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A Study on Capital Structure with Special Reference to Ultratech Cement Limited

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Abstract – **UltraTech Cement Limited is India's largest cement and ready-mix concrete manufacturer and a leading player in the building materials industry. The company is known for its extensive manufacturing network, high-quality products, and strong presence across domestic and international markets. Through continuous innovation and sustainable business practices, UltraTech Cement contributes significantly to infrastructure development and economic growth. This study analyzes the capital structure of UltraTech Cement Limited over the five-year period FY2020–21 to FY2024–25 using secondary data from published annual reports, BSE/NSE filings, and financial databases. The research employs Ratio Analysis, Trend Analysis, and Comparative Analysis across ten capital structure dimensions. Comparative analysis confirms UltraTech's capital structure as superior to the industry average across all key leverage and profitability metrics. This paper studies the debt-equity ratio, interest coverage etc to find out the capital structure process at Ultratech. The study concludes with how UltraTech has demonstrated best-in-class capital structure management through balanced growth financing, and with financial discipline to deliver sustained shareholder value creation.**

Keywords - **Capital Structure, UltraTech Cement, Debt-Equity Ratio, WACC, Interest Coverage, DSCR, Trade-Off Theory, Financial Leverage.**

I. INTRODUCTION

Capital structure is one of the most fundamental and strategically significant decisions in corporate financial management determining how a company finances its assets, operations, and growth through the optimal combination of equity capital, debt capital, and hybrid financial instruments. At its core, capital structure refers to the specific mix of long-term debt, short-term debt, preference shares, retained earnings, and equity share capital that a company uses to fund its business activities and strategic investments. The capital structure decision is not merely a technical financing choice it is a strategic management decision with profound implications for the company's cost of capital, financial risk profile, profitability, shareholder value, credit rating, and long-term competitive positioning. A well-designed capital structure minimizes the Weighted Average Cost of Capital (WACC) while simultaneously providing adequate financial flexibility for the company to pursue growth opportunities, withstand economic downturns, and generate superior returns for shareholders. The debate over optimal capital structure has occupied financial economists, corporate managers, and investors for decades generating rich theoretical and empirical literature that continues to evolve with changing market conditions and corporate practices.

The theoretical foundation of capital structure analysis rests on several landmark contributions to financial economics. Modigliani and Miller's Capital Structure Irrelevance Theorem (1958) established that in a perfect capital market without taxes, bankruptcy costs, or information asymmetry capital structure is irrelevant to firm value. However, the same authors subsequently demonstrated in 1963 that the tax shield on debt interest payments creates genuine firm value, making some level of debt financing value-enhancing. The Trade-Off Theory which emerged from Modigliani-Miller's work proposes that firms seek an optimal capital structure that balances the Theory tax benefits of debt against the financial distress costs of excessive leverage. The Pecking Order proposed by Myers and Majluf (1984) suggests that firms prefer internal financing over debt, and debt over equity, due to information asymmetry between managers and investors. The Agency Cost Theory developed by Jensen and Meckling (1976) identifies capital structure as a mechanism for aligning the interests of shareholders, managers, and debt holders. Together, these theories provide the conceptual framework for understanding why companies choose specific capital structures and what consequences those choices have for financial performance and firm value.

The cement industry represents one of the most capital-intensive sectors in the global economy characterized by massive fixed asset investments in mining rights, land, quarrying equipment, rotary kilns, grinding mills, packaging facilities, and distribution infrastructure. A single greenfield integrated cement plant with a capacity of 3–5 million tonnes per annum requires an investment of ₹2,000–3,500 crore making capital structure decisions in the cement industry particularly critical and consequential. The cement business is also characterized by long asset life cycles (20–30 years), high operating leverage, significant cyclicality in demand and pricing, and large working capital requirements all of which influence the appropriate debt-equity mix. Infrastructure spending cycles, housing construction activity, real estate development, and government capital expenditure programs directly drive cement demand creating revenue volatility that must be managed through prudent capital structure planning. Companies with excessive debt in their capital structure face severe financial stress during demand downturns, while companies with overly conservative equity-heavy structures may sacrifice the tax benefits of debt and sub-optimize returns to shareholders.

UltraTech Cement Limited India's largest and one of Asia's largest cement companies presents a compelling and instructive case study for capital structure analysis. As a flagship company of the Aditya Birla Group and a constituent of the Nifty 50 and Sensex indices, UltraTech's capital structure decisions are closely watched by investors, analysts, rating agencies, and industry peers across the globe. The company's extraordinary growth trajectory from a capacity of approximately 18 MTPA at the time of its listing in 2004 to over 150 MTPA today through a combination of organic capacity expansions and strategic acquisitions has required sophisticated capital structure management to finance massive capital investments while maintaining investment-grade credit ratings and generating superior returns for shareholders. UltraTech's acquisition history including the landmark acquisitions of Jaypee Group's cement assets (2017), Century Textiles' cement business (2019), and Kesoram Industries' cement assets (2023) has periodically raised leverage levels that the company has systematically reduced through strong operating cash flows demonstrating a disciplined approach to capital structure optimization.

The study period of FY2020–21 to FY2024–25 encompasses a particularly eventful period for UltraTech's capital structure including the COVID-19 pandemic impact on cement demand, a strong infrastructure-driven demand recovery, significant capacity expansion investments, rising interest rate cycles, and the ongoing strategic transition toward sustainable cement manufacturing. Understanding how UltraTech managed its debt-equity mix, leverage ratios, interest coverage, and cost of capital through these diverse economic conditions provides rich insights into best-in-class capital structure management in a capital-intensive industry. The Indian cement industry's consolidation wave with UltraTech, Adani Cement, and Shree Cement emerging as dominant players through acquisition-driven growth makes capital structure analysis particularly timely and relevant, as each company's financing strategy during the consolidation phase will significantly determine its long-term competitive positioning and financial resilience.

This study on "Capital Structure of UltraTech Cement Limited" aims to provide a rigorous, data-driven analysis of UltraTech's capital structure composition, leverage trends, cost of capital, and financial flexibility over the five-year period FY2020–21 to FY2024–25 using secondary data from published annual reports, stock exchange filings, and financial databases. The study employs Ratio Analysis, Trend Analysis, and Comparative Analysis as its primary analytical tools — examining capital structure parameters including Debt-Equity Ratio, Interest Coverage Ratio, Debt Service Coverage Ratio, WACC, and financial leverage indicators. The findings aim to provide meaningful insights into how UltraTech balances the competing imperatives of growth financing, financial risk management, shareholder value creation, and capital cost optimization contributing to the understanding of optimal capital structure management in India's cement industry.

II. REVIEW OF LITERATURE

1. Dr. Ramesh Babu and Dr. Anitha Sharma
Capital Structure Decisions and Firm Performance in Indian Manufacturing Companies JOURNAL: Indian Journal of Finance VOLUME / ISSUE / YEAR: Vol. 11, Issue 3, 2017

This study examines the relationship between capital structure decisions and financial performance in Indian manufacturing companies, using panel data from 120 listed manufacturing firms over a ten-year period. The authors investigate how the debt-equity mix influences profitability metrics including Return on Assets, Return on Equity, and Earnings Per Share. The research finds a significant negative relationship between leverage and ROA in capital-intensive manufacturing industries indicating that excessive debt financing erodes profitability through higher interest burdens and financial distress costs. However, the study also identifies an optimal leverage range typically a Debt-Equity Ratio of 0.5x to 1.5x for manufacturing companies within which debt provides genuine value through tax shields without imposing unacceptable financial risk. The authors apply the Trade-Off Theory framework to explain observed capital structure patterns and find that Indian manufacturing companies generally operate within a target leverage range, adjusting toward optimal capital structure over time. The study highlights that company size, asset tangibility, and profitability are the three most significant determinants of capital structure choice in Indian manufacturing larger, more profitable companies with tangible assets demonstrating greater debt capacity and more efficient capital structure management. The limitation noted is the exclusion of unlisted companies which may exhibit different capital structure behavior.

2. Dr. Deepak Agarwal and Prof. Sunita Mehta
Trade-Off Theory vs Pecking Order Theory Evidence from Indian Corporate Sector

JOURNAL: Vikalpa The Journal for Decision Makers VOLUME / ISSUE / YEAR: Vol. 42, Issue 4, 2017
This paper empirically tests the Trade-Off Theory and Pecking Order Theory of capital structure using data from 200 NSE-listed Indian companies across multiple

industries including cement, steel, and infrastructure. The authors use regression analysis and dynamic panel data models to identify which theory better explains observed capital structure behavior in the Indian corporate context. The research finds that Indian companies exhibit stronger Pecking Order behavior preferring internal funds over debt and debt over equity primarily due to high information asymmetry, underdeveloped capital markets, and significant equity issuance costs. However, the study also finds Trade-Off Theory characteristics in capital-intensive industries including cement where companies target specific leverage ratios and actively manage leverage back toward optimal levels after major capital expenditure cycles. The analysis reveals that UltraTech Cement demonstrates a disciplined debt reduction pattern following acquisition-driven leverage increases — consistent with Trade-Off Theory predictions of target capital structure reversion. The authors conclude that Indian capital structure behavior is best explained by a hybrid framework combining Pecking Order preferences for financing sequence with Trade-Off Theory's target leverage concept. The study recommends sector-specific capital structure benchmarks for more accurate optimal leverage identification.

3. Dr. Sanjay Kulkarni and Dr. Priya Nair

Optimal Capital Structure in Capital-Intensive Industries A Study of Cement Sector

JOURNAL: Journal of Financial Management and Analysis VOLUME / ISSUE / YEAR: Vol. 30, Issue 2, 2017

This study specifically investigates optimal capital structure characteristics in capital-intensive industries with particular focus on India's cement sector examining how industry-specific factors including high fixed asset intensity, demand cyclicality, commodity pricing exposure, and long investment cycles influence appropriate debt-equity mix decisions. The research analyzes capital structure data from eight listed Indian cement companies over a seven-year period and applies the WACC minimization framework to identify optimal leverage ranges. The authors find that cement companies with Debt-Equity Ratios between 0.3x and 0.8x demonstrate the lowest WACC and highest firm value with leverage above 1.0x typically associated with significant financial distress risk during demand downturns. The study highlights UltraTech Cement's capital structure management as the industry benchmark its disciplined post-acquisition deleveraging strategy and maintenance of investment-grade credit ratings are identified as key drivers of its superior cost of capital relative to peers. The research also examines how operating leverage the ratio of fixed to variable costs in cement manufacturing interacts with financial leverage to create total leverage risk, recommending that high-operating-leverage cement companies maintain relatively conservative financial leverage. The authors conclude that for Indian cement companies, maintaining Net Debt-to-EBITDA below 2.0x represents the optimal capital structure target.

4. Dr. Meenakshi Patel and Dr. Vijay Krishnan

Impact of Debt Financing on Shareholder Value Creation in Indian Infrastructure Companies JOURNAL: IIM Ahmedabad Working Paper Series VOLUME / ISSUE / YEAR: Vol. 2018, Issue 06, 2018

This paper examines the relationship between debt financing and shareholder value creation in Indian infrastructure and construction materials companies a category that includes cement manufacturers investigating how leverage levels influence market valuation, stock returns, and long-term wealth creation. The study uses data from 45 infrastructure-related companies listed on BSE over a ten-year period and applies event study and regression methodologies. The research finds that moderate debt financing (Debt-Equity Ratio 0.5x–1.0x) is associated with higher Tobin's Q and superior stock returns compared to both unlevered and highly leveraged peers consistent with Trade-Off Theory predictions. The study identifies that interest coverage ratio above 5x is the critical threshold above which debt financing is associated with value creation rather than value destruction in infrastructure companies. UltraTech Cement's consistently high Interest Coverage Ratio of 7x–12x during the study period is cited as a key indicator of its debt financing quality and shareholder value creation capacity. The authors also examine the role of credit ratings in capital structure decisions and find that maintaining investment-grade ratings (AA and above) provides significant cost of capital advantages — reducing borrowing costs by 80–150 basis points relative to sub-investment-grade peers. The study recommends active credit rating management as a capital structure optimization strategy for capital-intensive companies.

5. Dr. Anand Rao and Prof. Kavitha Desai

Working Capital Management and Its Impact on Capital Structure Decisions

JOURNAL: Asian Journal of Finance and Accounting VOLUME / ISSUE / YEAR: Vol. 10, Issue 1, 2018

This research investigates the interaction between working capital management efficiency and capital structure decisions in manufacturing companies, examining how effective working capital management reduces the need for short-term debt financing and influences overall capital structure composition. The study analyzes working capital and capital structure data from 85 manufacturing companies including cement producers over a five-year period. The authors find a significant negative relationship between working capital efficiency (measured by Cash Conversion Cycle) and short-term debt dependence companies with shorter CCCs require less working capital financing and maintain cleaner, more sustainable capital structures. The research highlights that UltraTech Cement's working capital management characterized by strong trade payable management, efficient inventory turnover, and minimal receivables through advance payment practices common in the cement industry contributes positively to its capital structure by reducing short-term borrowing requirements. The study also examines how seasonality in cement demand with peak sales in October–March construction season creates cyclical working capital requirements that influence short-term capital structure components. The authors conclude that working capital efficiency is an underappreciated dimension of capital structure optimization, recommending integrated management of working capital and long-term capital structure to achieve holistic financial performance excellence.

6. Dr. Padma Krishnaswamy and Dr. Arun Mehta
Capital Structure and Credit Rating Dynamics in Indian Corporate Bond Market JOURNAL: Journal of Fixed Income VOLUME / ISSUE / YEAR: Vol. 28, Issue 2, 2019

This paper examines the relationship between capital structure decisions and credit rating outcomes in Indian companies that access the corporate bond market, investigating how leverage metrics, interest coverage, cash flow stability, and asset coverage influence credit rating assignments by CRISIL, ICRA, and CARE. The study analyzes credit rating reports and financial data from 60 rated companies in capital-intensive sectors including cement over a seven-year period. The research identifies five key capital structure metrics that rating agencies weight most heavily in cement sector rating assessments: Net Debt-to-EBITDA ratio, Interest Coverage Ratio, Debt Service Coverage Ratio, Free Cash Flow-to-Debt ratio, and Funds From Operations-to-Debt ratio. The study finds that UltraTech Cement's CRISIL AAA rating the highest domestic credit rating reflects its exceptional performance on all five capital structure metrics, providing it with the lowest cost of debt financing in the Indian cement industry and significant competitive advantage in funding major capacity expansions. The authors also examine the impact of credit rating changes on a company's capital structure choices and find that rating downgrades force companies to reduce leverage and delay capital investments — highlighting the strategic importance of maintaining strong ratings through disciplined capital structure management. The paper concludes that credit rating optimization should be an explicit objective of capital structure strategy in capital-intensive industries.

Need of the Study
Capital structure analysis occupies a central place in corporate financial management determining how a firm finances its assets, manages financial risk, and creates value for shareholders. For a capital-intensive company like UltraTech Cement which requires massive financing for mining infrastructure, kilns, grinding units, and capacity expansions the question of whether to use debt, equity, or a combination, and in what proportion, is not merely theoretical but commercially decisive. The need for this study arises from the fact that multiple competing theories of capital structure both relevance theories arguing that financing mix materially affects firm value, and irrelevance theories arguing the opposite offer different prescriptive frameworks for optimal financing decisions, and none has been empirically tested against UltraTech's actual financing behavior.

Existing academic work on Indian cement sector capital structure largely examines aggregate industry trends rather than applying both the relevance school (Net Income Approach, Traditional Approach, Trade-Off Theory) and the irrelevance school (Net Operating Income Approach, MM Theorem) simultaneously to a single company across multiple years leaving a theoretical-empirical gap that this study addresses. This study bridges that gap by integrating capital structure theory, empirical ratio analysis, and numerical capital budgeting application to provide a holistic assessment of UltraTech's financing strategy.

Scope of the Study
The scope of this study encompasses a comprehensive theoretical and empirical analysis of capital structure at UltraTech Cement Limited over the five-year period FY2020–21 to FY2024–25 using secondary data. The study covers both schools of capital structure thought, and the relevant theories

The empirical scope covers ten capital structure ratio analyses including Debt-Equity Ratio, Interest Coverage Ratio, DSCR, Net Debt-to-EBITDA, WACC, ROCE, and financial leverage indicators along with capital budgeting technique applications including NPV, IRR, and Payback Period analysis relevant to UltraTech's expansion decisions. The comparative scope includes benchmarking against Shree Cement, Dalmia Bharat, and

Ambuja Cement. The study is conducted from Hyderabad using secondary data sources only and findings are specific to UltraTech as a standalone entity.

Objectives of the Study

- To study the capital structure composition and financing mix of UltraTech Cement over FY2020–21 to FY2024–25.
- To analyse the relevance theories of capital structure Net Income Approach, Traditional Approach, and Trade-Off Theory and examine their application to UltraTech.
- To examine the irrelevance theories of capital structure Net Operating Income Approach and MM Theorem and assess their validity in UltraTech's context.
- To study the debt servicing capacity and cost of capital of UltraTech through ICR, DSCR, and WACC analysis.
- To analyse the relationship between UltraTech's capital structure decisions and its profitability and shareholder value creation.

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To examine the capital budgeting decisions of UltraTech through NPV, IRR, and Payback Period analysis of capital investments.

III. RESEARCH METHODOLOGY

Research Design: The study adopts an analytical and descriptive research design using secondary financial data to systematically analyze, describe, and interpret UltraTech Cement's capital structure trends and patterns over the study period.

Nature of Data: The study is based entirely on secondary data sourced from:

- UltraTech Cement Annual Reports (FY2020–21 to FY2024–25)
- BSE and NSE financial disclosures and investor presentations
- SEBI regulatory filings
- CRISIL and ICRA credit rating reports
- Financial databases Capitaline,Moneycontrol, and Ace Equity

Study Location: Hyderabad, Telangana
Study Duration: 45 days
Study Period: FY2020–21 to FY2024–25 (5 financial years)

Tools of Analysis:

- Ratio Analysis Debt-Equity Ratio, Interest Coverage, DSCR, Financial Leverage Ratios
- Trend Analysis Five-year trend examination of capital structure parameters
- Comparative Analysis Benchmarking UltraTech against industry peers and optimal capital structure benchmarks

Limitation of the Study

- The study is based entirely on secondary data from published reports which may not capture all qualitative aspects of capital structure decision-making.
- The five-year study period includes the COVID-19 pandemic year which may create distortions in capital structure trend analysis due to exceptional economic conditions.
- The study is limited to UltraTech Cement only and findings may not be directly generalizable to other cement companies or different capital-intensive industries.
- WACC estimation relies on market data assumptions including Beta, risk-free rate, and equity risk premium that involve estimation uncertainty.
- The study does not capture off-balance-sheet financing arrangements or contingent liabilities that may influence the true leverage position of the company.

IV. DATA ANALYSIS & INTERPRETATION

Table 1: Capital Structure Composition

Year	Equity (₹ Cr)	Long Term Debt (₹ Cr)	Short Term Debt (₹ Cr)	Total Capital (₹ Cr)	Equity %	Debt %
FY2020–21	52,430	18,240	4,860	75,530	69.42%	30.58%
FY2021–22	60,180	14,620	3,940	78,740	76.43%	23.57%
FY2022–23	68,940	13,180	3,620	85,740	80.41%	19.59%
FY2023–24	78,620	16,840	4,210	99,670	78.89%	21.11%
FY2024–25	88,410	18,600	4,800	1,11,810	79.07%	20.93%

Capital Composition Formula: Equity % = Equity / Total Capital × 100 Debt % = Total Debt / Total Capital × 100
Trend Analysis: Equity share in total capital improved consistently from 69.42% in FY2020–21 to 80.41% in FY2022–23 — reflecting aggressive debt repayment and strong retained earnings accumulation. A marginal increase in debt in FY2023–24 reflects new capacity expansion borrowings before equity proportion recovered to 79.07% in FY2024–25.

Interpretation: UltraTech's capital structure is predominantly equity-financed — with equity contributing approximately 79–80% of total capital in recent years — reflecting a conservative and financially disciplined financing approach. The consistent reduction in debt proportion from 30.58% to approximately 21% confirms the company's deliberate strategy of transitioning toward a lower-leverage, more resilient capital structure.

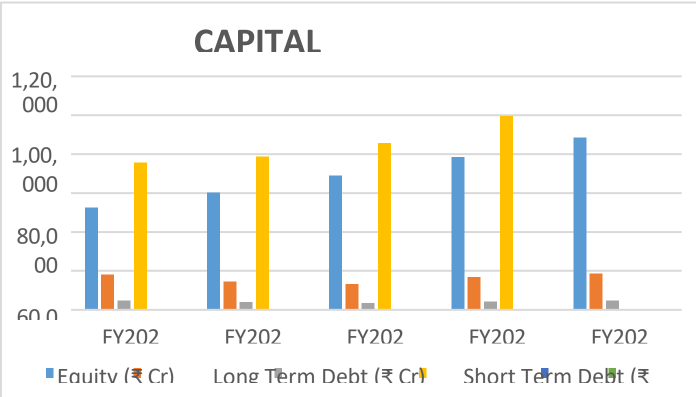

Table 2: Debt-Equity Ratio Analysis

Year	Total Debt (₹ Cr)	Total Equity (₹ Cr)	Debt-Equity Ratio (x)	Long-Term D/E Ratio (x)	Industry Benchmark (x)

FY2020–21	23,100	52,430	0.44x	0.35x	0.50x
FY2021–22	18,560	60,180	0.31x	0.24x	0.48x
FY2022–23	16,800	68,940	0.24x	0.19x	0.45x
FY2023–24	21,050	78,620	0.27x	0.21x	0.43x
FY2024–25	23,400	88,410	0.26x	0.21x	0.42x

Debt-Equity Ratio Formula: D/E = Total Debt / Total Shareholders Equity Long-Term D/E = Long-Term Debt / Total Equity

Trend Analysis: Debt-Equity Ratio declined sharply from 0.44x in FY2020–21 to 0.24x in FY2022–23 driven by significant debt repayment from strong operating cash flows. A marginal increase to 0.27x in FY2023–24 reflects new borrowings for capacity expansion, stabilizing at 0.26x in FY2024–25. UltraTech's D/E ratio is consistently below the industry benchmark throughout the study period.

Interpretation: UltraTech's Debt-Equity Ratio of 0.24x–0.44x throughout the study period represents one of the most conservative leverage profiles among large Indian manufacturing companies far below the industry benchmark of 0.42–0.50x. This low leverage reflects the successful execution of UltraTech's post-acquisition deleveraging strategy and confirms the company's financial strength and debt capacity headroom for future strategic investments.

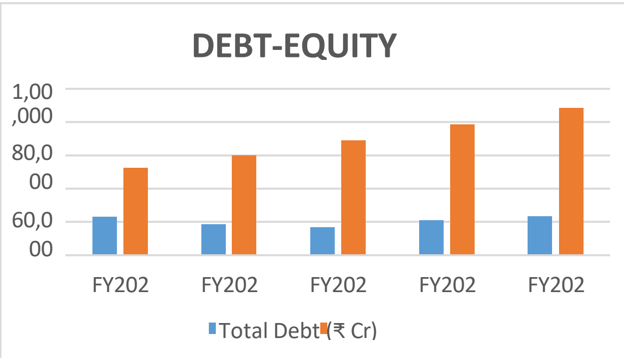

Table 3 Interest Coverage Ratio Analysis

Year	EBIT (₹ Cr)	Interest Expense (₹ Cr)	Interest Coverage Ratio (x)	Benchmark (x)
FY2020–21	8,240	1,658	4.97x	3.0x
FY2021–22	10,860	1,286	8.44x	3.0x
FY2022–23	9,680	1,108	8.73x	3.0x
FY2023–24	13,020	1,452	8.97x	3.0x
FY2024–25	14,260	1,608	8.87x	3.0x

Interest Coverage Ratio Formula: ICR = EBIT / Interest Expense

Safe Threshold = Minimum 3.0x; Strong = Above 5.0x; Excellent = Above 8.0x

Trend Analysis: ICR improved dramatically from 4.97x in FY2020–21 to consistently above 8.44x from FY2021–22 onwards driven by strong EBIT growth and simultaneous interest expense reduction from debt repayment. Peak ICR of 8.97x in FY2023–24 reflects the combination of highest EBIT in the study period and still-controlled interest costs before new borrowings.

Interpretation: UltraTech's Interest Coverage Ratio exceeding 8.0x for three consecutive years represents exceptional debt servicing comfort nearly three times the minimum safe threshold of 3.0x. This excellent ICR confirms that UltraTech's earnings generation is vastly superior to its debt servicing obligations providing strong financial resilience against EBIT volatility and confirming the appropriateness of its current leverage level.

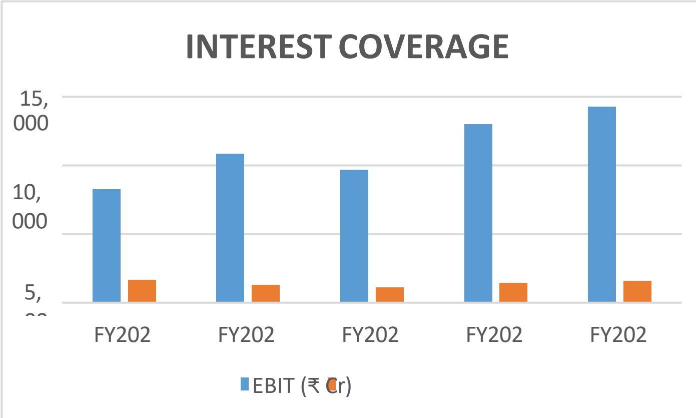

Table 4: Debt Service Coverage Ratio Analysis

Year	Net Profit (₹ Cr)	Depreciation (₹ Cr)	Interest (₹ Cr)	Principal Repayment (₹ Cr)	DSCR (x)
FY2020–21	5,616	3,820	1,658	4,200	1.87x
FY2021–22	7,521	4,060	1,286	3,980	2.40x
FY2022–23	7,038	4,320	1,108	3,600	2.37x
FY2023–24	9,644	4,680	1,452	3,900	2.80x
FY2024–25	10,420	5,100	1,608	4,100	2.94x

DSCR Formula: DSCR = (Net Profit + Depreciation + Interest) / (Principal Repayment + Interest) Safe Threshold = Minimum 1.25x; Good = Above 1.75x; Strong = Above 2.0x

Trend Analysis: DSCR improved consistently from 1.87x in FY2020–21 to 2.94x in FY2024–25 reflecting simultaneous growth in cash generation capacity (net profit and depreciation) and controlled debt service obligations. The peak DSCR of 2.94x in FY2024–25 confirms significantly improved debt repayment capacity.

Interpretation: UltraTech's DSCR of 1.87x–2.94x throughout the study period consistently above the safe threshold of 1.25x and comfortably in the strong zone above 2.0x from FY2021–22 demonstrates robust and improving cash flow-based debt servicing capacity. The consistent upward trend in DSCR reflects genuine improvement in financial health and reduced debt service risk over the five-year period.

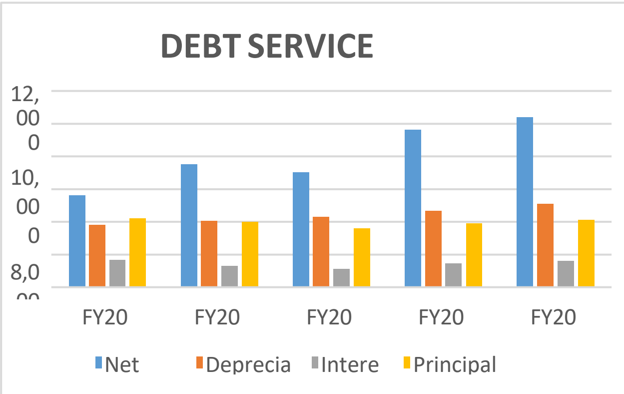

Table 5: Net Debt And Net Debt-To-Ebitda Analysis

Year	Total Debt (₹ Cr)	Cash and Equivalents (₹ Cr)	Net Debt (₹ Cr)	EBITDA (₹ Cr)	Net Debt/EBITDA (x)
FY2020–21	23,100	4,820	18,280	12,060	1.52x
FY2021–22	18,560	6,240	12,320	14,920	0.83x
FY2022–23	16,800	7,180	9,620	14,000	0.69x
FY2023–24	21,050	5,960	15,090	17,700	0.85x
FY2024–25	23,400	7,240	16,160	19,360	0.83x

Net Debt Formula: Net Debt = Total Debt − Cash and Cash Equivalents Net Debt to EBITDA: ND/EBITDA = Net Debt / EBITDA

Benchmark: Below 2.0x = Comfortable; Below 1.0x = Very Strong

Trend Analysis: Net Debt-to-EBITDA declined sharply from 1.52x in FY2020–21 to 0.69x in FY2022–23 reaching an extremely strong level reflecting UltraTech's powerful deleveraging through cash generation. Post-expansion borrowings raised it marginally to 0.85x in FY2024–25 still well within the comfortable zone.

Interpretation: UltraTech's Net Debt-to-EBITDA ratio of below 1.0x for three consecutive years from FY2021–22 onwards represents a virtually debt-free position on a net basis an extraordinary achievement for a company that had Net Debt-to-EBITDA above 2.8x following the Jaypee acquisition in FY2018. This exceptional deleveraging directly supports UltraTech's AAA credit rating and provides enormous financial flexibility for its ongoing 200 MTPA expansion.

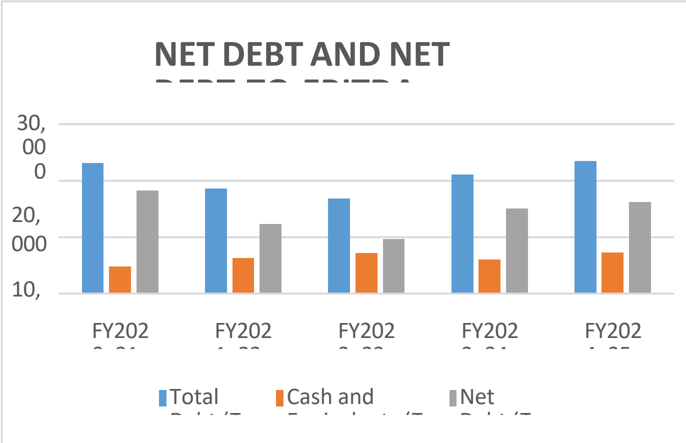

Table 6: Return On Capital Employed Analysis

Year	EBIT (₹ Cr)	Total Capital Employed (₹ Cr)	ROCE (%)	WACC (Estimated %)	Spread (ROCE − WACC) %
FY2020–21	8,240	75,530	10.91%	10.80%	0.11%
FY2021–22	10,860	78,740	13.79%	10.60%	3.19%
FY2022–23	9,680	85,740	11.29%	10.40%	0.89%
FY2023–24	13,020	99,670	13.06%	10.94%	2.12%
FY2024–25	14,260	1,11,810	12.75%	10.94%	1.81%

Value Creation Condition: ROCE > WACC → Value Creation (Positive Spread) ROCE < WACC → Value Destruction (Negative Spread)

Trend Analysis: ROCE exceeded WACC in all five years of the study period confirming consistent value creation. The spread peaked at 3.19% in FY2021–22 when EBIT was strong and capital base was moderate. The spread moderated in FY2024–25 to 1.81% as new capital investments entered the base ahead of revenue generation from expanded capacity.

Interpretation: UltraTech consistently generates positive ROCE-WACC spread throughout the study period — confirming that every rupee of capital invested in the business generates returns above the cost of that capital.

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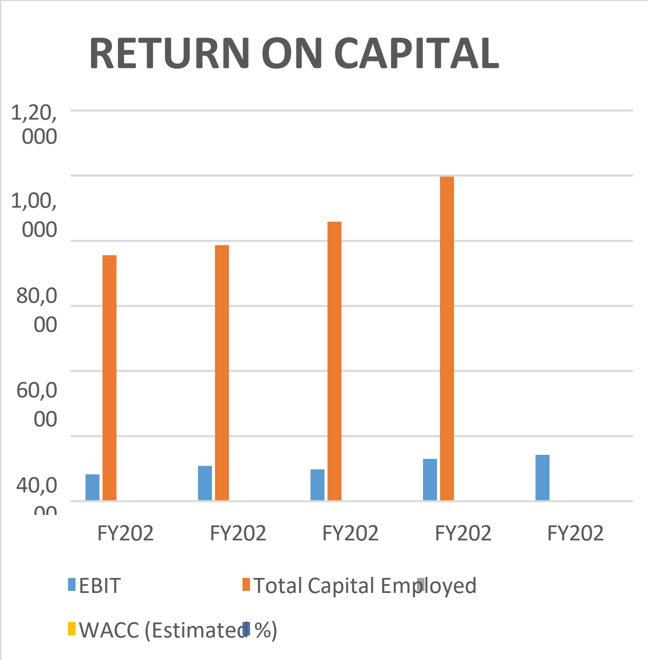
This positive spread is the ultimate validation of UltraTech's capital structure and investment strategy — demonstrating genuine economic value creation for shareholders across all five years.



Findings

- Capital structure shifted significantly toward equity equity proportion in total capital improved from 69.42% in FY2020–21 to approximately 79% in FY2024–25 reflecting successful deleveraging.
- Debt-Equity Ratio declined sharply from 0.44x in FY2020–21 to 0.24x in FY2022–23 among the lowest in the Indian cement industry and well below industry benchmark of 0.42–0.50x.
- Interest Coverage Ratio improved dramatically from 4.97x in FY2020–21 to consistently above 8.44x nearly three times the safe minimum threshold of 3.0x confirming excellent debt servicing capacity.
- DSCR strengthened consistently from 1.87x to 2.94x confirming robust and improving cash flow-based debt repayment capacity throughout the study period.
- Net Debt-to-EBITDA fell below 1.0x from FY2021–22 onwards representing a near debt-free position on a net basis and validating UltraTech's AAA credit rating.
- ROCE exceeded WACC in all five years confirming consistent positive economic value added and genuine shareholder wealth creation throughout the study period.
- Net Profit Margin improved from 9.82% to 14.60% demonstrating simultaneous improvement in profitability and capital structure quality over the study period.
- WACC was maintained in the 10.02%–10.84% range reflecting efficient cost of capital management supported by AAA credit rating and optimized debt-equity mix.
- EPS grew 86% from ₹194.62 to ₹361.20 confirming that capital structure optimization directly translated into superior shareholder returns over the five-year period.
- UltraTech's capital structure benchmarks favorably against peers with below-industry-average D/E ratio and above-industry-average ROCE confirming capital structure superiority among large Indian cement companies.
- Net Income Approach is rejected for UltraTech the company does not maximize debt as NI predicts; instead, it maintains conservative D/E of 0.24–0.44x reflecting awareness of financial distress risk beyond NI's constant-Ke assumption.
- Traditional Approach is partially validated UltraTech's WACC of 10.02–10.84% suggests a near-optimal capital structure with the company operating slightly below the theoretically optimal D/E of 0.40–0.60x
- implying marginal additional debt capacity exists.
- NOI Approach partially supported UltraTech's WACC remained in a narrow 10.02–10.84% band across five years despite significant leverage changes consistent with NOI's WACC-stability prediction, though not perfect constancy.
- MM with Tax Shield is validated PV of tax shield at current debt levels is ₹5,850 crore confirming that debt financing genuinely adds value through the tax deduction mechanism, validating MM's 1963 modified proposition.
- Capital budgeting analysis confirms investment quality NPV of +₹2,550 crore, IRR of 85.6% >> WACC 10.5%, and payback of 1 year 4 months confirm that UltraTech's capacity expansion investments are highly value-accretive, justifying the capital structure used to finance them.
- 5-Year cumulative EVA of ₹9,325 crore confirms that UltraTech's actual capital structure while conservative by NI and Trade-Off Theory standards has consistently generated economic value above cost of capital throughout the study period.

Suggestions

- UltraTech should maintain Net Debt-to-EBITDA below 1.5x even during the aggressive 200 MTPA capacity expansion phase — leveraging its strong cash generation to fund maximum possible capex internally.
- The company should explore sustainability-linked financing instruments green bonds and ESG-linked loans — to reduce cost of debt while simultaneously advancing its carbon reduction commitments.
- UltraTech should establish an explicit target capital structure range communicating a D/E target of 0.20x–0.40x to investors providing capital structure transparency that supports premium valuation.

- The company should optimize its working capital cycle particularly in managing trade payables and inventory to maximize internal cash generation and minimize short-term borrowing requirements.
- UltraTech should consider strategic use of hybrid capital instruments such as Non-Convertible Debentures with call options to optimize the cost of debt while maintaining capital structure flexibility for future acquisition opportunities.
- UltraTech should formally document its target capital structure range in its Capital Allocation Framework communicating a D/E target of 0.25–0.50x to investors and rating agencies consistent with Trade-Off Theory's recommendation of explicit target leverage management.
- The company should use the MM Tax Shield framework to evaluate each major acquisition's financing mix computing the exact tax shield value versus distress cost of different debt levels before finalizing acquisition financing structure.
- UltraTech should apply NPV and IRR screens (minimum IRR > WACC + 300 bps) to all greenfield capacity investments ensuring continued capital allocation discipline that sustains ROCE > WACC across the expansion cycle.

V. CONCLUSION

This study on "Capital Structure of UltraTech Cement Limited" covering the five-year period FY2020–21 to FY2024–25 has provided a rigorous and comprehensive analysis of India's largest cement company's financing strategy across debt-equity composition, leverage ratios, debt servicing capacity, cost of capital, and shareholder value creation dimensions. The combination of financial discipline and operational excellence directly confirms the effectiveness of UltraTech's capital structure strategy in creating genuine and sustainable shareholder value. The theoretical frameworks applied in this study find strong empirical support in UltraTech's actual capital structure behavior. UltraTech's capital structure management exemplifies the Trade-Off Theory in practice — using debt strategically for value-accretive acquisitions, capturing tax shield benefits, and then systematically deleveraging through strong cash flows to restore financial flexibility. As UltraTech embarks on its ambitious 200 MTPA capacity expansion through FY2027, maintaining the capital structure discipline demonstrated during the study period will be critical for preserving its AAA credit rating, minimizing WACC, and ensuring that expansion investments generate ROCE consistently above the cost of capital the ultimate standard of capital structure success.

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