

Evaluating The Financial Health of Cairn India: A Case Study of The Barmer Operations

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Abstract

Cairn India, a subsidiary of Vedanta Resources Limited, is a key player in India's oil and gas industry. Among its numerous ventures, Cairn India's operations in Rajasthan's Barmer district stand out as a cornerstone of its success. The discovery of one of India's largest onshore oil fields in Barmer in 2004 has transformed the region into a hub of oil and gas production, fueling both the company's growth and the local economy. This study provides an in-depth analysis of Cairn India's financial health from 2007-2020, focusing on key financial metrics such as revenue, profitability, assets, liabilities, and cash flows. Operating in Rajasthan's Barmer district, Cairn India has played a crucial role in the region's economic landscape. The primary objective of this research is to evaluate the company's year-over-year financial patterns to gain insight into its future performance, utilizing multivariable data analysis and statistical techniques. Data were sourced from credible secondary sources, including reports from the Directorate of Economics and Statistics, Rajasthan's Economic Surveys, and other official publications. The analysis employs a semi-log model to examine the company's financial trajectory, revealing slight negative growth in revenue and gross profit, although these declines are not statistically significant, signaling stability rather than a major downturn. The company's significant growth in non-current assets reflects its long-term investment strategy, but a rapid rise in total liabilities raises concerns about its increasing debt burden. Cash flows across operations, investing, and financing activities show stagnation, further underscoring financial challenges. The study highlights the need for Cairn India to manage its debt levels, improve operational efficiency, and explore revenue diversification, particularly in renewable energy, to ensure sustainable growth and financial resilience amidst evolving market conditions.

Keywords: Revenue, Profit, Loss, Assets, Liabilities, Equity, Cash flow.

1. Introduction

Cairn India, a subsidiary of Vedanta Resources Limited, has established itself as a leading force in India's oil and gas sector, with its operations in the Barmer district of Rajasthan playing a central role in its growth. The discovery of one of India's largest onshore oil fields in Barmer in 2004 transformed this arid region into a vital hub for hydrocarbon production. This case study evaluates the financial health of Cairn India, with a specific focus on its Barmer operations, which have become critical to both the

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company's profitability and the region's economic development. Cairn India's operations in Barmer have significantly contributed to local economic growth through job creation, infrastructure development, and increased regional investment. The Barmer oil fields, serving as a substantial revenue source, have also impacted on the company's overall financial performance. This research aims to provide an in-depth examination of Cairn India's financial status from 2007 to 2020, assessing key metrics such as revenue, profitability, capital expenditure, and operational efficiency. It explores the challenges Cairn India faces, including fluctuating oil prices and regulatory changes, and how these factors influence the company's strategic decision-making. By understanding the financial dynamics of Cairn India's Barmer operations, the study offers valuable insights for stakeholders, including investors, policymakers, and local communities. It highlights the broader implications of these operations on regional development, financial sustainability, and the company's long-term viability in the energy sector.

The objective of the study is to evaluate the financial health of Cairn India's Barmer operations from 2007 to 2020, focusing on key indicators such as revenue, profitability, and capital expenditure.

2. Review of literature:

The financial health of Cairn India's Barmer operations can be best understood by considering a blend of technological advancements, strategic corporate decisions, and regional economic impacts, which collectively define the company's trajectory. The exploration of oil fields, such as those in the Barmer Basin, has not only brought economic opportunities but also introduced operational challenges, especially as oil reserves mature. To address these, Sakthipriya et al. (2015) emphasized the role of enhanced oil recovery (EOR) techniques in extending the productive life of mature fields. These technological interventions are crucial in sustaining oil output, which in turn stabilizes the revenue streams vital for Cairn India's financial health. However, financial stability isn't solely dependent on technology. The broader economic context in which Cairn India operates plays a significant role. As Segal and Sen (2011) noted, the discovery of oil in Rajasthan brought the potential for substantial earnings, but effective management of these resources was critical for ensuring that the benefits were fully realized. This highlights the importance of fiscal responsibility and regional investment in maximizing the impact of Cairn India's operations, not only on the state economy but also on its own financial sustainability.

Operational efficiencies, such as those highlighted by Rosland et al. (2010), further underpin the financial success of Cairn India. Their analysis of well-planning and optimization processes shows that reducing costs while enhancing production capacity is a key driver of profitability. Cairn India's ability to efficiently develop the Mangala field through cutting-edge methods demonstrates how technical proficiency directly feeds into the company's bottom line, ensuring that operational costs are controlled even in challenging environments like the Barmer Basin. Moreover, the strategic decisions made at the corporate level, particularly the cross-border acquisition of Cairn India by Vedanta, introduced new dimensions to the company's financial landscape. Reddy (2010) and Nangia et al. (2011) explored the implications of this merger, noting how it reshaped Cairn India's financial structure, access to capital, and market positioning. The Vedanta acquisition brought new strategic direction, leveraging corporate synergies to enhance financial resilience. These structural changes are crucial for understanding how Cairn India's financial health has evolved, as they illustrate how external corporate maneuvers can influence internal operational efficiency and financial strategy.

Kumari and Devasi's (2019) research on the socio-economic impact of oil and gas exploration further complements this financial narrative by showing how oil production in the desert regions of Rajasthan has led to measurable regional development. This underscores the idea that Cairn India's financial success is not only a result of internal efficiencies and strategic mergers but also of its broader socio-economic influence on the region. The company's operations have contributed to local development, which indirectly strengthens its position by fostering a more stable operating environment.

The geological understanding of the Barmer Basin, as detailed by Kothari et al. (2014), adds another layer of complexity to Cairn India's financial assessment. The resource potential of the basin underpins the long-term sustainability of the company's operations. This geological foundation is crucial for forecasting future production levels and financial returns, which, when combined with technological and corporate strategies, forms the bedrock of Cairn India's financial outlook.

Lastly, the broader corporate growth strategy of Vedanta, as discussed by Agarwal and Karna (2023), plays a pivotal role in shaping Cairn India's future. Vedanta's aggressive expansion plans and internal growth efforts have positioned Cairn India within a global framework, where the focus on operational excellence, governance, and human capital are central to maintaining financial health. This strategic vision aligns with Cairn India's need to navigate complex global markets while continuing to leverage the Barmer Basin's resources effectively.

Thus, the financial health of Cairn India's Barmer operations is shaped by a confluence of technological innovations, strategic corporate restructuring, and regional socio-economic impacts. These interconnected factors reflect a multi-dimensional approach to understanding how Cairn India remains financially viable while facing the inherent challenges of operating in a mature and geopolitically significant oil field.

3. Methodology:

The methodology employed in this study is primarily based on secondary data sources to evaluate the financial health of Cairn India's Barmer operations and assess the regional development impacts of oil and gas exploration in Rajasthan. Data was collected from several credible and authoritative sources, including statistical abstracts, economic reviews, and various official reports. Key data sources include from the Directorate of Economics and Statistics, Statistical Organization data on the Rajasthan economy, Rajasthan Economic survey reports, statistical abstracts from Rajasthan, State Human Development Update Reports, reports and ONGC report data and year wise reports of Cairn India, Barmer operations. The current study intends to quantify the regional variation in the level of development in oil and gas exploration and adjacent areas at the district level, using multivariable data analysis methods based on a predetermined system of viewpoints. To make the study complete and more analytical, empirical and statistical approaches were used for various elements of the study.

To evaluate the financial health of Cairn India over the period 2007-2020 using an Ordinary Least Squares (OLS) semi-log model, we can examine various indicators like revenue, profit, assets, liabilities, and cash flows. The semi-log model helps to estimate the growth rate of these financial indicators over time, where the natural log of the dependent variable is regressed on time.

$$\ln Y_t = \alpha + \beta t + \varepsilon$$

Where:

$\ln Y_t$ is the natural log of the financial indicator (Y) at time

α is the intercept, β is the growth coefficient (which shows the growth rate of the indicator over time),

t is the time variable (years from 2007 to 2020),
 ϵ is the error term.

4. Result and Discussion: By analyzing Cairn India's financial statements, we can assess its financial position, operational performance, and potential future trends. Liquidity ratios provide insights into whether the company can meet its short-term liabilities using available current assets, offering precise evaluations due to the reliability of short-term accounting data.

Figure 1 presents a year-by-year analysis of revenue for Cairn India's Barmer operations, highlighting revenue growth patterns. By identifying periods of steady growth or decline, the analysis explores factors such as production levels, price fluctuations, and operational changes. The substantial revenue increase in 2010, followed by a decline in subsequent years, illustrates the impact of production levels, with higher production typically driving revenue growth, assuming stable prices.

Additionally, changes in crude oil prices in a volatile commodity market significantly affect revenue, while project developments like expansions or technological improvements influence operational efficiency and productivity. Operational efficiencies, in turn, enhance profit margins, linking revenue to gross profit to evaluate direct profitability. A healthy gross profit margin suggests revenue is covering production costs, and by examining the relationship between revenue and net profit, we can assess how income translates into overall profitability.

Furthermore, external factors such as market conditions and regulatory changes, including environmental policies and tax reforms, play a role in shaping revenue. This comprehensive analysis of Cairn India's revenue offers valuable insights into its financial performance, operational success, and long-term business viability in the Barmer region. Understanding these patterns helps gauge the company's growth potential, market position, and overall financial health.

Figure 1: Year wise revenue trends (2007-2020)

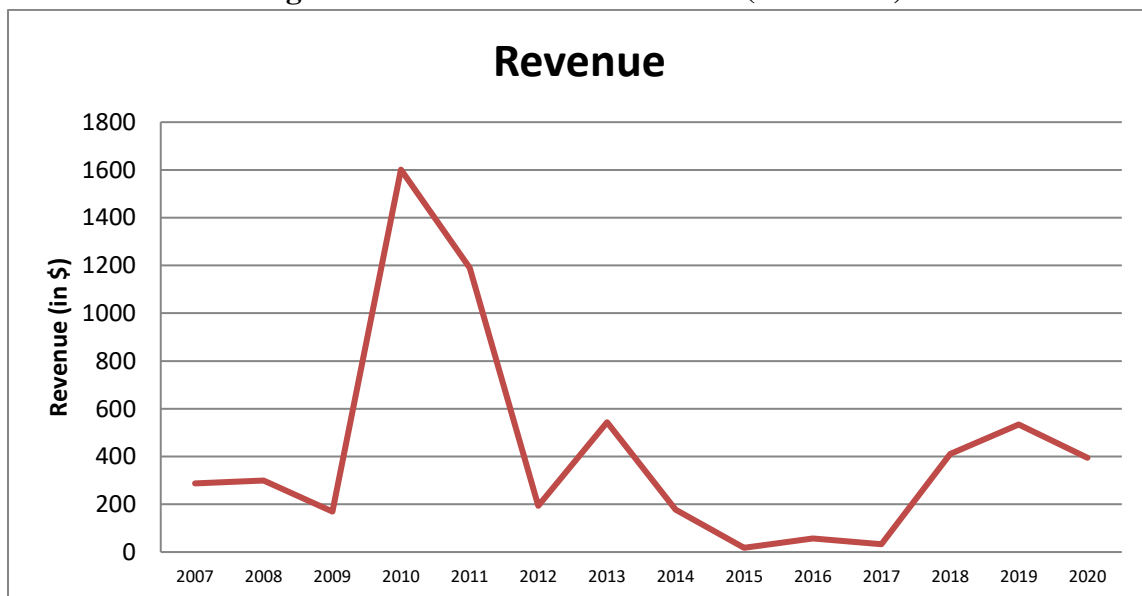


Figure 2 illustrates year-by-year trends in Cairn India's gross profit and net profit from its Barmer operations. Gross profit, the difference between total revenue and the cost of goods sold (COGS), reflects the earnings from core operations before deducting expenses like taxes, interest, and other overheads. Significant fluctuations are evident in this trend, ranging from high positive to low negative

values, highlighting variations in operational efficiency. The peak gross profit occurred in the fiscal years 2010-2011 and 2011-2012, reflecting strong cost management and pricing strategies. Gross profit serves as a key indicator of Cairn India's ability to control its production and extraction costs, with higher margins often signifying successful cost-cutting and revenue generation from core activities, such as oil and gas extraction. It also measures the company's efficiency in generating revenue from its primary business. Net profit, or net income, represents the remaining revenue after all expenses, including operational costs, taxes, and interest, have been deducted. It reflects the overall financial performance, offering insight into the company's ability to generate profit after accounting for all costs. In Cairn India's case, net profit underscores the financial health of its Barmer operations, considering both operational efficiency and financial management.

A positive net profit indicates sound financial health, while a negative figure suggests financial difficulties. Net profit also influences earnings per share (EPS), a critical measure of shareholder returns. Higher year-end profits often lead to increased dividends and a potential rise in the company's stock value, benefiting both investors and the company's market position. The trends in gross and net profits provide a comprehensive view of Cairn India's profitability and operational success over the years.

Figure 2: Trends in gross profit/profit of the year (2007-2020)

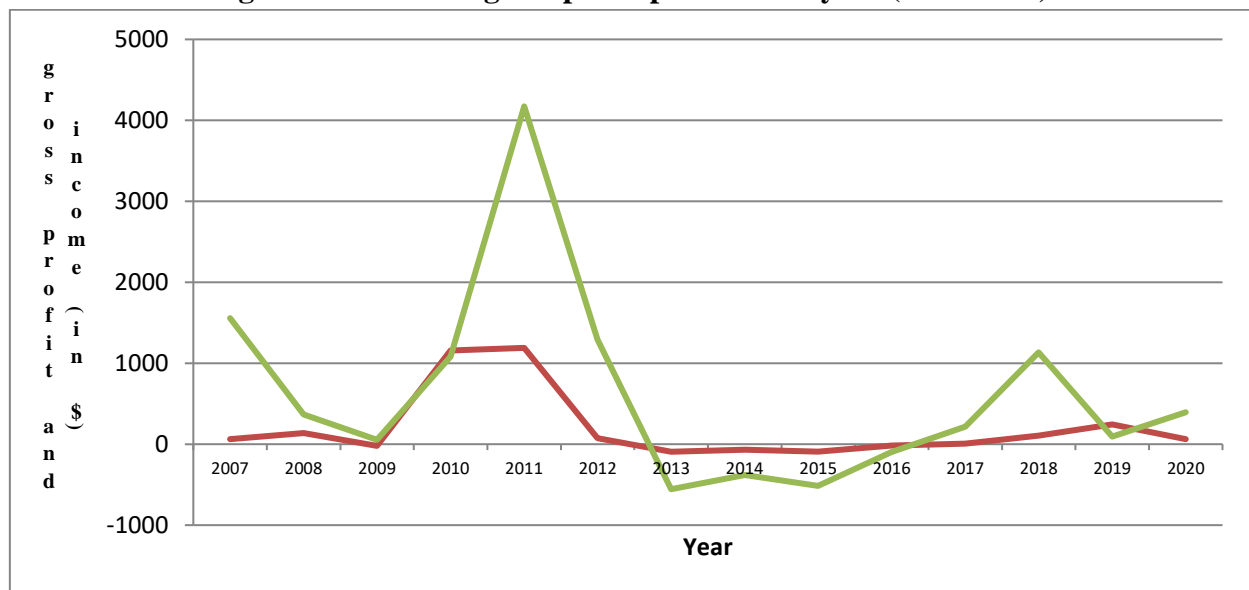


Figure 3 presents the year-by-year analysis of total recognized income and expenses for Cairn India's Barmer operations. This includes all income earned during the financial year, regardless of whether it was received in cash, offering a broad view of the company's financial performance. The income encompasses not only revenue from core operations, such as oil and gas sales, but also other income sources, including interest from investments, gains from asset sales, and other comprehensive income. This gives a holistic view of the company's ability to generate earnings beyond its primary activities, highlighting its overall financial health, profitability, and contribution to shareholder value. On the expense side, total recognition of expenses represent all costs incurred during the year, regardless of when the cash was paid. This includes production costs, operating expenses, interest payments, depreciation, and other comprehensive expenses. These are crucial for understanding the operational and financial burdens Cairn India faces in its Barmer operations. The analysis of this trend over the years

reflects both internal operations and the impact of external factors such as market conditions, oil prices, and regulatory changes. For instance, the highest total recognized income and expense was recorded in 2012, after which there was a notable decline. Between 2007 and 2010, and then from 2012 to 2020, the income and expense numbers fluctuated but remained relatively stable on average. This analysis provides crucial insights into Cairn India’s ability to manage its operational costs while generating income from various sources. It offers a comprehensive understanding of the company's profitability, operational efficiency, and overall financial health in the Barmer operations. Monitoring these trends is essential for assessing the long-term sustainability of Cairn India's business and its capacity to enhance shareholder value.

Figure 3: Total recognized income and expense for the year (2007-2020)

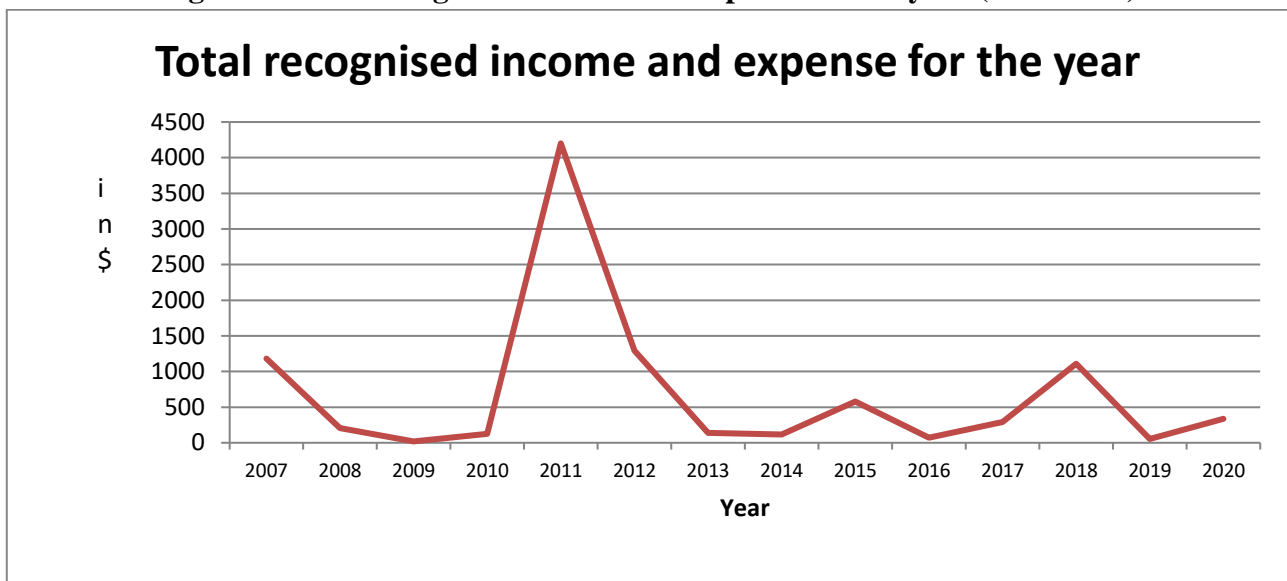


Figure 4 provides a comprehensive analysis of Cairn India's asset base and financial stability by examining non-current assets, current assets, and total assets from the Barmer operations' annual financial reports. Non-current assets, which are long-term investments intended to generate income beyond a year, form a crucial part of the company’s infrastructure. For Cairn India's Barmer operations, these include investments in extraction facilities, oil drilling equipment, and other essential infrastructure. The value and state of these assets reflect the company’s growth potential and operational stability, with depreciation impacting their value over time. Monitoring the management and replacement of these assets helps evaluate the company’s ability to sustain long-term operations and maintain its efficiency through investments in cutting-edge technology and modern facilities. Current assets, on the other hand, are resources expected to be consumed or converted into cash within a year. These are vital for day-to-day operations, ensuring liquidity and the ability to meet immediate obligations. A healthy balance of current assets, particularly in cash and receivables, is essential for maintaining working capital and supporting continuous operations. For Cairn India, this is crucial in managing operational costs and addressing any unforeseen expenses in the Barmer operations.

The total assets, which comprise both current and non-current assets, offer a holistic view of the company’s asset base and its overall financial health. This includes long-term infrastructure investments

and short-term resources required for daily operations. Analyzing the trends in total assets provides insights into the company's growth and its ability to support future income generation.

The trends depicted in Figure 4 reveal that Cairn India's non-current assets in Barmer have been growing steadily, with no significant gaps between the current and total asset numbers. The peak in total assets was observed in 2011, reflecting the company's extensive resource base at that time. In contrast, the highest point for non-current assets occurred in 2017, indicating significant long-term investments made during that period. These trends suggest a balanced approach to asset management, combining both short-term liquidity and long-term operational efficiency to ensure financial stability.

Figure 4: Year-wise trends of non-current, current and total assets (2007-2020)

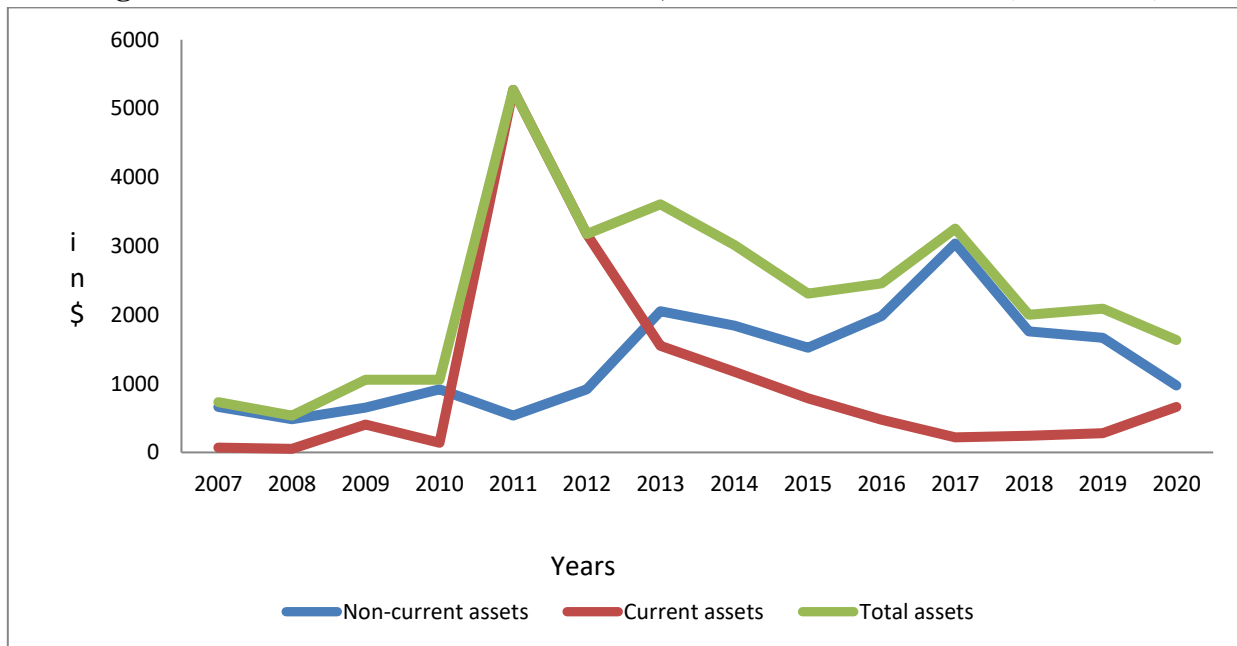


Figure 5 presents a detailed analysis of the year-over-year trends in net assets for Cairn India's Barmer operations. Net assets, calculated as the difference between total assets and total liabilities, represent the company's financial worth after accounting for all its obligations. This metric is crucial for assessing the financial health and stability of an organization. Net assets provide insight into a company's ability to cover its liabilities with its available resources. A positive net asset value indicates that a company's assets exceed its liabilities, reflecting a sound financial position. Such a robust net asset base offers resilience against economic downturns and operational challenges, enabling the company to continue its operations effectively even during financial stress. Additionally, a strong net asset position suggests that the company has substantial resources available for expansion, investment, and other strategic initiatives, which is particularly significant for Cairn India's Barmer operations, given the substantial investments required for exploration and production infrastructure.

The trend in net assets over time can also reveal the company's asset management efficiency. For instance, a growing net asset base often indicates effective resource management, which can enhance operational efficiency and productivity. Conversely, a decline might suggest challenges in asset utilization or financial strain. By analyzing changes in net assets, one can gain insights into how the company allocates its resources across various operational activities such as capital expenditures, research and development, and maintenance. For shareholders and potential investors, the net asset value

per share is a critical metric, as it helps determine the intrinsic value of each share based on the company's net assets. This ratio, along with leverage and solvency ratios like the debt-to-equity ratio, provides valuable information about the company's financial leverage and its capacity to service long-term debt.

The chart in Figure 5 illustrates an upward trend in Cairn India's net assets starting in 2007, peaking in 2011, and then showing a gradual decline until 2020. This trend reflects the company's financial trajectory and is influenced by various factors, including global oil price fluctuations. For example, a decrease in oil prices could reduce the value of reserves and assets, while an increase might bolster the company's asset base and overall financial stability. Therefore, monitoring net asset trends is crucial for understanding Cairn India's financial health and its capacity to navigate market volatility.

Figure 5: Year wise trends of net assets in Cairn energy India limited, Barmer operations (2007-2020)

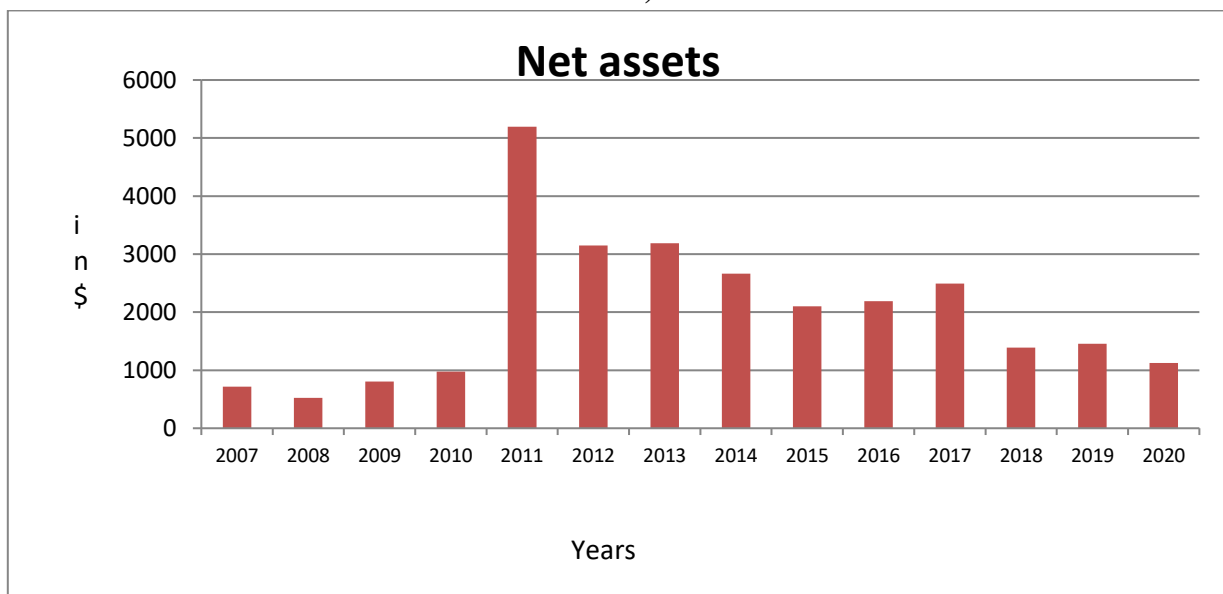


Figure 6 illustrates the year-over-year trends in net liabilities for Cairn India's Barmer operations. Net liabilities encompass the company's total financial obligations, including bonds, loans, accounts payable, and other debts, adjusted for cash and cash equivalents. This metric is crucial for assessing the company's overall debt situation and its capacity to manage and service its financial commitments. Net liabilities provide insight into the company's debt management by revealing the net amount of debt remaining after accounting for available cash reserves. A high net liability figure may indicate significant debt reliance, which could pose a risk to financial stability. Conversely, a lower net liability suggests that the company effectively utilizes its liquid assets to manage and reduce debt, indicating a stronger financial position. Analyzing net liabilities helps assess liquidity and financial flexibility. It reflects the company's ability to meet its debt obligations without resorting to additional borrowing or asset sales. Adequate liquidity ensures that the company can handle unforeseen expenses, capital needs, or operational requirements without facing financial strain.

Leverage ratios, such as the debt-to-equity ratio, are derived from net liabilities and offer insights into the company's financial risk and leverage. A high debt-to-equity ratio indicates increased financial risk, which could affect the company's stability and long-term strategy. The trends depicted in Figure 6 reveal

variations in net liabilities over time. In the early years, such as 2007, 2008, and 2012, net liabilities were relatively low. However, there was a noticeable increase in net liabilities from 2009 through 2016, peaking in 2017. Although net liabilities declined in the subsequent years of 2018, 2019, and 2020, they remained higher than in 2017. For a capital-intensive industry like oil and gas, understanding net liabilities is crucial for evaluating financial risk and sustainability. High net liabilities could indicate aggressive financing strategies that might impact the company's stability and long-term financial plans. Assessing net liabilities helps gauge the company's ability to balance debt management with growth and operational needs, providing insights into its financial resilience and capacity for future investments.

Figure 6: Year wise trends of total liabilities in Cairn energy India operating in Barmer region (2007-2020)

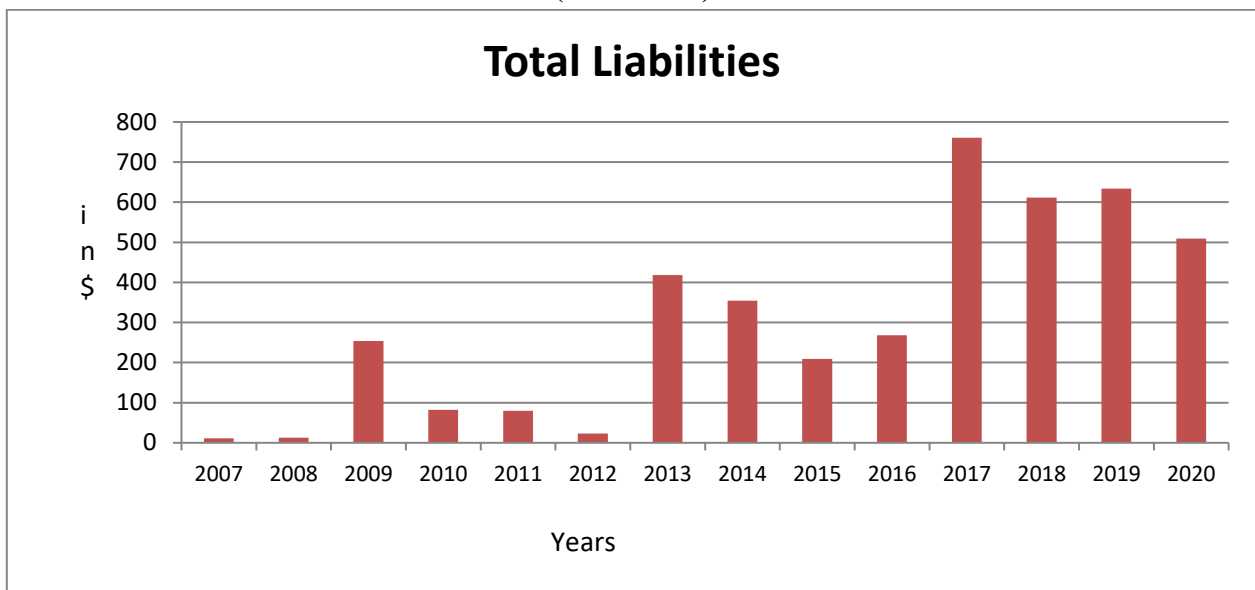


Figure 7 provides a comprehensive view of Cairn India's financial dynamics, focusing on several key indicators: total equity, net cash from investing activities, closing cash and cash equivalents, net cash generated from operating activities, and net cash flows from financing activities. Total equity represents the residual interest in the company's assets after deducting all liabilities, reflecting the net worth and financial stability of Cairn India's Barmer operations. A higher total equity value indicates a stronger financial foundation and a greater capacity to finance new projects or expand operations without excessive reliance on external debt. This is a crucial metric for investors assessing the company's ability to support growth initiatives and manage financial risks. Net cash for investing activities captures the cash flows associated with investments in long-term assets such as property, plant, and equipment. This figure is calculated by subtracting cash outflows for investments from cash inflows. High outflows in this category might signal significant investments in operational upgrades or expansions, which, while potentially impacting short-term liquidity, could enhance long-term profitability and operational efficiency.

Closing cash and cash equivalents reflect the company's liquid assets at the end of the financial period. This includes cash on hand and short-term investments easily convertible to cash. Higher closing balances indicate improved financial flexibility and liquidity, essential for addressing unexpected expenses or seizing investment opportunities. Adequate reserves ensure operational resilience and the

ability to manage short-term financial obligations. Net cash generated from operating activities represents the cash flow from the company's core business operations, excluding financing and investing activities. This metric highlights the company's ability to generate profit from its primary activities, showcasing operational sustainability and financial health. Positive net cash flow from operations supports day-to-day operations, capital expenditures, and shareholder returns. Net cash flows from financing activities capture cash transactions related to debt and equity financing, including inflows from borrowing or issuing shares and outflows from repaying debt or repurchasing shares. Positive cash flows in this category can indicate efforts to reduce debt or return capital to shareholders, while negative cash flows might suggest new financing or equity issuance. The trends depicted in Figure 7 show that total equity, net cash from investing activities, closing cash and cash equivalents, and net cash generated from operating activities peaked in 2011, reflecting strong financial performance and liquidity at that time. However, these metrics experienced a decline in subsequent years, continuing until 2020. This downward trend could indicate increased financial pressure or changes in the company's investment and financing strategies, highlighting the need for a deeper analysis of the underlying factors influencing these financial indicators.

Overall, the analysis of these financial metrics offers a detailed understanding of Cairn India's financial position and operational effectiveness, providing valuable insights into the company's ability to sustain growth, manage investments, and maintain financial stability.

Figure 7: Year wise trends in total equity, total cash generated from investing, operating and investing activities and closing cash or cash equivalent (2007-2020)

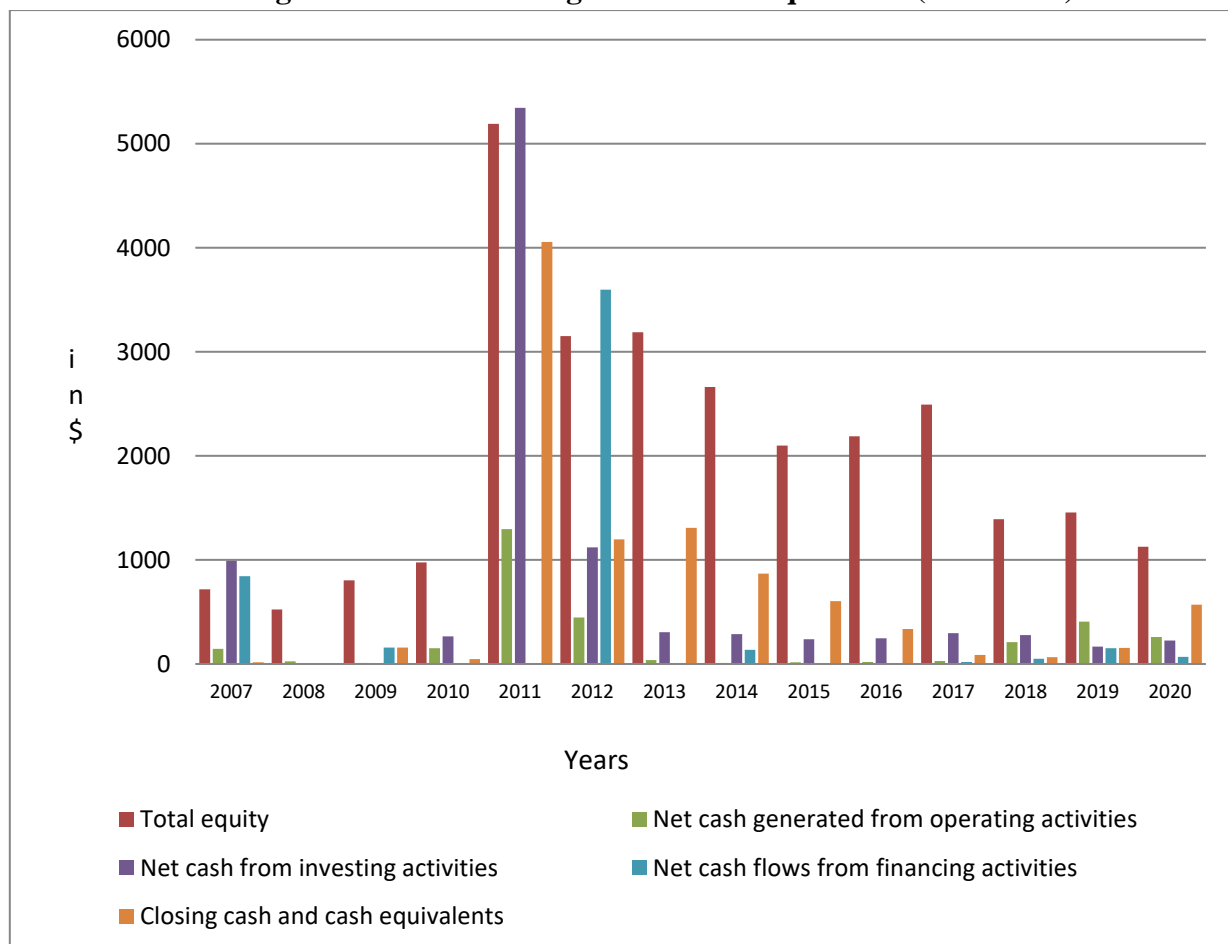


Table 1: Growth Coefficient of various indicators financial health (2007-2020)

	Intercept	Growth Coefficient	t-Value	P-Value	R ²
Revenue	5.988	-0.071	-0.828	0.423	0.054
Gross profit	5.623	-0.102	-0.887	0.404	0.101
Profit for the year	6.750	-0.068	-0.721	0.491	0.061
Profit/loss for the year	4.430	0.065	0.451	0.667	0.033
Total recognized income and expenditure	5.797	-0.025	-0.251	0.805	0.005
Non-current assets	6.342	0.096	3.428	0.005	0.495
Current assets	5.647	0.066	0.728	0.480	0.042
Total assets	7.002	0.075	1.895	0.082	0.230
Total liabilities	2.947	0.283	4.776	0.000	0.655
Net assets	7.027	0.050	1.162	0.267	0.101
Total equity	7.028	0.0504	1.162	0.267	0.101
Net cash generated from operations	3.960	0.049	0.452	0.658	0.016
Net cash from investing activities	4.136	0.139	0.851	0.411	0.056
Net cash flows from financing	3.431	0.001	0.007	0.994	0.000
Closing cash and cash equivalent	4.261	0.144	1.194	0.255	0.106

Source: Authors' own Calculation

Revenue Growth Coefficient is -0.0708679, which implies a negative growth rate over time. t-Value: -0.8284 (not significant), with a p-value of 0.4236, indicating no statistically significant decline in revenue. R²: 0.054, meaning only 5.4% of the variance in revenue is explained by time. This suggests a weak relationship between time and revenue.

Gross Profit Growth Coefficient is -0.102, indicating a negative growth in gross profit. t-Value: -0.8875, with a p-value of 0.4043, again indicating that this decline is not statistically significant. R²: 0.101, implying about 10% of the variance is explained, which is still weak.

Profit for the Year Growth Coefficient is -0.0683, showing a slight negative trend in annual profits. t-Value: -0.7213, with a p-value of 0.4913, meaning the decline is not significant. R²: 0.061, indicating a very low explanatory power of the model.

Non-Current Assets Growth Coefficient is 0.0966, which shows a significant positive growth in non-current assets. t-Value: 3.428, and a p-value of 0.005, suggesting that the growth in non-current assets is statistically significant at the 1% level. R²: 0.495, meaning almost 50% of the variation in non-current assets is explained by time, showing a robust relationship.

Total Liabilities Growth Coefficient is 0.2830, indicating strong growth in total liabilities. t-Value: 4.776, with a p-value of 0.0005, showing high statistical significance. R²: 0.655, suggesting that 65.5% of the variance in total liabilities is explained by time, indicating a significant increase over the years.

Net Assets & Total Equity Growth Coefficients are both indicators have a growth coefficient of 0.050, which shows a slight positive growth. t-Value: 1.162, with a p-value of 0.2677, indicating that this growth is not statistically significant. R^2 : 0.101, implying low explanatory power.

Net Cash Flows from Operations Growth coefficient is 0.0494, with a p-value of 0.6588, indicating no significant growth.

Investing Activities Growth coefficient is 0.1388, with a p-value of 0.4112, showing no significant growth. From Financing Activities: Growth coefficient is close to zero, with a p-value of 0.9944, showing no growth at all. R^2 values for these indicators are very low, indicating little explanatory power.

Cairn India's revenue and profitability indicators (gross profit, profit for the year) show slight negative growth, but the declines are not statistically significant, suggesting stability rather than a steep downturn.

Non-current assets and total liabilities show significant growth, with liabilities increasing rapidly, which may be a cause for concern regarding debt levels. Net assets and total equity have positive growth but are not statistically significant, indicating little change in the overall value of the company's assets relative to liabilities. Net cash flows, whether from operations, investing, or financing, show no significant growth, implying the company's cash generation has been relatively stagnant.

In conclusion, Cairn India's financial health from 2007-2020 reflects stable revenue and profit trends with notable growth in liabilities and non-current assets, suggesting a reliance on long-term asset expansion but potentially at the cost of increasing debt.

Conclusion

Cairn India's financial health from 2007-2020 demonstrates a mixed performance, with stable yet sluggish growth in revenue and profitability, contrasted by significant increases in liabilities and non-current assets. The analysis shows that while revenue and gross profit experienced negative growth, the declines were not statistically significant, indicating that Cairn India has maintained relative stability rather than undergoing any sharp downturns. However, the growth in non-current assets (significant at 1% level) highlights the company's focus on expanding long-term investments, particularly in oil exploration and production. This strategic asset accumulation is a positive sign, reflecting an effort to strengthen operational capacity. The most concerning aspect is the significant growth in total liabilities, which increased rapidly over the period, posing potential risks regarding the company's financial stability. The strong correlation between time and liabilities growth ($R^2 = 0.655$) indicates a heavy reliance on debt to finance expansion, which could undermine long-term sustainability if not managed carefully. While net assets and total equity showed slight positive growth, the changes were not statistically significant, suggesting limited improvement in the company's overall financial position relative to its rising liabilities.

Cairn India's cash flows, whether from operations, investing, or financing, showed no significant growth during the period, indicating stagnant cash generation. This trend, coupled with rising debt, could limit the company's ability to invest in future projects or weather market fluctuations effectively. To improve financial health, Cairn Energy should adopt policies aimed at reducing its debt burden, particularly focusing on lowering total liabilities. Enhancing operational efficiency through cost-cutting measures and leveraging new technologies to increase production from existing reserves would be prudent. The company should also seek to diversify revenue streams and explore opportunities in renewable energy sectors, ensuring sustainable growth while maintaining investor confidence through transparent financial reporting.

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