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The effect of working capital on the liquidity: A case of seed companies in India

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Abstract

The difference between current assets and current liabilities is recognized as working capital. Every business must have enough amounts of liquidity to carry out its daily operations without any obstacles. The key objective of working capital management is to maintain the stability between current assets and current liabilities. This study examined the relationship between working capital management and companies liquidity. The fixed and the current assets play a vital role in the success of any company. This paper attempts to evaluate the effectiveness of working capital and liquidity management of the Rallis, Monsanto, and Kaveri seed companies during 2013-17. Control variables like Current ratio, quick ratio, Debtors turnover ratio, inventory turnover ratio are used for measuring working capital management. Current assets to total assets ratio (CATAR) and return on investment (ROI) were taken as profitability and liquidity parameters. For this purpose, secondary data has been used through annual reports of the selected seed companies. Spearman's Rank Correlation Analysis, and t-test were used for analyzing the data. The study shows that there is a significant relationship between CATAR and the ROI of selected seed companies.

Keywords: Liquidity, profitability, seed companies, t-test, working capital management

Introduction

Working capital management is the set of activities that are required to run the daily operations of the companies to certain that cash is adequate to meet short-term debt and upcoming operational expenses. Working Capital is also well-known as circulating capital or revolving capital. Working Capital is a measure of a company's operational efficiency, liquidity, and short-term solvency. Efficient management of working capital is one of the pre-conditions for the success of an enterprise. The management of various components of working capital in such a way that an adequate amount of working capital is maintained for the smooth operation of a firm and the achievement of the dual objectives of liquidity and profitability is referred to as efficient working capital management. Efficient working capital management is thus a vital measure of an organization's sound health, as it necessitates the elimination of superfluous capital blocking in order to reduce financing costs.

Objectives of the Study

To analyze working capital management and study the relationship between liquidity and profitability through rank correlation of seed companies in India.

Research Methodology

Research

The type of research used for the study was descriptive research. Descriptive research involves assembly data that describe events and then organizes, tabulates, depicts, and describes the data collection.

Collection of Data: This study was based on secondary data. Data were collected from selected Annual Report, Balance Sheet, Financial Ratios, and various other financial statements.

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Period of the Study

Analysis of working capital and liquidity of three seed industries, i.e., Rallis India Ltd., Monsanto India Ltd, and Kaveri Seed Ltd., was made on the basis of data collected for five years.

Tools for Analysis

This paper throws some light on working capital position by analyzing liquidity ratios, spearman's rank correlation analysis, and to test the significance of rank correlation, t-test has been applied.

Hypothesis

There is no significant relationship between Profitability (CATAR) and Liquidity (ROI) in the seed companies.

Result and Discussion

Following significant ratios have been calculated to evaluate the working capital and liquidity position of the above companies.

Current Ratio (CR): It is a sign of the company's commitment to meet short-term liabilities. It is essential that a business unit should have a reasonable current ratio. Figure 1 discloses that the CR of Rallis is volatile and lies between 1.09 times in the year 2014 and 1.71 times in the year 2016, and it's mean is 1.39. The CR of Monsanto is showing fluctuating trends. It lies between 0.96 times in 2014 and 2.42 times in the year 2016, and then it started decreasing. The CR of Kaveri is showing increasing trends till 2015, and after that, it started decreasing. Thus, it can be said that the CR of all three companies is below the standard of 2:1. However, the CR of Rallis is better than Monsanto and Kaveri.

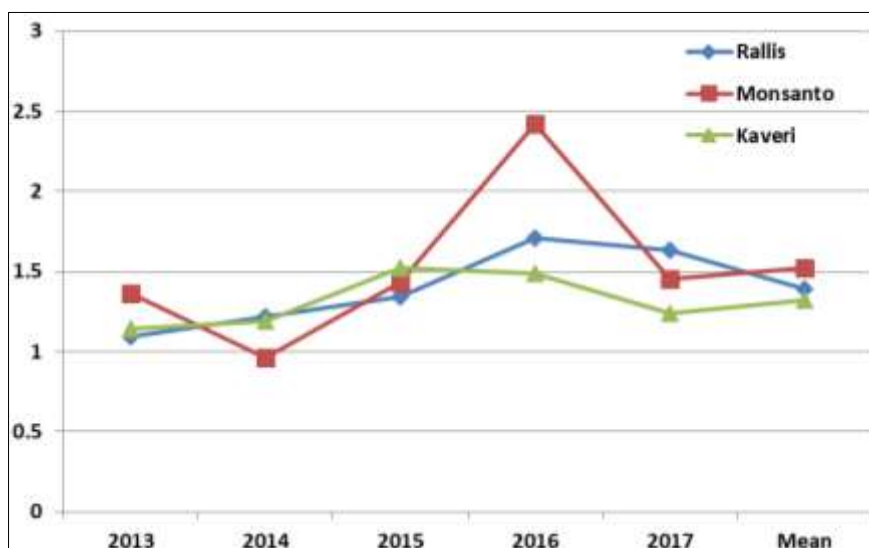


Fig 1: Current Ratio of Rallis, Monsanto, and Kaveri

Quick Ratio (QR): This ratio is apprehensive with the relationship between liquid assets and current liabilities. In liquid assets, all current assets are included except stock and prepaid expenses. The ideal level of the quick ratio is 1:1. In Figure 2, QR of Rallis is showing an increasing trend, i.e., in the year 2015 (0.91), 2016 (1.04), and later decrease in 2017.

Kaveri QR is lower as compared to Rallis, which was 0.23 in 2016 and 0.34 in 2017. The QR of Monsanto is showing a drastic increase in the year 2016 but still is below the ideal ratio criteria, same as Kaveri. This shows that the QR of Rallis is better, and the situation of Monsanto and Kaveri is alarming.

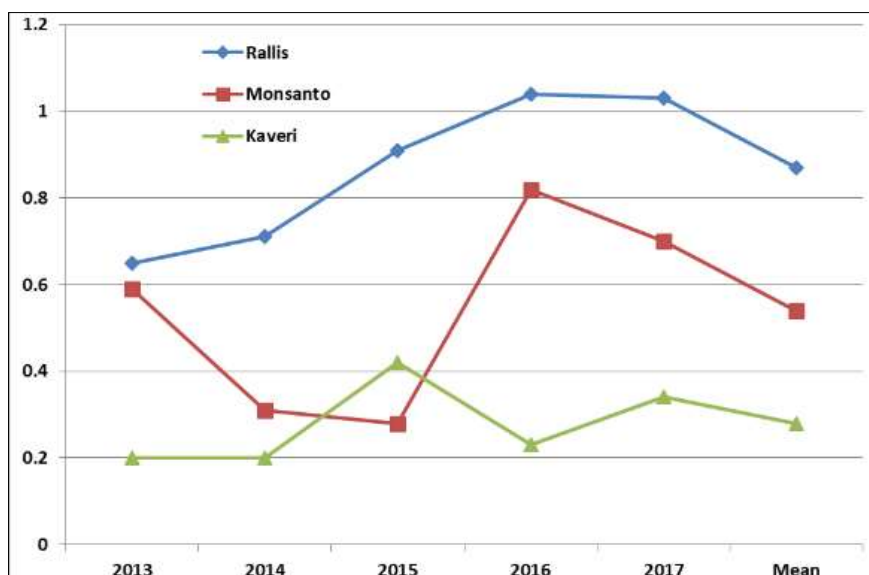


Fig 2: Quick Ratio of Rallis, Monsanto, and Kaveri

Current Assets to Total Assets Ratio (CATAR): This ratio indicates the share of current assets in total assets. This ratio is calculated by dividing current assets by total assets. The CATAR of Rallis is showing increasing and decreasing trends throughout the year from 2013 to 2017, and its mean is 0.40.

CATAR of Monsanto is showing a decreasing trend and increase in 2017 (0.75), and its mean is 0.79. CATAR of Kaveri seems to be stagnant over the year except in the year 2015. CATAR mean of Kaveri is 0.81. CATAR of Rallis and Kaveri is better than Monsanto.

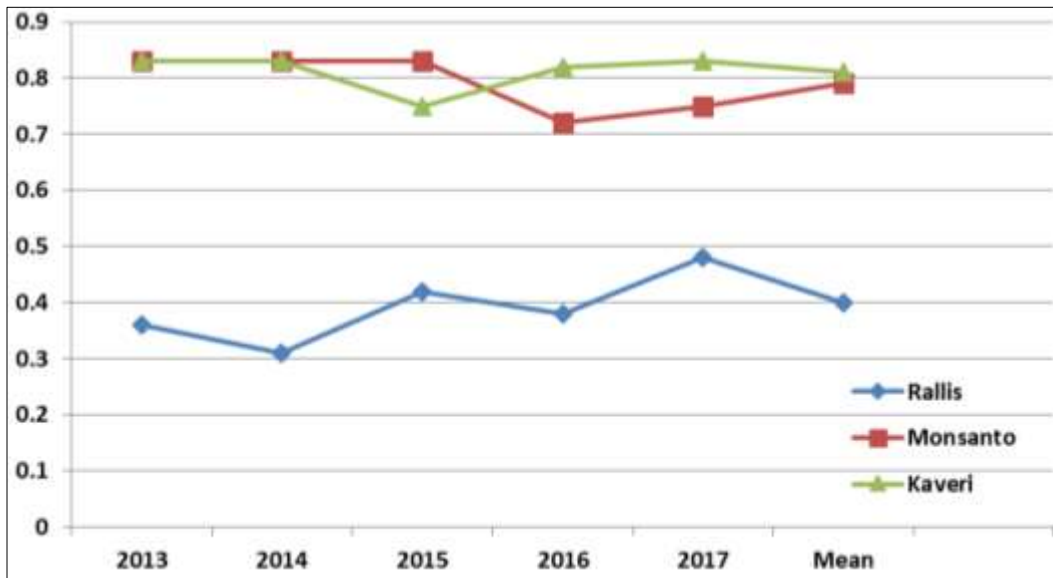


Fig 3: Current Assets to Total Assets Ratio of Rallis, Monsanto, and Kaveri

Debtor Turnover Ratio (DTR): This ratio indicates the relationship between net credit sales and average receivables outstanding during the year. Higher the ratio indicating the lesser time taken while collecting from debtors, and a low ratio indicates that the amount collected from debtors is not quick. DTR of Rallis is showing decreasing trend 11.72 times in the year 2013 and 6.85 times in the year 2017. DTR of Monsanto showed a drastic increase in the trend from 9.67

times in the year 2013 and 45.85 times in the year 2017. DTR of Kaveri is showing a mixed trend, decreasing in 2013 (14.71) and increased in 2014 (15.29) and then again decreased in 2015 (10.31) and increased in 2017 (10.08). From the above observation, it can be said that the DTR of Monsanto is better than others. Rallis and Kaveri need to take care of their credit management policy.

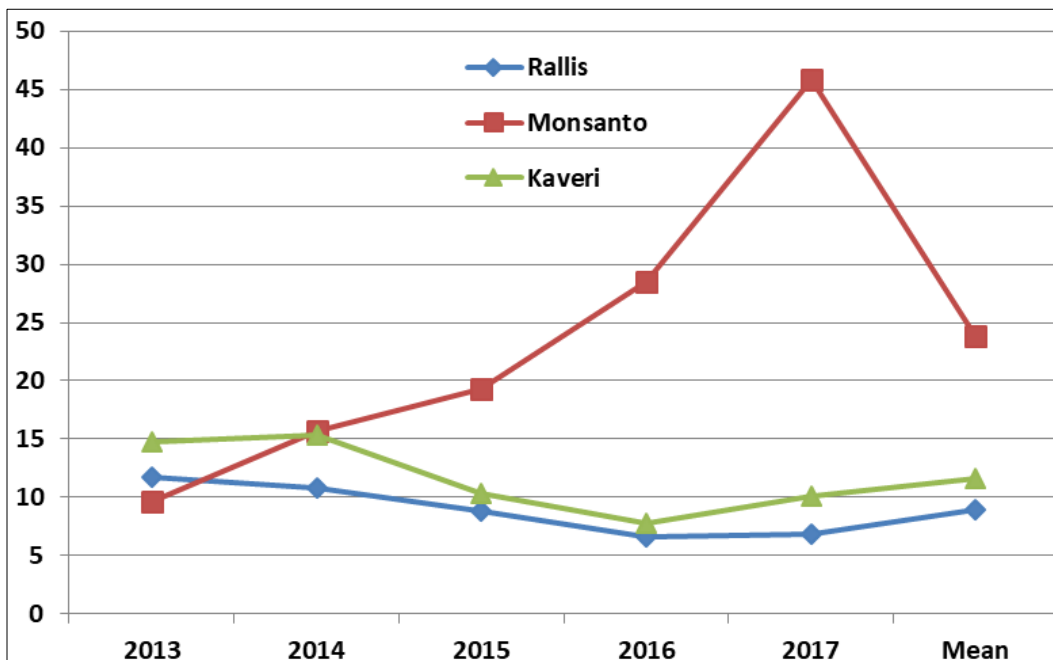


Fig 4: Debtors Turnover Ratio of Rallis, Monsanto, and Kaveri

Inventory Turnover Ratio (ITR): This ratio shows the relationship between the cost of goods and the average inventory kept during the year. This reveals that whether inventory is being efficiently used or not. The ITR of Rallis is showing decreasing trends from 7.45 times in 2013 to 6.16

times in 2017. The ITR of Monsanto is showing increasing trends from 3.17 (2013) to 5.34 (2017). DTR of both Kaveri is decreasing slowly after 2015. This shows that Rallis is good at maintaining its inventory.

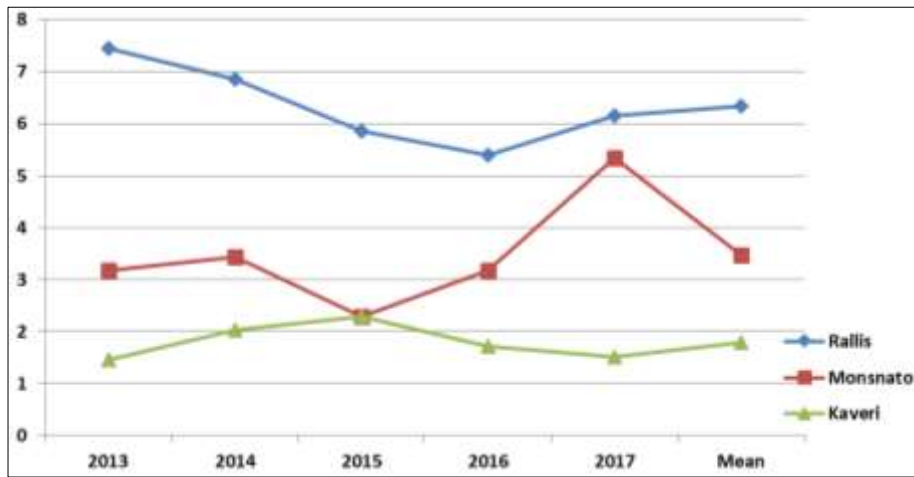


Fig 5: Inventory Turnover Ratio of Rallis, Monsanto, and Kaveri

Working Capital Turnover Ratio (WCTR): This ratio reveals the efficiency with which working capital has been utilized by a concern. A high ratio indicates efficient use of working capital in the concern, while a low ratio indicates low utilization of working capital. Figure 6 shows the drastic

decrease in the WCTR of Rallis means they are failing in doing efficient utilization of working capital. Overall average WCTR of Rallis, Monsanto, and Kaveri is 31.37, 1.86, and 2.57, respectively. Despite the decrease in WCTR of Rallis, it is better than Kaveri and Monsanto.

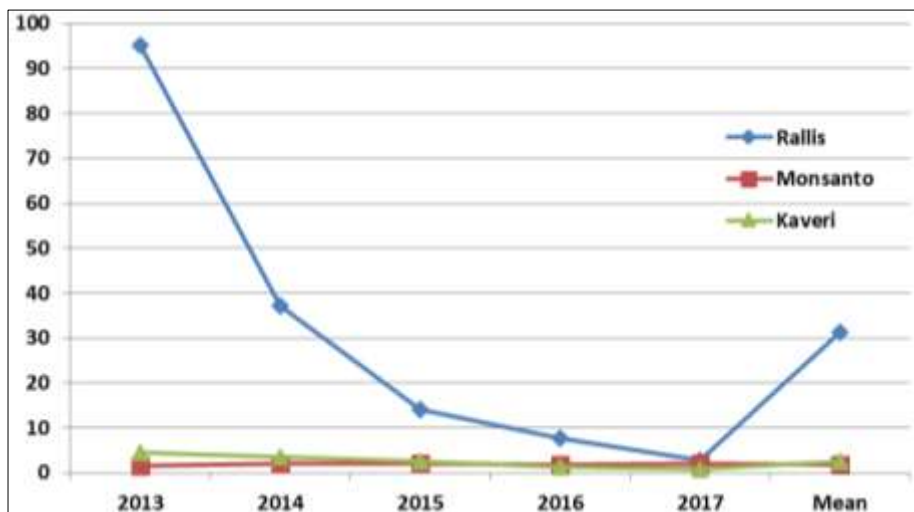


Fig 6: Working Capital Turnover Ratio of Rallis, Monsanto, and Kaveri

Hypothesis Testing

Current assets to total assets ratio (CATAR) and return on investment (ROI) are taken as profitability and liquidity parameters. Spearman's rank correlation coefficient was used to find the correlation between liquidity and profitability in the companies (Table 2). To test the significance of

coefficients t-test is applied. The null hypothesis states that there is no significant relationship between the Profitability (CATAR) and Liquidity (ROI) of these three seed companies. The study results show a significant relationship between the profitability (CATAR) and liquidity (ROI) of these three seed companies.

Table 1: T-test analysis of Rallis, Monsanto, and Kaveri

Basis	Rallis	Monsanto	Kaveri
t-value	3.13	11.79	7.78
Table value	2.776	2.776	2.776
Hypothesis	Reject	Reject	Reject

Table 2: Rank correlation between liquidity and profitability of Rallies India Ltd, Monsanto India Ltd, and Kaveri Seed Ltd.

Period	Rallis				Kaveri				Monsanto			
	CATAR		ROI		CATAR		ROI		CATAR		ROI	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
2013	36.44	4	29.50	1	82.64	3	38.51	3	82.98	2	18.57	5
2014	31.41	5	28.86	2	83.37	1	41.45	1	83.32	1	42.42	1
2015	41.51	2	24.47	3	75.15	5	40.74	2	82.80	3	34.56	2
2016	38.06	3	18.38	4	81.74	4	19.94	4	71.84	5	27.27	4
2017	47.89	1	17.75	5	82.76	2	14.01	5	75.25	4	30.40	3

Note: Current Assets to Total Assets Ratio (CATAR) and Return on Investment (ROI)

Conclusion

The CR, QR, and WCTR are better than Rallis as compared to Kaveri and Monsanto. It indicates that Rallis is in a better liquid position to pay out its current obligations and assures efficient working capital in its concerns than Monsanto and Kaveri. On the other hand, the DTR of Monsanto is better than Rallis and Kaveri, and this shows that collection from the debtor is quick for Monsanto. Rallis is using its inventory properly as compared to Kaveri and Monsanto. All the companies under study need improvement in their liquidity position to meet their short-term obligations in time. Rallis and Kaveri should improve their credit management. For that, they can restrict credit sales and should pay attention to the recovery from debtors as soon as possible. Monsanto and Kaveri should try to improve their liquid position.

References

1. Aminu Y. Impact of working capital management on the profitability of manufacturing companies listed on the Nigerian Stock Exchange [dissertation]. University Utara Malaysia; c2014.
2. Anwar Y. The effect of working capital management on profitability in manufacturing company listed in Indonesia stock exchange. *The Accounting Journal of Binaniaga*, 2018, 3(01).
3. Charitou MS, Elfani M, Lois P. The effect of working capital management on firms profitability: Empirical evidence from an emerging market. *J Bus Econ Res*, 2010, 8(12).
4. Kasozi J. The effect of working capital management on profitability: A case of listed manufacturing firms in South Africa. *Invest Manag. Financ. Innov.* 2017;14(2):336-346.
5. Mansoori DE, Muhammad D. The effect of working capital management on firm's profitability: Evidence from Singapore. *Interdiscip J Contemp Res Bus*, 2012, 4(5).
6. Podile V. Working Capital Management in Tulasi Seeds Pvt. Ltd-A Case Study in Andhra Pradesh. *Int. J Res. Manag.* 2018;8(2):262-266.
7. Ponsian N, Chrispina K, Tago G, Mkiibi H. The effect of working capital management on profitability. *Int. J Econ Finance Manage Sci.* 2014;2(6):347-355.
8. Rajdev A. Working capital management of Makson Healthcare PVT Ltd: A trade-off between liquidity and profitability, an empirical study. *Res World.* 2013;4(3):87.
9. Sharma AK, Kumar S. Effect of working capital management on firm profitability: Empirical evidence from India. *Glob Bus Rev.* 2011;12(1):159-173.
10. Sharma MPG, Kaur MRP. Working capital management and its impact on profitability: A case study of Bharti Airtel Telecom Company. *Imperial J Interdiscip Res.* 2016;2(3):265-271.
11. Sharma V, Katare R. Working Capital Management of Fertilizer Companies of India: A Case Study. *Int. J Manag. Prudence.* 2011;3(1):88.