

# Impact Of Mergers and Acquisitions on Financial Performance in The Pharmaceutical Industry: Evidence from India

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**Abstract**—Mergers and acquisitions (M&A) have become central strategic instruments in the pharmaceutical industry, particularly in volatile and innovation-driven environments. This study evaluates the impact of M&A on the financial performance of selected Indian pharmaceutical firms using a longitudinal pre- and post-merger framework. The study analyzes ten years of financial data (five years before and five years after merger) for six major firms. Profitability, financial risk, and operational efficiency were assessed using paired sample t-tests. The results indicate statistically significant improvements in profitability and efficiency, alongside a moderate increase in leverage. The findings support synergy-based explanations of merger outcomes while emphasizing the importance of disciplined financial management. The study contributes to emerging market merger literature and offers strategic implications for corporate leadership.

**Index Terms**—Mergers and Acquisitions; Financial Performance; Pharmaceutical Industry; Paired t-test; Emerging Markets.

## I. INTRODUCTION

The contemporary global business environment is characterized by heightened volatility, regulatory shifts, technological disruption, and intensified competition. The concept of a VUCA environment—volatility, uncertainty, complexity, and ambiguity—has become central to understanding corporate strategic behavior. Within such an environment, firms continuously seek mechanisms to sustain competitive advantage and ensure long-term value creation. Mergers and acquisitions (M&A) have emerged as prominent strategic tools for achieving rapid growth, market expansion, and resource consolidation.

The pharmaceutical industry represents one of the most research-intensive and regulation-driven sectors globally. Patent expiration cycles, rising R&D costs, biosimilar competition, and compliance requirements compel firms to pursue consolidation strategies. In India, the pharmaceutical sector has gained international recognition for its generic manufacturing capabilities and export competitiveness. However, sustaining growth in a dynamic global marketplace requires continuous innovation, capital efficiency, and operational integration.

Mergers and acquisitions provide opportunities for synergy realization, economies of scale, cost rationalization, and enhanced research capabilities. Nevertheless, M&A activity also introduces integration challenges, cultural conflicts, and financial risks. The literature presents mixed evidence regarding whether mergers generate sustained improvements in financial performance.

This study seeks to empirically evaluate the financial consequences of mergers in the Indian pharmaceutical sector by comparing pre- and post-merger financial indicators using statistical testing. Unlike event-based studies that focus on short-term stock market reactions, this research emphasizes accounting-based performance over a ten-year horizon.

## II. LITERATURE REVIEW

Kumar and Bansal (2021) conducted a comprehensive longitudinal study examining post-merger financial performance in pharmaceutical firms. Their analysis revealed moderate improvements in profitability indicators over time, suggesting gradual synergy realization rather than immediate gains. However, the study also noted variability in outcomes across firms,

indicating that integration effectiveness plays a critical role in sustaining performance enhancement.

Rao and Mishra (2021) investigated the impact of acquisition financing on capital structure dynamics in Indian firms. Their findings demonstrated that mergers significantly alter leverage ratios, particularly when financed through debt instruments. The study emphasized that while leverage may enhance returns, it simultaneously increases financial risk exposure, thereby necessitating prudent capital structure management.

Gupta (2022) analyzed stock market reactions to merger announcements using an event-study methodology. The results indicated positive short-term abnormal returns around announcement dates; however, these gains did not consistently translate into long-term accounting performance improvements. The study highlighted the divergence between market perception and actual financial outcomes.

Thomas and Varghese (2022) focused on the relationship between R&D intensity and post-merger innovation performance in pharmaceutical firms. Their research underscored that successful integration of research capabilities significantly influences long-term competitiveness. The authors argued that operational and technological alignment is essential for achieving sustained innovation-driven growth.

Sharma (2022) examined cross-border mergers in emerging markets and identified significant financial volatility during post-acquisition integration. The study highlighted challenges related to regulatory compliance, exchange rate fluctuations, and institutional differences. It concluded that cross-border mergers require robust risk management frameworks to mitigate transitional instability.

Kumar and Upadhyay (2022) analyzed pharmaceutical mergers within uncertain and unpredictable business environments. Their findings suggested that VUCA conditions amplify integration complexity and strategic risk. The study recommended cautious planning and structured execution to ensure long-term value creation in consolidation strategies.

Kumar and Upadhyay (2023) empirically examined financial performance before and after mergers in selected pharmaceutical firms. Using ratio analysis and statistical testing, the study found statistically significant improvements in profitability indicators. The results supported synergy-based explanations but emphasized the importance of managerial discipline during integration.

Kumar and Upadhyay (2024) extended their earlier research by employing advanced empirical analysis to evaluate merger impact in India. While profitability enhancement was observed, the study identified heterogeneity in outcomes across firms. The authors concluded that merger success depends on firm-specific strategic alignment and operational execution quality.

### III. OBJECTIVES OF THE STUDY

1. To evaluate the impact of mergers and acquisitions on profitability.
2. To analyze the effect of mergers on financial risk.
3. To assess changes in operating efficiency following mergers.

### IV. DATA COLLECTION

The study uses secondary data obtained from audited annual reports of selected Indian pharmaceutical companies. A ten-year dataset (five pre-merger and five post-merger years) was compiled for each firm. Financial ratios were calculated using standardized formulas.

### V. STATISTICAL TOOLS

The study employs the following statistical tool:  
Paired Sample t-test

### VI. DATA ANALYSIS AND INTERPRETATION

#### 6.1 Profitability Analysis

Table 1 Paired Sample t-Test – Profitability

| Variable | Mean Difference | t-value | p-value | Decision    |
|----------|-----------------|---------|---------|-------------|
| ROA      | 2.57            | 3.42    | 0.003   | Significant |
| ROE      | 4.35            | 2.98    | 0.007   | Significant |
| NPM      | 3.15            | 3.11    | 0.005   | Significant |
| EBITDA   | 3.65            | 2.65    | 0.012   | Significant |

Interpretation

The statistical results indicate that key profitability indicators such as ROA, ROE, and Net Profit Margin increased significantly after merger implementation. This improvement suggests effective realization of cost synergies and enhanced revenue generation. The findings support the proposition that strategic consolidation strengthens earnings capacity in the pharmaceutical sector.

6.2 Financial Risk Analysis

Table 2 Paired Sample t-Test – Financial Risk

| Variable          | Mean Difference | t-value | p-value | Decision        |
|-------------------|-----------------|---------|---------|-----------------|
| Debt-Equity       | 0.44            | 2.75    | 0.011   | Significant     |
| Interest Coverage | 1.65            | 2.32    | 0.021   | Significant     |
| Current Ratio     | 0.15            | 1.25    | 0.224   | Not Significant |

Interpretation

Debt-Equity ratio increased significantly, indicating higher leverage post-merger. However, interest coverage also improved significantly, reflecting enhanced earnings capacity. Liquidity change was not statistically significant.

6.3 Operating Efficiency Analysis

Table 3 Paired Sample t-Test – Operating Efficiency

| Variable           | Mean Difference | t-value | p-value | Decision    |
|--------------------|-----------------|---------|---------|-------------|
| Asset Turnover     | 0.26            | 3.56    | 0.002   | Significant |
| Operating Ratio    | -0.07           | -2.88   | 0.009   | Significant |
| Inventory Turnover | 1.30            | 3.10    | 0.004   | Significant |

Interpretation

Operational efficiency improved significantly following mergers. Asset utilization increased and cost ratios declined, confirming synergy realization.

VII. FINDINGS

1. The analysis revealed statistically significant increases in key profitability indicators such as ROA and ROE following merger implementation. This suggests that synergy realization and revenue

consolidation positively influenced overall financial performance.

2. Post-merger firms demonstrated improved asset turnover and reduced operating ratios, indicating enhanced resource allocation. Integration of production and distribution systems contributed to cost rationalization and productivity gains.
3. The Debt-Equity ratio increased after mergers, reflecting reliance on acquisition financing. While leverage expanded, it remained within manageable limits relative to earnings growth.
4. Interest coverage ratios improved significantly, suggesting that operating income growth offset higher financial obligations. This indicates sustainable financial management post-merger.
5. Although performance improvements were not uniform across all companies, the aggregate trend remained favorable. Firm-specific strategic alignment and integration effectiveness influenced the magnitude of success.

VIII. SUGGESTIONS

1. Mergers must be aligned with long-term corporate objectives such as innovation expansion and market penetration. Strategic misalignment can undermine synergy realization and erode shareholder value.
2. While debt financing may enhance returns, excessive borrowing increases financial vulnerability. A balanced capital structure ensures stability during post-merger transition.
3. Dedicated integration teams and defined timelines are essential for harmonizing operations and systems. Effective integration directly influences operational efficiency and profitability.
4. Merger success should be assessed through long-term financial indicators rather than short-term fluctuations. Sustained monitoring enables corrective action and strategic recalibration.
5. Board-level supervision ensures accountability and alignment with shareholder interests. Transparent reporting mechanisms enhance stakeholder confidence during merger execution.

REFERENCES

[1] Gupta, M. (2022). Market reaction to merger announcements in the pharmaceutical industry.

- Journal of Applied Financial Research, 15(4), 45–63.
- [2] Kumar, K. N. (2025). Evaluating financial performance: An analytical study of HDFC Bank's financial statements. *BTHN Journal*, 25(1), 23–32.
- [3] Kumar, K. N., & Upadhyay, M. (2022a). Mergers and acquisitions in the pharmaceutical industry: A challenge in an uncertain and unpredictable environment. *Pramana Research Journal*, 12(7), 1–15.
- [4] Kumar, K. N., & Upadhyay, M. (2023). An examination of financial performance before and after mergers. *Journal of Research Administration*, 5(2), 4132–4142.
- [5] Kumar, K. N., & Upadhyay, M. (2024). Examining the impact of mergers and acquisitions on financial performance: Empirical evidence from India. *Journal of the Maharaja Sayajirao University of Baroda*, 58(1), 1–15.
- [6] Rao, P., & Mishra, K. (2021). Leverage dynamics and post-acquisition performance in Indian firms. *Journal of Financial Research and Practice*, 12(3), 118–136.
- [7] Sharma, R. (2022). Cross-border acquisitions and financial volatility in emerging markets. *Global Finance Journal*, 27(2), 77–94.
- [8] Thomas, J., & Varghese, P. (2022). R&D intensity and post-merger innovation in pharmaceutical firms. *Research and Innovation Management Review*, 19(2), 89–106.