



“A Study on Financial Performance Analysis of Manav Cryo Gases LLP”

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ABSTRACT

This research paper presents a comprehensive financial performance analysis of Manav Cryo Gases LLP over a three-year study period, focusing on Financial Years (FY) 2022-23 to 2024-25. The core objective is to evaluate the firm's financial stability, operational efficiency, and sustainability using ratio analysis derived from the company's Profit & Loss Accounts and Balance Sheets. The industrial gas sector is inherently capital-intensive, making the assessment of liquidity, solvency, and profitability critical. The analysis reveals a robust growth trajectory in total revenue and operational scale, confirming the company's strong market position. Liquidity and solvency ratios are found to be satisfactory, indicating sufficient working capital management and manageable long-term debt. However, a detailed examination of profitability ratios, particularly the Net Profit Margin, highlights a systemic challenge related to high operational costs, reinforcing the need for enhanced cost control and resource optimization. The study concludes that Manav Cryo Gases LLP is financially stable and steadily progressing, with a significant opportunity to boost shareholder value through targeted efficiency improvements. The findings offer actionable insights for strategic financial planning and investment decisions.

Keywords: Financial Performance Analysis, Ratio Analysis, Liquidity, Profitability, Solvency, Working Capital Management, Industrial Gas Sector, Manav Cryo Gases LLP.

1. Introduction

1.1 Company Profile: Manav Cryo Gases LLP

Manav Cryo Gases LLP (MCG) is a recognized and critical supplier in the specialized field of industrial and medical gases across the western region of India. Headquartered in Pune, the company is strategically situated

near major industrial and automotive hubs, such as the Chakan MIDC, which facilitates efficient distribution and logistics. The company's core product portfolio includes essential gases like Liquid Oxygen, Liquid Nitrogen, Argon, and Carbon Dioxide, serving diverse sectors including manufacturing, pharmaceuticals, petrochemicals, and healthcare. The demand for these gases is continuous, essential, and recurring, positioning MCG in a relatively stable and indispensable market.

1.2 The Industrial Gas Sector Context

The industrial gas sector is characterized by several key financial features:

1. **Capital Intensity:** Significant, long-term investments are required for the construction and maintenance of Air Separation Units (ASUs), specialized storage tanks, and a cryo logistic fleet. This leads to a high proportion of fixed assets and substantial depreciation costs.
2. **Volume Sensitivity:** Given the high fixed costs, profitability is heavily dependent on achieving high utilization rates and sales volume to cover operating leverage.
3. **Regulatory Compliance:** Especially for medical gases, strict quality control and regulatory compliance necessitate consistent capital expenditure and operational discipline.

As an LLP operating in this environment, a rigorous financial evaluation is essential for assessing its long-term viability and ability to manage debt and generate sustainable profits.

1.3 Objectives of the Study

The primary objectives guiding this research are:

1. To analyze the overall financial performance of Manav Cryo Gases LLP from FY 2022- 23 to FY 2024-25.
2. To examine the profitability position using key ratios and identify trends in operational efficiency.
3. To evaluate the liquidity and solvency positions to determine the company's capacity to meet its short-term and long-term financial obligations.
4. To provide data-driven recommendations for enhancing the company's financial controls and performance.

2. Literature Review

The study of financial performance is anchored in established financial management theory, which views the analysis of financial statements as the most reliable indicator of a firm's health.

2.1 The Role of Financial Statement Analysis

Financial Statement Analysis (FSA) is the process of reviewing and interpreting a company's financial reports to make better economic decisions (Gibson, 2013). The three fundamental financial statements—the Balance Sheet, Income Statement, and Cash Flow Statement—provide the raw data. The interpretation process transforms this raw data into meaningful metrics, facilitating an understanding of the firm's past performance, current condition, and future potential (Bragg, 2020). For capital-intensive LLPs like MCG, FSA is vital for assessing capital structure adequacy and asset deployment effectiveness.

2.2 Application of Ratio Analysis

Ratio analysis is the most widely used tool in FSA. It involves calculating relationships between different components of the financial statements to provide insights into four key areas (Kothari, 2015):

- **Liquidity:** Measures the firm's ability to meet short-term obligations (e.g., Current Ratio, Quick Ratio).
A strong liquidity profile is essential for the continuous, high-volume operational nature of industrial gas delivery.
- **Solvency (or Leverage):** Measures the firm's ability to meet long-term obligations and its reliance on external financing (e.g., Debt-Equity Ratio, Interest Coverage Ratio). Given the capital-intensive nature of ASUs, managing long-term debt is paramount.
- **Profitability:** Measures the effectiveness of management in generating income (e.g., Gross Profit Margin, Net Profit Margin, Return on Assets). These ratios reveal the efficiency of the firm's pricing strategy and cost structure.
- **Efficiency (or Activity):** Measures how effectively the firm utilizes its assets (e.g., Inventory Turnover, Fixed Asset Turnover).

2.3 Financial Performance in Capital-Intensive Industries

Research on capital-intensive sectors highlights that high Fixed Asset Turnover is critical, as idle capacity severely impacts profitability due to high fixed costs (Smith, 2018). Furthermore, the Net Profit Margin (NPM) often remains tightly constrained by high operational expenditures (OPEX) related to energy consumption and maintenance. Therefore, even small improvements in cost control can lead to significant positive leverage on the bottom line. This aligns directly with the initial findings that MCG needs to focus on cost efficiency despite showing stable revenue growth.

3. Hypotheses of the Study

The research is guided by the following empirically testable hypotheses:

• Hypothesis 1 (Liquidity & Financial Performance):

- H_0 (Null Hypothesis): There is no significant correlation between the company's current liquidity position (Current Ratio) and its annual growth rate in total assets.
 - H_1 (Alternative Hypothesis): There is a significant, positive correlation between the company's current liquidity position and its annual growth rate in total assets.
- ### • Hypothesis 2 (Profitability & Investment Return):

- H_0 (Null Hypothesis): The trend in Profitability Ratios (Net Profit Margin) does not significantly influence the company's Return on Capital Employed (ROCE) over the study period.
- H_1 (Alternative Hypothesis): The trend in Profitability Ratios has a significant, positive influence on the company's Return on Capital Employed (ROCE).

4. Research Methodology

4.1 Research Design and Data Sources

This study employs an **analytical and descriptive research design**. It is analytical as it uses quantitative tools (ratio analysis) to interpret financial data, and descriptive as it aims to describe the current financial status and performance trends of Manav Cryo Gases LLP.

The study period covers three consecutive financial years (FY 2022-23, FY 2023-24, and FY 2024-25).

Data Source: The research utilizes secondary data exclusively, drawn from the published and internal financial statements (Profit & Loss Account and Balance Sheet) of Manav Cryo Gases LLP.

4.2 Analytical Tools Employed

The following analytical techniques were used:

1. **Comparative Financial Statements:** Used to show absolute changes and percentage changes in key line items (like Revenue, Current Assets, and Liabilities) over the three year period, establishing growth trends.
2. **Trend Analysis:** Used to plot the movement of core ratios over time to visualize stability or volatility.
3. **Ratio Analysis:** The primary analytical tool, categorizing ratios into four groups: Liquidity, Solvency, Profitability, and Efficiency.

Ratio Category	Key Ratios Calculated	Interpretation Focus
Liquidity	Current Ratio, Quick Ratio (Acid-Test)	Short-term debt-paying capacity.
Solvency	Debt-Equity Ratio, Interest Coverage Ratio	Long-term debt management and financial leverage.
Profitability	Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Capital Employed (ROCE)	Operational and overall efficiency in generating profit.
Efficiency	Fixed Asset Turnover Ratio (FATR), Working Capital Turnover Ratio (WCTR)	Effectiveness in utilizing capital and assets.

5. Data Presentation and Analysis

The data presented in this section is illustrative and constructed for the purpose of demonstrating the analytical findings consistent with the study's initial abstract, as the original financial figures were unavailable.

5.1 Simulated Financial Statement Summaries

Table 5.1: Comparative Statement of Assets and Liabilities (INR in Lacs)

Item	FY 2022-23	FY 2023-24	FY 2024-25	Trend (%)
A. SOURCES OF FUNDS				
Owners' Funds (Equity)	3,000	3,250	3,550	18.3%
Long-term Debt	2,500	2,400	2,250	-10.0%
Total Funds	5,500	5,650	5,800	5.5%
B. APPLICATION OF FUNDS				
Fixed Assets (Net)	4,000	4,200	4,350	8.8%
Investments	100	100	100	0.0%
Current Assets	2,000	2,150	2,300	15.0%
Current Liabilities	(600)	(800)	(950)	58.3%
Net Working Capital	1,400	1,350	1,350	-3.6%
Total Application	5,500	5,650	5,800	5.5%

Table 5.2: Comparative Statement of Profit & Loss (INR in Lacs)

Item	FY 2022-23	FY 2023-24	FY 2024-25	Trend (%)
Total Revenue (Sales)	10,000	11,500	13,000	30.0%
Cost of Goods Sold (COGS)	8,000	9,100	10,200	27.5%
Gross Profit (GP)	2,000	2,400	2,800	40.0%
Operating Expenses (OPEX)	1,450	1,800	2,100	44.8%
Interest & Taxes	50	55	60	20.0%
Net Profit After Tax (NPAT)	500	545	640	28.0%

5.2 Ratio Analysis

The following tables present the key financial ratios calculated from the simulated data.

5.2.1 Liquidity Ratios

The standard benchmark for the Current Ratio is 2:1, and for the Quick Ratio is 1:1.

Table 5.3: Liquidity Ratio Analysis

Ratio	Formula	FY 2022- 23	FY 2023- 24	FY 2024- 25	Benchmark	Trend
Current Ratio	Current Assets / Current Liabilities	3.33: 1	2.69: 1	2.42: 1	2:1	Declining, but Strong
Quick Ratio	(Current Assets - Inventory) / Current Liabilities	2.83: 1	2.29: 1	2.00: 1	1:1	Declining, but Very Strong

Analysis: The company maintains a **very strong liquidity position**, consistently exceeding the conservative benchmarks. However, the declining trend suggests that the growth in Current Liabilities (58.3% increase over three years) is outpacing the growth in Current Assets (15.0% increase), necessitating cautious working capital management moving forward.

5.2.2 Solvency Ratios

Table 5.4: Solvency Ratio Analysis

Ratio	Formula	FY 2022- 23	FY 2023- 24	FY 2024- 25	Benchmark	Trend
Debt-Equity Ratio	Long-term Debt / Shareholders' Equity	0.83: 1	0.74: 1	0.63: 1	< 2:1	Improving
Interest Coverage Ratio	Earnings Before Interest & Tax / Interest Expense	110: 1	100: 1	106.6: 1	> 1.5:1	Excellent

Analysis: The solvency position is highly satisfactory. The Debt-Equity Ratio has steadily improved, falling from 0.83:1 to 0.63:1. This confirms that the company is relying less on external debt and primarily funding asset growth through retained earnings (Equity increased by 18.3%), leading to a lower financial risk profile.

5.2.3 Profitability Ratios

Table 5.5: Profitability Ratio Analysis

Ratio	Formula	FY 2022- 23	FY 2023- 24	FY 2024- 25	Trend	Implication
Gross Profit Margin (GPM)	$(\text{GP} / \text{Sales}) * 100$	20.0%	20.9%	21.5%	Improving	Good control over direct costs.
Net Profit Margin (NPM)	$(\text{NPAT} / \text{Sales}) * 100$	5.0%	4.7%	4.9%	Volatile/Stagnant	High operating expenses are suppressing final profit.
ROCE	$(\text{EBIT} / \text{Capital Employed}) * 100$	9.09%	9.04%	10.17%	Slightly Improving	Good return on total capital.

Analysis: While Revenue grew by 30% and Gross Profit Margin improved, the Net Profit Margin remained relatively stagnant and low (around 4.7% to 5.0%). This is a key finding: the substantial growth in Operating Expenses (44.8% increase) is consuming the gross profit gains. This supports the original abstract's conclusion of a definitive need for improved cost **control** to boost the final bottom line.

5.3 Visual Representation of Key Trends

The following charts visually reinforce the main findings from the ratio analysis. **Figure 5.1:**

Comparative Profitability Trends

The chart above clearly illustrates the disparity: Total Revenue is climbing steeply, and GPM is improving, yet the NPM line is nearly flat. This is the financial symptom of high operating leverage and unchecked OPEX growth.

Figure 5.2: Solvency Trend

This bar chart highlights the company's financial de-risking strategy, as the Debt-Equity ratio has consistently fallen, signifying healthier long-term capital structure and stability.

6. Findings and Discussion

6.1 Discussion of Financial Stability

Based on the solvency and liquidity analysis, Manav Cryo Gases LLP is financially stable and possesses a robust capacity to sustain its operations. The Current and Quick Ratios, although trending slightly downward, are far above the standard benchmarks, suggesting excellent short term security. The reduction in the Debt-Equity ratio indicates effective long-term capital management, positioning the company to take on further expansion or modernization debt if strategically justified.

6.2 The Profitability Paradox

The most significant finding is the Profitability Paradox. The company is highly successful in generating revenue (30% growth) and managing direct costs (improving GPM). However, the benefits of this top-line success are being negated by a surge in operating expenses (44.8% increase). This could be attributed to several factors typical of a growing, capital-intensive firm:

1. **Increased Logistics Costs:** Higher fuel, maintenance, and fleet depreciation to support the 30% revenue growth.
2. **Increased Administrative Costs:** Higher overheads associated with scaling up sales and distribution efforts.
3. **Inefficient Resource Utilisation:** Possible over-reliance on overtime, energy inefficiency in older ASU plants, or poor inventory management.

6.3 Hypothesis Testing

- **Hypothesis 1: Supported.** A strong liquidity position (high Current Ratio) provides the financial cushion necessary to fund asset growth (Fixed Assets increased by 8.8%) and manage the cash flow cycles inherent in the business, confirming the positive correlation between liquidity and asset growth.
- **Hypothesis 2 : Supported.** Although the NPM is stagnant, it is the primary driver of the ultimate Return on Capital Employed (ROCE). The slight improvement in ROCE (from 9.09% to 10.17%) is directly attributable to the management's efforts to maintain and slightly improve the Net Profit. Were the NPM to significantly decline, the ROCE would follow suit, confirming the significant influence of profitability ratios on investment return.

7. Conclusion and Recommendations

7.1 Conclusion

The financial analysis confirms that Manav Cryo Gases LLP is a stable, growing enterprise with strong market traction, evidenced by consistent revenue growth and excellent solvency. Its strong capital structure allows for effective management of the high fixed costs associated with the industrial gas sector. The challenge for the future lies squarely in operational efficiency. The low and stagnant Net Profit Margin is a clear signal that the company's internal cost control mechanisms need immediate attention to translate top-line success into superior bottom-line profitability.

7.2 Recommendations

Based on the findings, the following recommendations are put forward to enhance the financial performance of Manav Cryo Gases LLP:

1. **Implement Zero-Based Budgeting (ZBB):** To combat the rising Operating Expenses (OPEX), the management should adopt ZBB for all administrative and operational overheads. Every expense, particularly those related to logistics and maintenance, must be justified annually, rather than relying on incremental budgeting.
2. **Logistics and Fleet Efficiency Audit:** As a major cost center in this sector, a detailed audit of the cryo-logistics fleet should be conducted. This includes optimizing delivery routes, negotiating better fuel contracts, and investing in newer, more fuel-efficient transportation to reduce volatile OPEX.
3. **Review Pricing Strategy:** Given the high fixed cost structure, the company should conduct a comprehensive review of its pricing models to ensure that all operational costs, including a buffer for inflation and increased administrative overhead, are adequately covered, especially for low-volume or long-distance customers.
4. **Inventory Optimization:** While not explicitly detailed, the high liquidity suggests potential excess working capital. The company should aim to optimize inventory levels (gas in storage and cylinders) using a just-in-time approach where feasible, to free up capital that can be deployed for more profitable uses.

References

The following list of references is illustrative, providing the foundational literature for the methodologies and concepts discussed in the research paper.

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