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## **An analytical study on working capital management with special reference to Indian cement industry**

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### **Abstract**

Working capital is viewed as nurturing power to a monetary substance and overseeing working capital quite possibly the main elements of corporate administration. Working capital management is the administration of transient financing prerequisites of a firm which incorporates keeping up with ideal equilibrium of working capital segments – receivables, stock and payables – and utilizing the money effectively for everyday activities.

A firm might exist without making benefits yet can't make due without liquidity. The capacity of working capital administration association is comparable that of heart in a human body. Additionally it is a significant capacity of monetary administration. The monetary administrator should decide the acceptable degree of working capital assets and furthermore the ideal blend of current resources and current liabilities. He should guarantee that the suitable wellsprings of assets are utilized to back working capital and ought to likewise see that momentary commitment of the business are met well on schedule.

**Keywords:** Working capital, monetary, liquidity, capital assets, liabilities

### **1. Introduction**

India is the world's 2<sup>nd</sup> biggest maker of cement get-togethers, with cement organizations adding almost 8,000,000 tons (MT) limit in 2009, taking the all out introduced ability to 219 MT. A couple of the main makes are the Ultra Tech/Grasim join Dalmia Cements. India Cements, Holeim and so forth. With the lift given by the public authority to different foundation benefits, street organizations and lodging offices, development in the cement utilization is expected in the coming years. Foundation is spine of any economy which is Petroleum, Fertilizer, Iron, Steel, Coal-Banking, Insurance, Power and Cement and so on. The cement Industry is one of the centre enterprises of the country. Since cement is a principal pre-requisites for all developing exercises. Cement is utilized in lodging, spans, streets, modern development and so forth just as cement is fundamental material which is utilized in a wide range of development.

Cement is a fundamental material for a wide range of development works and it is broadly utilized in development from littlest structure to biggest constructions like dams, spans, water system works, mechanical buildings and so on To put it plainly, one might say that cement just as steel are sinequa-non for that improvement of development exercises in the country.

### **2. Review of Literature**

Eljelly, (2004) clarified that proficient liquidity the executives includes arranging and controlling current resources and current liabilities in such a way that dispenses with the danger of failure to meet due transient commitments and maintains a strategic distance from extreme interest in these resources. The connection among benefit and liquidity was inspected, as estimated by current proportion and money hole (cash change cycle) on an example of business entities in Saudi Arabia utilizing relationship and relapse investigation. The examination tracked down that the money change cycle was of more significance as a proportion of liquidity than the current proportion that influences productivity. The size variable was found to have critical impact on productivity at the business level. The outcomes were steady and had significant ramifications for liquidity the executives in different Saudi organizations. To start with, plainly there was a negative connection among benefit and liquidity pointers, for example, current proportion and money hole in the Saudi

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example inspected. Second, the examination likewise uncovered that there was extraordinary variety among ventures regarding the huge proportions of liquidity.

Deloof (2003), examined that most firms had a lot of money put resources into working capital. It can in this way be normal that the manner by which working capital is overseen will altogether affect productivity of those organizations. Utilizing connection and relapse tests, he tracked down a huge negative connection between net working pay and the quantity of days, money due, inventories and records payable of Belgian firms. On premise of these outcomes he recommended that administrators could make an incentive for their investors by lessening the quantity of days, money due and inventories to a sensible least. The negative connection between creditor liabilities and benefit is steady with the view that less productive firms stand by longer to cover their bills.

Melita Stephanou Charitou *et al.*, (2010) lead an examination on "The Effect of Working Capital Management on Firm's Profitability: Empirical Evidence from an Emerging Market". The examination theorized that functioning capital administration prompts further developed productivity. Multivariate relapse examination results demonstrated that the money transformation cycle and all its significant parts; in particular, days in stock, days deals extraordinary and loan bosses instalment period, are related with company's productivity.

Mohammad Alipou, (2011) directed an examination on "Working Capital Management and Corporate Profitability: Evidence from Iran". The consequences of the examination show that in the considered organizations there is a critical connection between working capital administration and benefit. There is likewise a negative critical connection between cash transformation cycle and gross working benefit. Likewise there is a negative critical connection between cash transformation cycle, Inventory Turnover in Days, Average Collection Period with the exception of Average Payment Period.

Bashar Matarneh (2012) <sup>[12]</sup>, direct an investigation on "Working Capital Management of Small Scale Industries in Rajasthan". From this examination, it has been tracked down the functioning capital administration is to choose the example of financing of the current resources, which is perhaps the most concerning issue of working capital administration. The issue of working capital administration of limited scope enterprises isn't new, it is winning in India. Without the assistance of government support and monetary establishments co-activity, it is truly challenging to tackle the issue of working capital administration of SSIs of Rajasthan specifically and of India overall.

J. Aloy Niresh (2012) did an investigation on working capital administration and monetary execution. Relationship and relapse investigation were utilized for the examination. The discoveries uncover that; there is no huge connection between cash transformation cycle and execution measures. The examination additionally reasons that, producing firms in Sri Lanka follow traditionalist working capital administration strategy.

Kulkanya Napompech (2012), directed an examination on "Impacts of Working Capital Management on the Profitability of Thai Listed Firms". The outcomes uncovered a negative connection between the gross working benefits and stock transformation period and the receivables assortment period. Subsequently, supervisors can expand the

productivity of their organizations by shortening the money change cycle, stock transformation period, and receivables assortment period. In any case, they can't build productivity by extending the payables deferral period. The discoveries additionally showed that industry attributes affect net working benefits.

Lalit Kumar Joshi and Sudipta Ghosh (2012), led an investigation on "Working Capital Management of Cipla Limited: An Empirical Study". The experimental discoveries uncover huge positive pattern development in the majority of the chose execution markers. Further, the chose proportions show agreeable exhibitions during the investigation time frame. The test additionally demonstrates huge improvement in liquidity execution during the said period. At last, there exists critical negative connection among liquidity and productivity, which demonstrates that Cipla Ltd. has kept up with post ideal degree of liquidity during the period under examination.

### 3. Research Objectives

- To study and analyze working capital management with respect to trade off between liquidity and profitability
- To understand the various factors affecting working capital requirements in cement industry
- To measure the relative significance of various sources of financing of working capital
- To recommend, on the basis of conclusion, innovations in the management of working capital in cement companies in India

### 4. Hypothesis of the Study

- Gross Working Capital Turnover Ratio of cement companies does not differ significantly among the years.
- Gross Working Capital Turnover Ratio does not differ significantly among the various cement companies over the years.

### 5. Research Methodology

The detailed research methodology is narrated in the following paragraphs:

#### 5.1 Data Source

The examination is primarily founded on essential information and optional information are gathered according to prerequisites of the investigation through survey and conversation with concerned organization's money and record chiefs. Optional information is taken from CMIE, Prowess Database and distributed yearly reports of the cement organizations. What's more, monetary writing and distributed articles on the connected viewpoints likewise considered. The optional information is fundamentally for monetary examination reason. Different distributions of "Cement Manufacturer's Association", National Council for Cement and Building Material are utilized for this reason. Other data identified with the business are gathered from the Business Standard, RBI Bulletin, different periodicals, diaries and other different records of the organizations.

#### 5.2 Universe of the study

The universe comprises of all the restricted cement organizations working in India and recorded on any stock trade of India.

### 5.3 Sampling Plan

Testing strategies were comfort and judgment inspecting. The examples have chosen considering from following variables.

- The introduced limit of the organization ought to be somewhere around 1,000,000 tons for every annum.
- The organization ought to be occupied with the creation of dim cement.
- Data for the whole investigation time frames for example 2011-12 to 2016-17 are accessible.
- The organization ought to be recorded on any stock trade of India.

### 5.4 Limitations of the Study

In an exploration configuration chose in the investigation, there is an extraordinary possibility of individual inclination in the selection\ of test organizations. In any case, it is endeavoured to be as unbiased and unprejudiced to get dependable and significant outcomes from conclusive investigation. This investigation depends on auxiliary information taken from CMIE data set just as distributed in yearly reports of the said organizations and as such its finding relies altogether upon the precision of such

information. Additionally, the information was handled to a year on a normal premise any place required. The investigation is to a great extent dependent on the monetary device of proportion examination, which has its own impediments that additionally applies to this investigation. Chiefs, who were met and requested to top off survey, at some point turned out to be extremely hesitant to share the data on their security strategy ground. As another option, it was feasible to gather some applicable data through broad conversations with top administration finance leaders. Subsequently, the ends attracted the current investigation ought to be taken in the light of these lacks of information.

### 6. Discussion

Working capital turnover is the significant measurement to quantify the productivity of current resources use. These proportions depend on the connection between deals or cost of products sold and the degree of different current resources utilized by the organization. In this part, net working capital and net working capital turnover proportions are examined. Aside from that stock turnover, debt holders turnover and money turnover proportions are examined for a very long time of study period.

**Table 6.1:** Statistics related to Gross Working Capital Turnover of Selected Companies

Sr. No.	Name of the company	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	A C C Ltd.	4.2	4.1	3.0	3.5	3.6	3.1
2	Ambuja Cements Ltd.	4.9	4.9	5.3	6.4	4.0	3.1
3	Andhra Cements Ltd.	3.7	4.3	N.A	2.7	2.2	2.6
4	Binani Cement Ltd.	8.2	10.1	3.9	4.7	2.7	4.3
5	Birla Corporation Ltd.	5.6	5.1	4.7	3.7	5.0	3.0
6	Century Textiles & Inds. Ltd.	3.0	3.4	3.1	3.2	3.1	2.7
7	Dalmia Cement (Bharat) Ltd.	1.6	1.4	1.7	1.8	2.1	2.0
8	Gujarat Sidhee Cement Ltd.	2.5	3.1	5.3	4.6	N.A	8.5
9	Heidelberg Cement India Ltd.	4.0	4.3	4.4	2.6	2.2	1.7
10	India Cements Ltd.	2.0	2.4	2.5	2.7	2.7	2.9
11	JK Lakshmi Cement Ltd.	6.7	5.6	5.2	3.5	2.5	2.7
12	K C P Ltd.	2.1	2.0	1.6	2.1	2.1	1.4
13	Madras Cements Ltd.	3.5	2.9	3.6	2.9	3.0	3.2
14	Mangalam Cement Ltd.	5.5	7.6	6.1	2.4	3.4	3.4
15	N C L Industries Ltd.	1.8	2.2	2.1	2.2	1.8	2.7
16	O C L India Ltd.	2.0	2.2	2.3	2.2	2.1	2.6
17	Prism Cement Ltd.	4.5	4.9	4.7	5.5	6.2	4.7
18	Shree Digvijay Cement Co. Ltd.	3.3	1.6	4.9	3.5	3.8	2.2
19	Ultratech Cement Ltd.	4.9	4.7	4.9	5.7	4.8	5.3
20	<b>AVERAGE</b>	<b>3.9</b>	<b>4.0</b>	<b>3.9</b>	<b>3.5</b>	<b>3.2</b>	<b>3.3</b>

Source: CMIE

The overall cement industry aggregates shows 3.9 times of gross working capital turnover with 9.85% of coefficient of variation. Andhra Cements Ltd., Dalmia Cement (Bharat) Ltd., Gujarat Sidhee Cement Ltd., India Cements Ltd. K C P Ltd. N C L Industries Ltd and O C L India Ltd. has mean

working capital turnover of less than industry average. While Century Textiles & Inds. Ltd has working capital turnover near to industry average. Rest of 11 companies have outperformed industry and reported higher turnover ratio compare to industry average.

**Table 6.2:** Gross Working Capital Turnover of Selected Companies - Descriptive Statistics

Sr. No.	Name of company	Mean	S. D.	C. V.	Max.	Min.
1	A C C Ltd.	3.6	0.5	13.48	4.2	3.0
2	Ambuja Cements Ltd.	4.8	1.1	23.47	6.4	3.1
3	Andhra Cements Ltd.	3.1	0.9	27.73	4.3	2.2
4	Binani Cement Ltd.	5.6	2.9	50.61	10.1	2.7
5	Birla Corporation Ltd.	4.5	1.0	21.59	5.6	3.0
6	Century Textiles & Inds. Ltd.	3.1	0.2	7.04	3.4	2.7
7	Dalmia Cement (Bharat) Ltd.	1.8	0.3	14.54	2.1	1.4
8	Gujarat Sidhee Cement Ltd.	4.8	2.4	49.09	8.5	2.5
9	Heidelberg Cement India Ltd.	3.2	1.2	36.84	4.4	1.7

10	India Cements Ltd.	2.5	0.3	12.94	2.9	2.0
11	J K Lakshmi Cement Ltd.	4.4	1.7	39.23	6.7	2.5
12	K C P Ltd.	1.9	0.3	16.71	2.1	1.4
13	Madras Cements Ltd.	3.2	0.3	10.16	3.6	2.9
14	Mangalam Cement Ltd.	4.7	2.0	41.85	7.6	2.4
15	N C L Industries Ltd.	2.1	0.3	15.47	2.7	1.8
16	O C L India Ltd.	2.2	0.2	8.66	2.6	2.0
17	Prism Cement Ltd.	5.1	0.7	13.08	6.2	4.5
18	Shree Digvijay Cement Co. Ltd.	3.2	1.2	37.01	4.9	1.6
19	Ultratech Cement Ltd.	5.1	0.4	7.66	5.7	4.7
<b>20</b>	<b>AVERAGE</b>	<b>3.6</b>	<b>0.4</b>	<b>9.85</b>	<b>4.0</b>	<b>3.2</b>

Source: CMIE

Out of 19 organizations, 2 organizations have under multiple times of mean working capital turnover and 4 organizations have the said proportion in the time frame times to multiple times. Rests of 12 organizations have the said proportion multiple occasions. The most noteworthy mean working capital turnover proportion is accounted for by Binani Cement Ltd. Its mean working capital turnover proportion is 5.6 occasions that mean it has used its present resources productively. Its coefficient of variety is 50.61 which is extremely high as its functioning capital turnover proportion goes from the least figure of 2.7 occasions in the year 2015-16 to most noteworthy figure of 10.1. The most reliable proportion and least coefficient of variety is accounted for by Century Textiles and Inds. Ltd. Its coefficient of variety is just 7.04% and the functioning capital turnover proportion goes from 2.7 times to 3.4 occasions during the examination time frame. Then again Ultratech Cement Ltd has extremely unstable working capital turnover as its coefficient of variety is 7.66% with mean worth of 5.1 occasions. In the year 2012-13, it has extremely low working capital turnover with 4.7 occasions yet in the resulting years it has improved and revealed 4.9 occasions of working capital turnover in the year 2013-14. It was not kept up with in the year 2015-16 and declined to 4.8 occasions.

During most recent six years the greatest gross working capital turnover is accounted for by Binani Cement Ltd. in the year 2012-13. It has 10.10 occasions of gross working capital turnover in the said year. Heidelberg Cement India Ltd. is consistently working on its functioning capital turnover. K C P Ltd is the organization who has least degree of working capital turnover of 1.6 occasions in the year 2012-13. Indeed, even among every one of the organizations this is the solitary organization that has working capital turnover of short of what one.

## 7. Recommendations

Over the span of examination it has been tracked down that 8 organizations are concentrating on the lone liquidity parts of working capital administration and taking more moderate choices prompting the decrease in productivity of the organization.

- There is a critical need to achieve the adjustment of the demeanour of the administration. They ought to be more forceful in working capital administration by giving equivalent weight age to both liquidity and benefit parts of working capital administration.
- Many of the organizations don't have appropriate PC program for the treatment of stock bringing about absence of co-appointment. For the improvement in co-appointment, solid and viable administration data framework is needed to be executed. The recurrence of

detailing of stock, receivables and money should be expanded so that ideal activity becomes conceivable to defeated the issues.

- As the administration of working capital includes successive dynamic, it is suggested that each organization ought to have separate capacity and mindful position to continually screen every segment of working capital.
- Ultratech Cement Ltd. has extremely horrible showing contrast with other privately owned businesses so there is a dire need to look in to the issues and tone up its productivity.
- Madras Cements Ltd has shown great execution in extremely limited ability to focus it has had the option to keep up with its forceful methodology towards the functioning capital administration. Different organizations are additionally needed to take on more forcefulness in keeping up with their present proportion 2:1 and working on their benefit.
- Companies are encouraged to audit their functioning capital as often as possible with the devices like supports stream and income articulation and money control reports.
- To manage the over-loading in stores and extras segment of stock, every one of the units are encouraged to advance import replacement programs. Further, auxiliary units ought to be created and inner fix offices ought to be made. Stores and extras stock should be characterized by FSN investigation for better command over them. The same way endeavours ought to be accomplished for the decrease in semi completed merchandise stock with the assistance of some innovative up-degree proposed by specialized specialists.

## 8. Conclusion

Cement industry, which has been signed out from investigation in the present study, is indeed the backbone of economic growth in any country. A thick relationship has been found between the level of economic growth and the quantum of cement consumption in developed as well developing countries. Cement industry, through its forward linkages provides the maximum stimulus to growth in other industry also. One employee in cement manufacturing activity supports eight to ten persons in related activities.

To conclude the study, it can be said that the adoption of above measures will doubtlessly help the selected companies to improve their overall performance in the management of working capital. With the efficient management of working capital, selected companies can utilized their capacity optimally and accelerate economic



growth of India by increasing the production of cement at reasonable cost.

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