companies like Rashtriya Fertilizer Ltd., Coromandal International and National Fertilizer Company's Gross Profit Margin Ratio was not satisfactory.
- Deepak Fertilizer's performance regarding Net Profit Ratio was very good because its Net Profit Ratio was 10.55 which was higher than Industry ratio.
- Coromandal International's performance was excellent. Its Return on Capital Employed Ratio was 22.76 which was higher than Industry ratio followed by GSFC that was 22.07. Other selected four company performance was not satisfactory because its Return on Capital Employed Ratio was very poor.
- Return on Net worth Ratio of the Industry was 15.43. In this sense only Deepak Fertilizer Ltd.'s performance was satisfactory and other companies' ratio was very poor.
- Return on Assets Ratio of all selected companies was very good except two companies i.e. Rashtriya Fertilizer Ltd and National Fertilizer Ltd. GSFC performance regarding this ratio was very good that was 212.20. It is very high than the industry Ratio.

**Chavda K. N. and Shah Mehul B. (2015)<sup>iv</sup>** in their study entitled, "A Financial Ratio Analysis of Gujarat Narmada valley Fertilizers & Chemicals Ltd." used two liquidity ratios namely Current ratio and liquid ratio and two profitability ratios namely gross profit ratio and net profit ratio of GNFC Limited for the period 2009-10 to 2013-14. In this study researchers tried to find relation between Gross profit & Net Sales, Net Profit & Net sales, Current assets & Current liability and liquid assets & liquid liabilities and also this relation tested by t test and result came that only gross profit and net sales are related whereas others were not related. Researchers also examined the growth of these ratios and concluded that during these five years gross profit ratio and net profit ratio increased averagely 9.91% and 6.71% respectively. Average of Current ratio and liquid ratio was 1.50 and 1.17 respectively.

### Statement of Problem

A Comparative Study on Liquidity Performance of Selected Fertilizer Companies in Gujarat

### Objectives of the Study

- To analyze the Liquidity of the selected fertilizer companies.
- To make inter-firm comparison of liquidity of the selected fertilizer companies and measure the significant difference in their financial performance.

**Hypothesis**

**H<sub>0</sub>:** There is no significant difference in liquidity performance of selected fertilizer companies.

**H<sub>1</sub>:** There is significant difference in liquidity performance of selected fertilizer companies.

**Research Methodology**

The present study is based on Secondary Data which are collected through various sources such as websites, annual reports of the selected companies, journals, similar research studies, etc. The financial and other data collected is tabulated, collated and analyzed using such Accounting tools and Statistical techniques as may be adequate and commensurate with the nature of the problem and purpose. Both Accounting tools (i.e. Ratio Analysis – Liquidity Ratios) and Statistical techniques (i.e. t-test) are applied in order to support the hypothesis and derive suitable conclusion. Also the analysis done is supported by various tables and charts, which helps in tabulation and comparison of results.

**Data Analysis and Interpretation**

In the present study, t-test is applied to analyze the liquidity of the two selected fertilizer companies i.e. Indian Farmers Fertilizers Cooperative Limited. and Krishak Bharati Cooperative Limited for the period of 10 years starting from 2010-11 to 2019-20. Tabulated data and its interpretation is discussed below:

- **Current Ratio**

**Hypothesis**

**H<sub>0</sub>:** There is no significant difference in Current Ratio of selected fertilizer companies.

**H<sub>1</sub>:** There is significant difference in Current Ratio of selected fertilizer companies.

**Table 1.1: Test of Normality for Current Ratio of IFFCO & KRIBHCO**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
IFFCO	.213	10	.200	.931	10	.459
KRIBHCO	.251	10	.075	.865	10	.087

**Table 1.2: Statistical Data for Current Ratio of IFFCO & KRIBHCO**

Name of Company	N	Mean	Std. Deviation	Std. Error Mean
IFFCO	10	1.0290	.06624	.02095
KRIBHCO	10	1.2320	.18606	.05884

**Table 1.3: Independent Sample t-test for Current Ratio of IFFCO & KRIBHCO**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	7.058	.016	-3.250	18	.004	-.20300	.06245	-.33421	-.07179
Equal variances not assumed			-3.250	11.245	.008	-.20300	.06245	-.34010	-.06590

**Interpretation**

In the above Table 1.1, Shapiro-wilk's test shows p-value 0.459 for IFFCO and p-value 0.087 for KRIBHCO. Here the p-value for both the fertilizer companies is higher than significance level 0.05; hence the data of both the selected companies are normal and t-test (i.e. parametric test) is conducted. Table 1.2 represent the statistical data related to t-test in which mean of IFFCO is 1.0290, which is lower than that of KRIBHCO which is 1.2320. Table 1.3 shows p-value 0.004 which is less than significance level 0.05; hence the null hypothesis H<sub>0</sub> is rejected. So there is a significant difference in Current Ratio of selected fertilizer companies, hence H<sub>1</sub> is accepted.

- **Liquid Ratio**

**Hypothesis**

**H<sub>0</sub>:** There is no significant difference in Liquid Ratio of selected fertilizer companies.

**H<sub>1</sub>:** There is significant difference in Liquid Ratio of selected fertilizer companies.

**Table 2.1: Test of Normality for Liquid Ratio of IFFCO & KRIBHCO**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
IFFCO	.136	10	.200	.951	10	.684
KRIBHCO	.176	10	.200	.907	10	.264

**Table 2.2: Statistical Data for Liquid Ratio of IFFCO & KRIBHCO**

Name of Company	N	Mean	Std. Deviation	Std. Error Mean
IFFCO	10	.8530	.06848	.02166
KRIBHCO	10	1.0680	.15569	.04923

**Table 2.3: Independent Sample t-test for Liquid Ratio of IFFCO & KRIBHCO**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	6.315	.022	-3.997	18	.001	-.21500	.05379	-.32800	-.10200
Equal variances not assumed			-3.997	12.357	.002	-.21500	.05379	-.33182	-.09818

**Interpretation**

In the above Table 2.1, Shapiro-wilk's test shows p-value 0.684 for IFFCO and p-value 0.264 for KRIBHCO. Here the p-value for both the fertilizer companies is higher than significance level 0.05; hence the data of both the companies are normal and t-test (i.e. parametric test) is conducted. Table 2.2 represents the statistical data related to t-test in which mean of IFFCO is 0.8530, which is lower than that of KRIBHCO which is 1.0680. Table 2.3 shows p-value 0.001 which is lower than significance level 0.05; hence the null hypothesis H<sub>0</sub> is rejected. So there is a significant difference in Liquid Ratio of selected fertilizer companies, hence H<sub>1</sub> is accepted.

**Findings and Conclusions****Findings**

t-test	Result
Current Ratio	H <sub>0</sub> Rejected
	H <sub>1</sub> Accepted
Liquid Ratio	H <sub>0</sub> Rejected
	H <sub>1</sub> Accepted

The findings of the study are:

- There is a significant difference in the Current Ratio of selected fertilizer companies and hence Null Hypothesis H<sub>0</sub> is rejected and Alternative Hypothesis H<sub>1</sub> is accepted. Also the mean of current ratio is higher in KRIBHCO than IFFCO.
- There is significant difference in the Liquid Ratio of selected fertilizer companies and hence Null Hypothesis H<sub>0</sub> is rejected and Alternative Hypothesis H<sub>1</sub> is accepted. Also the mean of Liquid Ratio is higher in KRIBHCO than IFFCO.

### Conclusion

From the analysis we conclude that there is a significant difference in liquidity ratios of two selected fertilizer companies in Gujarat. The mean of KRIBHCO is higher than IFFCO in both the liquidity ratios. Overall the performance of KRIBHCO is better.

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