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CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

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LEVERAGE IN INDIAN CEMENT INDUSTRY: AN EMPIRICAL INVESTIGATION

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DEPARTMENT OF COMMERCE
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PASCHIM BARDHAMAN

ABSTRACT

The purpose of this study is to explore the analysis of leverage and the relationship between leverage and return of the selected cement companies during the period 2009-10 to 2018-19. The sample size of the study consists of ten cement companies which have been selected by following a purposive sampling procedure from the list of top 20 companies in Bombay Stock exchanges (BSE) based on market capitalization on date 31.12.2019. The finding of the study reveals that the failure to draw any definite relationship between leverage and return of the selected cement companies during the study period.

KEYWORDS

Leverage, return, cement industry.

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G32, L61.

I. INTRODUCTION

The term 'leverage' refers to accomplishing the power of gaining an advantage from the use of fixed costs. It represents the impact of one financial variable over some other related financial variables. These financial variables may be cost, output, sales revenue, EBIT, EPS, etc. The higher the leverage, the higher the profits and vice versa (Kishore, 2015). But higher leverage obviously implies either a high amount of fixed cost in the cost structure or higher outside borrowing in the capital structure and hence riskier if the business activity of the firm suddenly takes a dip (Patel, 2014). But low leverage does not necessarily indicate prudent financial management, because the firm cannot take the advantage of incurring higher amount of fixed costs (benefit of automation, modern machine, etc.) and the firm might be incurring an opportunity cost for not having borrowed funds at a fixed cost to earn higher profits. There are two types of risk- (i) Business risk and (ii) Financial risk. Business risk is associated with the operation of the firm, it arises out of fluctuation in the rate of return on total funds invested and the rate of return is a random variable as it may take different values at different points of time. This variation leads to a rise in business risk (Sur and Sarkhel, 2013). Financial risk is the risk associated with the financing decision of the firm. It arises out of (i) the possibility of failing to meet fixed commitments or contractual obligations. (ii) Possibility of fluctuation in income available to owners' equity (Sur and Sarkhel, 2013). Operating leverage emanates from the existence of fixed operating costs in the firm's cost structure. The higher the proportion of fixed operating costs to the total operating costs, the higher is the degree of operating leverage (Sur and Sarkhel, 2013). That's mean operating leverage measures the degree of business risk of firm. The genesis of financial leverage lies in the presence of fixed charge bearing capital (external equity) in the capital structure of the firm. The higher the proportion of fixed charge bearing capital to the total capital employed by a firm, the higher is said to be the degree of financial leverage (Sur and Sarkhel, 2013). That's mean financial leverage indicates the financial risk of firm. Therefore, leverage is measures the risk of firm. Theoretically, it is expected that high leverage can be rewarded by higher risk premium i.e. higher return. Even the findings of the studies so far made in India and outside India on this matter are conflicting in nature and the academic world is sharply divided into two schools of thought. One school of thought argues that the fixed operating cost and financing decisions of the companies have significantly affected their earning capability (Saleem, et al. 2011). Moreover, they also opine that the financial leverage has a positive effect on profitability (Olang, 2015, Reddy,2016, Dalci, 2018). The other school of thought suggests that the financial leverage has a significant negative effect on profitability while operating leverage has a positive effect on profitability (Gatsi, et al. 2013).

Form 1991 business environment is very changes for globalization, liberalization and privatization and the earning trends, cost behavior pattern, retention pattern, tax pattern, and liquidity policies in the Indian corporate sector have also changed completely. Consequently, the risk of the firm in India has witnessed notable changes. In this backdrop, the present paper attempts to analyze the leverage of selected cement companies during the study period 2009-10 to 2018-19.

The remainder of this paper is constructed as follows: section II is concerned with the review of related literature. Section III explains the objectives of the study. Section IV narrates the methodology of the study. In section V the limitations of the study are proposed. Section VI discusses the empirical results of the study. In section VII, concluding remarks are presented.

II. REVIEW OF RELATED LITERATURE

Before identifying the research gap of a study it is necessary to review the existing literature on the issue addressed in the study.

Ghosh and Maji (2006) conducted a study to examine the impact of operating leverage on profitability in four Indian manufacturing sectors namely, Tea, Chemical, paper and Pharmaceutical during the period 1990-91 to 2001-02. The study revealed that positive relationship between operating leverage and profitability of all selected industries.

Virani (2010) carried out a study to analyze the impact of leverage on profitability of Pantaloon Retail India Limited. The study revealed that the finance decision was concerned with selection of correct mix of debt and equity in capital structure.

Saleem et al. (2011) carried out a study to analyze the impact of leverage on the profitability of the oil and gas sector of SAARC countries during the period 2001 to 2010. The study showed significant relationships between DOL, DFL and ROA. The study also revealed that the fixed operating costs and the financing decisions of the companies under study significantly affected their earning capability.

In the study carried out by **Akinlo and Asaolu** (2012), the profitability and leverage associated with Nigerian firms were analyzed in order to assess the impact of leverage on profitability during the period 1999 to 2007. The study showed that the leverage was negative associated with profitability. The study also revealed that the firms were able to enjoy large profit levels if they could increase size and sales with significant reduction in debt ratio.

Soni and Trivedi (2013) examined the relationship between leverage and profitability of selected paint companies in India during the period 2003 to 2012. The results obtained from the study showed a significant relationship between DOL, DOF, DCL and EPS. The study revealed that the negative relationship between profitability and leverage.

Kalpana (2014) in his study analyzed the impact of leverage on profitability of selected steel companies traded in Bombay Stock Exchange. The study revealed that the negative relationships between degree of operating leverage, degree of financial leverage, degree of combined leverage and earning per share.

Vijayakumar and Karunaiathal (2014) conducted a study to analyze the impact of corporate leverage on profitability in Indian paper industry. The study revealed that the positive and significant impact of leverage measured in terms of total debt to total capital with the return on equity.

Srivastava (2014) in his study analyzed the leverage of Indian cement industry during the period 2008 to 2012. The result obtained from the study showed significant relationships between leverage and size, growth, profitability, liquidity, and tangibility. The study concluded that the profitability, size and liquidity were negatively correlated with leverage whereas tangibility had positive impact on leverage or capital structure of the industry.

Mahmoudi (2014) in his study analyzed the effect of leverage on profitability of 28 cement firms during the period 2008 to 2011. The study profitability was measured by return on equity and return on assets. The study revealed that the significant and negative relationship between leverage and firm profitability.

Sammanasu and Pappurajan (2017) examined the impact of leverage on profitability of selected steel companies in India listed in Bombay Stock Exchange during the period 2007 to 2016. The result obtained from the study showed a significant relationship between DOL, DFL, DCL, and EPS. The study revealed that the leverage impact was positive when the earning's of the firm was higher than fixed financial charges to be paid for the lenders.

Patel (2018) in his study analyzed the relationship between financial leverage and profitability of textile companies of India during the period 2013 to 2017. The study used purpose sampling technique, and used correlation and regression. The study revealed that the financial leverage was negatively related with all profitability indicators like net profit margin, return on assets, return on equity and earnings per share.

Sen and Ranjan (2018) carried out a study to analyze the rapport between leverage and profitability of TVS motor company during the period 2006 to 2016. The study used statistical tools like mean, SD, CV, CAGR, ANOVA etc. The study revealed that the operating, financial and combined leverage of the company did not play any major role in making investment decisions of the company. And it was also found that the financial, operating and combined leverage of the company had no significant impact on ROA (Return on Assets) and Risk Adjusted (SHROA) of the company.

III. RESEARCH GAP

Though a large number of studies on analysis of leverage have been carried out during the last few decades and a considerable number of studies on the issue relating to the analysis of the impact of leverage on profitability have also been conducted during the same period, however, a very few studies on the above-mentioned issue have been made during the post-liberalization era. By careful scrutiny of studies of the impact of leverage on profitability in the Indian Corporate sector, it can inferred that no in-depth study on this issue in connection to the Indian cement industry. Today's cement industry is very important for generating of employment. It is, therefore, high time deal with the issue relating to the analysis of the leverage of selected Indian cement companies during the post-liberalization era.

IV. OBJECTIVES OF THE STUDY

1. To measures the degree of operating leverage, degree of financial leverage and combined leverage associated with each of the selected cement companies and to compare the same with the Indian cement industry average.
2. To analyze the relationship between operating leverage and financial leverage of the selected cement companies.
3. To evaluate the nature and extent of the relationship between leverage and return of the selected cement companies.

V. METHODOLOGY OF THE STUDY

The study was based on 10 cement companies (see appendix 1). The study was used as a purposive sampling procedure for the selection of the sample. The top ten companies (based on market capitalization) were selected from BSE on 31.12.2019. The data of the selected 10 companies for the period 2009-10 to 2018-19 used in this study were collected from the secondary source i.e. published annual reports of the companies. In this study, simple mathematical tools like average, ratio, percentage, etc. and statistical techniques like Pearson's simple correlation, Spearman's rank correlation, Kendall's coefficient of concordance, etc, were used for analyzing the data. The ratios relating to the analyze of leverage which were used in this study are (a) degree of operating leverage, (b) degree of financial leverage, (c) degree of combined leverage. The ratios relating to the measure of return which was used in this study are (a) return on capital employed (ROCE) and (b) return on equity (ROE). The study was applied to popular statistical tools like the Z test, T-test, F test, etc at appropriate places.

VI. LIMITATIONS OF THE STUDY

1. The study was only followed by the published financial statements of the selected companies.
2. The study was not considered an inflation factor.
3. The study was analyzed only 10-year data of the selected companies.

VII. RESULT AND DISCUSSION

A. Table 1 measures the degree of operating leverage of selected ten cement companies. This table shows that the degree of operating leverage was the highest in Shree, followed by Ultra Tech, Ambuja, ACC, Ramco, JK Cement, Heidelberg, Star, JK Laskhmi, and India Cement. The companies, namely Heidelberg, JK Laskhmi, and India Cement were placed in the operating leverage above the grand mean of operating leverage of selected ten cement companies while the remaining seven companies under study were below the grand mean of operating leverage of selected ten cement companies during the study period.

B. Table 2 measures the degree of financial leverage of selected ten cement companies during the period under study. In this table also discloses that the degree of financial leverage was the highest in Indian Cement, followed by Ultra Tech, Ambuja, Shree, ACC, Ramco, JK Cement, Heidelberg, Star, JK Laskhmi. Only four of the selected companies, namely JK Cement, Heidelberg, JK Laskhmi, India Cement maintained above degree of financial leverage as compared to the grand mean of degree of financial leverage whereas the remaining six companies maintained their lower degree of financial leverage as compared to the grand mean of degree of financial leverage.

C. Degree of total leverage of selected ten cement companies measures in table 3. This table also shows that the degree of total leverage was the highest in Indian Cement followed by nine selected cement companies during the study period. The JK Cement, Heidelberg, JK Laskhmi and India Cement maintained greater degree of total leverage compared to the grand mean of degree of total leverage of selected ten cement companies during the period under study while remaining six companies under study was lower the degree of total leverage as compared to the same.

D. Table 4 discloses the nature and degree of relationship between operating leverage and financial leverage of the selected cement companies. All the three correlation coefficients were positive but were not found to be statistically significant.

E. In Table 5, risk-return status of the selected cement companies in India were ascertained with reference to DOL and ROCE. It is observed from Table 5 that the Shree was a high risk-high return. Heidelberg, JK Laskhmi, and India Cement were in the high risk-low return class. Ultra Tech, Ambuja, ACC and Star Cement maintained a combination of low risk and high return. Ramco and JK Cement were placed in the low risk- low return category during the study period.

F. In Table 6, risk-return profile of the selected cement companies were assessed on the basis of DFL and ROCE. This table discloses that the JK Cement was high risk-high return. Heidelberg, JK Laskhmi and India Cement were placed in the most undesirable class by maintaining a high risk-low return blend. Shree, Ultra Tech, ACC, Ramco and Star were placed in the most desirable category i.e. low risk-high return class. Ambuja was placed in the low risk- low return category during the study period.

G. In Table 9 an attempt was made to assess the nature and degree of relationship between DOL and ROCE, and DFL and ROE using the same measures of risk and returns as used in Table 7 and Table 8 respectively. This table exhibits that the two correlation coefficients were negative and one correlation coefficient was positive but all three correlation coefficients were not found to be statistically significant. Though all the correlation coefficients between DFL and ROE were also negative, only one correlation was found to be statistically significant.

VIII. CONCLUDING OBSERVATION

(i) The degree of operating leverage associated with Shree was highest and it was followed by Ultra Tech, Ambuja, ACC, Ramco, JK Cement, Heidelberg, Star, JK Laskhmi, and India Cement respectively in that order during the study period. That means business risk of the shree cement was high during the study period. Shree, Ultra Tech, Ambuja, ACC, Ramco, JK Cement and Star cements were able to maintain below operating leverage as compared to the grand mean operating

leverage as ascertained based on the degree of operating leverage of all the ten selected companies. Therefore, Shree, Ultra Tech, Ambuja, ACC, Ramco, JK Cement and Star cements were control the business risk during the study period.
(ii) The degree of financial leverage associated with Indian Cement was a maximum, followed by Ultra Tech, Ambuja, Shree, ACC, Ramco, JK Cement, Heidelberg, Star and JK Laskhmi during the study period. It means Indian cement financial risk is high during the study period. Ultra Tech, Ambuja, Shree, ACC, Ramco, Star adopted such financing policies with the help of which they were able to maintain below financial leverage as compared to the grand mean financial leverage as measured based on the degree of financial leverage of all the ten cement companies under study. Therefore, Ultra Tech, Ambuja, Shree, ACC, Ramco and Star were maintaining the financial risk during the study period.
(iii) The degree of total risk was the highest in Indian Cement and it was followed by Ultra Tech, Ambuja, Shree, ACC, Ramco, JK Cement, Heidelberg, Star and JK Laskhmi respectively in that order. That means Indian cement total risk was high during the period under study. Ultra Tech, Ambuja, Shree, ACC, Ramco and Star were able to maintain below total leverage as compared to the grand average of total leverage as ascertained based on the degree of total leverage of the ten selected cement companies during the period under study. Therefore, Ultra Tech, Ambuja, Shree, ACC, Ramco and Star were able to control the total risk during study period.
(iv) Though a notable degree of the negative association between operating leverage and financial leverage is theoretically desirable, no strong evidence of such a relationship was observed in all the selected cement companies during the study period.
(v) The study of leverage -return matrices reveal that the majority of the selected companies did not corroborate the theory that high leverage is compensated by high return. The study of correlations between DOL and ROCE, and also between DFL and ROE provided evidence in support of the above findings.

REFERENCES

1. Akinlo, O. and Asaolu, T. (2012), Profitability and leverage: evidence from Nigerian firms, *Global Journal of Business Research*, Vol. 6, Issue 1, pp. 17-25.
2. Ghosh, S. K., and Maji, S. G. (2006), Impact of Operating Leverage on Profitability: An Empirical Study on Selected Indian Industries, *The Management Accountant*, pp.660–667.
3. Kalpana V. (2014), A Study on Leverage Analyses and Its Impact on Profitability of Select Steel Companies Traded in BSE, *Indian Journal Of Applied Research*, Vol. 4, Issue- 10.
4. Kishore, R. M. (2015), Financial Management, Taxmann Publication Pvt. Ltd., New Delhi, pp.148-162.
5. Mahmoudi, S. (2014), The Effect of Leverage on Cement Industry Profitability, *Reef Resources Assessment and Management Technical Paper,* Vol. 40, pp. 673-676.
6. Patel, M. (2018), Relationship between Financial Leverage and profitability of Textile Companies of India, *Research Review International Journal of Multidisciplinary*, Vol. 3, issue- 6, pp. 24-27.
7. Saleem, Q., Rahman, R.U., and Sultana, N. (2011), Leverage (financial and Operating) Impact on Profitability of Oil and Gas Sector of SAARC Countries*, American Based Research Journal*, Vol.1-3, pp. 19-58.
8. Sammanasu, J. M. and Pappurajan, A. (2017), Leverage Analysis and Its Impact on Profitability of Select Steel Companies of India Traded in Bombay Stock Exchange*, Journal of Advance Management Research*, Vol.5, Issue- 3, pp.83-96.
9. Sen, G. and Ranjan, R. (2018), 'Rapport Between Leverage and Profitability: A study of TVS Motor Company, *Journal of finance and accounting*, Vol. 6, issue- 2, pp. 49-55.
10. Soni, B. and Trivedi, J. (2013), A Study on Leverage Analysis and Profitability for Selected Paint Companies in India; *Quest Bi-Annual Referred Journal of Management & Research*, Vol. IV, Issue 1, pp. 3-13.
11. Srivastava, N. (2014), "Determinants of Leverage of Indian Companies: An Empirical Analysis (A Study of Cement Industry in India)", *The International Journal of Business & Management,* Vol. 2, pp. 49-53.
12. Sur, D. and Sarkhel, J. (2013), An Introduction to Financial Management, Book Syndicate (P) Ltd. Kolkata, pp.116-138.
13. Vijayakumar A. and Karunaiathal, A. (2014), Impact of Corporate Leverage on Profitability - Evidence from Indian Paper Industry*, Indian Journal of Applied Research*, Vol. 4, Issue- 11, pp. 137-141.

TABLES

TABLE 1: DOL OF THE SELECTED CEMENT COMPANIES IN INDIA

Sl. No.	Company	DOL	Status
1	**Ultra Tech Cement Ltd (Ultra Tech)**	1.36	B
2	**Shree Cement Ltd. (Shree)**	1.92	A
3	**Ambuja Cement Ltd. (Ambuja)**	1.40	B
4	**ACC Ltd. (ACC)**	1.45	B
5	**Ramco Cement Ltd. (Ramco)**	1.41	B
6	**J. K. Cement Ltd. (JK Cement)**	1.36	B
7	**Heidelberg Cement Ltd. (Heidelberg)**	1.51	A
8	**Star Cement Ltd. (Star)**	1.33	B
9	**JK laskhmi Cements Ltd. (JK Laskhmi)**	1.65	A
10	**India Cements Ltd. (India Cement)**	1.55	A
Indian Cement Industry Average		**1.49**	
'A' denotes ' DOL above the Indian Cement Industry Average' and 'B' denotes ' DOL below the India Cement Industry Average'			
Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19			

TABLE 2: DFL OF THE SELECTED CEMENT COMPANIES IN INDIA

Sl. No.	Company	DFL	Status
1	**Ultra Tech Cement Ltd (Ultra Tech)**	1.20	B
2	**Shree Cement Ltd. (Shree)**	1.21	B
3	**Ambuja Cement Ltd. (Ambuja)**	1.05	B
4	**ACC Ltd. (ACC)**	1.07	B
5	**Ramco Cement Ltd. (Ramco)**	1.28	B
6	**J. K. Cement Ltd. (JK Cement)**	1.87	A
7	**Heidelberg Cement Ltd. (Heidelberg)**	1.73	A
8	**Star Cement Ltd. (Star)**	1.31	B
9	**JK laskhmi Cements Ltd. (JK Laskhmi)**	2.34	A
10	**India Cements Ltd. (India Cement)**	3.03	A
Indian Cement Industry Average		**1.61**	
'A' denotes ' DFL above the Indian Cement Industry Average' and 'B' denotes ' DFL below the India Cement Industry Average'			
Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19			

TABLE 3: DTL OF THE SELECTED CEMENT COMPANIES IN INDIA

Sl. No.	Company	DTL	Status
1	Ultra Tech Cement Ltd (Ultra Tech)	1.63	B
2	Shree Cement Ltd. (Shree)	2.32	B
3	Ambuja Cement Ltd. (Ambuja)	1.47	B
4	ACC Ltd. (ACC)	1.55	B
5	Ramco Cement Ltd. (Ramco)	1.80	B
6	J. K. Cement Ltd. (JK Cement)	2.54	A
7	Heidelberg Cement Ltd. (Heidelberg)	2.61	A
8	Star Cement Ltd. (Star)	1.74	B
9	JK Laskhmi Cements Ltd. (JK Laskhmi)	3.86	A
10	India Cements Ltd. (India Cement)	4.70	A
Indian Cement Industry Average		2.42	
'A' denotes ' DTL above the Indian Cement Industry Average' and 'B' denotes ' DTL below the India Cement Industry Average'			
Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19			

TABLE 4: CORRELATION COEFFICIENTS BETWEEN DOL AND DFL IN THE INDIAN CEMENT COMPANIES

Measure	Value
Pearson	0.19
Spearman	0.267
Kendall	0.18
* Correlation coefficient is significant at 0.05 level, ** Correlation coefficient is significant at 0.01 level	
Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19	

TABLE 5: RISK-RETURN STATUS OF THE SELECTED INDIAN CEMENT COMPANIES BASED ON THE COMBINATION OF DOL AND ROCE

Average ROCE / Average DOL	High	Low
High	Shree	Heidelberg, JK Laskhmi, India Cement
Low	Ultra Tech, Ambuja, ACC, Star	Ramco, JK Cement

Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19

TABLE 6: RISK-RETURN STATUS OF THE SELECTED INDIAN CEMENT COMPANIES BASED ON THE COMBINATION OF DFL AND ROE

Average ROE / Average DFL	High	Low
High	JK Cement	Heidelberg, JK Laskhmi, India Cement
Low	Shree, Ultra Tech, ACC, Ramco, Star	Ambuja

Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19

TABLE 7: CORRELATION COEFFICIENTS BETWEEN RISK AND RETURNS IN THE INDIAN CEMENT INDUSTRY

Correlation Coefficient / Between Measure	DOL and ROCE	DFL and ROE
Pearson	0.061	-0.824**
Spearman	-0.255	-0.503
Kendall	-0.270	-0.333
* Correlation is significant at 0.05 level, ** Correlation is significant at 0.01 level.		

Source: Complied and Computed from published Annual Reports of selected Cement companies for the period 2009-10 to 2018-19

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