Financial Performance of Cement Companies- A Critical Appraisal

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Abstract

The Indian cement industry is the second largest in the world employing in excess of a million people throughout the country. It contributes to the Indian economy because the construction industry in India relies heavily on the cement industry. The present paper analyses the financial performance of five major cement companies in India. The data has been collected from the annual reports of the cement companies since 2005-06 to 2014-15 and analyzed by applying one way ANOVA as the statistical tool. The analysis of the data shows that there is a significant difference in selected cement companies in India with respect to gross profit ratio, net profit ratio, current ratio, quick ratio, and debt equity ratio.
Keywords: cement, cement companies, ratio, ANOVA.

1. Introduction

The origin of Indian cement industry can be traced back to 1914 when the first unit was set-up at Porbandar (Gujarat) with a capacity of 1000 tonnes per year. India's cement industry comprises 131 large cement plants and 365 mini-cement plants, with an installed capacity of 165 million tonnes per annum. Large cement plants account for over 94 per cent of the total installed capacity. It has played a significant role in the growth of the Indian economy during the post-independence period and therefore the Government of India has identified cement as a core industry and hence its development has been an integral part of the national economic plans. It contributes employment about 2.5 per cent in the total value added in the manufacturing sector, and its contribution to the sector's employment is only about 1 per cent. Besides, the industry is also generates substantial employment in transportation and other related activities like quarries, service sector, etc. It is generally observed that the production of 1 million tonne of cement gives employment to one lakh persons. Moreover, it is the fifth largest in the world with production of over 150 million tonnes per year next to China, Russia, Japan, and U.S.A. It is poised to scale new heights due to liberalization policies of the Government of India and with the adoption of state-of-the art technology and a massive investment of Rs.100 billion. The industry covered under the Essential Commodities Act for a long time and subjected to various controls at the stages of mining or quarrying, acquisition of land, production, distribution, prices, etc. The utility of cement has greatly increased over the years as no substitute for cement has been discovered. Cement, apart from being used in construction of houses, dams, concrete roads, and bridges, is increasingly used in asbestos roof sheets, A.C. pipes, sanitary wares, and railway sleeper logs. Adequate production of cement is thus a precondition for intensifying construction activity in the major sectors of the economy.

2. Review of Literature

Richard & Howard (1977) in their research article have found that the pre-tax profit to total liabilities, current assets to total liabilities and current liabilities to total assets are the significant ratios which can explain the corporate failures in accurate manner. **Desai (2000)** in his research paper titled, "*Assessment of Capital Structure and Business Failure*" has studied the capital structure and the causes for business failure and found that sickness may be caused due to non-accounting factors. There is no single non-accounting factor responsible for sickness. The study further revealed that financial institutions have not granted funds to the company on the ground of inadequate returns on total assets. **Sankaran & Krishnaveni (2003)** have studied the funds management of select spinning mills in Tamil Nadu. The objective of their study is to analyze the long-term and short-term funds position of the 30 spinning mills selected for their study. They have collected data from the published reports of the mills for a period of 10 years from 1990-91 to 1999-2000. They have observed that continued erosion of profit leads to increased borrowings of the mills which have resulted in liquidity problem and then have led to desperate high-cost borrowing in order to keep the unit running somehow. **Sami and Khan (2015)** in their research paper entitled**,** "*Financial Performance Appraisal of Paper Industry in India: A Study of Selected Paper Mills*" analyzed the financial performance of paper industries in India. The authors have selected two paper industries namely Ballarpur Industries Limited (BILT) and Tamil Nadu Newsprint & Papers Limited (TNPL) and collected data from the annual reports of Selected cement companies in India since 2012-13 to 2014-15. Gross profit ratio, net profit ratio, current ratio, quick ratio and debt equity ratio are the variables taken by the researchers for measuring the financial performance of the selected paper industries. Besides, independent sample t-test has been applied to analyze the results. The analysis of the data shows that there is a significant

difference in the selected industries on the variables gross profit ratio, net profit ratio, current ratio, quick ratio and debt equity ratio. **Khan (2016)** in his study entitled, "*Profitability of Textile Industry in India- An Analytical Study*" analysed the profitability of four major Indian textile companies namely Wardhman textiles, Arvind Mills, Bombay Dyeing, and Raymonds. The data has been analyzed by applying one way ANOVA. The analysis of the data shows that significant difference exists in selected textile companies with respect to gross profit ratio, net profit ratio, operating profit ratio, return on capital employed, and return on shareholder's fund.
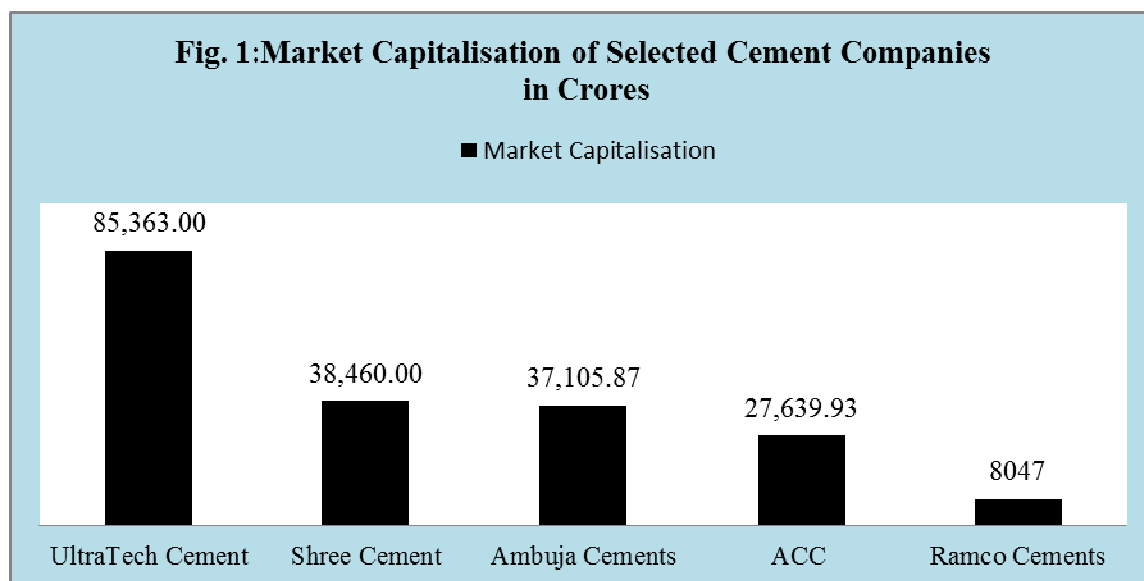
3. Cement Companies

The Indian cement industry is the second largest in the world after China, employing in excess of a million people throughout the country. It contributes to the Indian economy because the construction industry in India relies heavily on the cement industry for natural reasons. Table 1 shows the top 10 Publicly Listed cement companies in India in terms of Market Capitalization as on 31st July, 2015. Out of the top 10 companies, the present study has taken five companies to measure the differences in gross profit ratio, net profit ratio, current ratio, quick ratio, and debt equity ratio. A synoptic view of these companies is given below.

Table 1:

No	Company	Established	Headquarter	Market Capitalization As on 31/07/15 (in Crores)
1	UltraTech Cement	1983	Mumbai	85,363.84
2	Shree Cement	1979	Kolkata	38,460.30
3	Ambuja Cements	1983	Mumbai	37,105.87
4	ACC	1936	Mumbai	27,639.93
5	Ramco Cements	1950	Chennai	8047.00

Source: www.mapsofindia.com

Fig. 1:Market Capitalisation of Selected Cement Companies in Crores

Source: Table 1

4. Purpose of the Study

The present research paper aims to evaluate the financial performance of selected cement companies in India for the period from 2006 to 2015.The following are the broad objectives of the study:

i. To study the profitability position of the selected cement companies in India.
ii. To analyze the liquidity position of the selected cement companies in India.
iii. To appraise the long-term solvency of the selected cement companies in India.

5. Hypotheses of the Study

Ho1: There is no significant difference between gross profit ratios of the selected cement companies in India.
Ha1: There is a significant difference between gross profit ratios of the selected cement companies in India.
Ho2: There is no significant difference between net profit ratios of the selected cement companies in India.
Ha2: There is a significant difference between net profit ratios of the selected cement companies in India.
Ho3: There is no significant difference between current ratio of the selected cement companies in India.
Ha3: There is a significant difference between current ratio of the selected cement companies in India.

Ho4: There is no significant difference between quick ratios of the selected cement companies in India.
Ha4: There is a significant difference between quick ratios of the selected cement companies in India.
Ho5: There is no significant difference between debt equity ratios of the selected cement companies in India.
Ha5: There is a significant difference between debt equity ratios of the selected cement companies in India.

Table 2: Research Methodology

1	Sources of Data	The study is based on the secondary sources of data like annual reports of the companies, websites, books, articles, theses and research papers.
2	Method of Data Collection	Data have been collected from the published annual reports of the selected companies
3	Period of Study	The period of the study is ten years since 2005-06 to 2014-15.
4	Sample Size	Five major cement companies in terms of market capitalization have been selected for making analysis and interpretation.
5	Statistical tool	Since there are five companies, One way ANOVA has been used to test the hypotheses through SPSS 19.

6. Evaluation of Financial Performance

Financial performance of an organization is usually evaluated in terms of its liquidity, long-term solvency, and profitability.

Liquidity

Liquidity refers to the ability of an organization to meet its current obligations when they become due. A firm should ensure that it does not suffer from lack of liquidity, and also that it should not have excess liquidity since it affects profitability. The bankers, suppliers of goods extend credit only if they are sure that current assets are enough to pay off their obligations. Liquidity has been measured with the help of current ratio and quick ratio.
Current ratio is the ratio of current assets and current liabilities. It is a measure of general liquidity and is mostly used to analyze the short term financial position of a firm. A high current ratio is an indication that the firm is liquid and has the ability to pay its current obligations in time whereas a low current ratio depicts that the liquidity position of the firm is not good and the firm is unable to pay its current liabilities in time. *Quick Ratio* is also known as acid test or liquid ratio. It is the relationship between the liquid assets and liquid liabilities. A high acid test ratio is an indication that the firm is liquid and has the ability to meet its liquid liabilities on time whilst a low quick ratio represents that the firm's liquidity position is not good. A quick ratio of 1:1 is considered to be satisfactory.

7. Profitability

The primary objective of a business undertaking is to earn profit. A business needs profits not only for its existence but also for expansion and diversification. A business enterprise can discharge its obligations to the various segments of the society only through earning of profits. It has been measured with the help of gross profit ratio, net profit ratio, and operating profit ratio. In this paper, only gross profit ratio and net profit ratio have been calculated.
Gross Profit Ratio indicates the extent to which selling prices of goods per unit may decline without resulting in losses on operations of a firm. It reflects the efficiency with which a firm functions. *Net Profit Ratio* establishes a relationship between net profit and sales, and it indicates the efficiency of the management in manufacturing, selling, administrative, and other activities of the firm. The net profit ratio is reveals the overall profitability of the company and hence the higher the ratio, the better the profitability.

Solvency

The term solvency refers to the capacity of a concern to meet its obligations. The long-term indebtedness of a firm includes debenture holders and loans provided by financial institutions. The long-term creditors of a firm are primarily interested in knowing the firm's ability to pay interest regularly on long-term borrowings, repayment of the principal amount on maturity and the security of their loans. Accordingly, long-term solvency ratios indicate a firm's ability to meet the fixed interest and costs and to repay its long-term borrowings. Debt-Equity Ratio is an important measurement of examining long term solvency.

Debt-Equity Ratio indicates the relationship between borrowed funds and the owner's capital. The object of calculating the debt-equity ratio is to measure the relative interest of owners and creditors in the firm. A ratio of 1:1 may be usually considered satisfactory.

8. Hypothesis Testing

Hypothesis 1

Ho1: There is no significant difference in gross profit ratio of the selected cement companies in India.
Ha1: There is a significant difference in gross profit ratio of the selected cement companies in India.
One way ANOVA has been used as a statistical tool to examine the difference in gross profit ratios of the

selected cement companies in India. The null hypothesis is that there is no significant difference in gross profit ratios of the selected cement companies in India and the alternative hypothesis states that there is a significant difference in gross profit ratio of the selected cement companies in India.

Table 2 : ANOVA of Gross Profit Ratio

	Sum of Squares	df	Mean Square	F	Sig.
Between Companies	478.680	4	119.670	6.372	0.000
Within Companies	845.100	45	18.780		
Total	1323.780	49			

Source: Output of SPSS 19

Table 2 shows the significant value is 0.000 which is less than 0.05 at 95 percent confidence interval. Therefore, null hypothesis is rejected and hence it can be said that there is a significant difference in gross profit ratios of the selected cement companies in India.

Hypothesis 2

Ho2: There is no significant difference in net profit ratio of the selected cement companies in India.
Ha2: There is a significant difference in net profit ratio of the selected cement companies in India.

One way ANOVA has been used as a statistical tool to examine the difference in net profit ratios of the selected cement companies in India. The null hypothesis is that there is no significant difference in net profit ratios of the selected cement companies in India and the alternative hypothesis states that there is a significant difference in net profit ratio of the selected cement companies in India.

Table 3 : ANOVA of Net Profit Ratio

	Sum of Squares	df	Mean Square	F	P Value
Between Companies	520.080	4	130.020	2.216	0.004
Within Companies	2751.600	45	61.147		
Total	3271.680	49			

Source: Output of SPSS 19

Table 3 shows the significant value is 0.004 which is less than 0.05 at 95 percent confidence interval. Therefore, null hypothesis is rejected and hence it can be said that there is a significant difference in net profit ratio of selected cement companies in India.

Hypothesis 3

Ho3: There is no significant difference in current ratio of the selected cement companies in India.
Ha3: There is a significant difference in current ratio of the selected cement companies in India.

One way ANOVA has been used as a statistical tool to examine the difference in current ratios of the selected cement companies in India. The null hypothesis is that there is no significant difference in current ratios of the selected cement companies in India and the alternative hypothesis states that there is a significant difference in current ratio of the selected cement companies in India.

Table 4 : ANOVA of Current Profit Ratio

	Sum of Squares	df	Mean Square	F	P Value
Between Companies	539.880	4	139.970	1.584	0.001
Within Companies	3834.200	45	85.204		
Total	4374.080	49			

Source: Output of SPSS 19

Table 4 shows the significant value is 0.001 which is less than 0.05 at 95 percent confidence interval. Therefore, null hypothesis is rejected and hence it can be said that there is a significant difference in current ratio of the selected cement companies in India.

Hypothesis 4

Ho4: There is no significant difference in quick ratios of the selected cement companies in India.
Ha4: There is a significant difference in quick ratios of the selected cement companies in India.

One way ANOVA has been used as a statistical tool to examine the difference in quick profit ratios of the selected cement companies in India. The null hypothesis is that there is no significant difference in quick ratios of the selected cement companies in India and the alternative hypothesis states that there is a significant difference in quick ratio of the selected cement companies in India.

Table 5 : ANOVA of Quick Ratio

	Sum of Squares	df	Mean Square	F	P Value
Between Companies	76.320	4	19.080	0.466	0.000
Within Companies	1842.500	45	40.944		
Total	1918.820	49			

Source: Output of SPSS 19

Table 5 shows the significant value is 0.000 which is less than 0.05 at 95 percent confidence interval.

Therefore, null hypothesis is rejected and hence it can be said that there is a significant difference in quick ratio of the selected cement companies in India.

Hypothesis 5

Ho5: There is no significant difference in debt equity ratio of the selected cement companies in India.

Ha5: There is a significant difference in debt equity ratio of the selected cement companies in India.

One way ANOVA has been used as a statistical tool to examine the difference in debt-equity ratios of the selected cement companies in India. The null hypothesis is that there is no significant difference in debt-equity ratios of the selected cement companies in India and the alternative hypothesis states that there is a significant difference in debt-equity profit ratio of the selected cement companies in India.

Table 6 : ANOVA of Debt-Equity Ratio					
	Sum of Squares	df	Mean Square	F	P Value
Between Companies	488.600	4	122.150	2.091	0.0087
Within Companies	2629.400	45	58.431		
Total	3118.000	49			

Source: Output of SPSS 19

Table 6 shows the significant value is 0.003 which is less than 0.05 at 95 percent confidence interval. Therefore, null hypothesis is rejected and hence it can be said that there is a significant difference in debt-equity ratio of the selected cement companies in India.

Table 7: Summary of Hypothesis Tested

No	HYPOTHESES	Sig. Value	Results
1	There is no significant difference in gross profit ratio of the selected cement companies in India.	0.000	Rejected
2	There is no significant difference in net profit ratio of the selected cement companies in India.	0.004	Rejected
3	There is no significant difference in current ratio of the selected cement companies in India.	0.001	Rejected
4	There is no significant difference in quick ratio of the selected cement companies in India.	0.000	Rejected
5	There is no significant difference in debt equity ratio of the selected cement companies in India.	0.0087	Rejected

Source: Based on hypotheses tested

Table 7 shows the summary of the entire hypotheses tested to examine the differences in gross profit ratio, net profit ratio, current ratio, quick ratio and debt equity ratios of selected cement companies in India. All the hypotheses have been rejected meaning thereby significant difference exists in gross profit, net profit, current and quick ratio in selected cement companies in India.

9. Conclusion

The contribution of Indian cement industry to the Indian economy is significant because the construction industry in India relies heavily on the cement industry. The present paper analyses the financial performance of five major cement companies namely UltraTech Cement, Shree Cement, Ambuja Cements Limited, Associate Cement Companies Limited (ACC), and Ramco Cements. The data has been collected from the annual reports of the cement companies since 2005-06 to 2014-15 and analyzed by applying one way ANOVA as the statistical tool. All the null hypotheses have been rejected meaning thereby acceptance of alternative hypotheses. The analysis of the data shows that there is a significant difference in selected cement companies in India with respect to gross profit ratio, net profit ratio, current ratio, quick ratio, and debt equity ratio.

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