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EVA – ECONOMIC VALUEADDED ANALYSIS. REFERENCE OF INDIAN CEMENT INDUSTRY.

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Abstract: This study examines the effectiveness of Economic Value Added (EVA) as a performance measure, comparing it with traditional profitability metrics through simulation. EVA, calculated as Net Operating Profit After Tax (NOPAT) minus Weighted Average Cost of Capital (WACC), is analyzed for 10 NIFTY companies over five fiscal years. The research reveals EVA's high sensitivity to the cost of equity and unexpected insensitivity to the cost of debt under normal conditions. Firm growth policies and leverage significantly impact EVA and its variability. Furthermore, EVA is found to be more volatile than return on investment (ROI) and closely related to return on equity (ROE). The analysis indicates no strong pattern of wealth creation among the studied companies, with EVA varying yearly based on the cost of capital, particularly the cost of equity. Ultimately, the study finds no strong correlation between EVA and market price for the selected companies.

Keywords: EVA, NOPAT, WACC, EBIT

I. INTORDUCTION

The focus on shareholder value has driven a need for better corporate financial performance measures, leading to the development of Economic Value Added (EVA). EVA is a framework that provides insight into value creation by linking finance theory and competitive strategy, representing a relatively new approach in financial management. It aims to capture a firm's true economic profit and is closely tied to creating shareholder wealth over time. Originating from Adam Smith's idea of maximizing shareholder value, Stern Stewart further developed EVA to incorporate the principles of shareholder wealth maximization and the importance of profits exceeding the cost of capital. EVA is calculated as net operating profit minus the cost of capital, representing the profit available to shareholders. Unlike conventional accounting, EVA considers all capital costs, providing a clearer picture of wealth creation or destruction. Increases in EVA are expected to enhance a company's market value, with EVA's simplicity aiding in the management of assets and income trade-offs.

By highlighting the importance of capital efficiency and encouraging responsible asset management, EVA helps firms focus on sustainable value creation and long-term growth.

PROBLEM STATEMENT

Investors who have a variety of options will evaluate the performance of various companies based on the returns they provide, before making investments. In this context it is relevant to see whether companies are earning returns on their costs. and there by creating wealth for their shareholders.

NEED AND IMPORTANCE OF THE STUDY:

Investors who have a variety of options will evaluate the performance of companies based on the returns they provide, before making investments. Companied ned to improve their financial performance to meet the expectations of investors. So, creation of wealth is an important task for companies. Non-creation of EVA leads to investor dissatisfaction. This will affect the equity mobilization activities of companies, which have a great impact on the economy.

In this context, it is relevant to see whether companies are earnings returns on their costs and thereby, creating wealth for their shareholders.

THE OBIECTIVE THE STUDY:

The focus of the study is on the following objectives:

a) To calculate the important metric of financial performance that is EVA for a sample of 50 NSE listed Companies for the period of 2005-2010.





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b) To identify the companies which have cited the use of EVA in their annual reports for the financial year 2005-06 to 2009-10.

c) To measure the economic value added of selected companies

The Background of EVA

Economic Value Added (EVA) is rooted in the older concept of residual income, where economic profit equals operating profit minus the capital charge. Though its origins trace back to Alfred Marshall in 1890, the concept gained prominence only after Stern Stewart & Co. branded and refined it in the 1990s. Unlike earlier residual income models, EVA attracted widespread attention due to its strong link with shareholder value and its pairing with Market Value Added (MVA). While many companies may not follow Stern Stewart's exact formula, their adaptations still align with the core principles of EVA. Its focus on capital efficiency has proven especially valuable in highlighting overlooked costs like excess working capital. Furthermore, EVA's integration into long-term bonus systems motivates management to drive real economic profit, aligning their interests with those of shareholders and boosting performance sustainably.

II. RIVIEW OF LITERATURE

Kroll (1997) depicted that a business can get success only when if it generates profit more than its cost of capital. A company which implements economic value added shows a great improvement in its performance. Many companies have adopted economic value added and improved its performance with the help of it. Economic value added also helps in acquisition of a company because manager can know that what the value of a firm is?

Dodd & Chen (2000) said economic value added is the most important performance measure. EVA has important effect on stock market. The study is about to prove the importance of EVA than any other traditional measures. Author used regression to prove the relationship and find out that economic value added alone cannot be taken as performance measure. Every method has its own importance for measuring the performance of the company.

Stewart (2003) expressed the implication of economic value added in Harsco Corporation. Stern has used four M for performance measure under EVA system. The EVA Implementation at Harsco was structured using Stern Stewart's Four Ms. Economic value added used in this company for these four M which mean measurement, management, motivation and mindset. By using economic value added Harsco started to perform well.

Beneda (2004) has worked about the company named Toll Brothers performance, which was in the home building industry. The study shows that the performance of the company increases after applying the economic value added into practice. Here market value added is also calculating with the help of difference between the book value of company's assets in place and the overall value of the firms operations. Economic value added and ROIC computes the changes in the company due to change in value of operating invested assets in place.

GEYSE &Hall (2004) found that there are many methods to check the performance of the company but the best method amongst these methods are economic value added due to the performance value addition. These methods tell whether the company is creating or destroying the wealth of the shareholder. Economic value added can be calculated with the help of net operating profit after tax minus cost of capital. Here return on assets and return on equity has been taken as performance measures of economic value added. The result shows that Economic value added can be destroyed if more debt invested. This paper states that the traditional methods are not the good indicators of performance evaluation.

RESEARCH GAP

While EVA has been extensively studied in the banking sector, its application in other industries like cement, real estate, and energy remains underexplored. This study addresses this gap by analyzing EVA in the cement industry, providing fresh insights into its relevance and effectiveness across different sectors.

III. RESEARCH METHODOLOGY

STUDY TYPE:

The study type is analytical, quantitative and historical. Analytical as facts and existing information is used for the analysis. Quantitative as EVA is calculated and the variables are expressed in measurable terms. Historical as the historical information is used for analysis and interpretation.

SAMPLE SIZE:

Sample includes 10 companies in the NIFTY (for which relevant data was available), for a period of 5 years starting from FY 2019-20 to FY 2023-24. The following are the sample 10 companies:

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METHOD ADOPTED TO CALCULATE ECONOMIC VALUE ADDED (EVA):

EVA =NOPAT-WACC*CAPITAL EMPLOYED

NOPAT is net operating profit after taxes.

WACC is weighted average cost of capital (equity and debt), WACC used in the calculations is at book value of equity and debt. It is calculated as follows:

WACC= Ke *W- KD (1-T)*W2

W1 is weight of EQUITY W2 is weight of DEBT

KD is the effective cost of Debt, which is calculated by dividing the total interest by the total debt.

Ke is calculated using the Capital Asset Pricing Model developed by Modigliani and Miller. Ke= Rf+ Beta (Rm-Rf)

Rf is the risk-free rate, i,e, the rate of interest for I-year government securities. These rates are obtained from the website of Reserve Bank of India.

Rm is the return for the market. It is calculated by using the formula given below for the index values Rm=Average of return on market for all the 10 years Return =Closing index value-opening index value * 100/Opening index value

Beta values for all the sample companies for all the S years are calculated by finding the slope between log normal of share prices of all the companies and log normal of the index values, Log normal of the values is considered to remove abnormalities if any and convert them into normal distribution

Invested Capital is the total long term funds and includes equity shares and the total debt as at the end of the year.

DATA ANALYSIS AND INTERPRETATION

The following table show the calculated	beta of sample companies	for the period of 2020) to 2024:
BETA OF SAMPLE COMPANIES:			

COMPANY	2020	2021	2022	2023	2024
Company A	0.789568	0.577316	0.837773	0.543308	0.146095
Company B	1.114948	0.756129	0.094315	0.155549	0.329064
Company C	0.688010	0.928469	-0.512400	0.379761	0.204130
Company D	-8.110425	0.441470	0.549044	-0.305264	0.419723
Company E	1.064338	1.144172	0.240911	-0.604118	0.215408
Company F	1.091467	0.006181	-0.069233	0.713981	-2.066941
Company G	0.928009	0.841205	0.312865	0.545864	1.881995
Company H	1.601496	0.042289	0.733205	-0.370552	0.080320
Company I	1.385854	0.073135	0.667873	0.105305	0.588957
Company J	1.138902	0.633678	0.625358	0.607896	0.093593



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INTERPRETATION:

TABLE 1

COMPANY A beta dropped from **0.78 (2020)** to **0.15 (2024)**, showing strong stability. Company B moved from **1.11** to **0.33**, also becoming less volatile over time.

Company G Cements rose sharply from **0.93** to **1.88**, indicating increased risk.

Company F Cements fell drastically to -2.07 in 2024, showing abnormal behaviour.

Overall, most companies shifted toward lower beta values, making the sector more stable.

The following table show the EVA of sample companies for the period of 2020 to 2024: EVA OF SAMPLE COMPANIES:

COMPANY	2020	2021	2022	2023	2024
COMPANY					
Company A	-45,911.35	- 1,01,716.07	-35,230.01	-1,17,790.86	-2,42,720.68
Company B	10,255.91	-71,864.21	-81,300.32	-62,689.18	-64,677.84
Company C	-10,941.64	-4,945.74	-24,998.71	-19,526.59	-35,342.57
Company D	- 1,97,757.57	-12,968.04	-1,459.38	-4,835.56	-4,874.26
Company E	5,782.50	6,612.28	-36,609.00	-85,073.84	-45,763.28
Company F	2,042.37	-11,028.20	-11,919.12	-3,459.29	-37,557.08
Company G	8,382.01	-3,082.40	-5,408.58	-1,753.27	-489.99
Company H	62.07	-30,423.49	-8,714.42	-43,009.72	-28,222.51
Company I	8,753.94	-16,127.55	-5,937.98	300.88	-6,412.91
Company J	327.22	-9,038.03	-10,530.02	526.98	783.31

INTERPRETATION:

COMPANY A Cement consistently reports large negative EVA, with the loss increasing significantly to ₹2,42,720.68 million in 2024, showing persistent underperformance.

Company B Cements saw a positive EVA of ₹10,255.91 million in 2020 but quickly moved into negative territory, with values ranging from -₹71,864.21 million to -₹64,677.84 million over the years, indicating ongoing challenges.

Company C Cements shows negative EVA consistently, worsening in 2024, reflecting struggles in creating shareholder value.

Company D Cements experienced a dramatic negative EVA in 2020 (-₹1,97,757.57 million) before slightly improving in subsequent years, though it remains negative.

Ramco Cements fluctuates between positive and negative EVA, with a brief positive in 2020-2021, but then turning negative again in later years.

Company F Cements, Company G Cements, and Company H Cement all show negative EVA throughout, with Company F Cements reaching -₹37,557.08 million in 2024, highlighting significant financial difficulties.

Company I Cements had a small positive EVA in 2023, but overall performance is still negative across most years.

Company j Cements is one of the few companies with a positive EVA in 2023 and 2024, showing better financial performance compared to others.

IV. DISCUSSION

This study reveals that major cement companies like COMPANY A, Company B, and Company C have reported negative EVA over five years, indicating they failed to generate returns above their cost of capital. This reflects poor capital efficiency and operational challenges within the sector. Companies such as Company D and Company G Cements showed

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persistently negative EVA, while positive EVA in firms like Company E and Company I Corp was short-lived. These trends highlight structural issues in the industry, including high capital costs and fluctuating demand. The study also addresses a research gap by applying EVA analysis to the cement sector, suggesting that firms must focus on better capital management and financial strategies for long-term value creation.

V. CONCLUSION

This study analyzed the EVA of selected cement companies from 2020 to 2024, revealing that most firms, including COMPANY A, Company B, and Company C, generated negative EVA, indicating an inability to earn returns above their capital costs. While a few companies like Company E and Company I Corp posted occasional positive EVA, overall performance reflected inefficiencies in capital use and profitability. The results highlight operational and financial challenges in the sector and suggest the need for better capital management. By focusing on the cement industry, this study fills a research gap and encourages further exploration of EVA in under-studied sectors like cement, real estate, and energy.

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