



# Asset Management and Profitability: A study on selected Indian Cement Companies

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**Abstract:** The cement industry in India plays a significant role in the country's economy and is known for its advancements in technology. This study examines data from four Indian cement companies between 2014 and 2023. The profitability of these companies, measured by "Return on Capital Employed" (ROCE), is analyzed in relation to their asset management. The study uses multiple regression analysis to determine the relationship between ROCE and variables such as fixed assets turnover ratio (FATR), inventory turnover ratio (ITR), and debtors' turnover ratio (DTR). The results show that ROCE has a positive and significant association with FATR and DTR, while it has an insignificant and positive relationship with ITR. This study provides important insights and analysis to draw conclusions about the profitability and asset management of the cement industry in India.

**Keywords:** Asset Management, Cement Industries, Profit, Capital Employed.

## 1. INTRODUCTION:

India is the second-largest cement producer globally, with a significant share of the global installed capacity. The country has great prospects for growth in the infrastructure and construction sector, which will greatly benefit the cement industry. The demand for cement in India has been consistently increasing due to the rise in rural housing demand and its affordability. The industrial sector, which has recovered from the effects of the COVID-19 pandemic, is a major driver of cement demand. Consequently, there is a strong possibility of long-term growth in the cement industry. Initiatives like the development of smart cities are expected to have a significant positive impact on the sector.

The cement industry in India is experiencing strong growth with a compound annual growth rate of 5.65% between the years 2016-22. This is due to the country's abundant and high-quality limestone deposits. There are a total of 210 large cement plants in India, with a significant portion located in Andhra Pradesh, Rajasthan, and Tamil Nadu. The production capacity is distributed across different regions of India, with South India having the largest share at 32%. In the fiscal year 2023, India's cement production reached 374.55 million tonnes, showing a year-on-year growth rate of 6.83%. A concise overview is offered for the leading four selected cement enterprises.

Ultratech Cement, a major building materials company, is part of the Aditya Birla Group and has a market capitalization of Rs 2.24 trillion. The company is the largest producer of grey cement, ready-mix concrete, and white cement in India and has significant operations in several countries. ACC, which is now owned by the Adani group, manufactures various types of cement and concrete, with 17 manufacturing units and 85 ready-mix concrete plants. Ambuja Cements, also part of the Adani group, is a prominent cement company with multiple manufacturing plants and a production capacity of 33.05 million tons. Prism Cement primarily serves the Northern Region of India and has expanded its production capacity over the years.

The Institute of Asset Management provides a concise definition of asset management, describing it as the coordinated effort of an organization to derive value from its assets. This involves carefully weighing costs, opportunities, and risks in relation to the desired performance of these assets, all with the ultimate aim of achieving organizational objectives. The State Government of Victoria in Australia takes a broader perspective, stating that asset management is applicable throughout the entire life cycle of an asset. It encompasses four key stages: informed decision-making regarding asset



management, the procurement of suitable assets, the ongoing maintenance, upgrading, and operation of these assets, and finally, the management of asset treatment at the end of their useful life. Expanding further, the Financial Times Lexicon defines asset management as the act of effectively managing funds for investment purposes to maximize profitability for a financial institution or any other individual or organization. Additionally, it encompasses the management of a company's property in a way that optimizes profitability.

Asset management can be defined in two ways, either in terms of advisory services or corporate finance. In advisory services, asset management involves financial advisors or companies overseeing and coordinating their clients' investment portfolios. In corporate finance, asset management involves ensuring that a company's assets are properly maintained, accounted for, and utilized to their fullest potential.

Profitability refers to the ability of a business to make money. The main goal of a business is to generate profit, and profitability is a crucial factor in making managerial decisions. It is considered more important than simply looking at the actual profit earned. Profitability analysis is used extensively in decision making and internal accounting for sales, marketing, and product management within a company.

## **2. REVIEWS OF LITERATURE:**

Many studies have looked at the connection between profitability and asset management from different angles and in different situations. The upcoming study will investigate this relationship.

Puraghajan, A.,(2014), this paper examines the impact of an aggressive working capital strategy on the performance of companies listed in the Tehran Stock Exchange. The findings suggest that adopting an aggressive approach in managing assets and current liabilities leads to higher returns and increased risk for both assets and equity.

Nobanee, H., & Abraham, J. (2015), this article examines the management of current assets in small enterprises. The study uses a specific method to estimate data from a sample of 5802 US non-financial firms listed on various stock exchanges. The results of the study show that there is a negative and significant relationship between the efficiency of working capital management and liquidity in small firms.

Midesia, S. et al (2016), the study aimed to investigate the relationship between asset management and profitability in both conventional and Islamic stock markets in Indonesia. Data from annual financial reports of 100 stocks were analyzed using statistical tests. The results showed that there was no significant difference in stock returns between the two markets, suggesting that investors can expect similar returns regardless of whether they invest in conventional or Islamic stocks.

Zewude, H. (2016), the study analyzed the relationship between working capital management and profitability of manufacturing companies in Ghana using data from the annual financial statements of listed companies on the Ghana Stock Exchange from 2007 to 2011. The study revealed that factors like inventory days, account payable, and cash conversion cycle have an impact on the profitability of manufacturing companies.

Navid, B. J., & Dastgheib, B. (2018), this study aims to examine how the profitability of a company impacts the relationship between managing physical assets and implementing a profit sharing strategy. The study uses net physical assets and the ratio of physical assets as indicators of asset management, and the net profit margin as a measure of profitability. The findings indicate that a company's profitability has a positive influence on the connection between physical asset management and profit sharing strategy.

Dewi, A. R. S., & Wahyuliana, E. (2019), this study examines the impact of return on asset (ROA), return on equity (ROE), receivable turnover (RT), and inventory turnover (IT) on financial distress. The sample consists of five Bakrie Group companies that meet specific criteria and are listed on the Indonesia Stock Exchange. The findings indicate that ROA has a significant and negative impact on financial distress, while ROE has a negative impact but is not significant. RT has an insignificant impact and a positive relationship with financial distress, while IT has a significant and negative impact on financial distress.

## **3. OBJECTIVES OF THE STUDY:**

The main goals of this study are to examine how profitability and asset management are related in certain Indian cement companies, and to determine how asset management affects the profitability of these companies.



#### 4. RESEARCH METHODOLOGY:

The present study used secondary data for the analysis. The financial statements, including income statements and balance sheets, obtained from the companies' websites are used as the main sources of data. This study focuses on the population of listed companies in the Bombay Stock Exchange (BSE) in India. The sample for this study includes four companies from the cement industry, chosen using purposive sampling. The study covers a ten-year period from 2013-14 to 2022-23. The analysis of the data includes financial statement analysis techniques and statistical tools such as ratio analysis and regression analysis. The dependent variable is the Return on Capital Employed, while the independent variables are Asset Management ratios like Fixed Asset Turnover Ratio (FATR), Inventory Turnover Ratio (ITR), and Debtor Turnover Ratio (DTR).

#### 5. LIMITATION OF THE STUDY:

The study used existing data from other sources. It analyzed ten years of data from four specific companies, but the findings may not be applicable in the long term. The net profit used in the study is the Reported Net Profit before deducting any extraordinary items. The average inventory and debtors could not be determined accurately because the figures for opening inventories and debtors were unavailable, so the figures for closing inventories and debtors were used instead.

#### 6. DATA ANALYSIS:

Data analysis is the process of examining and analyzing data to find important insights and make informed decisions. It is essential for extracting valuable information from raw data and is being used to study how profitability affects asset management in cement companies, using ratio analysis and a Regression model.

##### Return on Capital Employed:

The return on capital employed ratio measures the effectiveness and profitability of a company's investment in capital. Shareholders' funds include equity share capital, reserves, share warrants, and application money. After deducting taxes, the profit is used to build reserves, pay preference dividends, and finally pay equity dividends. The return on shareholders' funds should be higher than the borrowing rate to prevent a decrease in shareholders' earnings when borrowing increases.

$$\text{Return on Capital Employed} = \frac{\text{Net Profit (after Tax)}}{\text{Equity Share Capital + Reserve \& Surplus}} \times 100$$

##### Fixed Assets Turnover Ratio:

The assets turnover ratio compares a company's net sales to its net assets, showing how efficiently the company uses its fixed assets. There is no standard benchmark for this ratio, but a higher ratio indicates better asset utilization by management. Multiple ratios are usually preferred for analysis.

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Net Sales (Cost of goods sold)}}{\text{Net Assets (Net Block)}}$$

##### Inventory Turnover Ratio:

This ratio compares the net sales (cost of goods sold) to the average inventory (closing stock) to measure how efficiently the inventory is being used. It shows how quickly inventory is being turned into sales. A higher ratio indicates better performance, as it suggests that either the same level of sales is being achieved with less investment in inventory, or sales are increasing without a corresponding increase in inventory. This ratio is typically expressed as a number of times.

$$\text{Inventory Turnover Ratio} = \frac{\text{Net Sales (Cost of goods sold)}}{\text{Closing Stock (Average Inventory)}}$$



**Debtors Turnover Ratio:**

This ratio measures how effectively a company collects payment from its customers. A higher ratio suggests that customers are paying quickly, while a lower ratio suggests that customers are taking longer to pay. It is typically expressed as a number.

$$\text{Debtor Turnover Ratio} = \frac{\text{Net Sales (Cost of goods sold)}}{\text{Closing Debtors(Average Debtors)}}$$

**6.1: The relationship between the profitability and asset management of certain Indian cement companies**

To investigate the correlation between the profitability of Indian cement companies and their management of assets, a thorough and extensive analysis will be undertaken. The purpose of this analysis is to determine the impact of asset management on the overall profitability of specific Indian cement companies.

**Table-1: Determine the Return on Capital Employed, Fixed Asset Turnover Ratio, Inventory Turnover Ratio, and Debtor Turnover Ratio (Figure in number)**

Year	ROCE	FATR	STR	DTR
2022-23	13.711	1.233	11.162	22.916
2021-22	10.978	1.238	11.992	22.366
2020-21	11.748	1.253	12.492	23.219
2019-20	12.068	1.275	12.457	23.384
2018-19	12.722	1.392	13.727	23.953
2017-18	16.732	1.744	12.803	24.066
2016-17	16.572	1.726	13.124	24.472
2015-16	14.406	1.739	13.611	25.392
2014-15	17.867	1.55	14.1	26.005
2013-14	17.984	1.86	14.202	24.733

This table shows the Return on Capital Employed (ROCE), Fixed Asset Turnover Ratio (FATR), Inventory Turnover Ratio (STR), and Debtor Turnover Ratio (DTR) for a selected Cement companies from 2013-2014 to 2022-2023. The ROCE measures the profitability of the company's capital investments, while the FATR measures how efficiently the company utilizes its fixed assets. The STR measures how quickly the company sells its inventory and the DTR measures how quickly the company collects payments from its customers.

The values for each ratio fluctuate over the years, with some increasing and others decreasing

**6.2: Relationship between Return on Capital Employed and Fixed Assets Turnover Ratio**

The return on capital employed is how much money a company makes compared to the amount of money it has invested in its business. The fixed assets turnover ratio is a way to measure how efficiently a company is using its fixed assets, like buildings and equipment, to make money. So, the relationship between the return on capital employed and the fixed assets turnover ratio of a selected cement companies means how well the company is making money compared to the amount of money it has invested in its buildings and equipment.

**Table-2: Relationship between Return on Capital Employed and Fixed Assets Turnover Ratio of selected cement companies.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.241	3.091		.402	.699
Fixed Asset Turnover Ratio	8.819	2.034	.838	4.335	.002

a. Dependent Variable: Return on Capital Employed



The table shows the regression equation for the relationship between return on capital employed (ROCE) and fixed assets turnover ratio (FATR).

$$ROCE = 1.241 + 8.819 (FATR)$$

The degree of freedom for this analysis is 8. The table value of t at the 1% significance level with 8 degrees of freedom is 3.355. The computed value of t is 4.335, which is greater than the table value. This means that the increase in the selected cement companies' fixed assets turnover ratio had a statistically significant impact on their return on capital employed. This suggests that the companies' management of fixed assets played a significant role in improving profitability during the study period.

### 6.3: Relationship between Return on Capital Employed and Inventory Turnover Ratio

The Return on Capital Employed on Inventory Turnover Ratio is a measure used to evaluate the performance of a specific cement company. This ratio compares the company's profitability with its ability to efficiently manage its inventory. By examining this ratio, investors and analysts can gain insights into how effectively the company is utilizing its capital and generating profits through the sale of its inventory. A higher ratio indicates that the company is efficiently managing its inventory and generating strong returns on the capital employed, which is a positive sign for investors. On the other hand, a lower ratio may suggest that the company is struggling to effectively manage its inventory and generate profits. Therefore, this ratio is a valuable tool for assessing the financial health and performance of the selected cement companies.

**Table -3: Return on Capital Employed on Inventory Turnover Ratio of selected Cement Companies.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-6.868	9.851		-.697	.505
Inventory Turnover Ratio	1.646	.758	.609	2.172	.062

a. Dependent Variable: Return on Capital Employed

The table shows that the regression equation for Return on capital employed (ROCE) is dependent on the Inventory turnover ratio (ITR).

$$ROCE = - 6.868 + 1.646 (ITR)$$

The calculated value of t (2.172) is lower than the table value of t at a significance level of 5% (2.306). When the inventory turnover ratio (ITR) increased by one unit, the return on capital employed (ROCE) of the company only increased by 1.646 units, which was not statistically significant at the 5% level. This suggests that the company's inventory management did not have a significant impact on its overall profitability during the period being analyzed.

### 6.4: Relationship between Return on Capital Employed and Debtor Turnover Ratio

The purpose of this study is to examine how the return on capital employed and debtor turnover ratio are related in a particular cement company. The goal is to gain insight into how these financial measures influence each other in the cement industry. Through data analysis and a comprehensive study, the researchers hope to provide valuable insights into the financial performance and efficiency of the chosen company. This research will contribute to the existing understanding of finance and offer useful information for investors, analysts, and decision-makers in the cement industry.



**Table-4: Return on Capital Employed on Debtor Turnover Ratio of selected Cement Companies.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-28.586	12.645		-2.261	.054
Debtor Turnover Ratio	1.791	.525	.770	3.409	.009

a. Dependent Variable: Return on Capital Employed

The observation found a regression equation that relates the Return on Capital Employed (ROCE) to the Debtors Turnover Ratio (DTR).

$$ROCE = -28.586 + 1.791 (DTR)$$

The calculated value of t (3.409) is higher than the t-value in the table at a 5% significance level (3.355). When the company's DTR increases by one unit, its ROCE also increases by 1.791 units, which is statistically significant at a 1% significance level. This indicates that the management of debtors in the company has a significant positive impact on its profitability. Therefore, the performance of debtors' management is significant during the study period.

## 7. FINDINGS:

Following are the important findings of the study

1. It is observed that the computed value of ROCE is greater than the table value of FATR in (table-2) at 5% significant level.
2. From the Table-3, it is also the computed value of ROCE is less than the table value of (ITR) at 5% level of insignificant.
3. In table-4, the computed value of ROCE i.e. (t-value = 3.409) is greater than the table value of DTR i.e. (t-value = 3.355) at 1% level of significant.

## 8. CONCLUSION AND SUGGESTIONS:

The cement industry plays a vital role in the global economy, making a substantial contribution of 5.4% to the overall global GDP and employing a significant 7.7% of the global workforce. Particularly in India, the cement industry holds immense significance, as it provides employment opportunities for over a million individuals either directly or indirectly. The objective of this study is to assess the correlation between Asset Management and Profitability in four carefully chosen cement industries within India. Upon analysis, it was discovered that the Return on Capital Employed exhibits a noteworthy positive relationship with both the Fixed Asset Turnover ratio and Debtor Turnover Ratio. However, it was determined that the Inventory Turnover ratio does not have a significant impact on the profitability. The efficient utilization of assets is of utmost importance for the triumph and profitability of the cement industry, which includes the swift disposal of finished goods, effective utilization of working capital, and the prompt collection of debts.

The study suggests that following specific inventory management norms can help reduce inventory turnover days and increase profitability for cement companies. Efficient handling of inventory turnover can have a positive impact on company profitability. Maintaining a low stock turnover ratio may indicate overstocking, which needs to be reduced without affecting customer service. It is recommended to closely monitor debtor turnover ratio to ensure effective credit extension and debt collection, maintaining liquidity and profitability.

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