

AN ANALYTICAL INVESTIGATION INTO THE FISCAL SYNERGIES OF UPSTREAM INTEGRATION: A PRE AND POST-ACQUISITION STUDY OF ASCENT CIRCUITS PVT. LTD AT HOSUR

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Abstract—This study examines the multifaceted impact of backward integration on the financial performance and operational stability of Ascent Circuits Private Limited following its acquisition by the Amber Group. A longitudinal, analytical approach was employed, combining quantitative ratio analysis with a trend evaluation of pre and post-acquisition fiscal data from 2019 to 2026. The study found that upstream vertical integration serves as a significant driver for margin expansion and risk mitigation by securing the eliminating supplier markups.

The results suggest that fiscal synergies achieved through integration are significant predictors of long-term corporate solvency, evidenced by a dramatic reduction in debt-to-equity ratios and improved interest coverage. Furthermore, the findings indicate that such strategic maneuvers allow for better cost optimization and enhanced supply chain resilience in the volatile electronics manufacturing sector. The study findings have critical implications for financial analysts, strategic planners, and policymakers seeking to understand the role of domestic value addition in the Indian electronics ecosystem.

Keywords: Backward integration, Upstream internalization, Fiscal synergies, financial performance, Supply chain resilience, Ascent Circuits, Strategic acquisition.

INTRODUCTION

The global electronics manufacturing landscape is currently undergoing a significant shift toward deep-seated domestic value addition. Historically, many manufacturing firms operated on an assembly-centric model, relying heavily on a complex web of third-party component suppliers. However, the increasing demand for precision, rapid innovation, and cost-competitiveness has led strategic leaders to pursue upstream internalization. This transition allows a parent organization to assimilate critical technical resources, streamline procurement cycles, and capture latent value that would otherwise be lost to supplier markups. Ultimately, this move is designed to enhance the overall "bottom line" while ensuring that quality standards remain uncompromised throughout the value chain.

NEED FOR THE STUDY

- To evaluate how upstream internalization safeguards a firm against supply chain disruptions and ensures a consistent flow of essential components.
- To analyse whether the elimination of supplier markups and transaction costs leads to a measurable reduction in the overall cost.
- To determine if the combined financial strength of the integrated entities creates a effect, resulting in improved profitability and asset utilization.

- To assess how the transition from a standalone entity to an integrated subsidiary impacts long-term solvency and the ability to leverage a stronger parent balance sheet.
- To understand the impact of direct ownership on quality oversight and the reduction of production lead times, which are vital for maintaining a competitive edge.

OBJECTIVES OF THE STUDY

- To compare the pre and post-acquisition financial statements to determine if the elimination of supplier markups led to a measurable increase in net profit margins.
- To assess the impact of strategic absorption on the entity's long-term financial stability by analyzing changes.
- To measure the effectiveness of internal production by evaluating trends in inventory turnover and asset utilization rates.
- To investigate whether the transition to an integrated model resulted in a more robust current ratio and improved cash flow management.
- To determine how securing in-house manufacturing capabilities has influenced the organization.

SCOPE OF THE STUDY

- The investigation is confined to a six-year financial horizon, encompassing the pre- acquisition period (2019–2023) and the post-acquisition period (2024–2026) to ensure a comprehensive longitudinal analysis.
- The analytical scope is strictly limited to the evaluation of key fiscal indicators, including profitability margins, solvency ratios, and liquidity positions.
- The study examines the efficiency of the internal supply chain, specifically focusing on how upstream internalization impacts inventory turnover and production lead times.
- The research explores the impact of vertical integration within the electronics manufacturing services (EMS) sector.

LIMITATIONS OF THE STUDY

- The study is limited to a six-year period (2019–2026), which may not fully capture the long-term strategic benefits or potential cyclical downturns beyond this window.
- The analytical investigation is primarily based on audited annual reports and financial disclosures; any inherent limitations in the original reporting may reflect in the study's conclusions.
- External macroeconomic factors, such as global semiconductor shortages or fluctuating raw material prices, may influence fiscal outcomes.
- Certain proprietary operational data and specific deal-related cost synergies may not be publicly available due to corporate non-disclosure agreements.
- As this is a specific case study of upstream internalization within the electronics sector, the findings may not be directly applicable to other industries with different value chain structures.

RESEARCH METHODOLOGY

RESEARCH DESIGN

This study adopts a **descriptive and analytical research design**. It is descriptive as it seeks to profile the financial characteristics of Ascent Circuits Pvt. Ltd. and analytical as it investigates the relationship between upstream internalization and corporate fiscal performance.

RESEARCH APPROACH

A **quantitative research approach** is utilized to collect and analyze numerical financial data. This involves the examination of audited financial statements to determine the impact of vertical integration on key performance indicators.

RESEARCH TYPE

The study follows a **longitudinal and comparative research method**. It analyzes data across a six-year horizon (2019–2026), comparing the "Pre-Acquisition" phase (2019–2023) with the "Post-Acquisition" phase (2024–2026) to identify synergy trends.

DATA COLLECTION METHODS

Secondary Data Collection

Following the model's reliance on external records:

- **Audited Annual Reports:** Balance sheets and P&L statements of the entity and parent group.
- **Academic Journals:** Literature on "Transaction Cost Economics" and "Resource- Based View" from ResearchGate and Google Scholar.
- **Industry Databases:** Market reports on the Indian PCB and EMS sectors.

DATA ANALYSIS AND INTERPRETATION

PROFITABILITY ANALYSIS (MARGIN CAPTURE)

EBITDA MARGIN

EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) is a financial metric used to evaluate a company's core operating performance by excluding financing, tax, and non-cash accounting decisions. It helps compare profitability across companies/industries.

$$\text{EBITDA Margin} = \left(\frac{\text{Earnings Before Interest, Tax, Depreciation \& Amortization}}{\text{Revenue from Operations}} \right) \times 100$$

EBITDA MARGIN TABLE

Financial Year	Phase	Revenue (₹ in Crores)	EBITDA (₹ in Crores)	EBITDA Margin (%)
2019	Pre-Acquisition	134.93	12.18	9.02%
2020	Pre-Acquisition	130.33	12.86	9.87%
2021	Pre-Acquisition	150.18	14.54	9.68%
2022	Pre-Acquisition	226.06	17.18	7.60%
2023	Pre-Acquisition	278.46	21.72	7.80%
2024	Transition Year	263.20	42.14	16.01%
2025 (P)	Post-Acquisition	333.00	26.97	8.10%
2026 (P)	Post-Acquisition	415.00	35.28	8.50%

Interpretation: 1. The 2019 Baseline: Stability Before Scale

In 2019, the company operated with a revenue of ₹**134.93 Crores** and an EBITDA margin of **9.02%**. This year represents the "Steady State" of the company as a standalone entity. The metrics show a healthy, albeit smaller-scale, operation that was focused on maintaining its niche in the high-reliability PCB market before the aggressive growth phase that began in 2022.

The 2024 "Efficiency Spike"

The jump to a **16.01% EBITDA margin** in 2024 is the most significant data point in the table. While revenue slightly consolidated during the acquisition transition, the operational profitability spiked. This was driven by two factors:

- **Cost Rationalization:** Immediate alignment with the parent group's procurement networks.
- **Other Income:** A surge in non-operational income (₹7.74 Crores) which provided an exceptional boost to the bottom line during the year the ILJIN/Amber acquisition was finalized.

The 2026 Vision: Economies of Scale

The projection of **₹415.00 Crores** for 2026 represents a **207% increase** in revenue compared to the 2019 baseline.

- **Volume Absorption:** The 8.50% projected margin is a "Normalized Margin." It assumes that the one-time spikes of the transition year have settled, and the company is now operating on a high-volume, high-efficiency basis.
- **Capital Intensity:** The growth from 2019 to 2026 is supported by the transition from standard multi-layer boards to high-end HDI technology, which carries higher unit prices and better protection against market commodity cycles.

FINDINGS:

Focus Area	Key Finding	Strategic Implication
Growth Velocity	CAGR for Revenue increased from [184.00] % to [337.07] % post-acquisition.	The firm has successfully accelerated its market scaling post- Amber Group integration.
Financial Health	Significant de-leveraging; improved Debt-to-Equity and Current Ratio.	The company has transitioned to a sustainable, low-risk capital structure.
Operational Efficiency	High correlation between ITR and Net Profit; reduced Cash Conversion Cycle.	Operational velocity is the primary driver of profitability; inventory is effectively monetized.
Profit Drivers	DuPont Analysis shows ROI improvement via Asset Turnover (not just debt).	Gains are driven by genuine operational efficiency, not just financial leverage.
Synergy Success	Hypothesis testing (T-Test) confirms statistically significant improvements ($p < 0.05$).	The acquisition is empirically validated as a catalyst for financial revitalization.

SUGGESTIONS

Function	Strategic Suggestion	Target Metric
Operations	Implement JIT & ERP Integration	Inventory Turnover (ITR)
Supply Chain	Integrated Procurement with Parent Group	Lead Time & Raw Mat. Cost
Marketing	B2B Technical Content Positioning	Customer Diversification
Finance	Debt Refinancing (Lower Interest)	Net Profit Margin
HR/Culture	Knowledge Transfer/Training	Operational Scalability

To ensure the financial gains achieved post-acquisition are sustained and further optimized, the following recommendations are made:

CONCLUSION:

- **Successful Operational Transformation:** The empirical data confirms that the acquisition acted as a catalyst for a structural turnaround. The firm has transitioned from a period of historical stagnation (2019–2023) to a phase of accelerated, stable growth (2024–2026P).
- **Validation of Financial Performance:** Hypothesis testing confirms that improvements in Return on Capital Employed (ROCE) and Net Profitability are statistically significant, validating that the Amber Group's management intervention yielded measurable value.
- **Operational Velocity as a Profit Driver:** The correlation analysis reveals a near- perfect relationship ($r \approx 0.99$) between Inventory Turnover Ratio (ITR) and Net Profit. This indicates that operational efficiency specifically the ability to convert inventory into sale is the primary driver of the company's bottom-line growth.
- **Improved Capital Structure:** The reduction in the Debt-to-Equity ratio, combined with a healthier Cash Conversion Cycle, demonstrates that the firm has successfully mitigated its financial risk profile while maintaining growth.
- **Strategic Risk Identification:** The heavy reliance on the Amber Group ecosystem for demand creates exposure to internal volatility. Diversification into independent market sectors remains the critical next step for long-term sustainability.
- **Final Verdict:** The integration of Ascent Circuits into the Amber Group has been a strategically sound initiative. The company has evolved into a lean, cash-generative organization, effectively establishing a new performance floor that positions it for long- term competitiveness in the electronics manufacturing landscape.

BIBLIOGRAPHY

Books

- **Aswathappa, K. (2020).** *Human Resource Management: Text and Cases*. McGraw Hill Education.
- **Kothari, C. R., & Garg, G. (2019).** *Research Methodology: Methods and Techniques*. New Age International Publishers.
- **Pandey, I. M. (2021).** *Financial Management*. Vikas Publishing House.
- **Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2022).** *Fundamentals of Corporate Finance*. McGraw Hill Education.
- **Subba Rao, P. (2018).** *Essentials of Human Resource Management and Industrial Relations*. Himalaya Publishing House.

Journals and Articles (Acquisition & Synergy)

- **Bruner, R. F. (2004).** "Where M&A Pays and Where It Strays: A Survey of Research." *Journal of Applied Corporate Finance*, 16(4), 63-76.
- **Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., & Davison, R. B. (2009).** "Taking Stock of What We Know About Mergers and Acquisitions." *Journal of Management*, 35(3), 469-502.
- **Jensen, M. C., & Ruback, R. S. (1983).** "The Market for Corporate Control: The Scientific Evidence." *Journal of Financial Economics*, 11(1-4), 5-50.
