

A Study on the Financial Resilience on Profitability and Liquidity Prospects of Selected Indian Cement Companies

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Abstract

The Cement industry is one of the key capital intensive areas with high sensitivity to macroeconomic shifts. This attempted study investigates the financial resilience of selected Indian cement companies by evaluating their profitability and liquidity performance over a ten-year period. As a capital-intensive sector highly sensitive to macroeconomic fluctuations, understanding financial strength within industry is essential for long-term stability and growth. Using secondary data derived from audited financial statements, the analysis involves financial ratios such as Return on Assets, Return on Equity, Earnings per Share, Current ratio, Liquid ratio and Total Asset Turnover ratio to assess each firm's capacity and maintain operational continuity. The results of study reveal substantial differences in financial performance across selected companies. UltraTech Cement showed stable profitability but consistently low liquidity; while Prism Johnson's sharp fluctuations indicate financial instability. JK Lakshmi Cement improves steadily until 2022 before experiencing renewed pressures. Overall, the findings emphasize the interdependence between liquidity and profitability in shaping financial efficiency. The attempted study highlights the need for improved liquidity planning, Cost efficiency, and strategic financial management to strengthen long-term sustainability in the Indian cement sector.

Keywords: Profitability, Liquidity, Cement Companies, Financial stability

1. Introduction

The cement industry is one of the significant sources for growth of the Indian economy and has pivotal impact on integral part of national financial planning. Cement plays vital role in infrastructure development like urbanization, Changes in real estate, expansion of business premises to etc. As one of the largest cement producers globally, India's cement sector is characterized by high capital intensity, cyclical demand fluctuations, substantial working capital requirements, and sensitivity to macroeconomic conditions such as inflation, interest rates, and construction activity. Government focuses more about growth of this industry since it holds high potential for financial and construction development. Financial resilience refers to a firm's ability to withstand economic shocks, maintain operational continuity, and preserve profitability under adverse conditions. Empirical evidence suggests that liquidity management significantly influences firm profitability, yet the relationship is often nonlinear and context-dependent (Panigrahi, 2020; Panigrahi & Vachhani, 2022). Financial stability of

concerns decides the growth, profitability, sustainability for long term period of time in national level. Working capital efficiency, particularly the management of receivables, inventory, and payables, directly affects cash flows and profitability margins in cement companies (Budhrani, n.d.; Devi et al., 2025). Therefore, this study aims to analyze the financial resilience of selected Companies.

1.1 Objectives of the study

1. To measure the various financial performances of Cement companies listed in Indian stock exchange.
2. To analyze the long-term solvency and profitability of selected Cement companies for future readiness based on financial statements.
3. To assess the trend and current scenario of selected cement companies in India during study period.

1.2 Statement of the Problem

The Indian cement industry operates within a highly capital-intensive, cyclical, and infrastructure-dependent environment where firms face persistent challenges related to demand volatility, high fixed costs, fluctuating input prices, and macroeconomic uncertainties. In such a setting, maintaining an optimal balance between profitability and liquidity becomes critical for ensuring financial resilience and long-term sustainability. Despite these contributions, existing studies largely examine profitability, liquidity, working capital efficiency, or financial distress in isolation rather than integrating them within a comprehensive financial resilience framework, particularly in the context of selected Indian cement companies using multi-year panel data analysis. Moreover, limited research simultaneously evaluates how liquidity indicators not only affect profitability but also shape future liquidity prospects and solvency stability under economic shocks.

2. Review of Literature

Studies using panel data methodologies demonstrate that moderate liquidity enhances profitability, while excessive liquidity may reduce firm performance due to idle resource allocation (Boadi et al., 2023). In the context of the Indian cement industry, working capital management significantly impacts return on assets and equity, with shorter cash conversion cycles improving both liquidity and profitability sustainability (Panigrahi, 2025; Kumar et al., 2022). Empirical findings further reveal that liquidity ratios influence market valuation positively and investor confidence, particularly in capital-intensive sectors where financial stability signals operational strength (Panigrahi & Vachhani, 2022). In Addition, liquidity indicators act as early warning predictors of financial distress, reinforcing their importance in resilience frameworks (Venugopal & Raghunandan, 2024). Systematic risk analyses confirm that firms with stronger liquidity buffers exhibit lower risk exposure and more stable profitability. (Mallik et al., 2022). Emerging research also highlights that ESG integration and governance quality enhance financial performance by strengthening liquidity management and long-term sustainability outcomes (Dhuri et al., 2024; Lockhat & Divekar, 2025). Efficiency-based evaluations using DEA models further establish that balanced working capital structures contribute to superior operational productivity and profitability in cement firms (Soni, 2024). Collectively, these studies underscore that profitability and liquidity are interdependent dimensions of financial resilience; yet comprehensive models integrating these constructs within the Indian cement sector remain limited, thereby necessitating further empirical investigation.

3. Research Methodology

The present study adopts a quantitative research design based on secondary data to examine the impact of financial resilience on profitability and liquidity prospects of selected Indian cement companies. The sample selection follows a purposive sampling technique to engage the inclusion of financially significant and consistently operating firms within the Indian cement sector. The population of the study comprises all cement manufacturing companies listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). The Sample consisted of five firms (Ultra Tech Cement, Prism Johnson, Birla Corporation, JK Lakshmi Cement, Heidelberg Cement) with largest market capitalization with high producing capacity in industry during the study period with availability of complete audited financial statements for analysis. Firms with incomplete financial data or irregular reporting patterns are excluded to ensure consistency and reliability of panel estimations.

The study covers the period from 1st April 2015 – 31st March 2025. The time frame is selected to capture various economic phases, including pre- and post-pandemic financial conditions, thereby enabling assessment of financial resilience under varying environments. Financial data are collected from sources such as annual reports of the respective companies and Capitaline database. Financial ratios were, employed to examine the relationship between profitability, liquidity, and the overall financial health of the chosen firms.

3.1 Return on Asset (ROA)

The Return on Asset is the measure a company's level of profitability to its own invested total assets. A higher value indicates better asset efficiency in the company. It conveys the investors and firm to know how firm converts investments to net earnings.

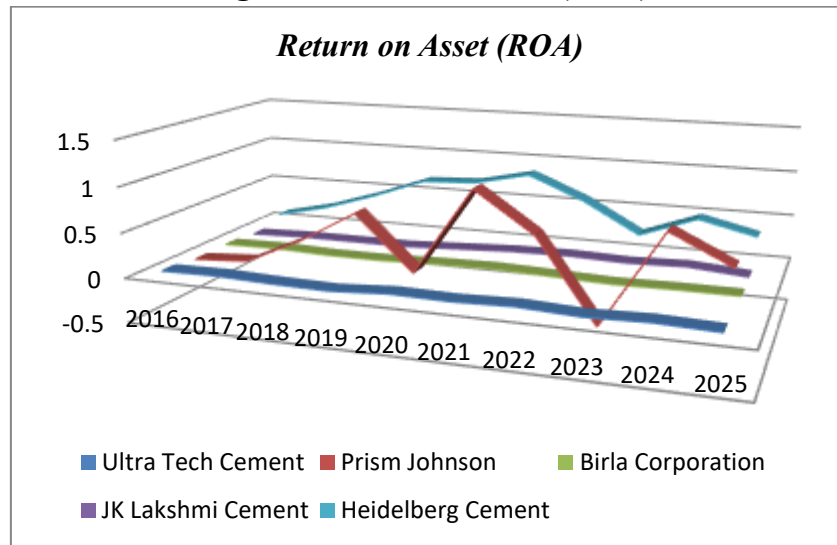
$$ROA = \frac{\text{Net Income}}{\text{Average Total Assets}} \quad (1)$$

Table 1: Return on Asset (ROA) of selected Companies

Companies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ultra Tech Cement	0.06	0.07	0.05	0.04	0.08	0.07	0.09	0.06	0.08	0.06
Prism Johnson	0.02	0.06	0.35	0.71	0.12	1.07	0.64	-0.25	0.80	0.49
Birla Corporation	0.03	0.04	0.02	0.02	0.04	0.05	0.03	0.01	0.02	0.02
JK Lakshmi Cement	0.00	0.02	0.02	0.02	0.05	0.08	0.09	0.07	0.09	0.04
Heidelberg Cement	0.10	0.24	0.44	0.67	0.70	0.84	0.58	0.23	0.47	0.32

Over the ten years, the companies show noticeably different profitability paths. UltraTech Cement stays steady with small movements, provides calm stable performance. Prism Johnson shifts sharply, and even turning negative in 2023, showed an uneven financial pattern. JK Lakshmi Cement improves gradually and meets the dip in 2025. Heidelberg Cement India records strong results up to 2021 but slowly declines afterward. Overall, the firms performance differ clearly with steady, volatility and consistently and improvement.

Figure 1 Return on Asset (ROA)



3.2 Return on Equity (ROE)

Return on Equity (ROE) is the key financial ratio used to evaluate the side of profitability and efficiency of a company in generating profits from shareholders' equity. Higher percentage indicates superior in profit management with equity.

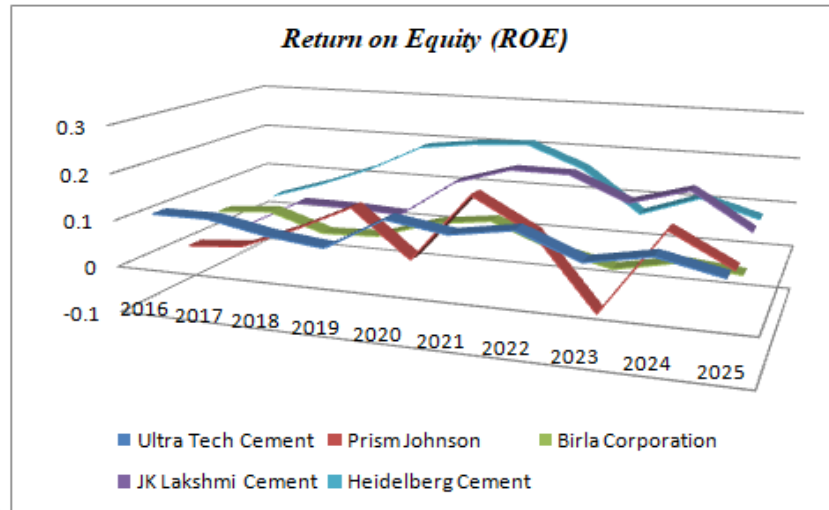
$$ROE = \frac{\text{Net Profit After Tax}}{\text{Shareholders' Equity}} * 100 \quad (2)$$

Table 2: Return on Equity

Companies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ultra Tech Cement	0.11	0.11	0.09	0.07	0.14	0.12	0.14	0.09	0.12	0.09
Prism Johnson	0.01	0.02	0.07	0.13	0.03	0.17	0.10	-0.05	0.14	0.07
Birla Corporation	0.06	0.07	0.03	0.03	0.07	0.09	0.04	0.01	0.04	0.02
JK Lakshmi Cement	-0.01	0.06	0.06	0.05	0.14	0.18	0.17	0.12	0.16	0.08
Heidelberg Cement	0.04	0.08	0.13	0.19	0.20	0.21	0.16	0.07	0.11	0.08

The decade-long profitability depicted differences in financial performance among chosen companies. Ultra Tech Cement remains steady with moderate returns, while JK Lakshmi Cement and Prism Johnson displays high volatility, including a negative return in 2023, indicating instability. Birla Corporation maintains consistently with low profitability. Overall, the sector shows a mix of stable leaders and companies faced persistent financial challenges over the study period.

Figure 2: Return on Equity



3.3 Earnings per Share (EPS)

Earnings per Share (EPS) are highly employed financial indicator which measures the portion of a company’s net profit attributable to each equity share held in the company.

$$EPS = \frac{\text{Net Profit After Tax} - \text{Preference Dividend}}{\text{Number of Equity Shares}} \quad (3)$$

Table 3: Earnings per Share (EPS) of Selected Companies

Companies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ultra Tech Cement	86.3	95.7	81.2	84.3	189.1	185.	245	171.7	239.5	210.5
Prism Johnson	0.15	0.35	1.30	2.45	0.45	3.97	2.39	-0.88	2.69	1.52
Birla Corporation	5.13	6.42	3.10	3.11	6.65	9.65	4.24	0.83	3.48	2.48
JK Lakshmi Cement	-0.25	2.82	2.46	2.05	5.82	8.30	8.46	5.45	7.19	4.57
Heidelberg Cement	2.15	4.4	7.05	10.3	12.36	14.8	10.9	4.43	7.09	4.97

UltraTech Cement shows consistently high and improving EPS, indicating strong profitability. Prism Johnson’s EPS fluctuates sharply, even turning negative in 2023, reflecting unstable performance. Birla Corporation maintains moderate but uneven earnings over time. JK Lakshmi Cement improves steadily until 2022 before a slight decline in 2025. Heidelberg Cement rises strongly until 2021, followed by a downturn, suggesting recent operational challenges.

3.4 Current Ratio

The Current Ratio is a liquidity ratio that measures a company’s ability to meet its short-term obligations using its short-term assets.

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \quad (4)$$

Table 4 : Current Ratio (CR) of Selected Companies

Companies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ultra Tech Cement	0.86	1.55	0.94	0.86	1.03	1.17	0.99	0.86	0.84	0.71
Prism Johnson	0.97	0.84	0.84	0.96	1.13	1.02	0.91	0.86	0.94	0.94
Birla Corporation	2.86	2.03	1.79	1.62	1.49	1.58	1.59	1.34	1.21	1.10
JK Lakshmi Cement	0.67	0.86	0.76	0.72	0.85	1.00	1.34	1.39	0.92	1.04
Heidelberg Cement	0.69	0.69	0.93	1.15	1.37	1.34	1.68	1.55	1.53	1.36

The current ratio trends show notable differences in liquidity management across the companies. UltraTech Cement maintains consistently low ratios, indicating tight short-term liquidity. Prism Johnson also records low but relatively stable levels. Birla Corporation begins with strong liquidity but experiences a gradual decline over the decade. Heidelberg Cement shows the strongest and most consistent improvement, maintaining ratios above 1 in recent years, reflecting a solid ability to meet short-term obligations.

3.5 Net Profit Ratio (NPR)

The Net Profit Ratio refers to the proportion of net profit earned by a firm in relation to its total sales revenue after deducting all operating and non-operating expenses, including interest and taxes.

$$Net\ Profit\ Ratio = \frac{Net\ Profit}{Sales} * 100 \quad (5)$$

Table 5: Net Profit Ratio of Selected Companies

Companies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ultra Tech Cement	10.00	11.00	7.60	6.03	13.42	12.37	13.95	8.09	10.06	8.61
Prism Johnson	0.15	0.35	1.30	2.45	0.45	3.97	2.39	-0.88	2.69	1.52
Birla Corporation	5.13	6.42	3.10	3.11	6.65	9.65	4.24	0.83	3.48	2.48
JK Lakshmi Cement	- 0.25	2.82	2.46	2.05	5.82	8.30	8.46	5.45	7.19	4.57
Heidelberg Cement	2.15	4.44	7.05	10.34	12.36	14.88	10.98	4.43	7.09	4.97

The data reveal noticeable variations in financial performance across the selected cement companies over the ten-year period. UltraTech Cement maintains relatively stable and strong performance, indicating consistent profitability. JK Lakshmi Cement demonstrates steady growth after an initial negative value. In contrast, Prism Johnson exhibits high volatility, including a negative value in 2023, indicating instability. Overall, the results highlight that larger firms tend to maintain stability, while smaller firms experience greater variability in returns.

3.6 Total Assets Turnover

A higher total asset turnover ratio reflects efficient utilization of assets, suggesting that the firm is capable of generating greater revenue per unit of investment in assets.

$$Total\ Asset\ Turnover = \frac{Average\ Total\ Assets}{Net\ Sales!} \quad (6)$$

Table 6: Total Asset turnover Ratio of Selected Companies

Companies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ultra Tech Cement	0.62	0.61	0.54	0.58	0.57	0.54	0.63	0.69	0.71	0.59
Prism Johnson	14.08	23.65	27.55	27.9	28.5	28.1	23.1	28.6	29.0	38.4
Birla Corporation	0.63	0.52	0.49	0.57	0.60	0.56	0.57	0.66	0.66	0.60
JK Lakshmi Cement	0.64	0.64	0.76	0.87	0.89	0.94	1.04	1.17	1.15	0.73
Heidelberg Cement	4.71	5.73	6.24	5.98	5.68	5.71	5.23	5.40	6.65	7.00

UltraTech Cement and Birla Corporation exhibit stable and consistent ratios, reflecting steady operational efficiency. JK Lakshmi Cement shows a gradual upward trend until 2023, suggesting improving asset utilization, followed by a slight decline. In contrast, Prism Johnson records exceptionally high and increasing values, highlighting aggressive asset usage. Overall, most firms maintain stability, efficiency levels vary significantly across companies.

3.7 REGRESSION MODEL

This multiple regression frameworks was employed to assess the determinants of financial performance of selected companies using Return on Assets (ROA) as the dependent variable and Net Profit Ratio (NPR) and Total Asset Turnover (TAT) as explanatory variables.

$$ROA_{it} = \beta_0 + \beta_1(NPR)_{it} + \beta_2(TAT)_{it}$$

Hypothesis

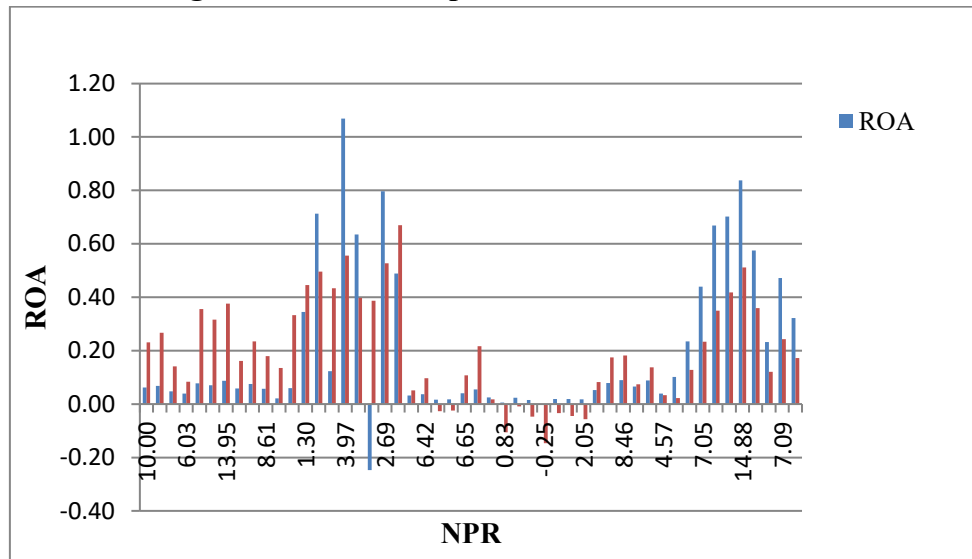
- **H₀₁**: Net Profit Ratio (NPR) and Total Asset Turnover (TAT) have no significant impact on Return on Assets (ROA).
- **H₁₁**: Net Profit Ratio (NPR) and Total Asset Turnover (TAT) have a significant positive impact on Return on Assets (ROA).

Regression of Financial Performance (ROA, NPR and TOT)

Variables	Coefficient	Std. Error	T - Statistic	p-value
Constant	-0.1501	0.0673	-2.2298	0.0306
Net Profit Ratio (NPR)	0.0369	0.0082	4.4806	
Total Asset Turnover (TAT)	0.0199	0.0032	6.2961	
Statistic	Value			
R ²	0.4755			
Adjusted R ²	0.4532			
F-statistic	21.305			
Prob (F-statistic)	0			
Observations	50			

The regression results indicate that the model is statistically significant (F = 21.305; p < 0.01), confirming that Net Profit Ratio (NPR) and Total Asset Turnover (TAT) jointly influence Return on Assets (ROA). Hence the alternative Hypothesis was accepted. The R² value of 0.4755 shows that about 47.55% of the variation in ROA is explained by these variables, suggesting moderate explanatory power.

Figure 3: Relationship of ROA on NPR and TOT



Individually, both NPR and TAT have positive and highly significant effects on ROA. The coefficient of NPR ($\beta = 0.0369$) implies that higher profitability leads to improved asset returns, reflecting effective cost control and revenue management. Similarly, TAT ($\beta = 0.0199$) highlights that efficient utilization of assets contributes significantly to financial performance. Notably, TAT appears slightly stronger in influence; the results suggest that financial performance depends on a balanced combination of profitability and efficient asset use, both of which are critical for sustaining growth in capital-intensive industries like cement.

4. Findings and Discussion

The Ten-year analysis reveals distinct time to time variations in the financial performance among selected cement companies. Ultra Tech Cement maintains consistent and stable profitability level, indicating efficient operational efficiency. JK Lakshmi Cement revealed gradual improvement with a slight decline in later years, while Heidelberg Cement India records strong performance until 2021 followed by a downturn. Birla Corporation maintains relatively low but stable profitability. Earnings per share trends support these findings, with UltraTech Cement showing consistent growth. Efficiency ratios suggest stable asset utilization for most firms, though Prism Johnson exhibits aggressive usage. Regression results confirm that Net Profit Ratio and Total Asset Turnover significantly influence Return on Assets, emphasizing the importance of profitability and asset efficiency in the capital Intensive Firms.

5. Conclusion

The study concludes that cement industry exhibits a dual structure of stable leaders and volatile firms in market. Among selected companies UltraTech Cement stands out during the study period for its consistent profitability and operational efficiency, whereas the Prism Johnson Company reflects significant fluctuations, indicating instability over the period of time. Companies maintaining balanced liquidity and efficiency are better equipped to handle market uncertainties. Larger firms tend to achieve greater stability due to economies of scale and stronger resource management, while smaller firms face higher variability due to less invested capital. The study concludes that sustainable financial performance depends on a balanced approach integrating profitability, Asset efficiency, and effective liquidity management.

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