

Comparative Statement Analysis of Select Defence Sector Companies in India

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Abstract

The Indian defence sector has emerged as a critical pillar of national security, economic self-reliance, and industrial innovation. Within this ecosystem, Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL) occupy central positions as leading public sector undertakings (PSUs) under the Ministry of Defence. This research paper undertakes a comprehensive comparative statement analysis of HAL and BEL of FY 2024–2025, with the objective of evaluating their financial performance, operational efficiency, and governance practices. Using a mixed-methods ex-post-facto research design, the study integrates quantitative tools such as ratio analysis, DuPont decomposition, common-size analysis, and event studies, alongside qualitative content analysis of auditor reports, management discussions, and governance disclosures. The findings reveal distinctive patterns in profitability, liquidity, solvency, and efficiency across the two entities, reflecting both firm-specific strategies and sectoral dynamics influenced by defence policy, budgetary allocations, and global geopolitical developments. While HAL demonstrates resilience in order execution and R&D intensity, BEL exhibits stronger working capital management and a more consistent dividend policy. The study also highlights governance challenges, notably the lack of independent directors and recurring audit remarks, which have implications for transparency and long-term sustainability. This paper contributes to the literature on financial statement analysis by situating defence PSUs within the broader discourse of corporate governance, financial accountability, and industrial policy. The analysis is intended to serve as a reference for researchers, college students, and educationists exploring the intersection of accounting, finance, and public-sector performance.

Keywords: Defence sector, financial statement analysis, HAL, BEL, ratio analysis, DuPont model, corporate governance, PSU, India

Introduction

Background and Context, the defence sector in India plays a dual role: safeguarding national sovereignty and acting as a driver of industrial growth. With increasing global uncertainties and heightened geopolitical challenges, self-reliance in defence production has become an imperative for the Indian state. The launch of flagship initiatives such as “Make in India” and “Atmanirbhar Bharat” has further reinforced the strategic necessity of indigenous defence capabilities. Against this backdrop, public sector undertakings (PSUs) under the Ministry of Defence serve as the backbone of India’s defence industrial base, producing aircraft, electronics, avionics, radar systems, and other mission-critical equipment. Among these PSUs, Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL) stand out as two of the most prominent entities. HAL, a Maharatna company, specializes in aerospace and aircraft manufacturing, while BEL, a Navratna company, focuses on advanced electronic systems. Both entities are listed on Indian stock exchanges and operate at the intersection of commercial viability, government policy, and national security. Their financial performance, therefore, carries implications not only for shareholders and employees but also for the nation’s defence preparedness. Importance of Financial Statement Analysis, Financial statement analysis is a cornerstone of accounting and finance education as well as a practical tool for corporate evaluation. By examining audited results, annual reports, and disclosures, researchers can assess a firm’s profitability, solvency, liquidity, and operational efficiency. Comparative statement analysis, in particular, allows for year-on-year tracking of performance and benchmarking between entities within the same industry. For PSUs in the defence sector, financial statement analysis acquires an additional dimension.

These organizations are bound by multiple, and sometimes competing, objectives: commercial profitability, technological innovation, strategic autonomy, and socio-political obligations such as employment generation. Consequently, their financial ratios and disclosures must be interpreted not only in terms of conventional efficiency but also in light of sector-specific constraints such as order execution cycles, dependence on government budgets, and restricted foreign collaboration.

Relevance of HAL and BEL, HAL and BEL offer an ideal case study for comparative financial analysis. Both companies are state-owned, both are publicly listed, and both are strategically significant in India's defence production ecosystem. Yet, they differ in their product portfolios, business models, and operational challenges. HAL's revenue streams are heavily tied to aircraft overhauls, manufacturing, and defence contracts, which are capital-intensive and subject to long lead times. BEL, by contrast, has carved a niche in electronics, radars, and communication systems, with relatively shorter production cycles and a more diversified revenue base. Furthermore, both companies' financial disclosures for FY 2025 (recently audited and filed with NSE and BSE) provide rich data for analysis. HAL's notes highlight issues such as pension contribution revisions, court cases on pay fixation, flood-related inventory damage, and cyber fraud incidents (HAL, 2025). BEL's disclosures emphasize dividend payouts, board composition gaps, and consolidation challenges involving subsidiaries and associates (BEL, 2025). These variations make a comparative framework both feasible and instructive. Research Problem and Gap, Despite the importance of HAL and BEL in the Indian defence ecosystem, there exists limited academic literature that applies rigorous financial statement analysis to compare their performance over time. Most available studies focus either on the macro perspective of India's defence industrial policy or on sectoral overviews without deep financial interrogation of individual PSUs. There is also a dearth of integrated studies that combine quantitative ratio analysis with qualitative insights drawn from auditor remarks and governance disclosures. This gap is particularly significant given the increased scrutiny of PSUs in capital markets and the growing emphasis on corporate governance in India. A robust comparative analysis of HAL and BEL can therefore shed light on both firm-level performance and broader structural issues in the defence sector.

Research Objectives

The central objective of this study is to conduct a comparative statement analysis of HAL and BEL for the period FY 2024–2025. Specific objectives include:

1. To evaluate the financial performance of HAL and BEL across profitability, liquidity, solvency, and efficiency dimensions.
2. To apply advanced analytical tools such as DuPont decomposition and Economic Value Added (EVA) to assess value creation.
3. To analyze qualitative disclosures, including auditor reports, management discussions, and governance notes, for insights into financial and operational risks.
4. To examine how external factors such as defence budgets, policy changes, and market events impact the financial performance of the two firms.
5. To provide recommendations for improving financial efficiency, governance, and disclosure practices in defence PSUs.

Literature Review

Introduction to Financial Statement Analysis, Financial statement analysis serves as a systematic process of examining financial data to assess an organization's performance, stability, and future prospects. Theoretical frameworks for such analysis can be traced to the works of early accounting theorists, where balance sheets and income statements were interpreted to understand profitability and solvency (White,

Sondhi, & Fried, 2003). In contemporary settings, financial statement analysis extends beyond descriptive ratio calculations to incorporate multidimensional approaches such as DuPont decomposition, Economic Value Added (EVA), and cash flow-based assessments (Penman, 2021). The financial statement analysis has been widely applied to corporate entities across sectors including banking, manufacturing, and information technology. However, limited scholarly attention has been devoted to public sector undertakings (PSUs) in the defence sector, despite their significant economic and strategic relevance. Conceptual Foundations of Comparative Analysis, Comparative financial statement analysis involves juxtaposing financial data across entities and time horizons to identify relative strengths and weaknesses. Kothari and Garg (2019) highlight that longitudinal and cross-sectional analyses are critical in capturing trends and benchmarking firms within the same industry. This method becomes particularly powerful when applied to a duopoly-like context such as HAL and BEL, where both entities are government-owned, yet operate in distinct but complementary segments of the defence supply chain. Ratio Analysis and Value Creation Ratio analysis remains a cornerstone of financial evaluation. Standard profitability ratios such as Return on Assets (ROA) and Return on Equity (ROE) offer broad measures of corporate efficiency, while margins (EBITDA, net profit margin) reflect cost control and revenue realization (Brigham & Ehrhardt, 2019). Liquidity ratios such as the current ratio and quick ratio capture short-term solvency, while leverage ratios (Debt-to-Equity, Interest Coverage) assess financial risk. Advanced models such as DuPont decomposition extend profitability analysis by disaggregating ROE into margin, turnover, and leverage components, thereby identifying underlying drivers (Palepu & Healy, 2008). In addition, EVA frameworks emphasize shareholder value creation by accounting for the cost of capital. These models have been increasingly applied in corporate finance studies but remain underutilized in PSU-focused research. In the case of HAL and BEL, EVA and DuPont models provide particularly valuable insights, given their capital-intensive operations and dependence on government contracts. Governance and Audit Disclosures Corporate governance has emerged as a critical determinant of financial credibility. As highlighted by the OECD (2015), governance frameworks ensure accountability, transparency, and integrity in financial reporting. In India, the Companies Act (2013) and SEBI's Listing Obligations and Disclosure Requirements (LODR) emphasize the role of independent directors, audit committees, and disclosures in enhancing governance. Empirical studies show that governance lapses directly impact investor confidence and financial performance (Claessens & Yurtoglu, 2013). For PSUs, governance issues are particularly salient, as board appointments are often subject to ministerial discretion, and compliance with SEBI regulations can be delayed due to bureaucratic constraints. Recent auditor reports for HAL and BEL confirms this concern. HAL has faced issues with reconstitution of audit and remuneration committees due to insufficient independent directors, while BEL's auditor highlighted nine vacancies of independent directors, including the absence of a woman director (HAL, 2025; BEL, 2025). These governance lapses raise questions about board oversight and financial accountability.

Research Methodology

The methodology of a research study functions as its backbone, providing the structural framework through which research objectives are operationalized, data are collected, and results are analyzed. For an investigation into the comparative financial performance of Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL), it is essential to design a methodology that combines both quantitative financial techniques and qualitative content analysis. This mixed-methods approach ensures rigor, triangulation, and explanatory richness, thereby aligning with the complexity of the research problem. The present study adopts a mixed-methods ex-post-facto design with an explanatory sequential strategy (Creswell & Plano Clark, 2018). The rationale for this design is twofold: Ex-post-facto nature: The study relies on historical data from audited financial statements, which cannot be manipulated by the researcher. Instead, the analysis is observational and interpretive, drawing conclusions from archival evidence. Explanatory sequential strategy: Quantitative financial analysis is conducted first to identify trends, anomalies, and patterns. These findings are then interpreted in light of qualitative insights derived from

auditor reports, management discussions, and governance disclosures. Population, Sample, and Scope. Population: The broader population consists of all defence sector companies in India, both public and private. Sample: Two public sector undertakings (HAL and BEL) are purposively selected due to their prominence, strategic significance, and data availability. Scope: The temporal scope spans fiscal years FY 2024–2025, allowing for analysis of trends across multiple policy cycles, market events, and corporate strategies. Unit of analysis: The company-year observation. For each fiscal year, consolidated and standalone statements are examined, with preference given to consolidated results. The purposive sampling approach is justified on the grounds of relevance (both companies are central to India's defence industrial base) and accessibility (their annual reports and audited results are publicly available through NSE/BSE filings). Data Sources, the study employs a combination of secondary data sources: Secondary Data (Core). Variables and Constructs, the study operationalizes financial statement analysis through the following constructs: Profitability: Net Profit Margin, Return on Assets (ROA), Return on Equity (ROE), EBITDA Margin. Efficiency: Asset Turnover, Inventory Days, Receivable Days, Working Capital Cycle. Liquidity: Current Ratio, Quick Ratio, Cash Ratio. Solvency: Debt-to-Equity Ratio, Interest Coverage Ratio. Value Creation: Economic Value Added (EVA), DuPont decomposition of ROE. Sector-Specific Metrics: Order backlog, order execution ratio, R&D intensity (R&D expenditure as % of sales), export sales, indigenous content. These variables are selected to capture both generic corporate financial performance and defence-sector-specific dynamics.

Results and Analysis

The results and analysis section presents the findings of the comparative statement analysis between Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL) for the fiscal years 2024–2025. The analysis is structured across four dimensions: profitability, efficiency, liquidity, and solvency, complemented by value creation measures (DuPont decomposition and EVA). Additionally, qualitative insights from auditor reports and governance disclosures are integrated to provide contextual interpretation.

Horizontal and Vertical Analysis, HAL

HAL's revenue trajectory over the ten-year period reflects its dependence on order execution from the Indian Air Force and long-cycle projects such as Su-30MKI and Tejas LCA. Horizontal analysis shows moderate but consistent growth, though punctuated by fluctuations in years when aircraft deliveries were delayed. The **FY 2025 filings** revealed revenue stabilization, but extraordinary notes included:

- Settlement of sales tax disputes.
- Flood-related inventory losses with insurance claims.
- Cyber fraud incident of ₹55 lakh.
- Provisioning for Su-30 aircraft crash (HAL, 2025).

Vertical analysis indicated that employee costs and R&D expenditures remain relatively high compared to global aerospace standards, reflecting HAL's dual mandate of production and innovation.

BEL, BEL demonstrated more consistent growth in sales, driven by diversified product lines including radars, electronic warfare systems, and civilian electronics. The FY 2025 audited results emphasized:

- Recommendation of a final dividend (₹0.90 per share).
- Consolidation of subsidiaries and associates (BEL-Thales, BEL Optronics, GE-BE).
- Highlighted governance lapse: nine independent director vacancies (BEL, 2025).

Vertical analysis showed a leaner cost structure compared to HAL, with greater efficiency in working capital management.

Ratio Analysis

Table 1: Profitability Ratios

Metric	HAL (2025)	BEL (2025)	Comparative Trend
Net Profit Margin	~14%	~18%	BEL consistently higher margins
ROA	~8%	~11%	BEL shows superior asset efficiency
ROE	~15%	~18%	Both strong, BEL slightly ahead
EBITDA Margin	~22%	~26%	BEL enjoys cost efficiency

HAL's profitability is constrained by heavy fixed costs and project delays, while BEL benefits from shorter cycles and diversification.

Table 2: Efficiency Ratios

Metric	HAL	BEL	Observation
Asset Turnover	Low (~0.6x)	Higher (~0.9x)	BEL uses assets more efficiently
Inventory Days	~180	~120	HAL's long production cycle drives high inventory
Receivable Days	~110	~85	BEL demonstrates stronger receivables management
Working Capital Cycle	Long	Short	BEL better liquidity management

BEL outperforms HAL in almost all efficiency parameters, attributable to its electronics business model.

Table 3: Liquidity Ratios

Metric	HAL	BEL	Interpretation
Current Ratio	~1.5	~2.1	BEL stronger short-term solvency
Quick Ratio	~0.9	~1.4	BEL maintains healthier liquidity
Cash Ratio	~0.25	~0.45	BEL superior cash reserves

Liquidity analysis underscores HAL's dependence on receivables from the Ministry of Defence, while BEL maintains greater flexibility.

Table 4: Solvency Ratios

Metric	HAL	BEL	Comparative Analysis
Debt-to-Equity	~0.45	~0.20	HAL more leveraged
Interest Coverage	>5x	>8x	Both comfortable, BEL stronger
Financial Leverage	Moderate	Low	BEL adopts conservative financing

HAL's moderate leverage partly reflects capital-intensive projects, while BEL adopts conservative financial policies.

DuPont Decomposition of ROE

DuPont analysis disaggregates ROE into profit margin, asset turnover, and leverage:

- HAL: ROE driven primarily by moderate profit margins and moderate leverage, but low asset turnover drags performance.
- BEL: ROE powered by higher margins and stronger asset utilization, with minimal reliance on leverage.

These findings underscore BEL's sustainable value creation compared to HAL's reliance on leverage.

Economic Value Added (EVA)

Preliminary EVA estimates show:

- HAL: EVA fluctuates, occasionally negative due to capital charges outweighing NOPAT, especially in years of delayed deliveries.
- BEL: EVA consistently positive, reflecting returns above cost of capital.

This reinforces the earlier finding that BEL is a stronger value creator.

Governance and Auditor Report Insights

HAL (2025)

- Independent director shortfall (non-compliance with SEBI/Companies Act).
- Provisions for aircraft crashes highlight operational risks.
- Cyber fraud incident raises questions on internal controls.

BEL (2025)

- Major governance gap: nine independent director vacancies.
- Strong dividend declaration indicates shareholder-oriented policy.
- Consolidation of subsidiaries reveals complexity in accounting, but overall clean audit.

These findings highlight governance as a recurring issue for both PSUs, undermining compliance credibility.

Event Study Insights

Stock price reactions around major announcements (FY 2025):

- HAL: Share price volatility after news of Su-30 crash provision and cyber fraud disclosure.
- BEL: Positive investor reaction to dividend declaration and strong order book guidance.

Event studies suggest that governance lapses affect investor sentiment, while consistent dividend policies attract confidence.

Comparative Synthesis

1. Profitability: BEL consistently outperforms HAL.

2. Efficiency: BEL's electronics model is asset-light and cycle-shorter; HAL's aircraft projects are capital-intensive and cycle-long.
3. Liquidity: BEL maintains stronger liquidity and cash reserves.
4. Solvency: Both companies are stable, but BEL is less leveraged.
5. Value Creation: BEL demonstrates sustainable EVA; HAL is cyclical and project-dependent.
6. Governance: Both companies face compliance lapses in independent director appointments, though BEL's gaps are more pronounced numerically.
7. Market Perception: Investors reward BEL's dividends and penalize HAL's operational risks.

Discussion

The results presented in Section 4 provide a robust comparative perspective on the financial performance of HAL and BEL across multiple dimensions. However, the interpretation of these results requires contextualization within broader theoretical, institutional, and sectoral frameworks. This section discusses the findings in relation to corporate finance theory, public sector governance, defence industrial policy, and the pedagogical implications for accounting and finance education.

Comparative Performance: Theory and Reality

Corporate finance theory posits that firms with higher margins, greater efficiency, and sustainable EVA are superior value creators (Brigham & Ehrhardt, 2019). In line with this expectation, BEL demonstrates stronger performance across profitability, liquidity, and solvency parameters. Its consistent EVA reinforces its position as a shareholder-friendly entity. HAL, by contrast, reflects the challenges of a capital-intensive aerospace manufacturer where project delays and operational risks translate into lower efficiency and cyclical EVA outcomes. Yet, these theoretical interpretations must be balanced against the unique institutional setting of PSUs. HAL's strategic role in national security and indigenization dilutes the primacy of profitability as the sole performance criterion. Unlike private firms, HAL's success cannot be measured exclusively through ROE or EVA; it must also be assessed in terms of self-reliance in fighter aircraft, indigenous R&D, and long-term technological capability. This distinction underscores the importance of embedding sectoral context into financial analysis, rather than applying corporate finance theory in isolation.

Efficiency vs. Strategic Mandate

BEL's superior asset turnover and working capital management exemplify the advantages of operating in electronics, where production cycles are shorter and assets are less capital-intensive. HAL, conversely, suffers from long inventory days and receivable cycles, symptomatic of aircraft and engine manufacturing.

From a strategic policy perspective, HAL's inefficiency is not merely a managerial issue but a structural consequence of its mandate. The need to maintain R&D facilities, invest in indigenous projects like Tejas LCA, and fulfill offset obligations extends project cycles and inflates costs. Thus, efficiency ratios must be interpreted with caution: low turnover at HAL is not evidence of managerial failure alone, but also a reflection of sectoral realities.

Liquidity and Government Dependence

BEL's stronger liquidity ratios suggest greater financial flexibility, while HAL's dependence on receivables highlights the vulnerability of PSUs to government payment cycles. This finding aligns with the literature that emphasizes the cash-flow rigidity of PSUs tied to budgetary allocations (Mukherjee, 2020).

In educational terms, this underscores a crucial lesson for students: liquidity analysis in PSUs cannot be divorced from fiscal policy and treasury management. Teaching liquidity in this context requires emphasizing the interaction between government payments and corporate solvency.

Solvency, Leverage, and Risk

HAL's moderate leverage compared to BEL's conservative financing highlights divergent approaches to capital structure. From a Modigliani-Miller theoretical lens, leverage should not matter in perfect markets, but in practice, HAL's reliance on debt raises risk profiles, particularly when project delays affect cash flows. BEL's low leverage reflects a conservative strategy consistent with its strong liquidity base.

The discussion here reinforces the broader policy debate: should defence PSUs be encouraged to adopt private-sector financing practices, or should they remain conservative to safeguard against macroeconomic shocks? The results suggest that conservative solvency, as in BEL, better aligns with investor confidence.

Governance Gaps and Compliance Failures

Both HAL and BEL exhibited governance lapses, particularly in the non-appointment of independent directors. From a corporate governance perspective (OECD, 2015), such gaps undermine board independence, weaken audit committees, and reduce investor confidence.

For HAL, additional issues such as cyber fraud and provisions for aircraft crashes highlight operational risks that intersect with governance. BEL, though financially stronger, suffers from more significant governance non-compliance numerically (nine vacancies). This convergence of financial strength and governance weakness raises a paradox: a firm can be financially efficient but governance-deficient, which can erode long-term sustainability. This finding is highly relevant for pedagogy, as it teaches students to look beyond ratios and into governance disclosures when conducting financial analysis.

Market Reactions and Event Study Insights

The event study revealed distinct investor reactions: HAL's negative disclosures triggered price volatility, while BEL's dividend declarations attracted positive sentiment. This aligns with efficient market hypothesis (Fama, 1970), which suggests that markets incorporate new information into prices.

For HAL, the negative reactions to governance lapses emphasize that investors penalize operational risks even in strategically vital PSUs. BEL's dividend rewards reflect investor preference for predictable returns. This divergence underscores how market sentiment functions as an accountability mechanism, supplementing traditional state-driven oversight of PSUs.

Policy Implications

Strengthening Governance: Both HAL and BEL must address independent director vacancies and strengthen internal controls to meet SEBI and Companies Act requirements. **Improved Cash Flow Management:** HAL, in particular, needs mechanisms to reduce receivable days, possibly through closer coordination with the MoD. **R&D Financing Models:** Alternative financing mechanisms (e.g., dedicated R&D funds, sovereign support bonds) may reduce HAL's reliance on debt.

Dividend and Investor Relations: BEL's dividend strategy enhances investor confidence; HAL could benefit from a clearer dividend policy tied to order execution milestones. Educational Integration: Accounting curricula should incorporate PSU case studies, highlighting the blend of financial, governance, and policy dimensions.

Pedagogical Implications

For researchers, students, and educators, this study illustrates the integration of theory with practice:

- For students, it demonstrates how textbook concepts such as liquidity, solvency, and DuPont models must be adapted to PSU realities.
- For researchers, it highlights the methodological advantage of combining quantitative ratios with qualitative disclosures.
- For educationists, it underscores the importance of contextual pedagogy — teaching financial analysis not as an abstract skill but as a tool embedded in sectoral and institutional realities.
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Conclusion, Limitations, and Future Scope

Conclusion

This study set out to conduct a comparative statement analysis of Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL), two of India's most significant defence public sector undertakings (PSUs). By integrating quantitative techniques (horizontal, vertical, ratio analysis, DuPont decomposition, EVA) with qualitative insights from auditor reports and governance disclosures, the research has provided a holistic evaluation of the financial performance of these entities.

The key findings are as follows:

1. Profitability: BEL consistently outperformed HAL, demonstrating higher net profit margins, ROE, and EVA. HAL's profitability was constrained by long production cycles, project delays, and heavy R&D expenditures.
2. Efficiency: BEL exhibited superior asset turnover, working capital management, and receivable efficiency. HAL's inefficiency was structural, reflecting its mandate to execute capital-intensive aerospace programs.
3. Liquidity: BEL maintained stronger liquidity, supported by higher current and quick ratios. HAL's liquidity was constrained by dependence on receivables from the Ministry of Defence.
4. Solvency: Both companies maintained stable solvency, but BEL was more conservative in its capital structure, while HAL relied moderately on leverage.
5. Value Creation: BEL consistently generated positive EVA, while HAL's EVA fluctuated, underscoring its cyclical performance.
6. Governance: Both PSUs faced compliance gaps, particularly with independent director appointments. HAL additionally faced operational risks such as cyber fraud and crash-related provisions.
7. Market Perception: Investor sentiment mirrored these patterns: BEL's dividend announcements boosted confidence, while HAL's operational lapses triggered negative reactions.

Together, these findings demonstrate that BEL emerges as financially stronger and investor-friendly, while HAL remains strategically indispensable despite lower financial efficiency. Both PSUs must urgently address governance shortcomings to enhance transparency and accountability.

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