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# CAPITAL STRUCTURE OPTIMIZATION IN MANUFACTURING FIRMS AT ASIAN PAINTS

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**ABSTRACT:** Capital structure has a significant impact on corporate finance because it determines the proportion of debt and equity that a company uses to fund its operations and expansion. Businesses that optimize their capital structure can lower their total cost of capital while increasing shareholder wealth. This investigation evaluates Asian Paints, a well-known Indian paint manufacturer, to assess its capital structure strategies and options. The investigation looks into the company's historical financial performance, leverage ratios, cost of capital, and the effect of the debt-to-equity ratio on profitability and risk. By examining the impact of various funding sources on financial stability, the research demonstrates how Asian Paints strikes the right balance between risk and return. The findings show that a well-structured capital mix can help manufacturing businesses achieve long-term financial sustainability, improve operational effectiveness, and maintain growth.

***Keywords:*** *Debt-Equity Mix, Weighted Average Cost of Capital (WACC), Financial Leverage, Cost of Debt and Equity, Risk-Return Trade-off*

## I. INTRODUCTION

The capital structure of a company is the combination of debt and/or equity used to fund its operations and assets. The debt-to-equity or debt-to-capital ratio is commonly used to describe a company's capital structure. Organizations use debt and equity capital to finance day-to-day operations, capital expenditures, acquisitions, and other investments. Businesses must weigh the benefits and drawbacks of financing their operations with debt or equity. Managers will strive to achieve the most optimal capital structure by striking a balance between the two. Capital structures vary significantly across industries. Mining and other cyclical industries have unpredictable cash flows, making it difficult to predict whether they will be able to repay their debts. As a result, they are unsuitable for debt.

Certain industries, such as banking and insurance, require large amounts of debt to operate and rely heavily on leverage. It may be more difficult for private companies to use debt over equity, especially small businesses that require personal guarantees from their owners. Mergers and acquisitions can cause significant changes to a newly formed organization's capital structure. Several factors will influence the final structure, including whether both companies retain their current debt and whether the target receives cash or shares. Identifying the new company's pro forma capital structure is an important part of financial modeling for mergers and acquisitions.

The financial stability and expansion potential of a manufacturing company are determined by its capital structure. It refers to the use of debt and equity financing by an organization to

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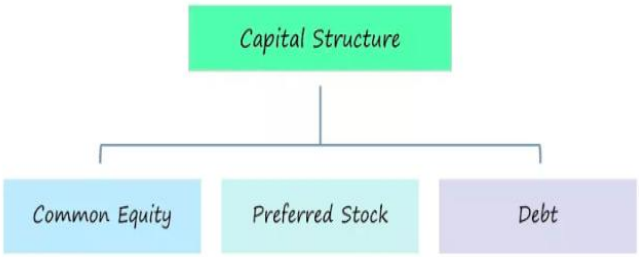
fund operations, invest in new initiatives, and increase output. While minimizing capital costs, an optimal capital structure strikes a balance between debt risk and equity cost.

Manufacturing companies, which frequently invest heavily in machinery, technology, and inventory, must ensure smooth operations and long-term profitability by obtaining the appropriate capital mix. In recent years, manufacturers have faced a combination of new technologies, increased competition, and shifting consumer demands. As a result, it is more important than ever to optimize their capital structure.

Companies can develop strategies to reduce financial risk and increase shareholder value by thoroughly analyzing factors such as capital cost, financial leverage, cash flow stability, and market conditions. Furthermore, an optimized capital structure allows manufacturing firms to maintain financial flexibility, secure external funding as needed, and invest strategically in innovative concepts. These factors contribute to their long-term success and ability to outperform their industry peers.

## II. TYPES OF CAPITAL STRUCTURES




**Debt Capital**

Debt Capital Structure data discloses the sources of debt for both publicly and privately held companies. The DCS data, derived from actual business filings and accounts, covers all types of debt, including cash and equity. The DCS data includes swaps, short-term credit facilities, and supplementary coverage. This information allows users to investigate debt instruments by their immediate parent company and final issuer. This allows them to track the evolution of the structure over time.

**Financial Leverage**

The term refers to the amount of debt that constitutes a significant portion of the organization's total capital. Capital gearing is another term for it. A company with a large amount of debt is referred to as highly leveraged, whereas one with a small amount of debt is referred to as low leveraged.

**Equity Capital**

Debt and equity make up the capital structure. Share ownership and future cash flow rights are the sources of equity capital in a company. Debt is typically made up of bonds and loans, whereas equity includes common stock, preferred stock, retained earnings, and even short-term loans. Equity does not require repayment, whereas debt refers to the funds that a business borrows.

**Optimal Capital Structure**

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whereas equity includes common stock, preferred stock, retained earnings, and even short-term loans. Equity does not require repayment, whereas debt refers to the funds that a business borrows.

## III. LITERATURE SURVEY

Tasrim, P. (2025). This investigation looks into the impact of capital structure optimization on a company's financial performance. This research uses empirical data from a mining company collected over a number of years to investigate the impact of debt and equity ratios on financial stability and profitability. According to the research, businesses with a balanced capital structure can reduce financial risk while increasing shareholder profits. It has been demonstrated that strategic debt and equity management can have a significant impact on long-term growth and liquidity. The research uses statistical analysis to determine the correlations between a company's performance and capital structure decisions.

Mattia, A. (2024) This research compares technology startups to traditional industry firms to determine the impact of capital structure decisions on firm value. The research found that traditional businesses use more debt due to their consistent cash flows and tax benefits, whereas technology startups typically rely more on equity due to their unpredictable growth and increased risk. The analysis shows that the best capital structures differ depending on the industry, growth potential, and risk profile. The research uses comparative metrics and financial data to show how leverage affects a company's profitability, value, and investment capacity. Ahmed, F. (2024). This research examines the relationship between corporate capital structure and firm performance using data from 78 publicly traded companies on the Dhaka Stock Exchange. The research uses panel data analysis to assess the impact of financing decisions on profitability and growth from 2017 to 2021. The findings show that maintaining a proper debt-to-equity ratio improves financial performance and reduces risk. The investigation concluded that both excessive and insufficient leverage can have a negative impact on operational efficiency and shareholder returns. Industry-specific data show that the impact of capital structure on performance varies.

Kontuš, E. (2023). This paper proposes a model that maximizes corporate value while minimizing capital costs in order to determine a company's optimal capital structure. It investigates the relationship between debt and equity financing, as well as how financing decisions affect a company's overall value. The research proposes a quantitative model for calculating the optimal debt-equity ratio in a variety of market scenarios. By analyzing the cost of capital, the research shows that excessive debt can lead to financial difficulties, whereas insufficient debt can reduce tax breaks.

Luo, P. (2023). This research develops a theoretical model to investigate the effect of environmental regulations on the optimal capital structure and investment opportunities. Businesses that address environmental concerns frequently take a risk-averse approach, which can lead to insufficient capital investment and the disposal of assets. The research employs a dynamic Q-theory framework to demonstrate how regulatory pressures affect the risk-return trade-off in financing decisions. The research emphasizes the importance of incorporating environmental considerations into corporate financial planning. The findings

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suggest that businesses must strike a balance between debt and equity to mitigate the impact of regulatory compliance on growth.

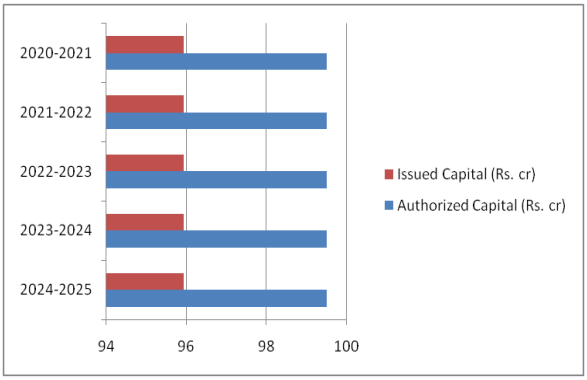
Satyanarayana, K.T. S. S., Narasimha Rao, A., & Jaya Surya, K. (2023). This research investigates the effect of mergers and acquisitions (M&As) on the financial performance and capital structure of Indian banks. The research uses a paired t-test to compare differences in capital structure and performance metrics between specific banks over a two-year period before and after mergers and acquisitions. The findings show that mergers and acquisitions (M&As) significantly alter the capital structure, thereby influencing the organization's financial performance. The research examines how strategic consolidation affects the financial

stability and operational effectiveness of banks in a competitive environment.

## IV. DATA ANALYSIS AND INTERPRETATION

### CAPITAL STRUCTURE OF ASIAN PAINTS

| Year | Instrument | Authorized Capital | Issued Capital | -PAIDUP- | | |
|---|---|---|---|---|---|---|
| | | (Rs. cr) | (Rs. cr) | Shares (nos) | Face Value | Capital |
| 2024-2025 | Equity Share | 99.5 | 95.92 | 95,91,97,790 | 1 | 95.92 |
| 2023-2024 | Equity Share | 99.5 | 95.92 | 95,91,97,790 | 1 | 95.92 |
| 2022-2023 | Equity Share | 99.5 | 95.92 | 95,91,97,790 | 1 | 95.92 |
| 2021-2022 | Equity Share | 99.5 | 95.92 | 95,91,97,790 | 1 | 95.92 |
| 2020-2021 | Equity Share | 99.5 | 95.92 | 95,91,97,790 | 1 | 95.92 |




**INTERPRETATION:** The company's authorized capital was ₹99.5 crore from 2020-2021 to 2024-2025. The company has consistently issued and paid-up capital of ₹95.92 crore, including 95.92 crore ₹1 equity shares. This demonstrates that the company's capital structure and share issuance process have not changed over the last five years.

### DESCRIPTIVE STATISTICS – COMPARATIVE FINANCIAL RATIOS

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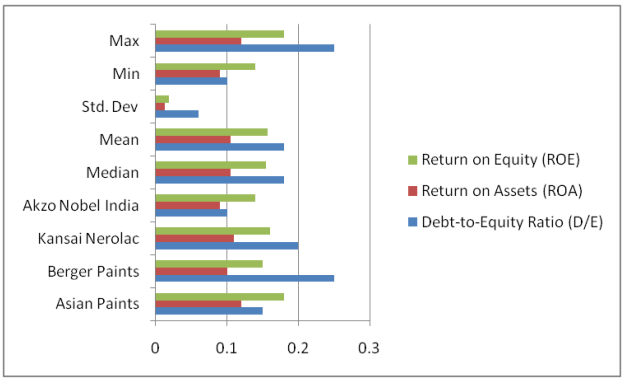
| Company | Debt-to-Equity Ratio (D/E) | Return on Assets (ROA) | Return on Equity (ROE) |
|---|---|---|---|
| Asian Paints | 0.15 | 12% | 18% |
| Berger Paints | 0.25 | 10% | 15% |
| Kansai Nerolac | 0.2 | 11% | 16% |
| Akzo Nobel India | 0.1 | 9% | 14% |
| Median | 0.18 | 10.50% | 15.50% |
| Mean | 0.18 | 10.50% | 15.75% |
| Std. Dev | 0.06 | 1.30% | 1.80% |
| Min | 0.1 | 9% | 14% |
| Max | 0.25 | 12% | 18% |




**INTERPRETATION:** The paint industry's median debt-to-equity ratio is 0.18, indicating that it is not highly leveraged. This implies that they are responsible with their financial resources. The company's profitability is typical, with an average return on assets (ROA) of 10.5% and a return on equity (ROE) of 15.5%. This demonstrates how effectively the organization is utilizing its assets and equity. The businesses' performance is consistent, as evidenced by their low standard deviation.

**DESCRIPTIVE STATISTICS – FIRM SIZE / TOTAL ASSETS**

| Company | Total Assets (₹ crore) | Firm Size (log of assets) |
|---|---|---|
| Asian Paints | 8,000 | 3.9 |
| Berger Paints | 3,500 | 3.54 |
| Kansai Nerolac | 4,200 | 3.62 |
| Akzo Nobel India | 2,800 | 3.45 |
| Median | 3,850 | 3.58 |
| Mean | 4,125 | 3.63 |
| Std. Dev | 2,280 | 0.18 |
| Min | 2,800 | 3.45 |
| Max | 8,000 | 3.9 |

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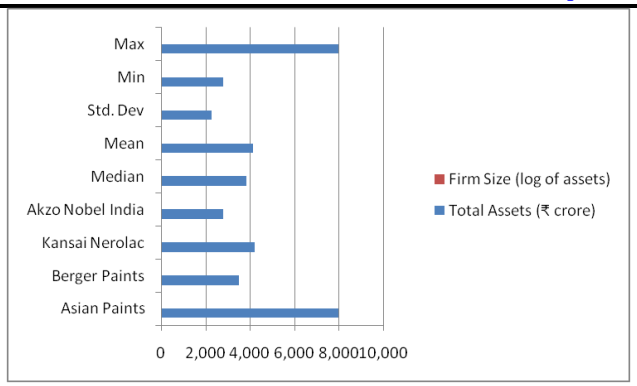


**INTERPRETATION:** Asian Paints has the industry's largest total assets (₹8,000 crore), exceeding the industry average. Akzo Nobel India has the lowest number of assets, totaling ₹2,800 crore. The median asset base is ₹3,850 crore, which falls slightly below the average of ₹4,125 crore. This implies that a moderate concentration is focused on medium-sized businesses. The log of assets for firm size values varies between 3.45 and 3.90, with a low standard deviation of 0.18. This implies that the industry's overall firm sizes are relatively similar, despite differences in absolute asset levels.

## V. CONCLUSION

Strategic capital structure optimization in manufacturing firms requires a debt-equity balance to ensure financial stability, cost-effectiveness, and long-term growth. Businesses can reduce capital costs and risk by carefully aligning their financing decisions with industry standards, project requirements, and current market conditions. A company's resilience is enhanced by obtaining funding from multiple sources, retaining profits, and receiving debt tax breaks. In contrast, convertible bonds and other adaptable instruments improve an organization's adaptability.

Furthermore, prudent risk management and the maintenance of high credit ratings ensure the availability of capital on favorable terms. In the end, a well-designed capital structure increases shareholder value and strengthens the company's competitive position, allowing it to thrive in changing manufacturing environments while remaining financially stable.

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