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Effect of Working Capital Management on Firm's Profitability- a Comparative Study of Ultratech Cement and India Cements

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Abstract

Working capital management is concerned with short-term investment and financing decision of an entity. It is a major business requirement and a significant part of corporate finance. Efficient management of working capital means the management of various components of working capital in such a way that an adequate amount of the working capital is maintained for smooth running of a firm. An optimal working capital management is expected to contribute positively to the creation of firm value. To reach optimal working capital management, firm manager should control the tradeoff between profitability and liquidity accurately. The purpose of this study is to examine the impact of working capital management on the profitability of UltraTech Cement and India Cements. Return on capital employed (ROCE) is used as dependent proxy variable for the profitability and current ratio, debtors turnover ratio, and inventory turnover ratio are used as independent proxy variables for the working capital management. The findings show that there is a significant impact of working capital management on the profitability of UltraTech Cement but insignificant impact has been found on the profitability of India Cements.

Keywords: working capital, management, cement industry, profitability

Introduction

Working capital is the life-blood and nerve centre of a business firm as business cannot run effectively without a sufficient quantity of working capital (Saleem & Rehman, 2011). Working capital is described as the capital available to meet the day-to-day operations, and depending on the industry, it could be a relatively high percentage of the total assets of the organization. It is the difference between two current assets and current liabilities. The overall success of the company depends upon its working capital position (Mansoori & Muhammad, 2012).

Working capital management is one of the most important functions of corporate management. The importance of working capital management in a business enterprise cannot be underplayed. Management of working capital is central to the growth and survival of any business. Business organizations need to give proper attention to the management of their working capital (Vijayakumar & Karunaiathal, 2014). The going concern ability of an organization is greatly anchored on the continued solvency of that organization. When working capital is managed improperly, allocating more than enough of it will render management non-efficient and reduce the benefits of short-term investments. However, if working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short-term liquidity crisis (Mohamad & Saad, 2010).

Working capital management is important because of its effects on the firm's profitability and risk, and consequently its value. Working capital manager makes attempt to optimally use current liabilities with the least amount of current assets through adventurous strategy (Arabahmadi & Arabahmadi, 2013). Working capital management is considered to be a vital issue in a firm's overall financial management since it contributes in creating firms' value. Working capital approved the company's ability to continue its activities without endangering liquidity. The management of working capital frequently considered as a tool to

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maintaining competence of the business inside their operations (Madishetti & Kibona, 2013).

Efficient management of working capital means management of various components of working capital in such a way that an adequate amount of working capital is maintained for smooth running of a firm. But, it is very difficult for the management to estimate working capital properly because the amount of working capital varies across firms over the periods depending upon the nature of the business, nature of raw material used, process technology used, nature of finished goods, degree of competition in the market, scale of operation, credit policy etc. (Malik & Bukhari, 2014). The working capital management contributes to ensure that a firm is capable enough to continue its day to day operations and it has sufficient ability to satisfy both short-term debt obligations and upcoming operational expenses. It helps in designing a framework to smooth the financial constraints of the business so as to make effective use of its resources (Gill, Biger, & Mathur, 2010).

Indian Cement Industry

India is the second largest producer of cement in the world. India's cement industry is a vital part of its economy which

provides employment to more than a million people, directly or indirectly. India has a lot of potential for development in the infrastructure and construction sector and the cement sector is expected to largely benefit from it. A significant factor which aids the growth of this sector is the ready availability of the raw materials for making cement, such as limestone and coal. The housing sector is the biggest demand driver of cement, accounting for about 67 per cent of the total consumption in India. The other major consumers of cement include infrastructure at 13 per cent, commercial construction at 11 per cent and industrial construction at 9 per cent. The cement capacity in India is estimated to be at 420 MT as on March, 2017 with production growing at 5-6 per cent per year. The country's per capita consumption stands at around 225 kg. The Indian cement industry is dominated by a few companies. The top 20 cement companies account for almost 70 per cent of the total cement production of the country. A total of 188 large cement plants together account for 97 per cent of the total installed capacity in the country, with 365 small plants account for the rest. Of these large cement plants, 77 are located in the states of Andhra Pradesh, Rajasthan and Tamil Nadu.

Table 1: List of Top Cement Companies
(Rs. in Crores)

S. No.	Cement Companies	Market Capitalization (as on 31.03. 2017)	Net Profit (as on 31.03. 2017)
1	UltraTech Cement	113,288.71	2,627.72
2	Shree Cements	65,203.44	1,339.11
3	Ambuja Cements	55,905.84	970.09
4	ACC	33,665.56	602.40
5	Dalmia Bharat	24,151.10	63.37
6	Ramco Cements	17,409.12	649.29
7	Birla Corp	7,483.76	214.00
8	J.K. Cement	7,155.66	259.58
9	OCL India	7,154.35	383.87
10	India Cements	5,646.89	173.35

Source: <http://www.moneycontrol.com/stocks/marketinfo/totassets/bse/cement-major.html>

UltraTech Cement Limited

It is India's biggest cement company and India's largest exporter of cement clinker based in Mumbai, India. It is part of the Aditya Birla Group and division of Grasim Industries. It has an annual capacity of 93 Million Tonnes Per Annum (MTPA) of grey cement. Its operations span across India, UAE, Bahrain, Bangladesh and Sri Lanka. UltraTech Cement is also India's largest exporter of cement reaching out to meet the demand in countries around the Indian Ocean and the Middle East. UltraTech cement has been awarded the Superbrand status. UltraTech Cement Ltd. is the largest manufacturer of grey cement, Ready Mix Concrete (RMC) and white cement in India. It is also one of the leading cement producers globally. UltraTech's subsidiaries are Dakshin Cements Limited, Harish Cement Limited, Gotan Limestone Khauj Udyog Private Limited, Bhagwati Limestone Company Private Limited, UltraTech Cement Lanka (Pvt.) Ltd., UltraTech Cement Middle East Investments Limited, PT UltraTech Mining Indonesia and PT UltraTech Investments Indonesia.

India Cements Limited

It is a cement manufacturing company in India. The

company is headed by former International Cricket Council chairman N. Srinivasan. It was established in 1946 by S. N. N. Sankaralinga Iyer and the first plant was set up at Thalaiyuthu in Tamil Nadu in 1949. It has 7 integrated cement plants in Tamil Nadu, Telangana and Andhra Pradesh, one in Rajasthan (through its subsidiary, Trinetra Cement Ltd) and two grinding units, one each in Tamil Nadu and Maharashtra with a capacity of 15.5 million tonnes per annum. Sankar, Coramandel and Raasi Gold are the brands owned by India Cements. India Cements owned Indian Premier League franchise Chennai Super Kings from 2008 to 2014. The franchisee was transferred to a separate entity named Chennai Super Kings Cricket Ltd., after the verdict of the Supreme Court of India

Literature Review

Quayyum (2011) in the study entitled, "Effects of Working Capital Management and Liquidity: Evidence from the Cement Industry of Bangladesh" highlighted that there was significant level of relationship between the profitability indices and various liquidity indices as well as working capital components. The author recommended that the firms should forecast their sales and hold cash enough as

according to their projected sales level, so that they take advantage of the bargaining position while making purchases. Nzioki et.al (2013) in the research titled, "Management of Working Capital And Its Effect On Profitability Of Manufacturing Companies Listed on Nairobi Securities Exchange (NSE), Kenya" revealed that gross operating profit was positively correlated with average collection period and average payment period but negatively correlated with cash conversion cycle. The relationship between inventory turnover in days and gross operating profit was insignificant. Nejad et.al (2013) in the research titled, "Effect of Working Capital Management on the Profitability of Listed Companies in Tehran Stock Exchange" examined that there was a significant inverse relationship between cash conversion cycle and its components, including the collection period, inventory turnover period and accounts payable turnover period, and profitability of the firms. Besides, the study recommended that corporate managers can increase the profitability of their company desirably by reducing the collection period and inventory turnover period. Hoque, Mia, & Anwar (2015) in their research entitled, "Working Capital Management and Profitability: A Study on Cement Industry in Bangladesh" examined the impact of working capital on the profitability of Cement Industry in Bangladesh. The study found that profitability position and working capital management of the selected cement industries was not satisfactory. Regression analysis was used to show the impact of Working Capital management on Profitability. The study was mainly based on secondary data. The study reveals that Profitability position & Working Capital position over the study period is not satisfactory. Moreover, it was analyzed that there was significantly positive correlation between profitability and working capital components as well as impact of day sales outstanding (DSO) on profitability ratios is negatively significant. The study recommended that sample cement industries should reduce their day sales outstanding (DSO) for improving their profitability position. Al-Dalayeen (2017) in the research paper titled, "Working Capital Management and Profitability of Real Estate Industry in Jordan- An Empirical Study" examined the impact of working capital management on the profitability of real industry in Jordan. Three real estate companies namely Jordan Decapolis Properties, Al-Tajamouat for Touristic Projects Co Plc, Real Estate Development of Jordan were selected in the study. ROCE was used as a dependent proxy variable for profitability whereas CR, ITR & DTR were used as independent proxy variable for working capital. The analysis of the data revealed that only debtors'

turnover ratio in case of Jordan Decapolis Properties and current ratio in case of Al-Tajamouat were positively related with the profitability and their impact was also significant. Nevertheless, the research found that rate of inventory turnover was very low in all the companies. Debtor's turnover ratio was found to be significant in Jordan Decapolis Properties only. DTR should also be highly correlated so as to maintain the liquidity. However, current ratio has insignificant relationship with the profitability of selected companies.

Research Gap

A number of researches have been conducted in this field but few researches are available on the cement industry in relation to working capital management. It has been found that most of the researchers have used the variable ROA (return on assets) as a dependent proxy variable for analyzing the profitability. The present study has taken ROCE (return on capital employed) as a proxy variable for evaluating the effect of working capital management on the profitability of selected cement companies. In this way, this research differs from earlier studies.

Objectives of the Study

1. To examine the impact of working capital management on the profitability of UltraTech Cement Limited.
2. To analyze the impact of working capital management on the profitability of India Cements Ltd.

Research Methodology

The study is primarily based on secondary data and therefore annual reports of the selected cement companies were approached and calculations were made out of it. The period of the study taken in this research is five years which ranges from financial year 2012-13 to 2015-17. The research is based on two companies UltraTech Cement and India Cement. These companies are selected because UltraTech Cement is the biggest company in terms of market capitalization and profit whereas India Cement is at the bottom in the list of top ten cement companies. The study used multiple linear regression to examine the impact of various proxy variables of working capital on ROCE (return on capital employed) of UltraTech Cement and India Cements. Table 1 highlights the Research Model of the study. The independent proxy variables for working capital are taken as current ratio (CR), inventory turnover ratio (ITR), and debtors turnover ratio (DTR) whereas ratio of ROCE (return on capital employed) was taken as dependent proxy variable for profitability.

Table 1: Research Model

Variables		Proxy Measures
Independent Variable	Working Capital Management	CR, ITR, DTR
Dependent Variable	Profitability	ROCE

Hypotheses of the study

- Ho₁: Working capital management has no significant impact on the profitability of UltraTech Cement Ltd.
- Ha₁: Working capital management has a significant impact on the profitability of UltraTech Cement Ltd.
- Ho₂: Working capital management has no significant impact on the profitability of India Cements Ltd.
- Ha₂: Working capital management has a significant impact

on the profitability of India Cements Ltd.

Hypotheses Testing

Ho₁: Working capital management has no significant impact on the profitability of UltraTech Cement Ltd.

Multiple regressions is used to examine the impact of working capital management on the profitability of UltraTech Cement Ltd. The null hypothesis is that working

capital management has no significant impact on the profitability of UltraTech Cement and the alternate

hypothesis states that working capital management has no significant impact on the profitability of UltraTech Cement.

Table 2: Regression Model of UltraTech Cement Ltd.

Independent Variables	Regression Coefficients	t Value	P Value
Current Ratio	0.29563	14.874	0.001
Debtors Turnover Ratio	0.18667	13.240	0.005
Inventory Turnover Ratio	0.31458	2.443	0.009
Adjusted R ² : 0.787; Dependent Variable: ROCE			

Source: Output of SPSS_20

Table 2 shows the results of multiple linear regression analysis. The value of adjusted R square is 0.787 which means 78.7 percent variation in ROCE is explained by current ratio, debtor's turnover ratio, inventory turnover ratio and rest of the variation (1-R²) is an unexplained variation due to variables that has not been considered in this model. ROCE is the dependent variable whereas current ratio, debtors' turnover ratio, and inventory turnover ratio are the independent variables. Firstly, current ratio has positive impact on ROCE since the unstandardized beta coefficient is 0.29563. It indicates that for every one unit change in current ratio, there will be 0.295 unit change in ROCE. However, its regression coefficient is statistically significant at 5% level of significance (P<0.05). Secondly, the unstandardized beta coefficient of debtors turnover ratio is 0.18667 which indicates that one unit change in debtors turnover ratio will bring 0.18 unit change in ROCE. Further, its regression coefficient is statistically significant at 5% level of significance (P<0.05). Thirdly, inventory turnover ratio

(ITR) has significant positive relationship with return on capital employed at 5% level of significance. The unstandardized beta coefficient value of inventory turnover ratio is 0.31458 which highlights that for one unit change in ITR, there is 0.31 unit change in ROCE. The regression coefficient of ITR is statistically significant at 5% level of significance (P<0.05). Hence, null hypothesis stands rejected and it can be said that working capital management has a significant impact on the profitability of UltraTech Cement Ltd.

Ho₂: Working capital management has no significant impact on the profitability of India Cements Ltd.

Multiple regressions are used to examine the impact of working capital management on the profitability of India Cements Ltd. The null hypothesis is that working capital management has no significant impact on the profitability of India Cements and the alternate hypothesis states that working capital management has a significant impact on the profitability of India Cements.

Table 3: Regression Model of India Cements Ltd.

Independent Variables	Regression Coefficients	t Value	P Value
Current Ratio	0.09245	-1.874	0.251
Debtors Turnover Ratio	0.05637	26.894	0.845
Inventory Turnover Ratio	0.01458	12.554	0.669
Adjusted R ² : 0.337; Dependent Variable: ROCE			

Source: Output of SPSS_20

Table 3 shows the results of multiple linear regression. The value of adjusted R square is 0.337 which means 33.7 percent variation in ROCE is explained by current ratio, debtors turnover ratio, and inventory turnover ratio and rest of the variation (1-R²) is an unexplained variation. ROCE is dependent variable whereas current ratio, debtors turnover ratio, inventory turnover ratio are independent variables. ROCE is the dependent variable whereas current ratio, debtors turnover ratio, and inventory turnover ratio are the independent variables. Firstly, current ratio has positive impact on ROCE since the unstandardized beta coefficient is 0.09245. It indicates that for every one unit change in current ratio, there will be 0.092 unit change in ROCE. However, its regression coefficient is statistically insignificant at 5% level of significance (P>0.05). Secondly, the unstandardized beta coefficient of debtors' turnover ratio is 0.05637 which indicates that one unit change in debtors' turnover ratio will bring 0.05 unit change in ROCE. Further, its regression coefficient is statistically insignificant at 5% level of significance (P>0.05). Thirdly, inventory turnover ratio (ITR) has significant positive relationship with return on capital employed at 5% level of significance. The unstandardized beta coefficient value of inventory turnover ratio is 0.01458

which highlights that for one unit change in ITR, there is 0.01 unit change in ROCE. The regression coefficient of ITR is statistically insignificant at 5% level of significance (P>0.05). Hence, null hypothesis stands accepted and it can be said that working capital management has no significant impact on the profitability of India Cements.

Conclusion

Working capital management is an important part in firm's financial management decision. The ability of the firm to continuously operate in longer period is depends on how they deal with investment in working capital management. The optimal of working capital management could be achieved by firm that manages the tradeoff between profitability and liquidity. The purpose of this study is to investigate the impact of working capital management on the profitability of UltraTech Cement and India Cements. Return on capital employed (ROCE) is used as dependent proxy variable for profitability and current ratio, debtors turnover ratio, and inventory turnover ratio are used as independent proxy variables for working capital management. The first null hypothesis stands rejected and the second has been accepted. Therefore, it can be said that working capital management has significant impact on the

profitability of UltraTech Cement but there is no significant impact of working capital management on the profitability of India Cements.

Since the present study focused exclusively on two cement companies therefore, there is much to be explored about working capital management and its relationship with profitability with respect to Indian firms from other industries. It is suggested that further research may be conducted on the same issue with more companies covering diverse industries and more number of years in the sample. The scope of further research may also be extended to other components of working capital management such as cash, marketable securities, receivables and inventory management.

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