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Impact of Capital Structure on Profitability of Listed Cement Companies in India

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Abstract
One of the most important aspects of financial decision-making is capital structure. The goal of this study is to investigate the relationship between capital structure, as measured by the debt equity ratio and the interest coverage ratio, and profitability, as measured by the return on capital employed, net profit ratio, operating profit ratio, and return on equity, of a few Indian cement companies. The research is supported by secondary data. Data was gathered from the annual reports of the data base and used in the research to sample the top 5 cement firms listed on the NSE during a five-year period from 2017 to 2022. To accomplish the study's goals, the researcher used the examination of numerous ratios. Descriptive statistics and a correlation matrix were used to analyse the data. The results of this research indicated a negative correlation between debt to equity and profitability ratios, suggesting that businesses with larger debt proportions tend to be less profitable. In order to maximise the profitability and wealth of the shareholders, the capital structure composition must be chosen carefully.

Key words: Capital Structure, Profitability, Correlation, Shareholders.

Introduction

One of the most important industries in the world is cement. It is regarded as the cornerstone of human civilisation and has the ability to support a large population of workers. India is now the fourth-biggest producer of crude cement in the world as a result of the country's fast expansion in output, which has made it the world's largest producer of sponge iron as well. Any country's level of per capita cement consumption is thought to have a significant impact on the development of the socioeconomic system and the standard of life of the populace. It has a significant impact on traditional industries including building, shipping, automobiles, and industrial applications, among others.

Every organization's motto in the current, fiercely competitive climate is "survival of the fittest." The manager's choice is one of the toughest duties in such a scenario since it determines the success of any organisation. Therefore, while making a particular choice, managers must analyse the cause-and-effect link. An optimal capital structure is crucial in the analysis of the factors influencing the profitability and growth of any business since it directly influences the profitability of an organisation. The current research will assist cement businesses determine their ideal amount of capital structure, which will help to maximise the wealth of the company's owners. It will also be useful as a reference for other academics studying commercial finance.

Review of Literature

In the examination of the literature, a few studies on the influence of mergers and acquisitions on the profitability of manufacturing sectors are examined.It has previously been written about by a number of writers from various backgrounds and viewpoints. The impact of capital structure on firm performance in Nigeria from 2000 to 2010 was examined by Ogebe et al. In 2013. They examine how several important macroeconomic factors such as GDP and inflation affect corporate performance. To ascertain the impact of leverage and macroeconomic factors on company performance, the traditional theory of capital structure was used. The research conducts a comparative examination of the selected companies, dividing them into highly leveraged and weakly leveraged companies, with a leverage level of more than 10% considered highly leveraged. The study objectives were achieved using static panel analysis. Over a ten-year period, a link between performance (measured by return on investment) and firms' effectiveness was found using a fixed-effects regression estimation model. According to the results, leverage is a key factor in determining how well a company performs, which is consistent with the classical theory of capital structure. In addition, the results showed that there is a clear negative correlation between leverage and performance. Despite the fact that loan capital may increase a company' worth, there comes a point when it becomes negative, hence they strongly advised that enterprises utilise more equity than debt to finance their commercial operations.

Muhammad Muzaffar Saeed et al (2013) examined how Pakistani banks' performance was affected by their capital structure. The research is extended to include empirical work on the factors affecting the capital structure of local banks over a five-year period from 2007 to 2011, using information from banks listed on the Karachi Stock Exchange. Using the model, the correlation between capital structure and banking performance is estimated using regression models. Earnings per share, return on equity and return on assets all serve as indicators of performance. Three factors that affect capital structure are total debt-to-equity ratio, all-out debt-to-capital ratio and long-term debt to equity ratio. They found that the analysis supports a positive relationship between factors affecting capital structure and banking sector performance.

Mehdi et al (2013) the financial structure and the profitability of Iranian pharmaceutical enterprises were compared. They said that even if businesses are aware of the appropriate level of cash, the funding combination is still the most crucial concern for them. Employing financial provisioning strategies that are consistent with the company's investment plan and profitability requires caution on the part of businesses. Based on the top 30 Iranian pharmaceutical firms in Iran, the survey was conducted. Their financial information from 2001 to 2010 was compiled. In this research, net profit margin and debt-to-asset ratio were used as indicators of profitability and capital structure, respectively, while sales growth was used as a control variable. The pharmaceutical industry developed the pass-order theory and internal financing increased profitability, according to their findings, which showed a significant negative correlation between profitability and capital structure. Tani 2013 investigates how capital structures in Jordanian banks affect their performance. He selected a sample of annual financial statements of 12 commercial banks listed on the Amman Stock Exchange and used this data in this research, which extended over five years from 2007 to 2011 and estimated in the analysis the relationship between capital structure and banking performance using multiple regression models. The results revealed a significant and positive relationship between total debt and bank performance such as net profit, return on capital and net interest margin, while no relationship was found between total debt and return on equity in the Jordanian banking sector.

Research Methodology

SampleSelection

Due to its importance as the foundation of the industrial sector, cement is regarded as an essential commodity. Cement today makes up approximately 3% of India's GDP and directly and indirectly

employs close to 10 lakh people. Additionally, India is a major competitor in the global cement industry because to its advantageous position, which is characterised by an extensive coastline for exports and imports. The cement business has been taken into consideration for the research since it is an emerging component of the Indian economy. Five businesses from the cement sector were chosen for the research based on the data that was available and their market value. In this study, an analytical research design was adopted. It is characterised by a potential cause-and-effect connection where the experimental group's dependent variables are affected by the manipulation of independent factors.

S. No.	CompanyName
1	Ambuja Cement
2	India Cement
3	Ramco Cement
4	ACC
5	Ultratech Cement

Objectives

- To determine the profitability of select cement companies over the period of study.
- To recommend the firms in the context of improving the profitability through adapting a better strategic frame work of capital structure.

Data Collection and Study Period

The research made use of secondary data that was gathered from the sample companies' official websites and yearly financial reports. The Capitaline database programme was used to get the financial data for the 2017–2018 to 2021–2022 research period.

Tools Used for Analysis

The researcher employed descriptive statistics and correlation for the analysis of the study. Knowing the variables under study's nature with the aid of descriptive statistics and discovering their important relationships with the independent variables with the aid of correlation analysis.

Data Analysis

Table 1: Debtto Equityratio

Company	2021-22	2020-21	2019-20	2018-19	2017-18	Mean	Std.Dev
Ambuja Cement	1.20	1.33	1.87	1.31	1.36	1.24	1.988
India Cement	1.65	0.30	1.44	0.04	0.98	0.21	0.335
Ramco Cement	-2.19	0.34	3.13	3.05	-3.14	4.02	1.261
ACC	1.32	1.11	0.00	1.33	1.26	0.28	0.295
Ultratech Cement	0.49	-01.90	-4.76	-7.18	0.07	-4.47	2.935

Source:Annual reports of selected cement companies(2017-18to2021-22)

The ratio of Ramco Cement Limited is significantly higher than that of the other cement firms, with a mean of 4.02, according to the aforementioned Table 1, which illustrates that Ramco Cement Company is opposed to using debt to finance its expansion. In contrast, ACC Cement's ratio, which has a mean of 0.28, is rather low, suggesting that the corporation wishes to maintain control over the

situation. Additionally, owing to their low standard deviation, this firm and Ultratech Cement firm have changed the debt-equity mix less often than other businesses. In contrast, firms with negative debt-to-equity ratios may be seen as risky by analysts, creditors, and investors since they are thought to be a sign of financial instability.

Table2:Interest Coverage Ratio

Company	2021-22	2020-21	2019-20	2018-19	2017-18	Mean	Std. Dev
Ambuja Cement	1.04	2.98	5.85	3.87	2.16	3.98	0.457
India Cement	3.12	3.50	3.19	3.17	3.11	2.16	1.746
Ramco Cement	-1.93	-6.12	4.61	1.14	-3.1	-4.79	1.283
ACC	4.95	7.13	9.15	8.87	5.18	0.12	9.321
Ultratech Cement	5.18	5.92	-5.15	-1.34	1.43	5.11	7.914

Source:Annual reports of selected cement companies(2017-18to2021-22)

A higher interest coverage ratio shows that the business can repay its interest costs in relation to its loan obligations many times over. The average interest coverage ratio for Ambuja Cement over the last five financial years is shown. Ramco Cement Limited firm, on the other hand, has a negative interest coverage ratio with a mean of -4.79, indicating that the firm is unable to satisfy its present interest payment commitments. Investors should be wary since it may be a precursor to approaching insolvency.

Table3:Operating Profit Ratio

Company	2021-22	2020-21	2019-20	2018-19	2017-18	Mean	Std. Dev
Ambuja Cement	0.15	31.19	19.92	6.16	14.14	35.19	2.912
India Cement	37.13	9.37	13.08	11.94	12.09	32.98	3.015
Ramco Cement	6.12	-4.17	1.12	0.98	5.97	1.95	4.095
ACC	0.10	2.18	4.28	8.90	7.95	5.98	3.416
Ultratech Cement	8.16	0.76	-0.98	6.12	1.09	3.77	3.919

Source:Annual reports of selected cement companies(2017-18to2021-22)

From the above table, it is evident that Ambjua Cement and India Cement have the highest operating profit ratios, with means of 35.19 and 32.98 respectively, when compared to the other companies under study. This shows that these companies have less financial loss and use their operations efficiently by turning their sales into profits quickly. However, Visa Cement's profit ratio is negative, which means its operations are inefficient and unable to cover its fixed and variable costs.

Table4:Net Profit Ratio

Company	2021-22	2020-21	2019-20	2018-19	2017-18	Mean	Std. Dev
Ambuja Cement	0.17	1.20	13.11	5.19	8.27	9.14	4.919

India Cement	1.16	0.55	0.12	9.31	7.14	7.11	3.991
Ramco Cement	41.11	-0.99	0.91	-9.01	-0.11	9.96	0.219
ACC	5.17	9.12	7.19	5.97	1.93	32.24	4.432
Ultratech Cement	35.88	1.19	-9.55	-8.15	0.16	-12.92	14.120

Source:Annual reports of selected cement companies(2017-18to2021-22)

According to Table 4, ACC Cement had the greatest Net Profit Ratio with a mean score of 32.24 throughout the course of the research, indicating that it was both in better financial condition and more equipped to handle market problems. In contrast, Ultratech Cement has a negative Net Profit ratio, which means the business is losing money and earning less than it is spending. Additionally, Ultratech Cement Limited's high standard deviation indicates that its net earnings fluctuate rapidly, in contrast to Ramco Cement Ltd.'s very low degree of variability in return.

Table5:Return on Capital Employed Ratio

Company	2021-22	2020-21	2019-20	2018-19	2017-18	Mean	Std. Dev
Ambuja Cement	3.06	7.19	7.02	2.97	1.09	16.99	2.910
India Cement	1.88	1.03	2.85	8.16	6.87	6.14	4.136
Ramco Cement	-7.91	-10.05	-8.59	-0.97	-5.95	-0.14	18.905
ACC	1.12	6.97	1.17	26.05	1.01	1.14	3.903
Ultratech Cement	1.09	1.88	-0.10	-0.12	1.66	4.03	12.914

Source:Annual reports of selected cement companies(2017-18to2021-22)

The overall descriptive data shown in Table 5 indicate that Ambuja Cement and ACC Cement have the greatest Return on Capital Employed ratios, with mean values of 16.99 and 17.94, respectively. This indicates that both companies are making good use of their resources. Ramco Cement Ltd., on the other hand, has a negative ROCE, which suggests that the firm is losing money and is unable to manage its finances effectively. Additionally, Ramco Cement Ltd.'s large standard deviation reveals fluctuation in their profits.

Table6:Return on Net Worth/EquityRatio

Company	2021-22	2020-21	2019-20	2018-19	2017-18	Mean	Std. Dev
Ambuja Cement	12.91	1.94	24.15	5.17	0.13	1.14	3.016
India Cement	1.22	12.19	2.17	11.97	1.94	17.27	2.103
Ramco Cement	1.21	-0.14	-4.13	-1.16	1.14	-6.01	7.001
ACC	5.99	7.90	1.09	4.05	6.12	6.84	0.139
Ultratech Cement	0.15	9.12	0.98	9.11	0.15	-44.19	10.397

Source:Annual reports of selected cement companies(2017-18to2021-22)

Table 6 demonstrates that, throughout the research period, Ramco Cement Ltd. & Ultratech cement had negative Return on Equity whereas India Cement had the greatest Return on Equity with a mean score of 17.27. This demonstrates that India Cement's performance is good and that it is effectively employing the cash of its investors, in contrast to Ramco Cement's poor returns, which suggest that a company may be poorly managed and may be spending profits in useless assets. Additionally, Ultratech cement's larger standard deviations of 10.397 were a factor.

Conclusion

On average, cement businesses' profitability is shown to be impacted by their capital structure. Ultimately, it is proposed based on these findings that managers focus on enhancing their current capital structure in order to maximise profitability and leverage advantages for their companies. Cement manufacturing companies operate in a highly competitive and challenging market climate today. There are still and always will be a number of financial issues, therefore in order to survive in this unpredictable climate, they must be ready to deal with these difficulties. With this, it can be deduced that one of the most crucial requirements for firms is having an ideal capital structure if they want to remain competitive and retain profitability in this difficult business environment. The research shows that the business does not effectively benefit from the advantages of leverage owing to unsound debt-equity composition in their capital structure. It examines the profitability and capital structure of five listed cement firms in India throughout the period from 2017 to 2012. The results of this research indicated a negative correlation between debt to equity ratios and profitability levels, suggesting that businesses with larger debt proportions tend to be less profitable. In order to maximise the profitability and wealth of the shareholders, it is important to choose the appropriate capital structure composition.

Future research should ideally have a longer time horizon and a bigger sample size of organisations in order to more thoroughly analyse the varied outcomes of the current study. This means that in the future, additional determinants in many areas should be discovered.

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