

Working Capital Management of Selected Cement Companies in India

R. Swaminathan

Head Department of Commerce, Bharathidasan Constituent College,
Perambalur, Tamilnadu.

N. Rajesh

Research Scholar

K. Mohamed Jasim

Asst Professor, Swami Vivekananda Institute of Management,
Thanjavur, Tamilnadu.

Abstract

This paper compares various cement companies in India by using Ratio analysis, regression analysis and ANOVA. For this researchers have used secondary data through annual report of those listed cement companies. At the end of the study researcher has found various result in Working Capital Management of Selected Cement Companies. According to the findings, conclusions the listed cement companies should improve their financial performance.

Key words: Regression, ANOVA, Working Capital Management

Introduction

The role of manufacturing sector is very crucial for a developing nation like India. India is fast emerging on the world map as a strong economy and global power. The country is going through a phase of rapid development and growth. All the vital industries and sectors of the country are registering growth and thus, luring investors and cement industry is one among them. The Indian cement industry plays a key role in national economy by generating substantial revenue for the state and central government. The industry is highly fragmented with a number of players of global standard. In terms of quantity, productivity and efficiency standard, it competes with foreign industries.

This study mainly focuses on Working Capital Management of select cement companies in India. The study attempts to review the origin and growth of cement companies in India. Profit and Loss account, Balance sheet and some of the important key ratios are taken for working capital management analysis. The productivity, profitability, solvency and turnover ratio of selected cement companies have also been analyzed.

Growth of Cement Industry in India

India is one of the few countries, which could continue to resist global recession with minor bruises and has proved its resilience with GDP growth registered at 7.5 per cent from the low of 6.7 per cent in the previous year. The cement industry that withstood the global financial meltdown and recorded a 7.9 per cent growth during the year 2008-2009, just 0.2

per cent drop from the previous year's growth of 8.1 per cent, when the economic growth plunged to 6.7 percent against a sustained growth of 9 per cent during the previous three years, jumped up to record a double-digit growth of 12.7 per cent in 2009-10, with on increased infrastructure projects and other construction activities supported by the government.

Statement of the Problem

- ❖ How did Cement companies in India grow during the reform periods?
- ❖ How do the sample cement companies have their own pattern of Working Capital?
- ❖ In What way do they achieve their goals with the help of Working Capital Management?

Review of Literature

Rai Sandeep Kumar and Dwivdei Shailesh K, (2011) in their study, stated that the Cement Industry in India is moment. Driven by a booming real estate sector, global demand and increased activity in his fracture development such as state and national highways, the cement industry has witnessed tremendous growth. The realty sector boomed but could not sustain for long and it collapsed because of the loan defaults. This situation spread like wild fiber and put the Indian economy in danger like the US economy. The US financial crises have affected many countries of the world and India is no exception to it. Because of these financial crises, Indian economy has lost more than 2% of GDP growth. Almost all sectors of the Indian economy have been affected by this crisis.

Ray Sarbapriya and Mihir Kumar Pal (2010) in their study reflect dismal declining trend after the path-breaking economic reforms in 1991. There is an urgent need for developing a comprehensive plan for cement industry so that it can survive in the post-liberalized Indian environment and make its presence global.

Chandrakumarmangalam, P Govindasamy (2010) in their study have discussed the impact of leverage on the profitability of the firm. The relationship between the debt and equity ratio and earnings per share and how effectively the firm be financing. The leverage and profitability and growth are related and the leveraging impact on the profitability of the firm.

Kasturi Rangan, S. (2008) in his study made an attempt to identify the factors determining the profitability of the banks through partial correlation co efficient for the period from March 2000 to 2007. These banks were categorized into 5 different groups for the purposes of analysis. The group in which banks were divided are: Nationalized Bank group (NB), State Bank group (SB), Old Private Sector Banks group Federal Bank (FB). The

financial position of a total of 74 banks has been considered for the study; the profit was taken as the net profit reported by the banks in their published accounts submitted to the RBI and the major determinants of profitability of a bank are: Internet Spread, other income and Operating expenses.

Research design and Methodology

Objectives of the Study

1. To study the origin and development of cement companies in India.
2. To Review the profile of select cement companies in India.
3. To analyze the Working Capital Management of Select cement companies in India.
4. To compare the Working Capital Management of Select Cement companies India.
5. To consolidate findings and offer suggestions for improvement of Working Capital Management of Select Cement companies in India.

Hypotheses

- ❖ There is no significant difference between the growth rate current assets and shareholders' funds.
- ❖ There is no difference between the growth rate of gross profit and sales. There is no significant difference between the growth rate of sales and total liabilities.
- ❖ There is no significant difference between the growth rate of current assets and current liabilities.
- ❖ There is no significant relationship between income and total liabilities.
- ❖ There is no significant difference between the growth rate of total assets and shareholders' funds
- ❖ There is no interrelationship among the components of working capital.

Methodology

The present study is based on secondary data. Data related to profit and loss account, balance sheet and other key ratios were collected from the published annual reports of select cement companies. Finally the data has been correlated and the working capital management analysis is evaluated.

Results and Discussions

Working Capital Analysis of Select Cement Companies in India

Table 1: Current Ratio

(In Times)

Name of the Companies	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (Percent)
ACC CEMENT	0.96	1.43	1.12	0.15	13.13
AMBUJA CEMENT	1.5	2.29	1.90	0.27	15.31
ULTRATECH CEMENT	0.99	1.5	1.24	0.17	13.97
GRASIM CEMENT	1.15	8.74	2.33	2.28	97.86
INDIA CEMENT	0.65	5.47	2.25	1.15	51.15
JK CEMENT	1	2.88	1.66	0.57	33.97
MADRAS CEMENT	1.54	2.39	1.96	0.29	15.94

Source: Annual Reports of the select cement Companies from 2001-2002 to 2010-2011

The mean Current ratio ranged from 1.12 to 2.33 among the Companies and it is higher in Grasim Cement whereas it is least in ACC Cement during the period of study. The least C.V 13.13 percent in ACC Cement indicates the consistent performance of this ratio.

Table 2: Quick Ratio

(In Times)

Name of the company	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (percent)
ACC CEMENT	0.42	0.89	0.57	0.13	23.67
AMBUJA CEMENT	0.45	0.75	0.61	0.10	16.61
ULTRATECH CEMENT	0.3	0.54	0.40	0.07	17.97
GRASIM CEMENT	0.54	1.29	0.73	0.21	28.16
INDIA CEMENT	1.23	3.37	2.20	0.71	32.17
JK CEMENT	0.65	1.64	1.04	0.43	41.29
MADRAS CEMENT	0.51	1.49	0.69	0.29	42.24

Source: Annual Reports of the select cement Companies from 2001-2002 to 2010-2011

The mean Quick ratio ranged from 0.57 to 2.20 among the Companies and it is higher in India Cement whereas it is least in ACC Cement during the period of study. The least C.V 16.61 percent in Ambuja Cement indicates the consistent performance of this ratio.

Table 3: Working Capital Turnover Ratio**(In Times)**

Name of the company	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (percent)
ACC CEMENT	8.49	39.58	20.53	12.22	59.49
AMBUJA CEMENT	7.89	88.28	35.22	25.69	70.10
ULTRATECH CEMENT	11.73	33.11	22.08	7.65	35.63
GRASIM CEMENT	8.76	43.01	27.43	10.95	39.94
INDIA CEMENT	1.6	9.51	5.63	2.72	48.31
JK CEMENT	7.82	38.25	17.40	8.04	46.21
MADRAS CEMENT	3.79	8.77	6.24	1.71	27.45

Source: Annual Reports of the select cement Companies from 2001-2002 to 2010-2011

The mean working capital turnover ratio ranged from 5.63 to 35.22 among the Companies and it is higher in Ambuja Cement whereas it is least in India Cement during the period of study. The least C.V 27.45 percent in Madras Cement indicates the consistent performance of this ratio.

Table 4: Inventory Turnover Ratio**(In Times)**

Name of the company	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (percent)
ACC CEMENT	5.37	27.51	13.49	8.64	65.09
AMBUJA CEMENT	5.45	15.41	9.67	2.74	28.35
ULTRATECH CEMENT	8.75	31.16	15.79	7.81	52.83
GRASIM CEMENT	6.77	25.79	15.24	6.21	40.74
INDIA CEMENT	5.29	27.47	12.57	9.74	77.51
JK CEMENT	5.45	49.34	17.52	16.79	95.82
MADRAS CEMENT	5.68	37.03	15.43	9.62	62.32

Source: Annual Reports of the select cement Companies from 2001-2002 to 2010-2011

The mean Inventory turnover ratio ranged from 9.67 to 17.52 among the Companies and it is higher in JK Cement whereas it is least in Ambuja Cement during the period of study. The least C.V 28.35 percent in Ambuja Cement indicates the consistent performance of this ratio.

Table 5: Debtors Turnover Ratio**(In Times)**

Name of the company	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (percent)
ACC CEMENT	10.2	31.22	20.26	7.18	35.42
AMBUJA CEMENT	8.4	91.7	38.38	22.51	58.66
ULTRATECH CEMENT	11.1	35.04	20.42	9.18	45.98
GRASIM CEMENT	7.8	18.21	13.24	3.93	29.67
INDIA CEMENT	5.69	10.66	7.78	1.96	25.20
JK CEMENT	6.65	21.26	10.45	5.02	48.09
MADRAS CEMENT	11.93	33.41	20.70	7.87	38.02

Source. Annual Reports of the select cement Companies from 2001-2002 to 2010-2011

The mean Debtors turnover ratio ranged from 7.78 to 38.38 among the Companies and it is higher in Ambuja Cement whereas it is least in India Cement during the period of study. The least C.V 25.20 per cent in India Cement indicates the consistent performance of this ratio.

Table 6: Creditors to Working Capital Ratio**(In Times)**

Name of the company	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (percent)
ACC CEMENT	0.28	6.99	2.15	2.34	109.01
AMBUJA CEMENT	0.43	5.96	2.53	1.88	75.19
ULTRATECH CEMENT	0.53	6.86	2.37	1.81	76.32
GRASIM CEMENT	0.63	5.24	2.22	1.20	55.22
INDIA CEMENT	0.29	0.98	0.60	0.25	41.65
JK CEMENT	0.46	5.21	2.92	2.03	69.62
MADRAS CEMENT	0.11	0.49	0.27	0.11	43.13

Source: Annual Reports of the select cement Companies from 2001-2002 to 2010-2011

The mean Creditors to inventories ratio ranged from 3.52 to 10.17 among the Companies and it is higher in JK Cement whereas it is least in Ambuja Cement during the period of study. The least C.V 28.64 percent in Ultra tech Cement indicates the consistent performance of this ratio.

Table 7: Gross Profit Ratio**(In percentage)**

Name of the company	Min. Value	Max. Value	Mean Value	Std. Deviation	C.V (percent)
ACC CEMENT	6.55	29.94	18.46	9.42	51.01
AMBUJA CEMENT	10.17	46.1	25.26	10.11	41.69
ULTRATECH CEMENT	10.51	28.06	16.82	6.29	37.42
GRASIM CEMENT	2.03	28.08	15.97	8.53	53.38
INDIA CEMENT	3.04	37.22	18.22	11.89	65.25
JK CEMENT	0.15	20.66	7.35	8.10	110.17
MADRAS CEMENT	11.63	29.98	17.57	6.22	35.42

Source: Annual Reports of the select cement Companies From 2001-2002 TO 2010-2011

The mean Gross profit ratio ranged from 7.35 to 25.26 among the Companies and it is higher in Ambuja Cement whereas it is least in JK Cement during the period of study. The least C.V 35.42 percent in Madras Cement indicates the consistent performance of this ratio

Performance of Select Cement Companies in India - Regression Analysis

Table 8: Regression Model for Y- Working Capital Turnover Ratio

Variables	Regression Coefficient	Standard Error	t- value (d.f = 3)	R ²
Constant	-5.836	1.565	-3.730	0.994
Interest coverage ratio	1.238	0.090	13.751**	
Creditors to working capital ratio	5.571	0.506	11.013**	
Cash to total fund	0.159	0.046	3.465*	

** Significant at both 5% and 1%

Table 9: Analysis Of Variance for Regression

Source of variation	Sum of Squares (S.S)	Degrees of freedom (D.F)	Mean Square (M.S)	Value (F)
Regression	685.7807	3	228.5936	171.44**
Residual	3.999962	3	1.333321	

** Significant at both 5% and 1%

Null Hypothesis: The independent variable interest coverage ratio, creditor to working capital and cash to total fund are not significantly contributing to working capital turnover ratio.

Alternative Hypothesis: The independent variable interest coverage ratio, creditor to working capital and cash to total fund are significantly contributing to working capital turnover ratio.

Table 10: Regression Model for Y- Gross Profit Ratio

Variables	Regression Coefficient	Standard Error	t- value (d.f = 5)	R ²
Constant	42.640	5.329	8.002	0.827
Inventory turnover ratio	-1.822	0.373	-4.886**	

**significant at 1per cent level.

Table 11: Analysis of Variance for Regression

Source of variation	Sum of Squares (S.S)	Degrees of freedom (D.F)	Mean Square (M.S)	Value (F)
Regression	124.7248	1	124.7248	23.86**
Residual	26.12603	5	5.225205	

Null Hypothesis: Inventory turnover ratio has not significantly contributed to gross profit.

Alternative Hypothesis: Inventory turnover ratio has significantly contribution to gross profit.

Table 12: Regression Model for Y- Net Profit Ratio

Variables	Regression Coefficient	Standard Error	t- value (d.f = 4)	R ²
Constant	1.961	1.232	1.591	.968
Interest coverage ratio	0.521	0.051	10.187**	
Current ratio	2.782	0.622	4.476**	

** Significant at both 5% and 1%

Table 13: Analysis of Variance for Regression

Source	Sum of Squares (S.S)	Degrees of freedom (D.F)	Mean Square (M.S)	Value (F)
Regression	61.26807	2	30.63403	60.50**
Residual	2.025305	4	0.506326	

** Significant at 1 percent level.

Results and Discussion

The step wise multiple regression model indicated that out of the explanatory variables under study, three Variables namely, interest coverage ratio, creditor to working capital and cash to total fund have all significantly contributed to Y and explained the variations of Y- working capital turnover ratio to the extent of 99.4 percent. The step wise multiple regression models indicated that out of the explanatory variables under study, one Variable namely, inventory turnover ratio has significantly contributed to Y- Gross profit ratio and explained the variations of Y to the extent of 82.7 per cent. The step wise multiple regression model indicated that out of the explanatory variables under study, two variable namely, Inventory to working capital ratio and inventory turnover ratio have significantly contributed to Y. - Total asset turnover ratio and explained the variations of Y to the extent of 99.6 per cent.

Conclusion

Working capital Management is important part firm in financial management decision. The present study point out that the overall position of the working capital of select cement companies is satisfactory, but there is a need for improvement in certain factors. The major portion of the current assets is in the firm of Inventory. The investment in current assets should consider liquidity profitability and solvency. The companies should also try to maintain adequate quantum of liquidity all the times by keeping considerable proportion of various components of the working capital in relation to the overall current assets. It is very important to trade off between liquidity and profitability by properly arranging the needed funds at right time, period and source.

Scope for further study

Further study on this can be made in the following areas:

- ❖ Determine of profitability in Indian cement industry an economic analysis.
- ❖ A comparative study of the working capital management of Government and Private cement companies in India.
- ❖ A study on the impact of working capital management practices on Indian cement companies.
- ❖ International working capital practices in India.

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