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Working Capital Management And Profitability: A Study Of Selected Cement Industry In India

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Abstract: This study aims toexaminethe working capital management and profitability: a study of selected cement industry in India. Working capital is defined as a major issue in financial decision-making given that it is being a part of savings in asset which calls for appropriate financing investment. The source of financial and economic data of the selected companies is based on the NSE (national stock exchange). Five companies are randomly selected from all listed companies in the NSE, but financial companies are excluded while drawing the sample. The time-dimension of panel data runs yearly from 2011 to 2012. The findings confirm that correlation between long-term debt and other independent variables has been checked.The results shows that longer the current assets, operating profit, liquidityand interest coverage ratio is negative relationship with LTD (long term debt) and other three components of working capital management have a positive relationship LTD. Accordingly, the findings of our results indicate that debt used by the firm are negatively associated with firm's profitability. Results show that companies could make a low debt ratio tend to have a shorter period to keep their inventory.Company will use the internal finance may earn the high profitability.

Keyword: Profitability, Working Capital, Current Assets, Operating Profit, Investment

INTRODUCTION:

Working capital is careful as a major issue in financial decision-making given that it is being a part of savings in asset which calls for appropriate financing investment. However, according to Sanger working capital has always been unobserved in financial decision-making because it involves investment and financing in short-term period and also acts as a restrain in financial performance, since it does not supply to Return on Equity. Although, it ought to be critical for to a firm to sustain their short-term investment as it will ensure the ability of a firm in longer period. The essential part in administration of working capital lies in maintaining its liquidity in day-to-day operation to ensure smooth running of the business and meets its obligations. Nevertheless, this is not an easy task because managers must ensure that the firm is administration in efficient and profitable manner and also there are high possibilities of difference of current asset and current liability during this process. If this happens and firm's manager failed to manage it properly then it will affect firm's growth and profitability which will further escort to financial distress and finally firms can go bankrupt. Various surveys have pointed out that manager's use up considerable time on day-to-day problems that involve working capital decisions. One major cause for this is that current assets are short-lived investments that are continually being converted into other asset types. As far as current liabilities are concerned, the firm is accountable for paying these obligations on a timely basis. Liquidity for the ongoing firm is not reliant on the liquidation value of its assets, but rather on the operating cash flows generated by those assets. Thus, when taken together, decisions on the level of different working capital components become frequent, cyclic, and time consuming. According to Joshi, working capital management is a very sensitive area in the field of financial management and it involves the decision of the amount and composition of current assets and the financing of these assets. The working capital management of a firm partly affects its profitability.

In general, current assets are considered as one of the important components of total assets of a firm. A firm may be able to reduce its investment in fixed assets by renting or leasing plant and machinery, whereas the same policy cannot be followed for the components of working capital. The high level of current assets may reduce the risk of liquidity associated with the opportunity cost of funds that may have been invested in long-term assets. The current study explores the various determinants of working capital management by taking into consideration different economic and financial variables relating to the industry.

CONCEPT OF WORKING CAPITAL

The working capital meets the short-term financial requirements of a business enterprise. It is the Investment required for running day-to-day business. It is the result of the time lag between the expenditure for the purchase of raw materials and the collection for the sales of finished products. The components of working capital are inventories, accounts to be paid to suppliers, and payments to be received from customers after sales. Financing is needed for receivables and inventories net of payables. The proportions of these components in the working capital change from time to time during the trade cycle. The working capital requirements decide the liquidity and profitability of a firm and hence affect the financing and investing decisions. Lesser requirement of working capital leads to less need for financing and less cost of capital and hence availability of more cash for shareholders. However the lesser working capital may lead to lost sales and thus may affect the profitability. The management of working capital by managing the proportions of the WCM components is important to the financial health of businesses from all industries. To reduce accounts receivable, a firm may have strict collections policies and limited sales credits to its customers. This would increase cash inflow. However the strict collection policies and lesser sales credits would lead to lost sales thus reducing the profits. Maximizing account payables by having longer credits from the suppliers also has the chance of getting poor quality materials from supplier that would ultimately affect the profitability. Minimizing inventory may lead to lost sales by stock-outs. The working capital management should aim at having balanced; optimal proportions of the WCM components to achieve maximum profit and cash flow.

REVIEW OF LITERATURE

Mahmood and Qayyum, (2010) pointed out that to increase profitability of a company and ensuring sufficient liquidity to meet short-term obligations as they fall due are two main objectives of working capital management. Profitability is related to the goal of shareholders' wealth maximization, and investment in current assets is made only if an acceptable return is obtained. While liquidity is needed for a company to continue business, a company may choose to hold more cash than needed for operational or transactional needs i.e. for precautionary or speculative reasons.

Filbeck G. et al. (2005) investigated the data of 26 industries by taking the data of 970 companies during 1996 to 1999. They found out that firms are able to decrease financing cost and/or augment the funds obtainable for development by reduce the amount of funds attached to the current assets. They revealed that significant difference exist between industries in working capital measures across time. In addition, we determine that these measures for working capital vary extensively with in industry with the passage of time.

Ching et al. (2011) conducted a study to find out the relationship between working capital management and profitability in Brazilian-listed companies. The objectives of their study were to investigate if there was any difference between corporate profitability and working capital management in two separate groups of companies: working capital intensive and fixed capital intensive; and to identify the variables that most affect profitability. They have measured profitability in three different ways: Return on Sales (ROS), Return on Assets (ROA) and ROE. The independent variables used are cash conversion efficiency, debt ratio, days of working capital,day receivable and days of inventory. Multiple linear regression used in their study identified that, there exists negative relationship between CCC (equal to days of working capital), debt ratio and profitability.

Deloof(2003). In US firms by researched the relationship between working capital management and value creation for shareholders. The standard measure for working capital management is the cash conversion cycle (CCC). Cash conversion period reflects the time span between disbursement and collection of cash. It is measured by estimating the inventory conversion period and the receivable Conversion period, less the payables conversion period. Their research found strong evidence of a negative relation between profitability and cash conversion cycle meaning that shorter the days of working capital, higher the profitability. Their findings also indicate a positive impact in the shareholder's value. This is similar to findings in Belgium that showed a negative between profitability that was measured by gross operating income and cash conversion cycle as well as number of day's accounts receivable and inventories. Also, empirically examined the relationship between profitability and liquidity, as measured by current ratio and cash gap (cash conversion cycle) in Saudi Arabia. Using correlation and regression analysis, the result confirmed a significant negative relationship between the firm's profitability and its liquidity level, as measured by current ratio. This relationship is more pronounced for firms with high current ratios and long cash conversion cycles. Working capital management is an important factor of financial management. . Large inventory and free trade credit policy make it possible to increase sales volume. Moreover large inventory stock reduces the risk of a stock out. Findings of this study show that firms having a large amount of cash invested in working capital also have extensive amounts of short term payables as a source of financing. Moreover delaying payments to suppliers allows a firm to evaluate the superiority of the products bought, and can be an economical and elastic source of financing for the firm.

Alipour(2011) took a sample of 1063 top firms listed in Tehran stock exchange and found a negative significant relationship between no of day's accounts receivable, Inventory Turnover and cash conversion cycle where as positive significant relation with no of days accounts payables with profitability and hence concluded that working capital management significantly affects the profitability of the firms.

According to Van Horne(1977), working capital management is the administration of current assets in the name of cash, marketable securities, receivables, and inventories.

Hughes' (1997) study of the financial structure of large and small U.K. businesses found that small businesses tend to rely more on short-term debt in comparison with large businesses. These results show that small businesses have a higher proportion of debt as trade credit, which is attributed to the fact that small firms face greater problems in attracting long-term debt than large businesses. However, this difference could also be explained by the mere preferences and attitudes of the owner manager toward debt capital.

Mathuva (2009) studied the impact of working capital management on the performance. He took firms as a sample and all these companies were listed in Nairobi stock exchange and the data was taken from 1993 to 2008. There were certain findings of his research by analyzing the fixed effects regression models. Firstly, there is a negative relationship between the time when the cash is collected from the customers and the firm's productivity. This depicts, firms that are more profitable enjoys less time period for the collection of cash from the customers as compare to ones which are less profitable. Secondly, there is a positive relationship between the inventories when they were brought in and the period to which they are sold and the firm's profitability. The interpretation comes out as that the firms or the organizations which take more time to keep the inventories it reduces the costs of the disruption in the process of production and usually the business losses as there is the insufficiency in the goods. This situation decreases the operating cost of the firm. The third assumption of the research was the association between the average payment period and profitability and found out to be positive ($p<0.01$). The more the time taken to disburse the creditors, the profitability will increases

DATA AND VARIABLES

The source of financial and economic data and are randomly selected from all listed companies in the NSE, but financial companies are excluded while drawing the sample. The time-dimension of panel data runs yearly from April 2011 to march2012.

OBJECTIVES OF THE STUDY

To analyze the problem statement as mentioned earlier, we have developed objectives of our research. This research is focusing on working capital management and its effects on profitability for a sample of 5 Indian cement companies over a period of 1 year (april2011-march 2012). The main objectives are:

· To determine the nature and extent of the relationship between working capital management and profitability.

· To explore the joint impact of different components of working capital management on profitability.

Computation of selected variable

Long term debt /equity	Long term Debt/equity.
Current ratio	Current asset/current liability.
Operating margin	Operating cost/net sales x100
Total debt/equity	Debt/ equity.
Quick ratio	Quick asset/current liability.
Fixed assets turnover ratio.	Cost of goods sold (or) sale/net fixed assets.
Inventory turnover ratio	Cost of goods sold (or) sale/average inventory.
Interest coverage ratio	PBIT/ TOTAL ASSETS.

Data Analysis and Interpretation
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
long term debt	5	.02	.84	.5600	.35630
current asset	5	.88	1.44	1.0720	.21742
operating profit	5	6.20	25.37	19.2760	7.54259
debt/equity	5	.35	.90	.5180	.22939
Liquidity	5	.54	1.35	.9220	.29321
fixed asset ratio	5	.69	1.94	1.0680	.49736
\inventory ratio	5	8.98	20.35	14.3780	4.60998
interest coverage ratio	5	1.69	3.05	2.3220	.62743
Valid N (list wise)	5				

Table.1 shows the descriptive statistics of the variables: the mean, minimum, maximum, standard deviation.Firms in the cement industry of Indian on average have long term debts 0.56, Operating Income 19.27,debt /equity 0.51, ligudity,0.92,Current Ratio 1.07,Fixed assets 1.06, inventory ratio 14.37, interest coverage ratio 2.32.

Correlations

	long term debt	current asset	operating profit	debt/ equity	liquidity	fixed asset ratio	inventory ratio	interest coverage ratio
long term debt	1							
	.							
	5							
current asset	-.755	1						
	.140	.						
	5	5						
operating profit	-.333	.528	1					
	.583	.361	.					
	5	5	5					
debt/equity	.175	-.529	-.926(*)	1				
	.779	.359	.024	.				
	5	5	5	5				
Liquidity	-.481	.140	.695	-.438	1			
	.412	.822	.192	.461	.			
	5	5	5	5	5			
fixed asset ratio	.345	-.349	-.936(*)	.856	-.830	1		
	.570	.565	.019	.064	.082	.		
	5	5	5	5	5	5		
inventory ratio	.726	-.179	.060	-.376	-.512	.025	1	
	.165	.773	.924	.533	.378	.968	.	
	5	5	5	5	5	5	5	
interest coverage ratio	-.504	.519	.379	-.546	.215	-.502	.085	1
	.387	.371	.529	.341	.728	.389	.891	.
	5	5	5	5	5	5	5	5

Table.2 Here correlation between long-term debt and other independent variables has been checked. Deloof(2003) concluded the same result for the Belgian's firm. The results shows that longer the current assets operating profit liquidity interest coverage ratio will be the net operating profit as all three components of working capital management have a positive relationship with inventory debt/equity fixed assets

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.189	4	.047	0.00	0.00
Within Groups	.000	0	.		
Total	.189	4			

Table.3Tohavea valid linear equation, the value should be less than 0.05, in the cement section,the value of F is less than 0.05, which mean that the null hypothesis is accepted, and there existing a significance relation between the variables.

Regression model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000(a)	1.000	1.000	.

Predictors: (Constant), interest coverage ratio, inventory ratio, operating profit, current ratio.

Table 4 Since R square is 1; statistically it means that there is no variation. It is a good forecasting model.

CONCLUSION

Fromthe present study, we investigated working capital management on firm's profitability using a sample of Indian cement companies Deloof (2003) as it concluded the same result for the Belgian's firm. The results shows that longer the current assets, operating profit, liquidity and interest coverage ratio is negative relationship with LTD (long term debt) and other three components of working capital management have a positive relationship LTD. accordingly, the findings of our results indicate that debt used by the firm are negatively associated with firm's profitability. Results show that companies that have a low debt ratio tend to a shorter period to keep over their inventory. Company will use the internal finance may earn the high profitability.

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