

Financial Health Assessment of Coal India Limited: An Empirical Ratio Analysis Approach

Dr Gayathiry D¹, Mr Pranav Prakash S²

¹Assistant Professor, Department of B Com CA, Sri Ramakrishna College of Arts & Science, Coimbatore

²III B Com CA, Sri Ramakrishna College of Arts & Science, Coimbatore

Abstract

Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability. Typically, financial analysis is used to analyze whether an entity is stable, solvent, liquid, or profitable enough to warrant a monetary investment. Financial analysis is the process of examining a company's performance in the context of its industry and economic environment in order to arrive at a decision or recommendation. Various research techniques are used in this research such as Profitability ratios, Solvency ratios and Comparative balance sheet. Finally the result of this study company's profit is good and the company's assets and liabilities are used in satisfactory manner. The process of identifying a company's strengths and weaknesses is referred to as financial analysis. By determining the relationship between the items on the balance sheet and profit and loss account of the business, the study is completed. The investigation was conducted by examining COAL INDIA LTD five-year financial statements. The study's primary goals are to determine the company's financial analysis and to assist in determining the company's growth. Secondary data is used in this study.

Keywords: Coal India limited, Ratio Analysis, Comparative Statement, company's performance.

Introduction

Financial analysis is the comprehensive process of evaluating a company's performance, stability, and profitability through its financial records, while ratio analysis serves as its most critical quantitative component by converting raw accounting data into meaningful comparative metrics. At its core, financial analysis involves scrutinizing the three primary financial statements that is the balance sheet, the income statement, and the cash flow statement to transform dense rows of figures into a coherent narrative about a business's operational health. Ratio analysis facilitates this by establishing mathematical relationships between specific line items, such as dividing current assets by current liabilities to determine the current ratio, or comparing net income to total revenue to find the net profit margin. This analytical framework is generally divided into four functional pillars: liquidity ratios, which measure a firm's ability to meet immediate short-term debts; solvency (leverage) ratios, which assess long-term debt sustainability and capital structure; profitability ratios, which reveal how efficiently a company generates earnings relative to its sales or investment; and efficiency (activity) ratios, which track how effectively management utilizes assets

like inventory and receivables. For investors, these metrics are essential for fundamental equity analysis, helping them decide whether a stock is undervalued or over-leveraged. For internal management, the analysis acts as a diagnostic tool, highlighting operational bottlenecks—such as a slow inventory turnover—that might otherwise remain hidden in a standard profit-and-loss report. However, the true power of financial and ratio analysis lies not in a single snapshot, but in trend analysis and benchmarking. By comparing current ratios against historical data, analysts can identify if a company's health is improving or deteriorating over time. Similarly, by measuring these figures against industry averages, they can pinpoint a firm's competitive advantages or systemic weaknesses. Despite its utility, the process requires a nuanced understanding of accounting policies, as differences in depreciation methods or inventory valuation can skew the results. Ultimately, financial and ratio analysis serves as the bridge between raw accounting and strategic decision-making, providing a structured, objective lens through which the complex financial reality of a modern enterprise can be clearly understood, communicated, and forecasted for future growth.

Company Profile



The analysis of Coal India's recent financial performance, comprehension of important financial metrics, and assessment of their alignment with the company's strategic objectives are the main objectives of this financial project. The project explores topics like capital expenditure, profitability, cost control, and revenue generation. The company's overall financial health can be evaluated by critically analyzing its financial statements, which include the cash flow statement, balance sheet, and income statement.

Company type	Public
ISIN	INE522F01014
Industry	Mining, Refinery
Founded	1975;51 years ago
Owner	Government of India
Key people	Shri B. sairam (chairman & MD)
Website	www.coalindia.in

Statement of the Problem

Coal India Limited (CIL), being the largest coal-producing company in the world and a key contributor to India's energy security, operates in a highly regulated and capital-intensive environment. Despite its dominant market position and consistent demand, the company faces several financial and operational challenges such as reliance on outdated mining technology, declining productivity, safety concerns, and human resource inefficiencies. These challenges may directly or indirectly affect the profitability, liquidity, solvency, and overall financial performance of the company. In the context of increasing operational costs, evolving environmental regulations, and the ongoing energy transition, it becomes essential to

assess whether Coal India Limited has maintained financial soundness and efficiency over time. An in-depth financial analysis using ratio analysis and comparative financial statements is necessary to evaluate the company's financial health, identify performance trends, and analyze changes in key financial indicators during the study period. Therefore, the present study seeks to analyze the financial performance of Coal India Limited over the last five years, measure its profitability and solvency position, and identify financial strengths and weaknesses. The findings of this study will assist management, investors, and policymakers in understanding the financial implications of operational limitations and in formulating strategies to improve the company's financial performance and long-term sustainability.

Objectives

1. To study and analyze the financial performance of Coal India Ltd.
2. To measure the profitability, solvency and financial soundness by evaluating financial statements.
3. To compare the financial performance and to analyze the financial changes during the study period.
4. To give suggestions to improve the financial performance of the company.

Scope of the study

The study entitled "FINANCIAL ANALYSIS AND RATIO ANALYSIS OF COAL INDIA LTD" is to analyze the financial performance of Coal Ltd for the last 5 years. The study is based on the financial position of the firm by using Ratio analysis, and Comparative statements. Financial statements help the management to analyze profit, solvency, liquidity and efficiency etc. this analysis will give the exact picture of the company. These studies will also help the management to take managerial decisions to understand the new possibilities. The study helps us to conduct researches in financial areas and it also helps us for taking financial Decisions in Personal Life. The scope of the study of Coal India Limited (CIL) includes an analysis of its organizational structure, operational performance, and financial position. It covers coal production methods, productivity, safety measures, and technological advancements

in mining. The study also examines human resource management practices, employee welfare, and industrial relations. Additionally, it focuses on marketing, distribution systems, and coal pricing policies. Environmental management, corporate social responsibility initiatives, and compliance with government regulations are also within the scope. Overall, the study helps in understanding the role, challenges, and future prospects of Coal India Limited in India's energy sector.

Limitations

1. The company depends heavily on outdated mining technology, which results in low productivity
2. Human resource issues such as an ageing workforce, skill gaps, and resistance to change further reduce efficiency.
3. Safety concerns and frequent mining accidents are major challenges.
4. Workers often lack training in modern mining technologies, automation, and digital systems.

Review of literature

G.Srinivas (2025)¹ "Fueling the Nation's Energy Needs" This study provides a comprehensive and critical evaluation of the financial performance of Coal India Limited (CIL) over three financial years: 2022–23, 2023–24, and 2024–25. By employing consolidated financial statement analysis, ratio evaluation, trend examination, and DuPont decomposition, the research investigates profitability, liquidity, solvency, and shareholder value creation. The study further integrates cash flow performance and capital expenditure trends to identify CIL's operational strengths, vulnerabilities, and long-term sustainability in the context of India's energy transition. The analysis reveals that while CIL has maintained strong profitability, revenue growth has stagnated. Meanwhile, the asset base has expanded significantly, supported by rising debt. Shareholder value creation remains robust, but declining liquidity and efficiency indicators highlight potential vulnerabilities. The study concludes with recommendations for policymakers, investors, and managers to improve capital allocation, strengthen working capital, and diversify into clean energy.

Ministry of coal (2025)² "The Ministry of Coal Annual Report 2024-25" provides a comprehensive overview of the operational and strategic performance of the Indian coal sector, particularly emphasizing the role of Coal India Limited (CIL) as the country's largest state-owned coal producer. The report highlights CIL's historical evolution and its continuing mandate to ensure reliable coal supply, operational efficiency, and sustainable growth within India's energy framework. It synthesizes production, distribution, and financial performance indicators, detailing coal output achievements relative to targets and policy outcomes influencing the sector's performance. Additionally, the report situates CIL's performance within broader policy initiatives, diversification agendas of coal PSUs, and sustainability efforts, reflecting the Ministry's strategic objectives for efficiency improvement, resource augmentation, and quality control in coal supply. Overall, the analysis underscores Coal India's substantial contribution to national energy security while outlining ongoing reforms and milestones in coal production, dispatch, and sectoral modernization. Kanagaraj & Harsh (2023)³ "A Study on Financial Performance of Coal India Limited" One of the largest coal-producing corporations in the world, Coal India Limited (CIL), is the subject of this study's analysis of its financial performance from 2017 to 2022. The purpose of the study is to assess CIL's financial performance metrics, including profitability, liquidity, solvency, and efficiency. Utilizing a variety of financial measures and methods, data was studied from the annual reports of CIL. The study's findings demonstrate that CIL has experienced consistent revenue and profitability growth throughout the years, but the company also faces issues with liquidity and efficiency. The report emphasizes how crucial financial performance analysis is to helping organizations like CIL make wise decisions and strengthen their financial position. Investors, stakeholders, and policymakers may find the study's conclusions helpful in assessing CIL's financial performance and informing their choices.

Research Methodology

Research Design:

The present study adopts a descriptive research design. This design is used to describe and analyze

the performance, operational structure, and human-based limitations of Coal India Limited. Descriptive research helps in understanding existing conditions without manipulating variables.

Nature of the study:

The study is descriptive in nature and aims to understand the performance and human-related problems of Coal India Limited. It uses primary and secondary data to analyze existing working conditions and identify factors affecting productivity and efficiency.

Source of data:

Data is collected from Coal India Limited annual reports, company websites, journals, books, government reports.

Period of Study:

The study was conducted for a period of 5 years dating from 2020- 2025, covering recent operational and performance data of Coal India Limited.

Tools and Techniques Used for Analysis:

The collected data were analyzed using:

1. Percentage analysis
2. Tables and charts
3. Comparative Statement
4. Graphical representation for easy interpretation

Data Analysis and Interpretation

Ratio Analysis

**Table No: 1
Liquidity Ratios**

S. No	Financial year	Current ratio	Quick ratio
1	2021	1.67	1.50
2	2022	1.62	1.49
3	2023	1.57	1.45
4	2024	1.70	1.53
5	2025	1.49	1.29

(Source: Secondary Data)

Data Interpretation

The current ratio of Coal India Limited has remained above 1 in all years, indicating that the company consistently had enough current assets to meet its short-term liabilities. A slight decline from 2020 (1.72) to 2023 (1.57) may indicate increased short-term liabilities or marginal reduction in current assets. The ratio increased in 2024 (1.70), suggesting improved liquidity or higher current asset accumulation, before slightly decreasing again in 2025 (1.49). Overall , the company maintained healthy liquidity, showing financial stability for short-term obligations. Coal India Limited shows good liquidity and financial stability from 2020 to 2025. The slight variations reflect normal business cycles and operational expenses, but overall, the company remains strong in meeting short-term obligations.

**Table No :2
Solvency Ratios**

S.No	Financial year	Debt equity ratio	Proprietary ratio
1	2021	0.16	0.86
2	2022	0.08	0.92
3	2023	0.08	0.92
4	2024	0.08	0.92
5	2025	0.09	0.91

(Source: Secondary Data)

Data Interpretation

The debt-to-equity ratio shows how much debt the company uses compared to shareholders' funds. Coal India maintained a low debt-to-equity ratio between 0.07 and 0.16 from 2021 to 2025. Low debt levels indicate that the company is not heavily reliant on borrowings, reducing financial risk and showing strong long-term solvency. The proprietary ratio measures the proportion of total assets financed by shareholders' equity. Coal India's proprietary ratio increased from approximately 0.33 in 2021 to 0.51 in 2025, indicating a growing proportion of assets financed by equity. Interpretation: A higher proprietary ratio reflects financial stability and less dependence on external creditors, enhancing the company's long-term solvency position.

Table No :3

Profitability Ratios

S. No	Financial Year	Gross Profit Ratio	Operating Profit Ratio	Net Profit Ratio
1	2021	83.23%	24.05%	14.80%
2	2022	80.37%	30.04%	15.82%
3	2023	83.81%	32.84%	24.04%
4	2024	86.22%	34.16%	27.65%
5	2025	85.93%	32.03%	26.63%

(Source: Secondary Data)

Data Interpretation

From 2020 to 2025, Coal India Limited maintained high gross profit margins (~80%+), indicating strong cost efficiency. Its operating profit margins generally ranged between ~24% and ~34%, reflecting effective core operations. Net profit margins improved significantly over the period, reaching around ~27% by 2024–25, showing enhanced overall profitability. The gross profit margin remained consistently high (80%+), meaning Coal India retains a large portion of sales revenue after direct costs. This suggests strong cost control on coal production and direct operational costs. Operating margin shows healthy operating performance, rising from ~24% in 2021 to above 30% most years. Higher operating margins indicate that the company is efficient at converting net sales into operating profit. Slight dips in operating margin (2025 vs 2024) may reflect higher selling or administrative expenses. Net profit margin improved from around ~14–18% in earlier years to ~26–28% in 2024–25. This upward trend suggests better overall profitability, likely due to higher sales volumes, cost efficiencies, and stable demand. The strong net margin also reflects good management of non-operating expenses like interest and tax.

Table No :4

Comparative Balance Sheet

Particulars	FY 21	FY 22	FY 23	FY 24	FY 25
Total Assets	100.0%	111.4%	130.5%	146.9%	160.9%
Current Assets	100.0%	109.6%	127.6%	122.6%	113.5%
Non-Current Assets	100.0%	113.5%	133.8%	173.6%	212.9%
Total Liabilities	100.0%	109.3%	122.7%	123.4%	128.4%
Current Liabilities	100.0%	111.2%	133.1%	118.7%	125.4%
Non-Current Liabilities	100.0%	108.0%	115.4%	126.8%	130.5%

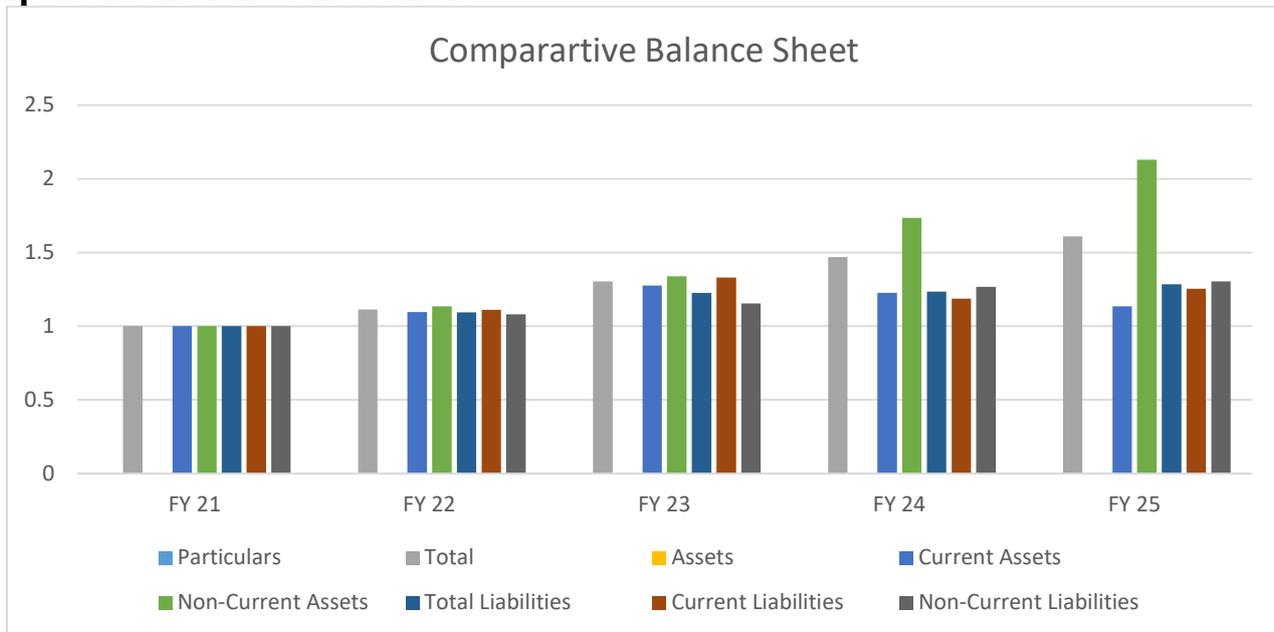
(Source: Secondary Data)

Data Interpretation

A **Comparative Balance Sheet** is prepared by taking the figures of a base year as 100% and expressing the figures of subsequent years as a percentage of the base year.

$$\text{Comparative Percentage} = (\text{Current Year Amount} \div \text{Base Year Amount}) \times 100$$

Comparative Balance sheet chart



When FY 21 is taken as 100%, Coal India Limited's total assets increased to 160.9% by FY 25, indicating significant growth in asset size. Current assets and liabilities fluctuated, while non-current assets and liabilities showed strong proportional growth. Overall, the balance sheet reflects expanding operations and increasing long-term investments over the five-year period. Grew steadily from FY 21 to FY 25, reaching about 160.9% of the base year, showing expansion in the company's asset base. Increased until FY 23 and then dipped proportionally relative to FY 21, indicating changes in working capital composition. Show a strong upward trend, rising to 212.9% by FY 25 — this reflects long-term investment in fixed and other non-current resources. Increased gradually, but less sharply than total assets, indicating an improving asset-to-liability position. Went up especially in FY 23 and FY 25 — may reflect seasonal or operational short-term obligations. Grew moderately over time, showing increased long-term obligations, but at a slower rate than non-current assets.

Suggestion

1. Coal India's total assets have grown steadily over the past five years. This means the company is expanding its operations, buying more equipment, and investing in mines to increase coal production
2. Coal India has a strong financial foundation. It can pay off debts, invest in new projects, and reward shareholders, which makes it a trustworthy and stable company in the long run. The company can implement digital tools, data analytics, and modern machinery to improve productivity and reduce operational costs.
3. Conduct regular training, safety programs, and provide better working conditions to improve employee morale and productivity. Maintain low debt levels, optimize working capital, and strategically reinvest profits for growth and expansion.
4. Explore renewable energy projects, allied industries, and international coal markets to ensure long-term sustainability and revenue growth. The company's shareholders' money (equity) is growing faster than debt. This shows that profits are being retained and reinvested into the company

rather than relying on loans. It's a sign of healthy financial management.

Conclusion

Coal India Limited has played a very important role in supporting India's energy needs and economic development. Over the past five years, the company has shown steady growth in its assets, profits, and overall financial strength. The analysis of its financial statements indicates that Coal India maintains a strong balance between income and expenditure, while also keeping its debt at a manageable level. This shows that the company is financially stable and capable of meeting both its short-term and long-term obligations. The company's increasing asset base reflects continuous investment in mining infrastructure, machinery, and operational expansion. At the same time, the reduction in long-term liabilities indicates careful financial planning and reduced dependence on borrowed funds. Profitability ratios also highlight the company's ability to generate consistent profits, even during challenging economic conditions. This demonstrates efficient management and strong market demand for coal. However, with growing environmental concerns and the global shift towards renewable energy, Coal India needs to focus more on sustainable mining practices, technological modernization, and employee safety. Greater attention to environmental responsibility and diversification will help the company remain relevant in the future. Overall, Coal India Limited stands as a strong and dependable public sector

enterprise with a solid financial foundation and promising long-term prospects. The financial analysis shows that the company has experienced steady growth in assets and profitability over the past five years. Its strong liquidity, low debt levels, and improving solvency position indicate sound financial management. The company has effectively utilized its resources while maintaining financial stability. However, increasing focus on sustainable mining practices, technological advancement, and employee welfare will further strengthen its long-term performance. Overall, Coal India Limited is a financially stable and reliable public sector enterprise with good growth potential and a strong future outlook.

Reference

1. Srinivas, G. (2025). Fueling the Nation's Energy Needs: Coal India Limited. *International Journal of Current Science*, 5(2), 28–34. ISSN 2250-1770.
2. Ministry of Coal, Government of India. (2025). *Annual Report 2024-25*. New Delhi: Ministry of Coal. (Section on Coal India Limited). Retrieved from coal.gov.in
3. Kanagaraj, P., and C. Harsh. (2023) "A Study on Financial Performance of Coal India Limited." *EPRA International Journal of Research & Development (IJRD)*, vol. 8, no.
4. www.coalindia.in
5. WWW.Groww.in