

How Changing Values of Financial Ratios Has Impacted The Growth of The Fertilizers Industry of India

Dr. P. C. Saini

Assistant Professor
Department of ABST
University of Rajasthan,
Jaipur, Rajasthan, India

Abstract

This study gives a clear idea about the impact of changing values of the financial ratios on the fertilizers industry. The aims and objectives of the research have been discussed with the appropriate research philosophy, research approach and research design. The proper representation of the ratios with graphs and charts has been provided. With the help of these graphs and charts, the financial position of the chosen company has been derived.

Introduction

In this study, the impact of the changing value in ratio for Zuari agricultural limited has been discussed along with the comparison between three agricultural companies named Chambal fertilizers, Indian farmer fertilizers and Hindustan fertilizer cooperation. The literature review and the research

methodology have also been briefly discussed here. All the data considered for this topic is between the periods of 2014 to 2019. Net profit ratios, gross profit ratio, ROA, ROE, and ROCE and soon have been analyzed.

Review of Literature

Condition of the Indian Fertilizer Industry

The fertilizing companies of India are entirely dependent on agricultural companies. It is the backbone of the Indian agricultural company. The use of fertilizers helps to facilitate faster production of food to serve the nation (Singh *et al.*, 2019)

Contribution in GDP

The contribution of the Indian fertilizer industry to GDP is precious (Praveen,2017). It has been seen that the share of the fertilizer industry for the growth of GDP is 20% which has been increased from the year 2019-2020.

Implementation for economic growth

The fertilizer industry has played a unique role to implement the economic development of the country. It has been proven that the economic development of the country is partially dependent on the fertilizer industry. The industries like cotton and jute mills tend to manufacture different kinds of products which are considered a vital part of the economic growth process (Shahbaz *et al.*, 2017).

Literature Gap

Different studies have been conducted in the sector of the fertilizers industry. This study includes various aspects of the fertilizers industry, such as decisions regarding produce goods for sale, pre and post-harvesting activities etc.

Methodology

Research philosophy

To complete any research correctly, a research philosophy has been used. In this matter, the main focus has been given to the ***positivism research philosophy***. This philosophy has been used because it provides conservative information regarding the topic (Ryan,2018)

Research approach

A deductive research approach has been considered for this research. Woiceshyn and Daellenbach (2018) ***opined that deductive research*** helps provide valuable and potential data for the analysis.

Research Design

As the research design for this study, ***exploratory research design*** has been the most appropriate one. This research design is beneficial for understanding the issues and the problems, and also it helps solve the problem as soon as possible (Jain and Tiwari, 2020).

3.4 Data collection method

A secondary research method has been used for collecting the data. Books, magazines, and journals have been used as the definitive resource (Johnston, 2017).

Research aim and Objective

Aim

The main aim of this study is to find out the impact of the changing value of ratios of the fertilizer industry.

Objectives

1. Comparison of the same categorical companies based on financial data.

2. The practical impact of fertilizer industry for the improvement of the economy.
3. Contribution to the growth of the GDP.

Collection of Secondary Data

Statistical Analysis

Zuari Agrochemicals Limited

	Gross Profit Ratio	NET Profit Ratio	Operating Profit Ratio
Average	24.144	-0.56	7.752
SD	3.18	2.03	9.45
CV	0.13	-3.63	1.22

Chambal Fertilizers Limited

	Gross Profit Ratio	NET Profit Ratio	Operating Profit Ratio
Average	40.81	4.222	8.402
SD	5.98	2.34	2.12
CV	0.15	0.56	0.25

Indian Farmer Fertilizer Cooperation Limited

	Gross Profit Ratio	NET Profit Ratio	Operating Profit Ratio
Average	19.536	3.112	3.64
SD	2.65	0.83	4.02
CV	0.14	0.27	1.11

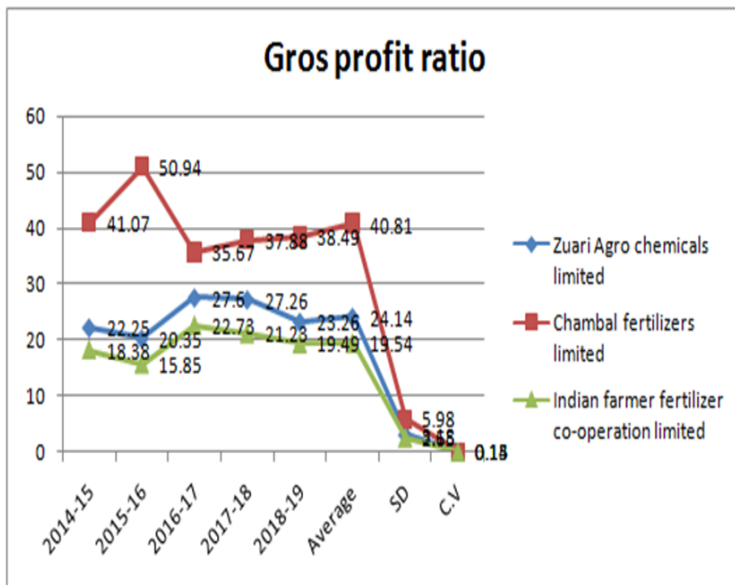


Figure 1: Gross profit ratio

(Source: Self-Created)

In this study, the financial ratio of Zuari agricultural limited has been analyzed along with its two competitors for the time span of 2014 to 2019. As per the record, the gross profit ratio has been increasing from 2014 to 2018, but in 2019 it seems to decrease. CV is 0.13% which is comparatively lower than the other two companies which mean there is a decrease in the selling price of goods.

Net Profit Ratio

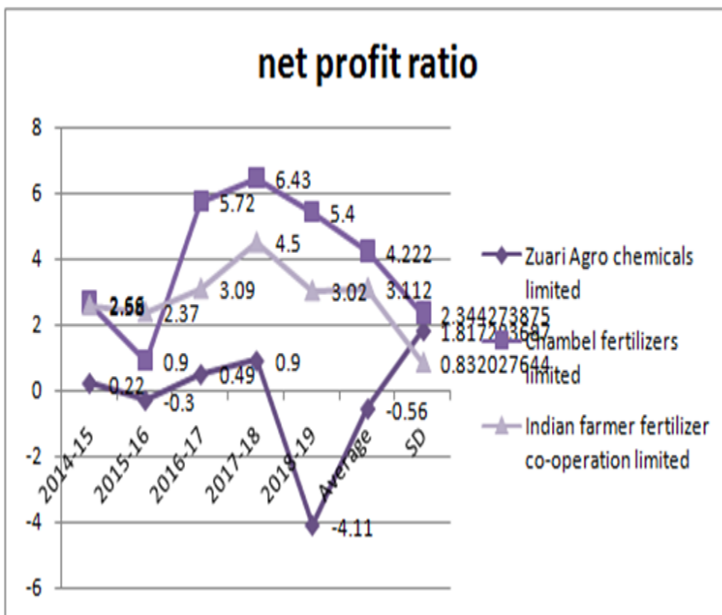


Figure 2: Net profit ratio

(Source: Self-Created)

Comparing to the Chambal fertilizers limited and Indian farmer cooperation limited, Zuari agrochemical has managed to earn a lower net profit ratio of 0.22% in 2014. It means that the company has used an inactive cost structure for the pricing strategy compared to the other two companies. As per the record, it can be seen that in the years 2015 and 2018, the company had a negative net profit ratio of -0.3% and -4.11%, which mean that the money earned from the selling of the products is not enough to cover the production cost.

Operating Profit Ratio

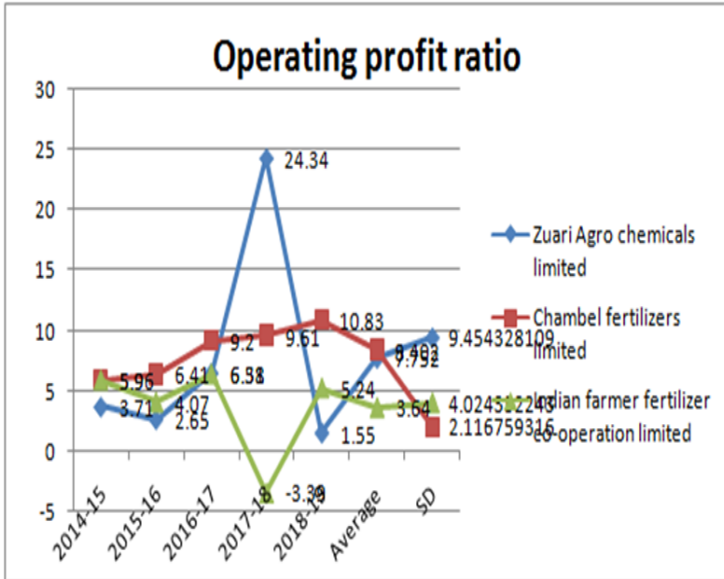


Figure 3: operating profit ratio

(Source: Self-Created)

The ratio is a profitability ratio responsible for reflecting the percentage of the profit that a company produces. Here Zuari agro chemical's operating profit ratios for the year 2014 to 2019 were 3.71%, 2.65%, 6.51%, 24.34% and 1.55%. As per the record, it can be seen that the company has managed to earn a higher margin of operating profit ratio in the year 2018 which means that the company has efficiently managed its operations. However, Chambel fertilizers have a higher average operating profit ratio than Zuari agrochemicals and Indian farmer fertilizers have a lower average operating ratio.

Return on capital employed

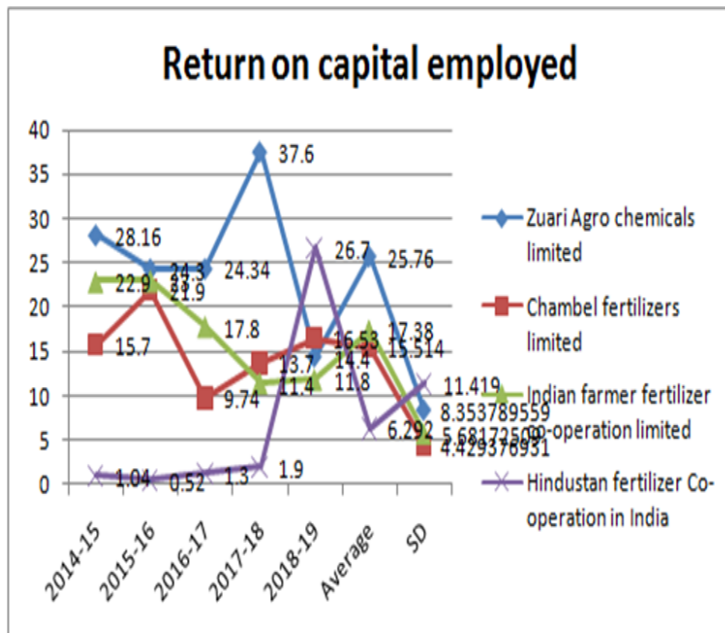


Figure 4: ROCE

(Source: Self-Created)

In this study, the comparison of the return on capital employed has been conducted on the basis of four agricultural companies. The average return on capital employed during the period from 2014 to 2019 for the four companies was 25.76%, 15.514%, 17.38% and 6.25%. Hence it can be seen that Zuari agrochemical has managed to earn a higher percentage of return on capital employed than the other companies and also the changing value of the company has increased over time. It is the indicator of the successful growth of the company.

Return on equity ratio

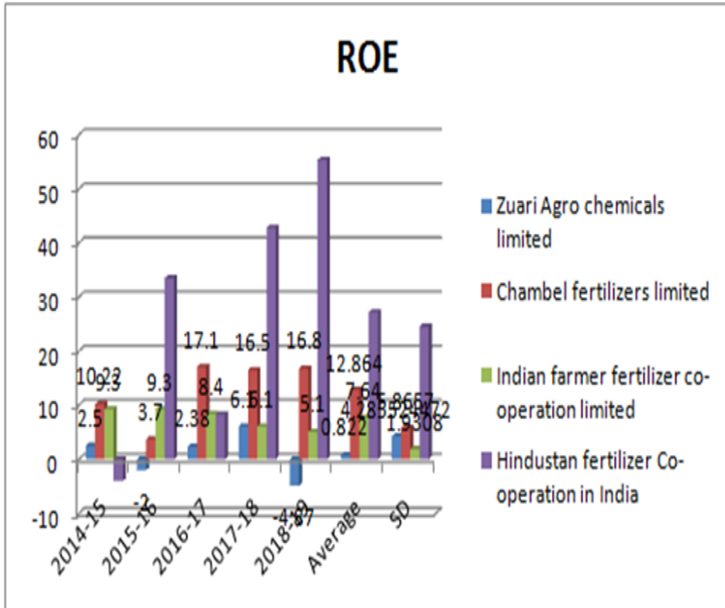


Figure 5: ROE

(Source: Self-Created)

The term return on equity ratio or ROE is the measurement of financial performance by dividing the net income by shareholder's equity. Considering the average percentage of ROE, Hindustan fertilizers cooperation has the higher percentage of average ROE and SD of 27.198% and 24.542% whereas Zuari agro has the lowest average ROE of 0.8222%.

Return on total asset ratio

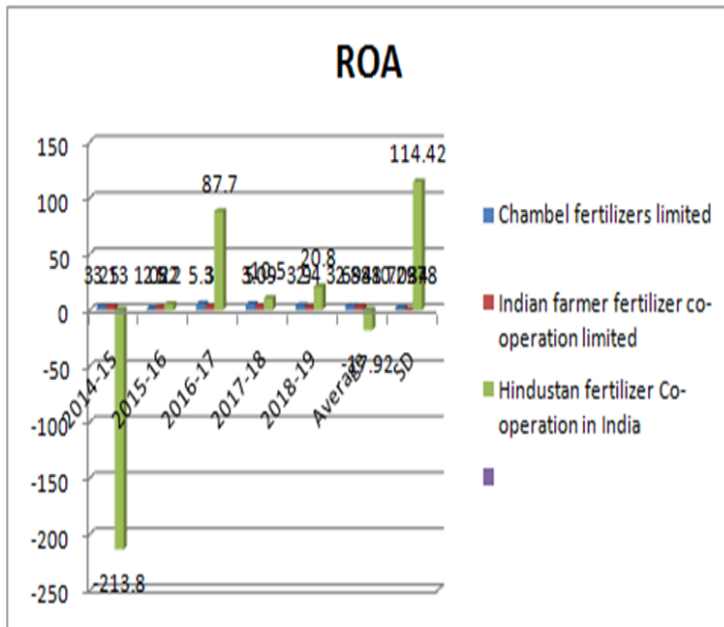


Figure 6: ROA
 (Source: Self-Created)

The average percentage of ROA of Zuari agro shows a negative balance of -0.484 %. Hindustan fertilizers cooperation has the lowest percentage of average ROA of -17.92% and Chambel fertilizers have achieved the highest percentage of 3.694%.

Expenses ratio

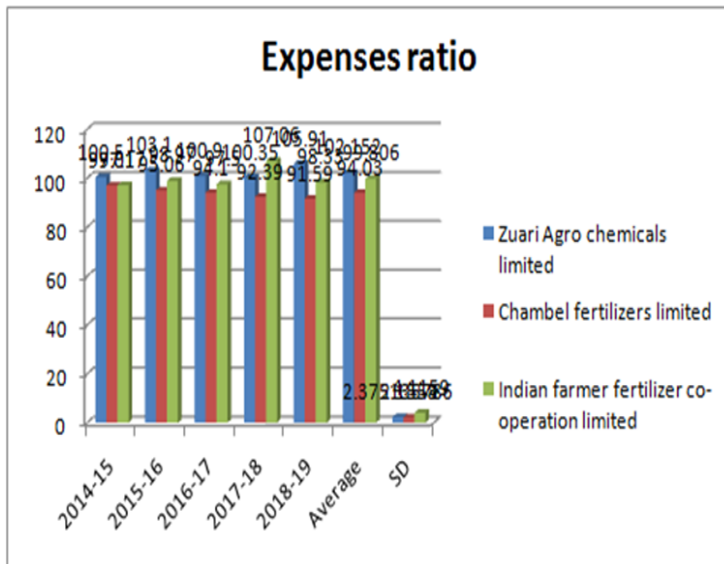


Figure 7: Expenses ratio

(Source: Self-Created)

The average expenses ratio of Zuari agro fertilizers is comparatively higher than the other three companies. It shows 102.152% for the time span of 2014-2019. However, the standard deviation is lower than the Indian farmer cooperation.

Earnings per share

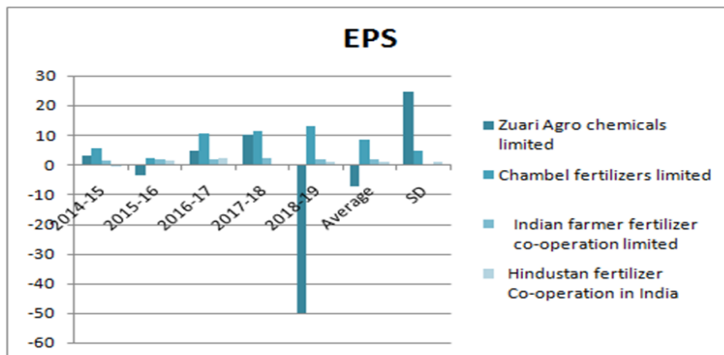


Figure 8: EPS

(Source: Self-Created)

Earnings per share of Zuari agro shows a negative balance of -7.28%, chambal fertilizers, Indian fertilizers cooperation and Hindustan fertilizers operation has a higher earnings per share. Chambal fertilizers have the highest percentage of average EPS of 8.55%, whereas Zuari agro has the lowest.

Current ratio

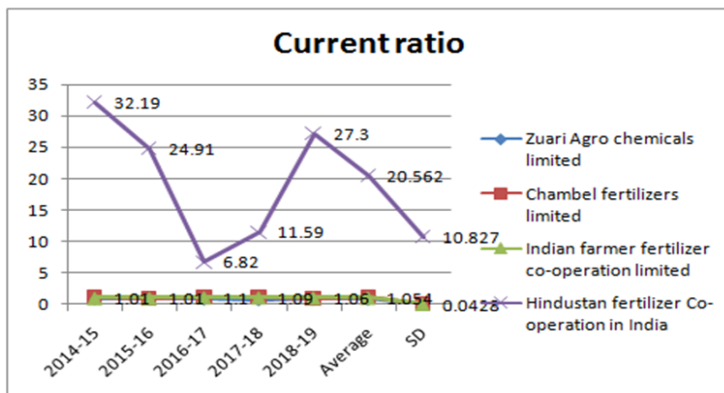


Figure 9: Current ratio

(Source: Self-Created)

As per the record, Hindustan fertilizers operation has the highest percentage of current ratio and Zuari agro has the lowest percentage of current ratio. 0.882% is the average current ratio and 0.06% is the SD of Zuari agro which is comparatively lower. However, the CV is higher than the Indian farmer cooperation.

Quick ratio

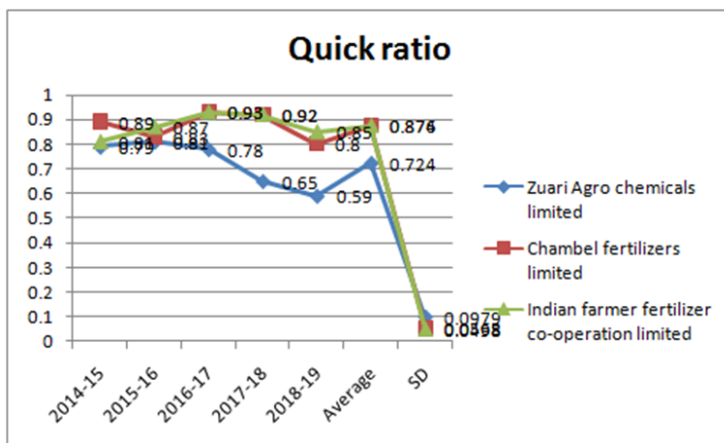


Figure 10: Quick ratio

(Source: Self-Created)

On the basis of the average quick ratio, SD and CV for the period 2014-2019, it can be stated that the Indian farmer fertilizer cooperation has the highest percentage of average quick ratio however; the SD and the CV are comparatively lower.

Absolute liquid ratio

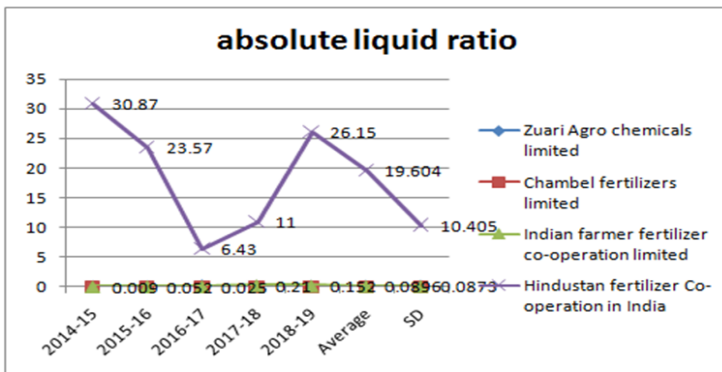


Figure 11: Absolute liquid ratio

(Source: Self-Created)

Hindustan fertilizer has the highest percentage of the average absolute liquid ratio of 19.604% whereas Chambel fertilizers have the lowest average absolute liquid ratio of 0.0138%. The standard deviation is highest for Hindustan fertilizer operation and the CV is high for the Zuari Agro.

Fixed asset ratio

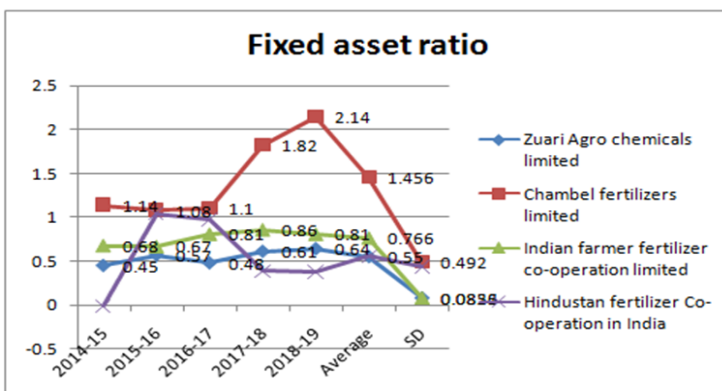


Figure 12: Fixed asset ratio

(Source: Self-Created)

Chambal fertilizer limited has the highest fixed asset ratio of 1.456% and Zuari agro hs the lowest fixed asset ratio of 0.55%. Chambal fertilizer has the highest SD as well, whereas Hindustan fertilizers operation has the lowest fixed asset ratio.

Debt equity ratio

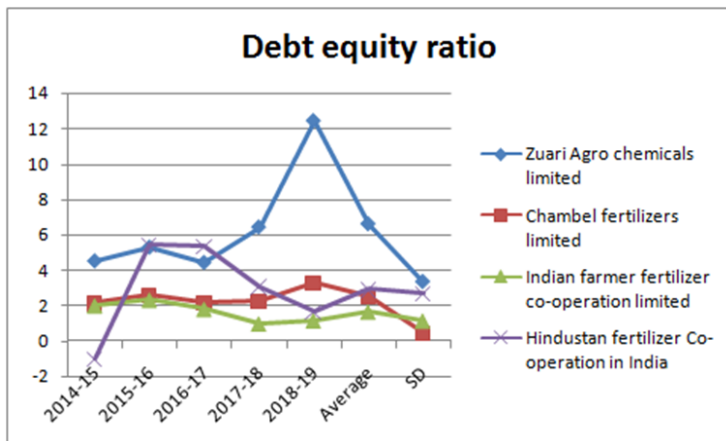


Figure 13: Debt equity ratio

(Source: Self-Created)

Zuari agro has the highest percentage of the debt-equity ratio of 6.61%, whereas Indian farmer cooperation limited as the lowest percentage of 1.646.

Inventory turnover ratio

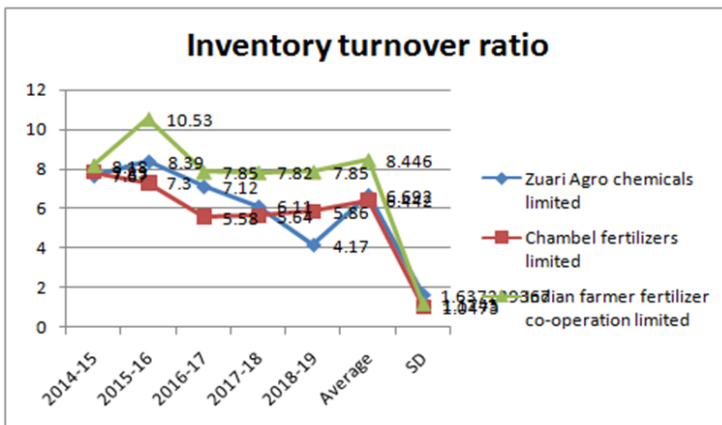


Figure 14: Inventory turnover ratio

(Source: Self-Created)

Indian farmer fertilizer has the highest inventory turnover ratio of 8.446% and Chambal fertilizers have the lowest percentage of 6.442.

Debtor's turnover ratio

Indian farmer fertilizers cooperation has the highest debtor's turnover ratio and Chambal fertilizers have the lowest.

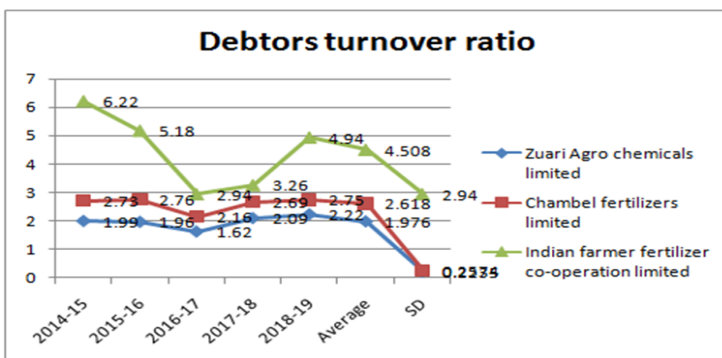


Figure15: Debtors turnover ratio

(Source: Self-Created)

Creditor's turnover ratio

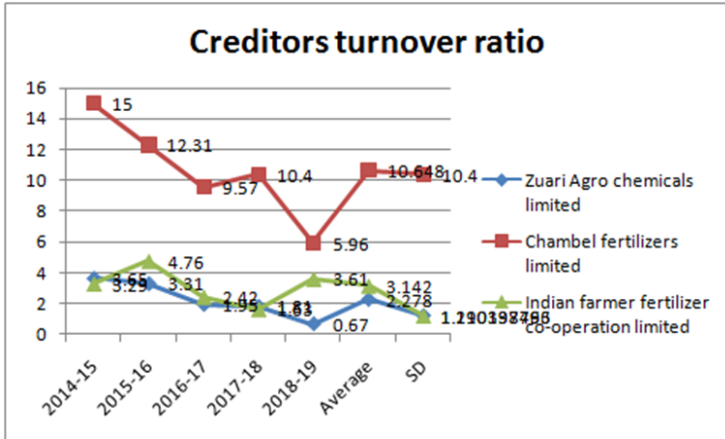


Figure 15: Creditors turnover ratio
 (Source: Self-Created)

In this matter, Chambal fertilizers have the highest percentage and Zuari agro has the lowest. 10.648% is the creditor turnover ratio for Chambal fertilizer is the highest among the three companies.

Working capital turnover ratio

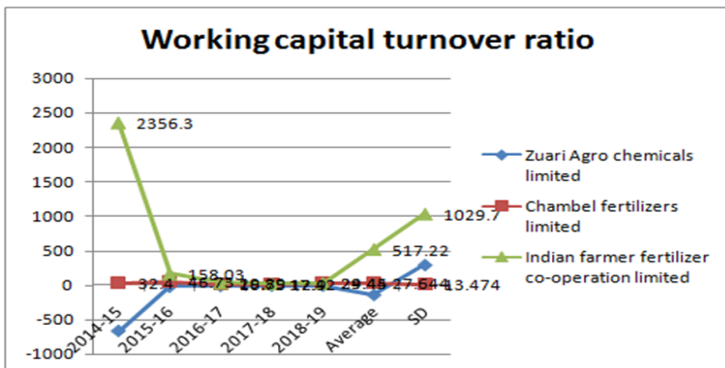


Figure 16: Working capital turnover ratio
 (Source: Self-Created)

Indian farmer cooperation limited has the highest percentage of the working capital turnover ratio of 517.218% however Zuari agro has a negative 143.666% ratio being the lowest one.

Capital Turnover Ratio

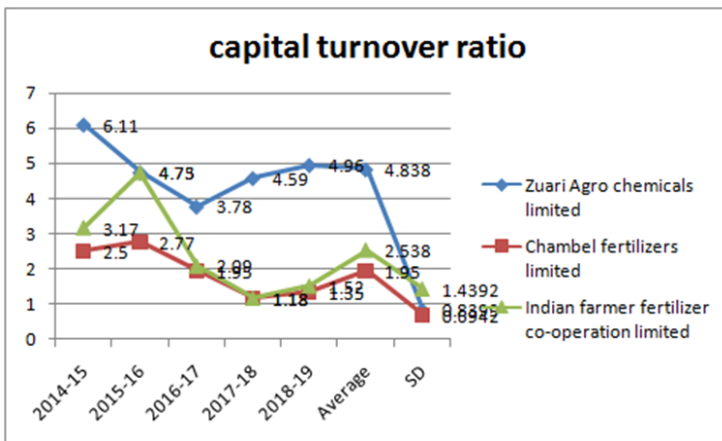


Figure 17: capital turnover ratio

(Source: Self-Created)

Zuari agro has the highest capital turnover ratio of 4.838% whereas Chambal fertilizers have the lowest ratio of 1.95%.

Findings and Researches

In this segment, the correlation and the regression on the basis of gross profit ratio has been discussed. In regression analysis, the P-value is lower than five which means it is considered as significant. The correlation of Chambal fertilizer has been negative, which means if the on a variable will increase the other will automatically decrease.

ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	27.89273	27.89273	6.938711	0.118947			
Residual	2	8.039744	4.019872					
Total	3	35.93248						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	42.61332	6.904915	6.171448	0.025265	12.90387	72.32277	12.90387	72.32277
41.07	-0.44167	0.167671	-2.63414	0.118947	-1.1631	0.279761	-1.1631	0.279761

Table 1: Regression Analysis

(Source: Self- Created)

	22.25	41.07
22.25	1	
41.07	-0.88105	1

Table 2: Correlation analysis

(Source: Self- Created)

Conclusion

In this study the financial analysis has been done on the basis of the changing value in the ratios. Different graphs and charts have been provided for all the necessary calculations, Also the proper research philosophy; approach and design have been discussed.

References

1. Ali, S., Hussain, T., Zhang, G., Nurunnabi, M. and Li, B., 2018. The implementation of sustainable development goals in "BRICS" countries . *Sustainability*, 10(7), p.2513 .

2. Jain, P. and Tiwari, G.K., 2020. *The development and standardization of an Indian Positive Body Image Scale with an Exploratory Research Design* . *Authorea Preprints*.
3. Johnston, M.P., 2017. *Secondary data analysis: A method of which the time has come. Qualitative and quantitative methods in libraries*, 3(3), pp.619-626 .
4. Praveen, K.V., 2017. *Indian fertilizer policies: revisiting the odyssey and lessons from abroad. Current Science*, pp.1246-1254 .
5. Ryan, G., 2018. *Introduction to positivism, interpretivism and critical theory. Nurse researcher*, 25(4), pp.41-49 .
6. Shahbaz, M., Van Hoang, T.H., Mahalik, M.K. and Roubaud, D., 2017. *Energy consumption, financial development and economic growth in India: New evidence from a nonlinear and asymmetric analysis. Energy Economics*, 63, pp.199-212 .
7. Singh, M., Jawalkar, C.S. and Kant, S., 2019. *Analysis of drivers for green supply chain management adaptation in a fertilizer industry of Punjab (India)* . *International journal of environmental science and technology*, 16(7), pp.2915-2926 .
8. Woiceshyn, J. and Daellenbach, U., 2018. *Evaluating inductive vs deductive research in management studies: Implications for authors, editors, and reviewers* . *Qualitative Research in Organizations and Management: An International Journal*.