**MERGER AND ACQUISTION ANALYSIS OF AMBUJA CEMENT USING DISCOUNTED CASH FLOW MODEL**

1. **Akash**

IV semester, Finance specialization, Department of Business Administration, Sahyadri College of Engineering and Management.

1. **Professor. Akshatha P**

Assistant Professor, Department of Business Administration, Sahyadri College of Engineering and Management.

**ABSTRACT**

The cement industry is crucial to global infrastructure and economic growth, with leading companies such as Ambuja Cement significantly influencing market dynamics and industry standards. This research paper aims to evaluate the financial and strategic value of acquiring Ambuja Cement through a detailed application of the Discounted Cash Flow model. The analysis begins with a thorough review of Ambuja Cement's historical financial performance and its position within the industry. It then projects future cash flows based on historical trends, market conditions, and strategic initiatives. These projected cash flows are discounted to their present value using a suitable discount rate that reflects the risk profile and cost of

capital. The resulting valuation offers a clear benchmark for assessing the company's worth and the strategic fit of the acquisition. Additionally, the research paper includes scenario and sensitivity analyses to evaluate how different assumptions impact the valuation. The findings provide actionable insights into the potential benefits and risks of the transaction, such as alignment with strategic goals, potential synergies, and operational efficiencies. Recommendations are given on whether to proceed with the acquisition, strategies for effective integration of Ambuja Cement, and ways to enhance value creation post-transaction. This comprehensive analysis aids in informed decision-making by elucidating both the financial implications and strategic advantages of the proposed merger or acquisition.

**KEYWORDS:** Mergers and Acquisition, Discounted Cash Flow, Synergy, Intrinsic value.

1. **INTRODUCTION:**

The cement industry plays a pivotal role in global infrastructure and economic development, with major players like Ambuja Cement shaping market dynamics and setting industry standards. Ambuja Cement's influence extends through its substantial market presence and contribution to industry practices. This underscores the importance of evaluating such companies to understand their strategic and financial impact on the sector.The research paper aims to determine Ambuja Cement's intrinsic value through a comprehensive financial evaluation. Utilizing the Discounted Cash Flow model, the paper forecasts future cash flows and discounts them to their present value to assess the impact of potential mergers or acquisitions on Ambuja Cement's overall worth. This analysis includes a review of industry trends, sustainability efforts, and the strategic rationale behind the Adani Group's acquisition of Ambuja Cement and ACC Limited. The DCF methodology involves a two-phase evaluation: a forecast period and a terminal value, assuming the company's indefinite lifespan. The objective is to guide decision-makers by elucidating the financial consequences of potential M&A activities and providing insights into whether the company is undervalued or overvalued. The paper also explores strategic alignment, potential synergies, and long-term benefits of the acquisition, offering a thorough evaluation to support informed decision-making in the cement sector.

1. **LITERATURE REVIEW**

Anjala Kalsie and Aishwarya Nagpal (2017) examined the financial synergies in the merger between UltraTech Cement and Samruddhi Cement, using the DCF model and data from 2011-2015. Their analysis found a significant shortfall of INR 4,315 billion between the estimated worth (INR 65,333 billion) and the actual value (INR 61,018 billion), indicating unmet financial synergies. The study supported the hypothesis of absent financial synergy and highlighted negative synergies due to external factors like weak demand and price fluctuations. It emphasized the need for future research on operational synergies and a broader evaluation of mergers in the Indian cement industry.

Sri Ayan Chakraborty (2018) emphasized the importance of the Time Value of Money and the Discounted Cash Flow (DCF) method in financial valuation. The DCF approach, which discounts projected future cash flows using the Weighted Average Cost of Capital, influences Market Price per Share and shareholder wealth. His ANOVA results revealed that UltraTech Cement had

the highest financial metrics and Present Value among Indian cement companies, while ACC had the lowest Present Value and Debt Equity Ratio, and Binani Cements had the lowest Weighted Average Cost of Capital. T-Test analysis showed significant correlations between financial metrics, reinforcing the relevance of DCF in evaluating company value and performance.

Aanchal Mahajan (2016) analyzed Ambuja Cement using the Discounted Cash Flow and Comparable Company Multiple methods. The DCF method, with a 5% terminal growth rate and 13% WACC, valued the company at ₹154,277 million, reflecting its intrinsic value. In contrast, CCM valuations, using EV/EBITDA and EV/Sales multiples, were ₹237,505 million and ₹183,773 million, respectively. These discrepancies highlight the impact of valuation methods, with EV/Sales often being more relevant for steady revenue sectors like cement. This underscores the need to align valuation methods with industry specifics for a comprehensive evaluation.

Nikita Sadiq (2024) explores the effects of mergers and acquisitions (M&A) on HDFC Bank’s financial performance. Through a detailed analysis of pre- and post-M&A data, along with a review of relevant literature and industry standards, the study reveals that six of the seven financial elements examined—Capital Adequacy, Asset Quality, Earning Efficiency, Management Efficiency, and Liquidity Position—showed positive changes. Although there was a minor decline in the CASA to Total Deposits Ratio, it did not significantly impact the bank's overall performance. Sadiq recommends that HDFC Bank continue its careful evaluation of M&A opportunities, focusing on strategic alignment and potential synergies to sustain its sector leadership.

1. **RESEARCH DESIGN**
	1. **PROBLEM STATEMENT**

The cement industry has experienced substantial consolidation, making mergers and acquisitions key to achieving growth and market dominance. Ambuja Cement, a leading industry player, is assessing its strategic options, including potential M&A opportunities. To facilitate this evaluation, it is essential to determine Ambuja Cement's intrinsic value using the Discounted Cash Flow model, comparing it to the company's current market valuation. This analysis will also explore potential synergies and strategic benefits from M&A, providing insights into how these moves could enhance the company's market position and overall value.

* 1. **OBJECTIVES**
* To calculate the intrinsic value of Ambuja Cement using the Discounted Cash Flow (DCF) model.
* To compare Ambuja Cement's intrinsic value with its current market valuation to identify potential mispricing.
* To analyze potential synergies and strategic benefits from prospective mergers or acquisitions involving Ambuja Cement.
	1. **RESEARCH METHODOLOGY**

The study utilizes secondary data sources, including Ambuja Cement's Annual Reports, Press Releases, journals, articles, and relevant websites. The Discounted Cash Flow model is employed to determine the value of the investment by assessing its future returns. The analysis focuses on a one-year period, encompassing both the year before and after the merger. This approach ensures a comprehensive evaluation of Ambuja Cement's financial performance and valuation impact surrounding the merger.

* 1. **LIMITATIONS**

The study faces significant constraints that may affect the reliability of its conclusions. The accuracy of the Discounted Cash Flow model depends on precise projections of future cash flows, which are subject to uncertainties from market fluctuations, raw material costs, and regulatory changes. Variations in assumptions for the Weighted Average Cost of Capital and terminal growth rate can lead to substantial differences in the intrinsic value calculated. Additionally, comparing Ambuja Cement's intrinsic value to its market valuation is limited by forecast data and fluctuating market conditions. Evaluating potential synergies and strategic benefits also involves qualitative factors that are challenging to quantify and may not be fully captured by financial models.

1. **DATA ANALYSIS AND INTERPRETATION**
* **Calculation of intrinsic value of Ambuja cement post-merger**

The cost of equity is calculated as 7.02% plus 0.68 times 6%, resulting in 11.1%. The cost of debt is determined by dividing 2763.7 by 7220.9, yielding 38.2736%. The tax rate is calculated as 11626.1 divided by 59006.2, which equals 19.7%. The post-tax cost of debt is therefore 38.2736% multiplied by (1 - 19.7%). The weight of equity is computed as 1635390.833 divided by the sum of 1635390.833 and 7220.9, equating to 0.9956. The weight of debt is calculated as 7220.9 divided by the sum of 1635390.833 and 7220.9, resulting in 0.0044. The Weighted Average Cost of Capital (WACC) is then calculated as 0.9956 times 11.1% plus 0.0044 times 38.2736% multiplied by (1 - 19.7%), which equals 11.19%, or approximately 11%.

Long-term Growth Rate 4.00%

WACC/ Discount rate 11%

Final Year Cash Flow 5,521.77

Growth Rate 4.00%

Discount Rate 11%

Present Value = FCF/WACC-g \*Present value of last year i.e. 5th year

Present Value=5521.77/11%-4% \*0.593

Present value =46772.28 crore

Intrinsic value =46772.28+18743.90

 = 65516.18 crores

4.5 INTERPRETATION

The Discounted Cash Flow analysis of Ambuja Cement, using a Weighted Average Cost of Capital of 11% and a long-term growth rate of 4%, estimates the company's intrinsic value at approximately ₹65,516.18 crores. This valuation includes a present value of forecasted free cash flows of ₹18,743.90 crores and a discounted terminal value of ₹46,772.28 crores. While the DCF model suggests a strong financial outlook, it is sensitive to assumptions about future cash flows, discount rates, and growth rates. The model also may not fully account for merger-related synergies or integration challenges, but it provides a solid estimate for evaluating strategic merger opportunities.

* **Comparison of Intrinsic value and current market valuation**

Market Valuation=Current Stock Price × Number of Outstanding Shares

Market Valuation =₹ 650.85 × 246.31 crore

Market Valuation =₹ 160310.8635 crore

Difference=Market Valuation−Intrinsic

 Value

Difference=₹ 1,60,310.8635 cr –

 ₹ 65,516.18 cr

Difference=₹ 94,794.6835 crore

Ratio = Market Valuation / Intrinsic Value

Ratio = 1,60,310.8635 cr / 65,516.18 cr

Ratio = 2.45 times

4.6 INTERPRETATION

The intrinsic value of Ambuja Cement, estimated at ₹65,516.18 crores, is notably lower than its market valuation of ₹1,60,310.8635 crores, indicating a potential overvaluation. The market price is approximately 2.45 times higher than the intrinsic value, suggesting that the stock may be overpriced based on fundamental analysis. This discrepancy could reflect market sentiment, speculative trading, or expectations of future growth not yet captured in the valuation. It is important to evaluate strategic developments, industry trends, and qualitative factors that might justify the higher market price. Overall, the significant difference suggests the stock might be trading at a premium not fully supported by its intrinsic value.

* **Analyzing potential synergies and strategic benefits from prospective mergers or acquisitions involving Ambuja Cement**

The cost of equity is calculated as 7.02% plus 0.72 times 6%, resulting in 11.34%. The cost of debt is determined by dividing 2763.7 by 7220.9, yielding 38.2736%. The tax rate is calculated as 11626.1 divided by 59006.2, which equals 19.7%. The post-tax cost of debt is therefore 38.2736% multiplied by (1 - 19.7%). The weight of equity is computed as 1585019.958 divided by the sum of 1585019.958 and 7220.9, equating to 0.9955. The weight of debt is calculated as 7220.9 divided by the sum of 1585019.958 and 7220.9, resulting in 0.0045. The Weighted Average Cost of Capital (WACC) is then calculated as 0.9955 times 11.34% plus 0.0045 times 38.2736% multiplied by (1 - 19.7%), which equals 11.385%, or approximately 12%.

Long-term Growth Rate 4.00%

WACC/ Discount rate 12%

 Present value =12698.60 crores

Intrinsic value = 12698.60+5928.16

 = 18626.76 crores

Value of firm (combined) = 65516.18 crores

Value of firm (standalone) = 18626.76 crores

Value of Synergy = 46889.42 crores

4.11 INTERPRETATION

The analysis of Ambuja Cement's potential mergers or acquisitions reveals significant strategic benefits and synergies. With a current Weighted Average Cost of Capital (WACC) of 12%, influenced by a high post-tax cost of debt and a strong equity base, the company could potentially optimize its capital structure through strategic debt management. Projected Free Cash Flows show a positive growth trajectory, with a present value of ₹5,928.16 crores, contributing to a total enterprise value of ₹18,626.76 crores when including a terminal value of ₹12,698.60 crores. The post-merger valuation of ₹46,889.42 crores highlights substantial synergy potential, indicating that strategic mergers or acquisitions could significantly enhance Ambuja Cement’s overall value and market positioning.

1. **Findings**

The Discounted Cash Flow analysis of Ambuja Cement provides a detailed assessment of its intrinsic value in light of a potential merger. With a Weighted Average Cost of Capital of 11% and a long-term growth rate of 4%, the intrinsic value is calculated at ₹65,516.18 crores. This value is derived from forecasted free cash flows amounting to ₹18,743.90 crores and a discounted terminal value of ₹46,772.28 crores, reflecting a solid financial outlook despite market volatility and competitive pressures. The current market valuation of ₹1,60,310.8635 crores is approximately 2.45 times higher than the intrinsic value, suggesting potential overvaluation. This discrepancy may be driven by investor sentiment, speculative trading, or optimistic growth expectations not fully captured in the intrinsic value. The analysis also highlights significant potential synergies from mergers or acquisitions, with the standalone enterprise value at ₹18,626.76 crores and the combined firm’s value post-merger at ₹46,772.28 crores, representing a substantial synergy value of ₹28,145.52 crores. This indicates that strategic consolidation could lead to substantial value creation through operational efficiencies and enhanced market positioning.

1. **CONCLUSION**

The analysis of Ambuja Cement highlights a significant discrepancy between its intrinsic value and market valuation, suggesting the stock may be overvalued. With an intrinsic value of ₹65,516.18 crores, based on detailed financial projections and discounting techniques, compared to a market valuation of ₹1,60,310.8635 crores, there is a notable divergence indicating that the stock price exceeds its fundamental value. This discrepancy necessitates a cautious approach to investment and a thorough review of underlying assumptions and market conditions. On the other hand, the potential synergies from mergers or acquisitions present a compelling case for strategic consolidation. The increase in firm value from ₹18,626.76 crores to ₹46,772.28 crores, with synergies valued at ₹28,145.52 crores, underscores the significant value creation possible through such strategic moves. This potential enhancement of valuation and market position emphasizes the importance of considering mergers and acquisitions for growth. In conclusion, while the intrinsic value points to a conservative valuation, the higher market valuation may reflect positive sentiment or growth expectations. Investors should carefully assess both financial metrics and strategic benefits when considering Ambuja Cement's future prospects.

1. **REFERENCE**
* Kalsie, A., & Nagpal, A. (2017). Identification of Financial Synergy: A Case Study of Merger of UltraTech Cement with Samruddhi Cement. International Journal of Management Research, 8(2), 42-60.
* Chakraborty, S. A. APPLICATION OF DISCOUNTED FCF: A STUDY ON INDIAN CEMENT SECTOR.
* Mahajan, A., & Joshi, H. (2016). Valuation of Ambuja Cement By Using Different Valuation Approches. FORE School of Management.
* SADIQ, N. (2024). IMPACT OF MERGERS AND ACQUISITIONS ON FINANCIAL PERFORMANCE.
1. **BIBILOGRAPGHY**
* [**https://scholar.google.com/**](https://scholar.google.com/)
* [**https://www.gurufocus.com/term/wacc/NSE:AMBUJACEM**](https://www.gurufocus.com/term/wacc/NSE%3AAMBUJACEM)
* [**https://www.screener.in/**](https://www.screener.in/)
* [**https://www.moneycontrol.com/financials/ambujacements/balance-sheetVI/AC18**](https://www.moneycontrol.com/financials/ambujacements/balance-sheetVI/AC18)
* [**https://www.nseindia.com/get-quotes/equity?symbol=AMBUJACEM**](https://www.nseindia.com/get-quotes/equity?symbol=AMBUJACEM)
* [**https://www.bseindia.com/stock-share-price/ambuja-cements-ltd/ambujacem/500425/**](https://www.bseindia.com/stock-share-price/ambuja-cements-ltd/ambujacem/500425/)