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Capital structure and financial performance of selected cement companies in India: An analysis

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Abstract
The term capital structure refers to the relationship between the various long-term forms of financial such as debenture, preference share capital and equity in financing the firm's assets is very crucial problem in every business and as a general rule there should be a proper mix of debt and equity capital in financing the firm's asset. The use of long term fixed interest bearing debt and preference share capital along with equity shares is called financial leverage or trading on equity.
Financial performance analysis is the process of identify the financial strength and weakness of the firm by properly establishing the relationship between the items of balance sheet and profit and loss account. It also helps in short-term and long-term forecasting and growth can be identified with the help of financial performance analysis. The dictionary meaning of 'analysis' is to resolve or separate a thing in to its element or components parts for tracing their relation to the things as whole and to each other. The analysis of financial statement is a process of evaluating the relationship between the component parts of financial statement to obtain a better understanding of the firm's position and performance. This analysis can be undertaken by management of the firm or by parties outside the namely, owners, creditors, investors.
An attempt is made in this study to analyze capital structure and financial performance of selected cement companies in India.

Keywords: cement companies, capital structure

Introduction
The assets of a company can be financed either by increasing the owners claim or the creditors claim. The owner's claims increase when the firm raises funds by issuing ordinary shares or by retaining the earnings, the creditors' claims increase by borrowing. The various means of financing represents the financial structure of an enterprise. The financial structure of an enterprise is shown by the left hand side of the balance sheet. Traditionally, short-term borrowings are excluded from the list of methods of financing the firm's capital expenditure and therefore the long term claims are said to form the capital structure of the enterprise. The capital structure is used to represent the proportionate relationship between debt and equity. Equity includes paid-up share capital, share premium and reserves and surplus.
The financing of capital structure decision is a significant managerial decision. It influences the shareholders returns and risk consequently the market value of share may be affected by the capital structure decision. The company will have to plan its capital structure initially or at the time of its promotion.
Financial performance refers to the act of performing financial activity. In a border sense, financial performance refers to the degree to which financial objectives are being or has been accomplished. It is the process of measuring the results of a company's policies and operation in monetary terms. It is used to measure a company's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sector in aggregation. The performance of the company can be measured by its financial results, i.e., by its size of earnings. Riskiness and profitability are two major factors which jointly determine the value of concern. Financial decisions which increase risks will decrease the value of the company and on the other hand, financial decisions which increase the profitability will increase value of the company. Risk and profitability are two essential ingredients of a business concern.

Statement of the Problem
Finance manager should have a detailed knowledge about the components of financial statements. Capital structure of a concern plays an important role in managerial decision making. The combination of debt and equity will decide the earnings available to equity shareholders. Cement is an article of basic importance in all development plans. It is the most commonly used construction material. It plays a vital role in the people's life in the modern world today. A study on capital structure and financial performance is considered as an important one. It is important to study the capital and financial performance of the selected company so as to guide the future policy makers to decide whether to continue, increase and decrease or to drop the importance and assistance given by this company.

Objectives of the Study
The following objectives have been framed for the study;
1. To analyze the components of capital structure of selected companies.
2. To study the relationship among the selected companies in terms of Net profit, Sales, Expenses, Current Asset and Total Asset.
3. To analyze the variability in short-term solvency ratio, long-term solvency ratio and Profitability ratio among the selected cement companies.

Research Methodology

Research Design

The research study is analytical in nature. It has been used for analyzing the capital structure and financial performance of the cement industry. In this study the researcher has used facts and information already available and analyzed the capital structure and financial performance of selected cement companies.

Period of Study

The present study covers a period of ten years from 2005 -06 to 2014 - 15.

Selection of Sample

To carry out the study, a sample of 10 companies belonging to cement industry was taken up. The companies for which the data were not available for one and more than one year in between or in the beginning or at the end of the study period have been ignored. Ten companies were selected based on the average sales and availability of financial data for a continuous period of ten years.

The following are the list of the companies selected for the study:

1. UltraTech Cement Ltd
2. ACC Ltd
3. Ambuja Cement Ltd
4. Shree Cement Ltd
5. Prism Cement Ltd
6. India Cement Ltd
7. Brila Corporation Ltd
8. J K Lakshmi Cement Ltd
9. OCL India Ltd
10. KCP Cement Ltd

Sources of Data

Ten companies were selected for analysis. All the 10 companies are listed in BSE. The needed data belonging to the companies have been collected from CMIE, Prowess and Capital line database.

Tools and techniques used

The following tools were applied with the objectives of the study.

- Simple Percentage Analysis
- Correlation Analysis
- Analysis of variance

Review of Literature

Rachel Nancy Philip (2002) [1] in her research efforts made to study the trends in capital structure of selected corporate firms and attempt made to analyze the extend of influence of capital structure on shareholders' value. The study concludes that the relationship between capital structure and the ultimate objective of shareholders wealth cannot be over-emphasized and it must be dynamically watched and managed at all times.

Nandhini, M., Usha, M and Palanivelu, P. (2013) [2] explained that an empirical examination to the widely held existing theories on the determinants of corporate capital structure. He has attempted to develop and test a new theory on capital structure for large manufacturing firms in developing economy such as India. The study analyzed the measures of short term and long term debt rather than only an aggregate measure of total debt. The study analyzed the empirical implications of liberalization of the Indian economy, on the determinants of capital structure of the firm and firms diversification strategy and size were found to be no significance and non debt tax shields has some significance in deciding the leverage level of the firm.

Analysis and Interpretation

Table 1: Capital Structure of Selected Cement Companies in India (In Percentage)

S. No.	Company Name	Long Term Debt	Equity Share Capital	Retained Earnings	Total
1	Ultratech Cement	19.11	41.08	39.81	100
2	ACC Ltd	6.25	51.33	42.42	100
3	Ambuja Cements Ltd	3.85	48.88	47.54	100
4	Shree Cement Ltd	30.91	34.98	34.11	100
5	Prism Cement Ltd	35.42	44.52	20.06	100
6	India Cement Ltd	27.52	37.88	34.60	100
7	Brila Corporation Ltd	18.74	41.93	39.33	100
8	JK Lakshmi Cement Ltd	39.36	31.66	28.98	100
9	OCL India Ltd	32.80	33.94	33.26	100
10	KCP Cement Ltd	25.68	38.94	35.38	100
	Overall Mean	23.94	40.51	35.55	100

The average proportion of long term debt in capital structure 23.94 percentage. The average proportion of equity share capital comes up to 40.51 percentage and the average proportion of retained earnings 35.55 percentage.

Out of ten companies the proportion of long term debt ranges between 3.85 percentages in Ambuja Cements Ltd, and 39.36 percentage in JK Lakshmi Cement Ltd.

The high gear company is JK Lakshmi Cement Ltd at 39.36 percentages and Low Gear Company is Ambuja Cements Ltd at 3.85 percentage.

Correlation Analysis

Table 2: Correlation Analysis

Independent Variable	Dependent Variable	Correlation Co-efficient (r)	Co-efficient determination (r^2)
Sales Expenses	Net profit	.899**	0.808
Current Assets	Net profit	.623**	0.388
	Total Assets	.914**	0.835

** Correlation is significant at the 0.01 level (2 – tailed)

Sales and net profit are positively correlated for all the ten companies. Therefore, when sales increases net profit also increases. The co-efficient determination explains (r^2) 0.808 variations in net profit are due to net sales.

Expenses and net profit are positively correlated for all the ten companies. The co-efficient determination explains 0.388 variations in net profit are due to expenses.

Current assets and total assets are positively correlated for all the ten companies. Therefore, when current assets increases total assets also increases. The co-efficient determination explains 0.835 variations in total assets are due to current assets.

Based on the correlation analysis current assets and total assets are positively and highly correlated.

Analysis of Variance

Table 3: ANOVA for Current Ratio and Liquidity Ratio

ANOVA for Current Ratio Hypothesis There is no significant mean difference in current ratio among the selected cement companies.					
Source of Variation	**Sum of Squares**	**Degrees of Freedom**	**Mean sum of Square**	**F Value**	**S / NS**
Between Groups	38.536	9	4.282	6.530	S
Within Groups	59.013	90	.656		
Total	97.549	99			
ANOVA For Liquidity Ratio Hypothesis There is no significant mean difference in liquidity ratio among the selected cement companies.					
Between Groups	67.637	9	7.515	3.390	S
Within Groups	199.512	90	2.217		
Total	267.149	99			

(5 % level of significance) (S – Significant, NS – Not Significant)

The calculated F value is 6.530, table value at 5 % level of significance, when degrees of freedom is 9, 1.986. The calculated F value is more than the table value; hence the null hypothesis is rejected. There is significant mean difference in current ratio among the selected cement companies

The calculated F value is 3.390, table value at 5 % level of significance, when degrees of freedom is 9, 1.986. The calculated F value is more than the table value, hence the null hypothesis is rejected. There is significant mean difference in liquidity ratio among the selected cement companies.

Table 4: ANOVA for Debt Equity Ratio and Solvency Ratio

ANOVA for Debt Equity Ratio Hypothesis There is no significant mean difference in debt equity ratio among the selected cement companies.					
Source of Variation	**Sum of Squares**	**Degrees of Freedom**	**Mean sum of Square**	**F Value**	**S / NS**
Between Groups	28.016	9	3.113	6.386	S
Within Groups	43.868	90	.487		
Total	71.884	99			
ANOVA for Solvency Ratio Hypothesis There is no significant mean difference in Solvency ratio among the selected cement companies.					
Between Groups	2.137	9	.237	9.977	S
Within Groups	2.142	90	.024		
Total	4.278	99			

(5 % level of significance) (S – Significant, NS – Not Significant)

The calculated F value is 6.386, table value at 5 % level of significance, when degrees of freedom is 9, 1.986. The calculated F value is more than the table value, hence the null hypothesis is rejected. There is significant mean difference in debt equity ratio among the selected cement companies.

The calculated F value is 9.977, table value at 5 % level of significance, when degrees of freedom is 9, 1.986. The calculated F value is more than the table value, hence the null hypothesis is rejected. There is significant mean difference in solvency ratio among the selected cement companies.

Table 5: ANOVA for Gross Profit Ratio and Net Profit Ratio

ANOVA for Gross Profit Ratio hypothesis There is no significant mean difference in gross profit ratio among the selected cement companies.					
Source of Variation	**Sum of Squares**	**Degrees of Freedom**	**Mean sum of Square**	**F Value**	**S / NS**
Between Groups	2385.646	9	265.072	3.198	S
Within Groups	7460.968	90	82.900		
Total	9846.614	99			
ANOVA For Net Profit Ratio Hypothesis There is no significant mean difference in net profit ratio among the selected cement companies.					
Between Groups	1563.785	9	173.754	3.552	S
Within Groups	4403.008	90	48.922		
Total	5966.793	99			

(5 % level of significance) (S – Significant, NS – Not Significant)

The calculated F value is 3.198, table value at 5 % level of significance, when degrees of freedom is 9, 1.986. The calculated F value is more than the table value, hence the null hypothesis is rejected. There is significant mean difference in gross profit ratio among the selected cement companies.

The calculated F value is 3.552, table value at 5 % level of significance, when degrees of freedom is 9, 1.986. The calculated F value is more than the table value, hence the null hypothesis is rejected. There is significant mean difference in gross profit ratio among the selected cement companies.

Findings

Capital Structure

The average proportion of long term debt in capital structure is 23.94 percentage. The average proportion of equity share capital comes up to 40.51 percentage, and average proportion retained earnings is 35.55 percentage. Ultratech Cement, ACC Ltd, Ambuja Cements Ltd, Shree Cement Ltd, Prism Cement Ltd, India Cement Ltd, Brila Corporation Ltd, OCL India Ltd, KCP Cement Ltd are low gear companies. These companies are mostly depending on equity share capital.

Correlation Analysis

Current assets and total assets are positively and highly correlated (0.914)

Analysis Of Variance (ANOVA)

- **Current Ratio:** There is significant mean difference in current ratio among the selected cement companies.
- **Liquidity Ratio:** There is significant mean difference in liquidity ratio among the selected cement companies.
- **Debt Equity Ratio:** There is significant mean difference in debt equity ratio among the selected cement companies.
- **Solvency Ratio:** There is significant mean difference in solvency ratio among the selected cement companies.
- **Gross Profit Ratio:** There is significant mean difference in gross profit ratio among the selected cement companies.
- **Net Profit Ratio:** There is significant mean difference in net profit ratio among the selected cement companies.

Conclusion

The present study highlighted that the capital structure and financial performance of cement industries. The financial performance plays a significance role in the successful functioning of industries. Poor financial performance threats very survival and leads to business failure. The cement industries could improve the performance of identifying and concentrating in the relevant areas, where the attention is much needed and possibility for improvement thereby.

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