The Impact of Corporate Leverage on Profitability: Evidence from Cement Industry in India

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Abstract- This study investigates to create a relationship between Corporate Leverage and Profitability of cement industry in India. The study emphasises an oration of the study objectives and analysis to endorse the hypothesis framed. The statistical tools viz. correlation and regression are used to learn the relationship and impact of corporate leverage on profitability. The study concludes that the relationship between financial leverage and operating leverage is negatively significant and combined leverage and financial leverage is positively highly significant relationship of the firms.

Key words: Corporate Leverage, Profitability, Cement Industry

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1. INTRODUCTION

In the past few years, the growth of Cement Industry in India has drastically increased. Globally India is the 2nd largest producer of cement accounted over 7% of global installed capacity. In India, 98% of the total cement production power is held by the private sector and the rest by the public sector. The consumption of cement as increased and the demand for it is expected to continue its zestful ride on the back of bouncy economic growth and infrastructure development in the country.

The grouping of debt and equity capital used by a company in its long-term finance operations and the strategic financing decision forms the capital structure of the business. The most suitable quantity of the equity and debt capital are valuated through the leverage analysis techniques. The position of foreign exchange is a important part of financial management as it helps in setting up the system for the financial decisions of an association. Profitability assessment benefits the company with proper financial and investment decisions.

2. REVIEWS

Sinha and Samanta (2014) examines on the eight firms -specific determinants of the capital structure namely firm size, tangibility, growth opportunities, profitability, non-debt tax shields, operating risk, liquidity and firm age over the conditional distribution of leverage using the statistical tools relating 22 Indian cement companies for 5 years.

Silambarasan and Azhagaiah (2015) study results stated the effect of leverage on profitability. The evaluation findings of the Operating Leverage have been negative significant effect on the Profitability and Financial Leverage have been positive effect on the Return on Net worth (RONW). Moreover, the effect of combined leverage proves to be not significant because of the negative effect for operating leverage on return on net worth. Bhushan and Mohinder (2016) investigated on the 5 years financial data and found significant negative relationship between debt and equity concluding that companies with higher proportion of debts tend to have low return on net worth.

Paswan (2021) aims to probe an empirical study to observe the relation between leverage and profitability of Indian cement industry. The data are of selected organisations yearly reports and records. The 10-year record investigation of 21 companies are put into statistical valuation to find the correlation of degree of leverage on return on equity and the determined estimation of F value infer that there is no significant effect on the hypothesis framed.

3. OBJECTIVES OF THE STUDY

- To analyse the relationship between leverage and profitability of cement industry in India.
- To study the impact of leverage on profitability of cement industry in India.

4. HYPOTHESES

H_0^1: There is no significant relationship between financial leverage and operating leverage

H_0^2: There is no significant relationship between financial leverage and operating leverage

H_0^3: There is no significant impact of operating leverage on return on net worth

H_0^4: There is no significant impact of financial leverage on return on net worth

5. METHODOLOGY

- The present research paper is based on secondary data.
- The study has focused seven firms from cement industry in India.

6. RESEARCH METHODS

The study used descriptive statistics, correlation and regression for analysis of data.

6.1 Operating leverage

The operating leverage is the relation between a firms operation and revenue from operations and the profitability that the company derives.

Operating Leverage = EBIT/Sales

6.2 Financial leverage

It is when you have a loan of money to make an investment that will confidently lead to better returns.

Financial Leverage = EBIT/EBT

6.3 Correlation

The correlation used in finance to calculate the degree of relationship between two variables, factors or data sets[3].

6.4 Regression

Regression is a statistical method used in business, investing, and other disciplines that attempts to find out the strength and character of the relationship between one dependent variable and other variables known as independent variables[4].

Linear regression: $Y = a + bX + u$

Multiple regression: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 \ldots\ldots + b_tX_t + u$

7. ANALYSIS

Table 1-*List of Firms*

Sl.No.	Name of the Firms
1	Ambuja Cements
2	Anjani Cement
3	India Cements
4	J. K. Cements
5	JK Lakshmi Cements
6	KCP
7	Ramco industries

Source: Money Control

Table 2- *Descriptive Statistics for Return on Net worth, Operating leverage, Financial Leverage and Combined Leverage of Cement Firms in India from 2012 to 2021*

Variables	N	Minimum	Maximum	Mean ($\bar{X}$)	Std. Deviation(σ)
RONW	7	1229.00	110158.00	37496.71	37061.15
OL	7	0.14	0.21	0.17	0.03
FL	7	0.22	1.97	1.28	0.57
CL	7	0.04	0.34	0.23	0.09

Source: Money Control

The descriptive statistics results show that return on net worth, operating, financial and combined leverage of cement firms in India is presented in table 2. It is conclude that variable return on net worth has the minimum value is 1229.00 and maximum value is 110158.00, while the mean is 37496.71 and std. deviation is 37061.15. Operating leverage has the minimum value is 0.14 and maximum value is 0.21, while the mean is 0.17 and std. deviation is 0.03. The financial leverage minimum value is 0.22 and maximum value is 1.97, while the mean is 1.28 and std. deviation is 0.57. It is found that the combined leverage has been minimum value is 0.04 and maximum value is 0.34, while mean is 0.23 and std. deviation is 0.09.

Table 3-*Results of Correlation Analysis for Selected Variables of Cement firms in India from 2012 to 2021*

Variables		RONW	OL	FL	CL
RONW	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	7			
OL	Pearson Correlation	.299	1		
	Sig. (2-tailed)	.515			

	N	7	7		
FL	Pearson Correlation	.106	-.261*	1	
	Sig. (2-tailed)	.821	**.043**		
	N	7	7	7	
CL	Pearson Correlation	.162	.095	.933**	1
	Sig. (2-tailed)	.729	.839	**.002**	
	N	7	7	7	7

Source: Money Control

*. Correlation is significant at 0.05 level (2-tailed).

**.Correlation is significant at 0.01 level (2-tailed)

The correlation analysis shows that the relationship between financial leverage and operating leverage (-0.261) is negatively significant at 5% level. Hence, **H_0^1:** "*there is no significant relationship between financial leverage and operating leverage*". The result revealed that relationship between combined leverage and financial leverage (0.933) is positively highly significant at 1% level. Hence, **H_0^2:** "*there is no significant relationship between combined leverage and financial leverage*". The result shows that all the cement firms should balance between EBIT & EBT and Sales level, since both these two factors connect with financial risks. All the firms could not have high operating leverage and high financial leverage at the same time.

Table 4-Regression Results for Financial Variables of Cement firms in India from 2012 To 2022

Variables	Unstandardized coefficients		Standardized coefficients	t	Sig.
	β	Std. Error	β		
RONW	60.27	224.79		-2.334	.002
OL	5.69	2.37	3.91	2.097	.046
FL	0.73	7.38	10.28	2.269	.048
CL	3.78	1.69	-9.81	-2.232	.112
R					0.49
R^2					0.34
F					2.540*(0.040)

Source: Money Control

The table 4 shows operating leverage has been significant positive co-efficient (5.69) on return on net worth in cement firms. Hence, H_0^3: "*there is no significant impact of operating leverage on return on net worth*" is rejected at 5%; the financial leverage has been significant positive co-efficient is (0.73) on return on net worth of cement firms. Hence, H_0^4: "*there is no significant impact of financial leverage on return on net worth*" is rejected at 5%.

8. CONCLUSION

The study concludes that relationship between financial leverage and operating leverage is negatively significant. Hence, H_0^1 is rejected and combined leverage and financial leverage is positively highly significant relationship of the firms. Hence, H_0^2 is accepted. Further, the present study reveals that significant impact of operating leverage and financial leverage on return on net worth. Hence, H_0^3 and H_0^4 are rejected. However, the negative impact of combined leverage on net worth is insignificant of cement industry in India.

9. LIMITATION

- The study focused on only seven firms in the cement industry considered for analysis.
- Based on secondary data from 2012 to 2021.
- We are used descriptive methods, correlation and regression. So feature researchers can be used for advanced models.

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