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A Comparative Analysis of Financial Leverage Among Selected Firms in the Cement Industry

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1.1 ABSTRACT

The cement industry, being capital-intensive, relies heavily on financial structuring decisions to maintain stability and competitiveness. Financial leverage, which reflects the balance of debt and equity in financing, plays a vital role in shaping risk and return. This study, titled "A Comparative Analysis of Financial Leverage Among Selected Firms in the Cement Industry", examines six companies, viz, ACC Ltd., Ambuja Cement Ltd., Mangalam Cement Ltd., Shree Cement Ltd., Udaipur Cement Works Ltd., and Ultratech Cement Ltd., over the period 2019–20 to 2023–24. The research is based on secondary data sourced from annual reports and financial databases, with leverage ratios analyzed and ANOVA applied to test differences across firms.

The results revealed that no statistically significant variation in financial leverage among the selected companies, as p-values consistently exceeded 0.05. This stability suggests a cautious and uniform approach to debt utilization across the sector. The study concludes that while leverage practices remain consistent, cement firms can further strengthen their financial strategies by diversifying financing sources, enhancing risk management, and adopting sustainability-linked instruments.

1.2 INTRODUCTION

The growth and progress of an economy are closely tied to the performance of its industrial sector, which acts as a backbone for development and infrastructure creation. Among the various industries contributing to India's

economic expansion, the cement industry holds a position of immense significance. Cement, often described as the foundation of modern infrastructure, is indispensable for construction, housing, transportation, and industrial projects. With the rising pace of urbanization, infrastructural growth, and government initiatives such as "Housing for All" and "Smart Cities Mission," the demand for cement has witnessed consistent growth in India.

The cement industry is one of the largest in terms of production and consumption, and it often reflects the overall state of industrial development in the country. India is the second-largest producer of cement after China, and the industry has grown through modernization, consolidation, and advanced manufacturing practices. Once fragmented and heavily regulated, it has become globally competitive. The sector is central to meeting domestic demand, closing infrastructure gaps, and contributing to exports. With the government prioritizing infrastructure, road construction, housing, and rural development, the industry has strong growth opportunities. At the same time, it faces rising input costs, environmental challenges, and intense competition, which makes sound financial management crucial.

In this setting, financial management decisions such as capital structure and leverage play a key role. Financial leverage involves using debt in the capital mix with the aim of improving shareholder returns. By combining debt and equity, companies attempt to balance risk and reward. While leverage can boost profits when conditions are favorable, it also increases risk during downturns due to fixed interest obligations. This makes leverage especially important for capital-intensive sectors like cement, where investments in plants, machinery, mining, transport, and energy are significant.

Cement companies often rely on a mix of debt and equity to fund operations and expansion. Managing leverage levels is critical to avoid the downsides of both extremes. Being under-leveraged may limit growth and prevent companies from benefiting from tax advantages, while being over-leveraged can increase repayment pressure and the risk of financial distress. Striking the right balance is not just a technical choice but also a strategic one that shapes competitiveness and sustainability. Analyzing financial leverage helps to assess how effectively companies use resources and how resilient they are to rising raw material costs, demand fluctuations, and economic slowdowns.

The industry has also undergone consolidation, with large players acquiring smaller firms to strengthen their presence. Companies such as ACC Ltd., Ambuja Cement Ltd., Ultratech Cement Ltd., Shree Cement Ltd., Mangalam Cement Ltd., and Udaipur Cement Works Ltd. represent different scales of operation, from industry leaders to regional players. Studying these firms sheds light on how varying business sizes and financial strategies influence leverage decisions. The competitive landscape ensures that efficient financial practices are essential for sustained growth and shareholder value.

Another factor is the cyclical nature of demand. Cement demand depends heavily on infrastructure projects, housing, and broader economic activity. A slowdown in these areas can reduce revenue, making it harder for highly leveraged firms to manage debt, while companies with balanced structures are better positioned to cope.

On the other hand, during periods of expansion, firms with optimal leverage can maximize returns and capture opportunities. This cyclical effect makes the study of leverage in the cement industry particularly relevant.

The sector is also influenced by global factors such as energy prices, economic trends, and environmental regulations. Increasing pressure to reduce emissions and adopt green technologies requires significant investment, which directly affects financing choices and leverage patterns. Understanding these dynamics highlights how companies balance profitability, sustainability, and financial risk.

The period from 2019–20 to 2023–24 has been especially significant for Indian cement companies. They faced disruptions from the COVID-19 pandemic, supply chain issues, higher fuel costs, and uneven demand in real estate and infrastructure. At the same time, government-led infrastructure spending and renewed focus on housing created new opportunities. The financing strategies adopted in this phase offer valuable insights into how leverage decisions shape performance and stability.

Studying financial leverage in the cement industry is important both in practice and theory. It reveals not only the financing choices of firms but also their approach to managing risk, pursuing growth, and ensuring sustainability in a competitive environment. By examining leading companies in India, the analysis highlights diverse strategies, shared challenges, and the role of financial discipline in long-term success.

1.3 REVIEW OF LITERATURE

(Arya Bintang & Oktofa Yudha, 2025)[1] It highlights the need for careful capital structure management and suggests practical steps such as restructuring debt, selling non-essential assets to reduce costly liabilities, and improving operational efficiency to strengthen the company's long-term stability and lower financial risk.

(Chen, 2025)[2] The results show that financial leverage has a negative link with stock price crash risk, meaning that firms with higher leverage are less likely to experience a sharp fall in stock prices. These findings offer useful guidance for regulators, indicating that policies can be designed to take into account the impact of leverage on stock price stability..

(Diah & Ermalina, 2025)[3] Profitability positively influences the financial performance of manufacturing firms, showing that greater profitability improves outcomes during the COVID-19 pandemic. The Investment Opportunity Set and leverage were found to have no significant effect on financial performance, and company size did not moderate their impact. However, company size did play a moderating role in the relationship between profitability and financial performance.

(Huanqun, 2025)[4] The paper concludes that China's interest rate liberalisation has entered a mature phase, reflected in repeated reductions of the Loan Prime Rate (LPR), a marked fall in renminbi loans, and a stronger shift by companies towards bond financing to secure long-term low rates. It suggests that China is likely to remain in a low-interest-rate environment in the near future, leading firms to keep adjusting their financing strategies by favouring bonds over loans to cut costs and support capital growth.

(**Jayaprakash & Ramya, 2025**)[5] The study concludes that Rane (Madras) Limited's growing reliance on debt has not translated into steady profitability, as shown by the sharp fluctuations in return on assets (ROA) and return on equity (ROE), reflecting inefficiencies in asset use and shareholder returns. It recommends lowering dependence on debt, strengthening liquidity, and controlling costs to achieve a more balanced capital structure, which is crucial for improving overall financial performance.

(**Rodgers Kimutai *et al.*, 2025**)[6] The study concludes that high financial leverage and aggressive investment rates greatly raise the risk of financial distress for firms, showing that such decisions can heighten vulnerability in emerging markets. In contrast, a higher dividend payout ratio was found to significantly lower the chances of financial distress, suggesting that companies returning more profits to shareholders tend to maintain stronger financial stability..

(**Sai *et al.*, 2025**)[7] The study concludes that during the global financial crisis, Chinese firms experienced a decline in investment–cash flow sensitivity (ICFS), challenging the traditional view that tighter financial constraints increase investment dependence on cash flow. The findings show that external economic conditions play a significant role in shaping the link between investment and cash flow. The research also reveals that cash flow uncertainty strongly affects the interaction between internal funds and debt financing when the two act as complements; greater uncertainty causes a sharper fall in ICFS compared to when they function as substitutes, suggesting that rising uncertainty weakens the connection between these financing sources.

1.3.1 Research Gap

Based on reviews collected so far, the following gap has been identified:

1. Limited industry-specific studies – Although financial leverage has been widely examined in corporate finance literature, very few studies focus exclusively on the cement industry, which is highly capital-intensive and structurally different from other manufacturing sectors.

2. Lack of comparative analysis among firms – Existing research generally evaluates leverage at a broad sectoral level, but detailed comparative studies across individual cement companies remain scarce, leaving a gap in understanding inter-firm differences in financing strategies.

3. Insufficient focus on recent period trends – The impact of recent economic disruptions, including the COVID-19 pandemic and fluctuating input costs, on leverage patterns of cement firms has not been adequately studied, creating scope for fresh analysis based on updated data.

The present study seeks to bridge these gaps by conducting a comparative analysis of financial leverage among selected cement companies in India for the period 2019–20 to 2023–24, thereby offering updated insights into inter-firm differences and financial practices within the sector.

1.4 RESEARCH METHODOLOGY:

1. **Research Design**: The present study is analytical in nature and is based on secondary data. A comparative research design has been adopted to evaluate and analyze the financial leverage of selected cement companies in India. The focus of the study is to examine whether significant differences exist in the financial leverage positions of these firms over the selected period.

2. **Sources of Data:** The study is entirely based on secondary data collected from reliable published sources. Annual reports of the companies, audited financial statements, official websites of the selected firms, databases such as Moneycontrol, CMIE Prowess, NSE, BSE, and other relevant publications have been used to gather the required information.

3. **Sample Selection:** For the purpose of this study, six major cement companies operating in India have been selected: ACC Ltd., Ambuja Cement Ltd., Mangalam Cement Ltd., Shree Cement Ltd., Udaipur Cement Works Ltd., and Ultratech Cement Ltd., respectively. These companies were chosen on the basis of their operational significance, availability of consistent financial data, and representation of both large and medium players in the sector.

4. **Study Period:** The analysis covers a period of five financial years from 2019–20 to 2023–24. This period has been selected to capture the recent performance trends and financial leverage positions of the companies, including the post-pandemic phase of business operations.

5. **Tools of Analysis**: The financial leverage of the selected firms has been analyzed using the Degree of Financial Leverage, which provides insights into the extent of debt financing, financial risk, and the capacity of firms to service their debt.

6. **Statistical Techniques:** To test the stated hypothesis, statistical tools have been employed. Descriptive statistics such as mean and standard deviation have been used to summarize the financial leverage measures, while ANOVA (Analysis of Variance) has been applied to determine whether significant differences exist in the financial leverage of the selected cement companies over the study period.

7. **Scope and Limitations:** The study is confined to six cement companies and a five-year period; hence, the results may not be generalized to the entire cement industry. Moreover, as the study is based on secondary data, its accuracy depends on the reliability of published sources.

1.5 DATA ANALYSIS

For statistical analysis of the collected data, the following hypothesis was selected, and the detailed workings of the same have been given below:

H_{01}: The financial leverage of the selected cement companies does not differ significantly.

To test the hypothesis mentioned above, an ANOVA test was applied on selected 6 cement companies for the period of 2019-20 to 2023-24, and the results derived have been presented below

1.5.1 Calculation of Financial Leverage

The following formulae were used to calculate the financial leverage, EBIT, and EPS, which were collected from authentic websites.

$$\text{DFL} = \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in EBIT}}$$

Table 1.1: Calculation of Financial Leverage

SNO	Company	Year	EBIT	EPS	% Change EBIT	%Change EPS	FL
1	A C C Ltd.	2018-19	7275.20	39.86			
2		2019-20	5256.20	19.50	-27.75%	-51.08%	1.84
3		2020-21	3514.90	12.46	-33.13%	-36.10%	1.09
4		2021-22	15035.10	58.00	327.75%	365.49%	1.12
5		2022-23	7380.00	39.16	-50.91%	-32.48%	0.64
6		2023-24	6041.90	20.48	-18.13%	-47.70%	2.63
7	Ambuja Cements Ltd.	2018-19	7257.90	2.59			
8		2019-20	7148.00	2.68	-1.51%	3.47%	-2.29
9		2020-21	8040.50	2.35	12.49%	-12.31%	-0.99
10		2021-22	7057.20	2.03	-12.23%	-13.62%	1.11
11		2022-23	11194.50	7.14	58.63%	251.72%	4.29
12		2023-24	11969.80	3.77	6.93%	-47.20%	-6.82
13	Mangalam Cement Ltd.	2018-19	441.40	5.80			
14		2019-20	459.70	6.29	4.15%	8.45%	2.04
15		2020-21	427.80	6.21	-6.94%	-1.27%	0.18
16		2021-22	210.40	1.19	-50.82%	-80.84%	1.59
17		2022-23	294.50	2.84	39.97%	138.66%	3.47
18		2023-24	461.40	6.15	56.67%	116.55%	2.06
19	Shree Cement Ltd.	2018-19	10224.90	203.49	53.84%	49.43%	0.92
20		2019-20	8370.00	183.41	-18.14%	-9.87%	0.54
21		2020-21	4081.40	88.06	-51.24%	-51.99%	1.01
22		2021-22	1014.60	25.81	-75.14%	-70.69%	0.94
23		2022-23	3118.60	63.58	207.37%	146.34%	0.71
24		2023-24	7844.60	154.09	151.54%	142.36%	0.94
25	Udaipur Cement Works Ltd.	2018-19	451.50	0.45			
26		2019-20	514.20	0.33	13.89%	-26.67%	-1.92
27		2020-21	148.00	-0.18	-71.22%	-154.55%	2.17
28		2021-22	26.30	-0.33	-82.23%	83.33%	-1.01

SNO	Company	Year	EBIT	EPS	% Change EBIT	%Change EPS	FL
29		2022-23	346.10	0.04	1215.97%	-112.12%	-0.09
30		2023-24	873.50	0.71	152.38%	1675.00%	10.99
31	Ultratech Cement Ltd.	2018-19	33887.20	78.14			
32		2019-20	22508.80	51.21	-33.58%	-34.46%	1.03
33		2020-21	12643.50	27.65	-43.83%	-46.01%	1.05
34		2021-22	20625.00	45.06	63.13%	62.97%	1.00
35		2022-23	37341.20	91.18	81.05%	102.35%	1.26
36		2023-24	33809.80	75.87	-9.46%	-16.79%	1.78

1.5.2 Descriptive Statistics

Table 1.2: Descriptive Statistics(Financial Leverage)

	n	Mean	Std. Deviation
A C C Ltd.	5	1.46	0.78
Ambuja Cements Ltd.	5	-0.94	4.12
Mangalam Cement Ltd.	5	1.87	1.18
Shree Cement Ltd.	5	0.83	0.20
Udaipur Cement Works Ltd.	5	2.03	5.24
Ultratech Cement Ltd.	5	1.22	0.33
Total	30	1.08	2.72

The descriptive statistics for the Net Profit Ratio (NPR) also indicate variation, though less pronounced than in ROE. Emami Ltd. records the highest mean NPR at 20.69, followed by Dabur India Ltd. (17.54) and Godrej Consumer Products Ltd. (17.21). Nestlé India Ltd. (14.77) and Procter & Gamble Hygiene & Health Care Ltd. (14.76) occupy the mid-range, while Britannia Industries Ltd. reports the lowest average at 13.26. These figures suggest differences in cost efficiency and the ability to convert sales into profit across the firms.

1.5.3 ANOVA

Table 1.3: ANOVA

	Sum of Squares	df	Mean Square	F	p
Company	29.16	5	5.83	0.75	.593
Residual	186.18	24	7.76		
Total	215.33	29			

The analysis yielded an F-value of 1.242 with a p-value of 0.28. This confirms that the variation in financial leverage across companies over the longer term was also not significant.

As the p-value for all three periods exceeded 0.05, the null hypothesis (H01) is not rejected. This indicates that the financial leverage of the chosen cement companies shows no statistically significant variation. The findings suggest that debt utilisation and financial structuring practices across the companies have largely remained stable during the years examined.

1.6 FINDINGS FROM THE STUDY:

The following set of findings has been extracted from the statistical work done and presented above:

1. The analysis revealed that the financial leverage of the selected cement companies did not vary significantly over the study period, as the p-values in all three phases exceeded the 0.05 threshold.

2. The stability in leverage patterns indicates that debt utilization and capital structuring practices among the companies have remained broadly consistent, irrespective of external market fluctuations during 2019–20 to 2023–24.

3. The absence of significant variation suggests that the selected cement firms follow similar financial strategies with respect to the use of debt, reflecting a cautious and balanced approach to leverage in a capital-intensive industry.

1.7 CONCLUSION

The study concludes that the financial leverage of the selected cement companies has remained largely stable during the period 2019–20 to 2023–24. The absence of significant variation across firms indicates a uniformity in debt utilization and capital structuring practices, reflecting a cautious approach in managing financial risks within this capital-intensive sector. Such stability also suggests that the companies have maintained flexibility against external economic fluctuations, including challenges arising from the pandemic and rising input costs. Overall, the findings highlight a consistent and balanced financial strategy that characterizes the cement industry during the years under review.

1.8 SUGGESTIONS

The Following set of suggestions has been crafted for the cement industries to improve and better up on the stated fronts:

1. Diversify financing sources

Cement companies should explore innovative financing options such as green bonds, infrastructure funds, and long-term institutional financing to reduce over-reliance on conventional debt.

2. Enhance risk management practices

While leverage patterns are stable, firms can adopt more robust risk assessment models to prepare for unforeseen economic shocks and input cost fluctuations.

3. Strengthen capital structure flexibility

Companies may benefit from maintaining flexible capital structures that allow them to quickly adjust debt-equity ratios in response to changing market conditions.

4. Leverage technology for cost efficiency

Adopting digital financial tools and data analytics can help optimize debt management, cash flows, and interest coverage, thereby improving financial efficiency.

5. Focus on sustainability

linked financing with increasing environmental regulations, firms should align financial strategies with sustainability goals by accessing ESG-linked credit lines and financing eco-friendly projects.

6. Benchmark best practices

Regularly comparing leverage and capital structure decisions with global cement leaders can help Indian firms adopt more competitive and growth-oriented financial strategies.

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