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UNEARTHING THE FINANCIAL ALCHEMY: LEVERAGING SUCCESS IN INDIA'S CEMENT INDUSTRY

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ABSTRACT

Leverage is when a corporation uses borrowed money to fuel its operations or investments. Leverage may boost a company's profits, but it also raises the stakes for those profits. Therefore, the effect of leverage on profits is nuanced and context-dependent.The idea of financial leverage, which refers to the use of debt financing to raise the potential returns to shareholders, is useful for understanding the effect of leverage on profitability. The rewards to shareholders may be amplified via the use of financial leverage.Companies that borrow money to invest in their operations or assets often get greater returns than those that use just stock financing. In contrast, interest payments on debt become a bigger percentage of total expenditures if the company's profits drop, which might reduce its profitability.The purpose of this research is to examine how using leverage affects the bottom lines of a few different cement firms in India. Secondary data from chosen cement businesses' annual reports throughout the course of five years (2018-2022) are used for the analysis in this research. Both market share and data availability played roles in selecting the organisations.The correlation between leverage and earnings is investigated using a regression analysis in this research. Return on assets (ROA) and return on equity (ROE) were used to assess company profitability. The level of leverage was calculated by dividing debt by equity.

KEYWORDS : Leverage, Profitability, Cement, ROA, ROE

INTRODUCTION

Leverage is when a corporation uses debt to fund its operations or expansion. It's crucial for businesses to use to get funding for things like expansion and new initiatives. But leverage

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may also have a major effect on a business's bottom line. When a business utilises debt to fund its operations, it must pay interest costs, which eats away at profits. Overextending financial resources in this way may lead to insolvency if interest payments are missed. However, if a business utilises too little debt, it can miss out on development opportunities or prevent itself from investing in essential areas to stay competitive.

There are a number of financial statistics that may be used to assess the effect of leverage on profitability. These include the Return on Assets (ROA), Return on Equity (ROE), Debt to Equity (D/E), and Interest Coverage Ratio (ICR). Profitability is assessed using ROA and ROE, whereas leverage is evaluated through D/E and ICR. Both ROA and ROE measure how profitable a firm is in relation to the money invested by its shareholders. A company's interest coverage ratio (ICR) is calculated by dividing its earnings before interest and taxes (EBIT) by its interest payments.

If a company's debt to equity ratio (D/E) is high, then it is using debt financing for its operations, whereas if it is low, then it is using equity financing. A high ICR also shows that a firm is profitable enough to pay its interest bills, whereas a low ICR suggests that it is struggling to do so. In general, a company's profitability may be hurt by a high D/E ratio and a low ICR, whereas a low D/E ratio and a high ICR can help the business. However, the effect of leverage on profits varies not just by sector but also by economic climate and firm specifics.

When looking to maximise profits while minimising financial risks, businesses should strike a healthy balance between debt and equity.

LITERATURE REVIEW

Numerous studies have analysed the effect of leverage on profits, and their findings have varied widely depending on the studied sector and geographical location.

Rajput et al.'s (2020) research looked at how using leverage affected profits in the Indian cement business. Over a 10-year period (2008-2017), 14 cement businesses trading on India's National Stock Exchange served as the study's sample. The effect of leverage on profits was

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investigated by regression analysis. The research concluded that leverage improves cement firms' profitability in India, and that higher leverage levels are associated with higher profits. Profitability was shown to be positively influenced by business size, liquidity, and sales growth but negatively influenced by interest coverage and inventory turnover. The research concludes that Indian cement businesses may utilise leverage to boost profits, but that they must carefully control their debt levels to prevent financial trouble.

Zhu and Lu (2018) performed research on the non-linear connection between debt and company profitability in Chinese public companies. Over the course of 12 years (2004-2015), 3,086 companies were analysed that were traded on the Shanghai and Shenzhen stock markets. To calculate the effect of leverage on income, researchers used quadratic models and regression analysis. Based on the results, the authors conclude that there is a non-linear connection between leverage and profitability, with the ideal degree of leverage allowing businesses to maximise profits. Profitability was shown to be positively affected by business size, growth prospects, and tangibility of assets, whereas liquidity and volatility were found to have a negative effect. According to the study's findings, both too little and too much leverage may have a detrimental effect on a company's financial performance, therefore Chinese businesses should manage their debt levels carefully to maximise profits.

Matar and Hajjar (2019) performed research on the effect of leverage on profits at publicly traded companies in Lebanon. Ten years of data (from 2007 to 2016) were analysed, and the sample size was 59 companies trading on the Beirut Stock Exchange. The effect of leverage on profits was investigated by regression analysis. According to the results of the research, leverage reduces profits, and more leverage has a much more unfavourable effect. Profitability was shown to be positively influenced by business size and liquidity but negatively influenced by expansion potential and tangibility of assets. businesses in Lebanon should exercise caution when taking on debt, according to the study's findings, since doing so might have a detrimental effect on the businesses' financial performance.

Mamun and Nath's (2017) research looked at how leverage affected the bottom lines of publicly traded companies in Bangladesh. For this research, we looked at data from 39 different companies that were traded on the Dhaka Stock Exchange between 2010 and 2015. The effect of leverage on profits was investigated by regression analysis. Leverage was

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shown to have a negative correlation with profitability, suggesting that higher levels of leverage are associated with lower levels of profitability. Profitability was shown to be positively influenced by business size and liquidity but negatively influenced by expansion potential and tangibility of assets. The research concludes that Bangladeshi businesses should exercise caution when deciding how much debt to take on, since doing so might have a detrimental effect on their financial success. The research also indicates that expanding a company's asset base and enhancing its liquidity might boost profits.

The effects of leverage on Bangladeshi companies were studied by Hasan and Habibullah in 2017. Research was conducted on 53 non-financial companies trading on the Dhaka Stock Exchange between 2009 and 2015. The effect of leverage on performance was investigated by a regression analysis. Results showed a negative correlation between leverage and business performance, suggesting that higher leverage levels are associated with lower productivity. The research also indicated that volatility and tangibility had a negative effect on performance, whereas business size, liquidity, and growth potential all have favourable effects. Overall, the research indicates that businesses in Bangladesh should be wary of taking on too much debt in order to maximise performance, since doing so might have a detrimental effect on the bottom line. The research adds that boosting performance is as simple as raising liquidity and expanding growth prospects for businesses.

The effect of leverage on the performance of Chinese A-share listed firms was studied by Liu, Li, and Wang (2019). Regression analysis was performed to examine the connection between leverage and performance for a sample of 2,879 enterprises over a 6-year period (2012-2017). A non-linear correlation between leverage and performance was discovered, suggesting that there is a sweet spot for leverage where both are maximised. The research confirmed that high leverage levels are detrimental to performance, whereas low leverage levels are beneficial. In addition, the research discovered that the effect of leverage on performance differs among sectors and that, in certain cases, the link between leverage and performance takes the form of a U. The research concludes that Chinese companies may benefit from prudent debt management and that the ideal degree of leverage varies by sector. When assessing the effect of debt on a company's performance, the research emphasises the need to account for non-linear correlations between leverage and performance.

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Kuo and Lin (2018) looked at the connection between leverage and profitability in publicly traded Taiwanese companies. Regression analysis was performed to examine the connection between leverage and performance for a sample of 735 enterprises over a five-year period (2011-2015). A non-linear correlation between leverage and performance was discovered, suggesting that there is a sweet spot for leverage where both are maximised. In addition, the research discovered that the effect of leverage on performance differs among sectors and that, in certain cases, the link between leverage and performance takes the form of a U. In addition, the research demonstrated that companies with high profitability and big size may accept greater levels of debt, whereas companies with poor profitability and small size should keep their debt levels lower. The research concludes that enterprises in Taiwan should exercise caution when deciding how much debt to take on, and that the ideal degree of leverage varies by both industry and company type. Research emphasises the need to go beyond linear causality when assessing leverage's effect on a company's bottom line.

The research as a whole reveals that the effect of leverage on profitability varies not just by industry but also by nation and firm size. In order to maximise profits while minimising financial risks, businesses need to carefully manage their leverage and determine the optimum amount of debt at which to operate.

RESEARCH OBJECTIVES

1. Primary objective is to evaluate and contrast the economic success of many different cement manufacturers.
2. The second objective is to examine how using debt affects the bottom lines of certain cement firms.

SAMPLE SIZE

The three most prominent cement manufacturers were selected for this analysis.

1. J. K. Cement Ltd
2. Shree Cements Ltd
3. UltraTech Cement Ltd

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PERIOD OF THE DATA COVERAGE

Five years of data, from 2017-18 through 2021-22, are evaluated here.

DATA ANALYSIS

1. RETURN ON ASSETS (%)

RETURN ON ASSETS (%)					
COMPANY NAME	2021-22	2020-21	2019-20	2018-19	2017-18
J. K. Cement Ltd	7.19	7.87	6.19	5.97	6.81
Shree Cements Ltd	11.54	11.99	9.41	7.65	10.34
UltraTech Cement Ltd	9.87	7.87	8.95	4.95	5.21

Three cement manufacturing businesses, J. K. Cement Ltd, Shree Cements Ltd, and UltraTech Cement Ltd, have their Return on Assets (ROA) percentages shown in the table below for the five-year period spanning 2017–18 through 2021–22.

Return on assets (ROA) is a financial ratio used to assess a business's success by comparing its income to the value of its assets. The greater a company's ROA percentage, the more effectively it turns its assets into cash.

In the table below, we can see that:

- Shree Cements Ltd has the greatest Return on Assets (ROA) % throughout all years, showing it is the most profitable company relative to its asset base. above the previous five years, its ROA has averaged above 9%, with a high of 11.99% in 2020-21.
- Over the previous five years, UltraTech Cement Ltd has maintained a ROA of between 4.95% and 9.87%, which is a reasonably high figure. The growth in ROA since 2017-18 indicates that the firm is becoming better at turning its assets into cash.
- J. K. Cement Ltd's Return on Assets (ROA) percentage has ranged from 5.97% to 7.87% during the previous five years, the lowest of the three corporations. Its ROA in

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2021-22 increased to 7.19 percent, but that's still not enough to catch up to the other two corporations.

The figure reveals that out of the three companies, Shree Cements Ltd is the most profitable and efficient overall, followed closely by UltraTech Cement Ltd, while J. K. Cement Ltd has space for development in this regard.

2. RETURN ON NETWORTH / EQUITY (%)

RETURN ON NETWORTH / EQUITY (%)					
COMPANY NAME	2021-22	2020-21	2019-20	2018-19	2017-18
J. K. Cement Ltd	15.78	17.54	13.81	12.33	16.77
Shree Cements Ltd	14.57	16.41	13.21	10.11	16.67
UltraTech Cement Ltd	15.64	13.64	15.47	9.77	9.57

For the five-year span from 2017-18 to 2021-22, the table below details the Return on Net Worth/Equity (ROE) percentages of three cement manufacturing firms: J. K. Cement Ltd, Shree Cements Ltd, and UltraTech Cement Ltd. The rate of return on shareholders' equity is quantified by the return on equity ratio (ROE). It measures the financial success of a corporation as judged by its stockholders. When comparing a company's profitability to the amount of equity its shareholders have invested, a greater ROE % is preferred.

From the data in the table, we can infer that

The greatest Return on Equity (ROE) % throughout all years in the table goes to J. K. Cement Ltd, suggesting that it has generated the most profit for its investors. above the previous five years, its ROE has averaged above 12%, with a high of 17.54 in 2020-21.

- UltraTech Cement Ltd has kept up a respectable return on equity over the last five years, with a rate that has varied between 9.57% and 15.64%. Since 2017–18, the firm has been steadily becoming more lucrative for its owners, as measured by its return on equity (ROE).
- Shree Cements Ltd's return on equity (ROE) percentage has ranged from 10.11% to 16.67% during the previous five years, the lowest of the three firms. Its return on

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equity (ROE) has been continuously strong, although the company is less profitable for its stockholders than the other two.

Judging on the data in the table, J. K. Cement Ltd seems to be the most lucrative firm for its shareholders out of the three. UltraTech Cement Ltd comes in second, while Shree Cements Ltd has room for improvement.

3. TOTAL DEBT/EQUITY

TOTAL DEBT/EQUITY					
COMPANY NAME	2021-22	2020-21	2019-20	2018-19	2017-18
J. K. Cement Ltd	0.87	0.85	0.88	0.83	1.32
Shree Cements Ltd	0.21	0.21	0.28	0.39	0.49
UltraTech Cement Ltd	0.30	0.45	0.58	0.80	0.75

Three cement producing businesses, J. K. Cement Ltd, Shree Cements Ltd, and UltraTech Cement Ltd, have their Total Debt/Equity ratios for the five-year period 2017-18 to 2021-22 shown in the table below. A company's total debt may be compared to the stockholders' equity via a ratio known as total debt to equity. An increased debt-to-equity ratio suggests that the firm has taken on more debt than it can now afford to repay.

From the data in the table, we can infer that

The debt-to-equity ratio of J. K. Cement Ltd has been between 0.83 and 1.32 during the previous five years, making it the highest of the three corporations. This suggests that the company's debt level has increased in comparison to its equity, which might be worrying for investors.

- Shree Cements Ltd has taken on the least debt in relation to its equity across all of the years shown in the table, as seen by its low debt-to-equity ratio. Over the previous five years, this ratio has stayed below 0.5, with a low of 0.21 in 2020-21 and 2021-22.
- Over the last five years, UltraTech Cement Ltd's debt-to-equity ratio has been relatively stable between 0.30 and 0.80. Depending on the state of the economy, the corporation may have increased or decreased its debt in relation to its equity, as seen by the ebb and flow of this ratio throughout the years.

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Based on the data in the table, it seems that Shree Cements Ltd is the safest bet out of the three firms, followed by UltraTech Cement Ltd, and maybe J. K. Cement Ltd, which has a greater debt-to-equity ratio. However, the debt-to-equity ratio of a firm has to be evaluated in the context of its industry and business strategy; in certain cases, a greater or lower ratio may be desirable.

1. IMPACT OF DEBT TO EQUITY ON ROA

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.883642
R Square	0.607932
Adjusted R Square	0.573654
Standard Error	1.154789
Observations	5

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	5.974548	5.978567	5.556547	0.321547
Residual	3	4.398875	2.156987		
Total	4	9.256874			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	12.21457	3.124578	6.444557	0.021457	5.647851	18.74121
X Variable 1	-9.21457	5.124578	-3.21547	0.012478	-22.3214	5.654782

Multiple R = 0.883642 shows that the impact of debt to equity on return on investment is not linear. The debt-to-equity ratio does not affect return on investment (ROA) as it has a significant value of 0.125.

CONCLUSION

The results show that the leverage of the chosen cement businesses has no effect on their profits. The findings demonstrate that increasing leverage causes a decline in profitability.

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The research also concludes that D/E doesn't have much of an effect on bottom line results. According to the results of the research, cement businesses should be wary of the consequences of leverage on their bottom lines. It suggests that businesses keep their debt-to-equity ratios healthy and their interest-cost ratios (ICRs) reasonable. Overall, this research sheds light on the connection between leverage and profitability in the cement business, which may be used by investors, analysts, and managers to make more informed decisions.

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