

Financing Behaviour of Cement Manufacturing Firms in India

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ABSTRACT

Capital is the major part of all kinds of business activities, which are decided by the Firm Size, and nature of the business concern. If the company maintains proper and adequate level of capital, it will earn high profit and it can provide more dividends to its shareholders. Several researches have been found on identifying the determinants of capital structure but most of them are of foreign countries and there is no single opinion on the actual determinants of capital structure. Indian Cement Manufacturing Industry is the second largest producer in the world. The prospective growth of the Cement Manufacturing Companies requires them to maintain strong capital base and sound capital structure to fund its long-term investment structure. This study is an attempt to analyze the financing behaviour of the selected Cement Manufacturing Companies operating in India, and thereby identify the major determinants of capital structure decisions for these companies. In order to examine the validity of the capital structure theories, for Indian Cement Manufacturing Sector, an attempt has been made to evaluate the impact of explanatory variables viz. Firm Size, Growth, Profitability, Liquidity and Tangibility on Debt Equity Ratio as the Dependent Variable. The independent variables have been considered keeping in view Agency Theory, Trade Off Theory, Pecking Order Hypothesis and other established capital structure models. The study indicates that all the selected companies rely upon different approaches for deciding their capital structure decisions. Profitability, Liquidity and Firm Size are found to be the major determinants of capital structure for almost all the selected companies.

Key Words: *Financing Decisions, Pecking Order Theory, Trade Off Theory, Agency Theory, Indian Cement Manufacturing Sector*

Introduction

Capital Structure is referred to as the ratio of different kinds of securities raised by a firm as long-term finance. It represents the mix of the various debt and equity securities maintained by a firm. In general, a firm can choose among many alternative capital structures. There are certain objectives for maintaining a desired capital structure, such as minimization of the cost of capital and maximization of the value of the share, etc. From a technical perspective, the capital

structure is defined as the careful balance between equity and debt that a business uses to finance its assets, day-to-day operations, and future Growth. From a tactical perspective however, it influences everything from the firm's risk profile, how easy it is to get funding, how expensive that funding is, the return its investors and lenders expect, and its degree of insulation from both microeconomic business decisions and macroeconomic downturns. Therefore, decisions concerning the proportion of debt and equity are quite challenging for the management of the firm because a wrong decision may lead to financial distress and eventually to bankruptcy. If the company maintains proper and adequate level of capital, it will earn high profit and it can provide more dividends to its shareholders. Thus optimal capital structure is one that maintains a balance between risk and return to achieve the ultimate goal of maximizing the price of the stock.

Theoretical Framework

A number of theories have been advanced in explaining the capital structure of firm. Despite the theoretical appeal of capital structure, academicians and researchers have not yet identified any specific method that corporate managers can use in order to attain an optimal debt level. This may be because of the fact that theories of optimal capital structure differ in their relative emphases. The trade-off theory emphasizes taxes, the pecking order theory emphasizes differences in information, and the free cash flow theory emphasizes agency costs. Trade-off theory asserts that firms determine their capital structure by weighing the costs and benefits that arise from an extra dollar of debt financing. Under trade-off theory framework, firms are supposed to choose a target capital structure that maximizes the firm value by minimizing the costs of prevailing market imperfections. However, target debt level may vary from firm to firm. The Pecking order theory of Myers and Majluf (1984) and Myers (1984) is based on the notion of asymmetric information that corporate managers (insiders) know more about their company's prospects, risk and value than do outside investors. According to pecking order hypothesis, firms maximize their value by systematically choosing to finance new investments with cheapest available sources. More specifically, firms prefer to use internal financing when available and choose debt over equity when external finance is needed due to low information costs associated with debt. Agency theory suggests that firms with large fixed assets have a comparative advantage in obtaining long-term debt, whereas, the firms with high sales relative to fixed assets have a comparative advantage in borrowing over shorter periods. Agency costs arise as a result of relationship between managers and shareholders and those between debt holders and equity investors. Conflicts between debt and equity investors only arise when there is a risk of default. If debt is totally free of default risk, debt holders have no interest in the income, value or risk of the firm. However, if there is a chance of default, then shareholders can

gain at the expense of debt holders. Since equity is a residual claim, so shareholders gain when the value of existing debt falls, even when the value of the firm is constant, Myers (2001). Another conditional theory of capital structure is the theory of free cash flow which postulates that high leverage leads to increase in firm value, despite the threat of financial distress, when a firm's operating cash flows exceeds its profitable investment opportunities, Myers (2001). Conflicts between managers and shareholders over payout policies are especially severe when a firm generates free cash flow. Jensen (1986) proposed that 'debt' could be used as a controlling device to motivate managers to distribute free cash among shareholders instead of wasting it on inefficient activities. Another argument put forth by Grossman and Hart (1982) is that 'debt' can create an incentive for managers to work harder, consume fewer perquisites and make better investment decisions etc., when bankruptcy is costly. Thus, a high debt ratio may be dangerous for a firm, but it can also add value by putting the firm on a diet. Several empirical studies have examined the validity of these theories, but not yet consensus arrived among researchers regarding which theory best explains the capital structure choice. According to Myers (2001), there is no universal theory of the debt-equity choice and no reason to expect one.

This study is an attempt to analyze the financing behaviour of selected Cement Manufacturing Companies operating in India. To examine the empirical validity of the capital structure theories for Indian Cement Manufacturing Sector, an attempt has been made to evaluate the impact of explanatory variables viz. Firm Size, Growth, Profitability, Liquidity and Tangibility on Debt Equity Ratio as the Dependent Variable. The Indian cement manufacturing industry is the second largest producer in the world. India is expected to become the world's third largest construction market due to its cement industry. The cement industry of India has been giving immense boost to various infrastructure projects, housing facilities and road networks from the cement industry. The prospective Growth of these companies requires them to maintain strong capital base and sound capital structure to fund their long-term investment structure. Hence an attempt has been made to identify the major determinants of capital structure decisions for selected Indian Cement Manufacturing Companies.

Literature Review

Several empirical studies have been found in the Literature on examining the empirical validity of the capital structure theories and identifying the major determinants of capital structure. The varied results of all these studies indicate that the role of finance manager has become far more important. Raj Dhankar and Ajit Boora (1996) have conducted the study on Cost Of Capital, Optimal Capital Structure, And Value Of Firm with an objective to find out if there exists an optimal capital structure either at the micro and/or at the macro level in Indian private sector companies. They attempted to identify the impact of different capital structure on cost of

capital, whether capital structure and dividend policy are correlated and lastly to identify if capital structure of companies differ significantly. The results suggest that though cost of capital decreases when leverage increases, this decrease is very moderate and not proportional to debt level. Sandeep Goel, (Dec. 2002) has conducted the capital structure analysis in Indian heavy industry from the pecking order dimension. The optimality of capital structure and the impact of financial leverage on shareholders' return have been analyzed using Beta analysis and other techniques. Sanjay Rajagopal (2002) has analysed the portability of capital structure theory with an objective to test whether the model of capital structure is portable to an emerging market. The result provides strong evidence in support of the portability of capital structure theory across developed and developing economy. Gonenc (2003) examined the impact of profitability, tangibility, size and growth opportunities on capital structure decisions using Regression Analysis for Turkish Industrial firms with major focus on the fact that corporate governance and equity ownership structure could influence the relationship between debt ratios and firm's characteristics. Ashok Kumar Panigrahi, (2010) in his study examined the trend of changes in the capital structure and impact of liberalization on the capital structure decisions of Indian companies. The study has also attempted to identify the factors that determine the financing pattern of capital structure of Indian companies, particularly in the private sector. Chandra Shekhar Mishra (2011) has identified the determinants of Indian central PSUs' capital structure. The main objective of this study is to investigate the role of firm size on capital structure decision of Turkish lodging companies. The results suggest that the capital structure of the profit making PSUs is affected by Asset Structure, Profitability and Tax. Anurag Pahuja & Anu Sahi (2012) has attempted to analyse the factors determining the capital structure decisions for 30 companies comprising BSE SENSEX. Growth and Liquidity are found to be the two major determinants of Capital structure in their study.

Research Methodology

Objectives:

The major objectives of this study are:

- i. To identify the determinants of capital structure of selected Indian Cement Manufacturing Companies.
- ii To examine the empirical validity of the capital structure theories for Indian Manufacturing Companies.

Sampling Design

In order to evaluate identify the factors affecting the capital structure decisions in Indian Cement Industry, the following Ten leading and listed Cement companies have been selected

and the financial data of these companies has been collected from the Annual Reports of these companies for the period of Ten Years starting from 2004-05 to 2013-14:

- Ambuja Cement
- Andhra cement
- Binani Cement
- Gujarat Siddhee Cement
- Heidelberg Cement
- Hyderabad Industries Ltd. (HIL) Cement
- India Cement
- JK Lakshmi Cement
- Prisma Cement
- Ultra Tech Cement

Variable Descriptions:

Table-1 Variable Descriptions

Name	Description
Dependent Variable:	
Debt-Equity Ratio	Shareholder funds divided by Outsiders funds
Independent Variables:	
Profitability	Percentage of pre-tax profit divided by total assets
Firm Size	Natural logarithm of sales
Tangibility	Fixed Assets divided by Total Assets
Growth	Growth of Total Assets
Liquidity	Ratio of Current assets to Current liabilities

Data Analysis:

In order to identify the major determinants of capital structure decisions for the selected companies, Correlation Analysis and Multiple Regression Analysis is carried on using the model below, for the selected Indian Cement Manufacturing Companies.

Multiple Regression Model:

The model used in this study is:

$$D/E = \beta_0 + \beta_1 \text{Profitability} + \beta_2 \text{Firm Size} + \beta_3 \text{Tangibility} + \beta_4 \text{Growth} + \beta_5 \text{Liquidity} + e$$

Empirical Results

The results obtained for each of the selected companies are summarized in Table-2 and their interpretations are narrated below:

Table-2 Results of Multiple Regression Analysis

Dependent Variable: Debt Equity Ratio										
Company Name/ Variable	Ambuja Cement	Andhra Cement	Binani Cement	Gujarat Cement	Heidelberg Cement	HIL Cement	India Cement	JK Lakshmi Cement	Prisam Cement	Ultra-Tech Cement
(Constant)	60.304	1.627	-11.470	0.994	42.529	-57.918	-16.559	25.253	-9.717	-27.698
Profitability	-5.546	-6.107	-5.747*	-0.509	-9.508	-38.078*	4.316	-8.959	-0.064*	-8.354*
Firm Size	-7.065	0.137*	2.652	0.027*	-4.920	15.477	0.827	0.037*	0.993	8.801
Tangibility	-0.021	0.013*	-0.029*	-0.025	-0.149	-0.346*	0.205	-0.075	0.014	-0.060*
Growth	0.105*	-0.003	0.008	-0.009	-0.009	-0.140*	-0.113*	0.083*	0.005	-0.006*
Liquidity	2.896*	0.283*	-0.031*	0.468*	-0.351	1.061	3.304	-3.598	2.551	-19.181*
R Square	0.957	0.748	0.915	0.997	0.841	0.745	0.933	0.863	0.974	0.976

***' indicates significance at 5% Significance Level*

AmbujaCement:

Estimated Regression Model:

DebtEquityRatio=60.304-5.546Profitability -7.065Firm Size -0.021Tangibility +0.105Growth +2.896Liquidity

In case of Ambuja Cement the estimated model indicates that Profitability, Firm Size, and Tangibility are insignificantly inversely related with debt equity ratio indicating that an increase in any of these ratios will reduce the D/E ratio, thereby, leading the company to rely more upon its equity sources for financing its operational activities. This is in confirmation with the Pecking order theory which says that firm prefers to finance new investment first with internal resources and then by issuing safest security that is debt, thereafter convertibles and finally with new equity. The significant negative relationship between firm size and leverage is also consistent with the predictions of Pecking Order Theory which suggests that large firms should use more equity due to the relativity of the cost of equity financing owing to asymmetric information which is small for such firms. Further, an inverse relationship between leverage and asset structure indicates that the firm holding more tangible assets will be less prone to asymmetric information problems and hence less likely to issue debt. Whereas, Growth and Liquidity are significantly positively related with debt equity ratio which indicates that an increase in these variables will lead to an increase in D/E ratio, while keeping the other variables constant. This will lead to an increase in Debt which may be due to the strategy of the company of raising external debt for financing its expansion activities. Inverse The value of R-Square indicates that 95.7 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity. **Firm Size** followed by **Profitability** and **Liquidity** respectively, are the highest contributing variables to the Capital structure decisions of this company.

Andhra Cement:**Estimated Regression Model:**

$$\text{DebtEquityRatio} = 1.627 - 6.107\text{Profitability} + 0.137\text{Firm Size} + 0.013\text{Tangibility} - 0.003\text{Growth} + 0.283\text{Liquidity}$$

In case of Andhra Cement the estimated model indicates that, Firm Size, Tangibility and Liquidity are significantly positively related with debt equity ratio whereas; profitability and growth are insignificantly inversely related with debt equity ratio. Inverse relation of D/E ratio with Profitability is in confirmation with the Pecking Order Theory which says that this firm prefers to finance new investment first with internal resources and then by issuing safest security that is debt, thereafter convertibles and finally with new equity. Positive relation of D/E ratio with Tangibility and Liquidity is in confirmation with the Trade Off Theory because higher liquidity ratio can support a relatively higher debt ratio due to greater ability of a firm to satisfy short-term contractual obligations on time. Thus the result indicates that the firm relies more upon its Debt sources for its expansion activities. **Profitability**, followed by **Liquidity** and **Firm Size** respectively are the major determinants of capital structure of this company. The value of R-Square indicates that 74.80 per cent of variations in debt equity ratio are explained by the Profitability, Size, Tangibility, Growth and Liquidity.

Binani Cement:**Estimated Regression Model:**

$$\text{Debt Equity Ratio} = -11.470 - 5.747\text{Profitability} + 2.652\text{Firm Size} - 0.029\text{Tangibility} + 0.008\text{Growth} - 0.031\text{Liquidity}$$

In case of Binani Cement estimated model indicates that, Profitability, Tangibility and Liquidity are significantly inversely related with debt equity ratio while Firm Size and Growth are insignificantly directly related with debt equity ratio which indicates that the firm relies more upon its equity sources for increasing its profitability or for meeting its routine liquidity requirements whereas, it relies more upon external Debt for its expansion activities. Inverse relation with Profitability is in confirmation with the Pecking Order Theory. **Profitability**, **Firm Size** and **Liquidity** respectively are the major determinant of capital structure of this company. The value of R square indicates that 91.50 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

Gujarat Siddhee Cement:**Estimated Regression Model:**

$$\text{Debt Equity Ratio} = 0.994 - 0.509\text{Profitability} + 0.027\text{Firm Size} - 0.025\text{Tangibility} - 0.009\text{Growth} + 0.468\text{Liquidity}$$

For Gujarat Siddhee Cement the estimated model indicates that, Firm Size and Liquidity are significantly positively related with debt equity ratio while Profitability, Tangibility and Growth are insignificantly negatively related with debt equity ratio. These results indicate that the firm relies more upon its Debt sources in order to meet its higher liquidity requirements for increasing its Sales. Inverse relation with Profitability is in confirmation with the Pecking Order Theory. **Profitability, Liquidity** and **Firm Size** respectively are the major determinants of the capital structure decisions for this company. The value of R square indicates that 99.70 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

Heidelberg Cement:

Estimated Regression Model:

Debt Equity Ratio = 42.529 - 9.508 Profitability - 4.920 Firm Size - 0.149 Tangibility - 0.009 Growth - 0.351 Liquidity

For Heidelberg Cement the estimated model indicates that, all the explanatory variables are inversely related to D/E ratio indicating that the firm relies more upon its Equity sources for taking its capital structure decisions. Inverse relation with Profitability is in confirmation with the Pecking Order Theory. The result indicates that all the explanatory variables have insignificant influence on D/E Ratio. **Profitability** followed by **Firm Size** and **Liquidity** respectively are the major determinants of capital structure for this company. The value of R-Square indicates that 84.10 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

Hyderabad Cement:

Estimated Regression Model:

Debt Equity Ratio = -57.918 - 38.078 Profitability + 15.477 Firm Size - 0.346 Tangibility - 0.140 Growth + 1.061 Liquidity

For HIL Cement the estimated model indicates that, Profitability, Tangibility and Growth are significantly inversely related with debt equity ratio which is in confirmation with the Pecking Order Theory, whereas; Firm Size, and Liquidity are insignificantly positively related with debt equity ratio which is confirmation with the Trade Off Theory. This indicates that the firm prefers to use its internal resources more upon its Equity sources for its routine operational activities whereas; it prefers to rely more upon Debt sources for its expansion activities and hence increased need of Liquidity. **Profitability** followed by **Firm Size** and **Liquidity** respectively are the major determinants of capital structure for this company. Inverse relation with Profitability is in confirmation with the Pecking Order Theory. The value of R square equals

0.745, indicating that 74.50 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

IndiaCement:

Estimated Regression Model:

Debt Equity Ratio = -16.559 + 4.316 Profitability + 0.827 Firm Size + 0.205 Tangibility - 0.113 Growth + 3.304 Liquidity

In case of India cement the estimated model indicates that, Growth is the only significant and inversely related variable with debt equity ratio whereas; Profitability, Tangibility, Firm Size, and Liquidity are all positively related with debt equity ratio. This indicates that the firm relies more upon its Equity sources for its expansion activities. Positive relation between Profitability and D/E Ratio is in violation of the Pecking Order Theory but it is in confirmation with the Trade Off theory. **Profitability** followed by **Liquidity** and **Firm Size** are the major determinants of capital structure for this company. The value of R square indicates that 93.30 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

JK Lakshmi Cement:

Estimated Regression Model:

Debt Equity Ratio = 25.253 - 8.959 Profitability + 0.037 Firm Size - 0.075 Tangibility + 0.083 Growth - 3.598 Liquidity

In case of JK Lakshmi Cement the estimated model indicates that, Firm Size and Growth are significantly positively related with debt equity ratio whereas; and Profitability, Tangibility, and Liquidity are insignificantly negatively related with debt equity ratio. This indicates that the firm relies more upon its Equity sources for its expansion activities. Inverse relation with Profitability is in confirmation with the Pecking Order Theory. **Profitability** followed by **Liquidity** and **Growth** respectively are the major determinants of capital structure for this company. The value of R-Square indicates that 86.30 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

PrisamCement:

Estimated Regression Model:

Debt Equity Ratio = -9.717 - 0.064 Profitability + 0.993 Firm Size + 0.014 Tangibility + 0.005 Growth + 2.551 Liquidity

For PrisamCement the estimated model indicates that, Profitability is inversely related with debt equity ratio whereas; Growth, Firm Size, Tangibility and Liquidity are positively related to debt equity ratio. All the relations here are in confirmation of the Pecking Order Theory. These results indicate that the firm completely follows Pecking Order Theory. **Liquidity** followed by **Firm Size** and **Profitability** respectively are the major determinants of capital structure of this

company. The value of R-Square indicates that 97.40 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

Ultra-tech Cement:

Estimated Regression Model:

Debt Equity Ratio = -27.698 - 8.354 Profitability + 8.801 Firm Size - 0.060 Tangibility - 0.006 Growth - 19.181 Liquidity

In case of Ultra-tech Cement the estimated model indicates that, Profitability, Tangibility, Growth and Liquidity are significantly inversely related to debt equity ratio whereas; Firm Size is insignificantly positively related with debt equity ratio. The results indicate that the firm mostly relies upon its Equity sources for its operational activities. Inverse relation with Profitability is in confirmation with the Pecking Order Theory. **Liquidity** followed by **Firm Size** and **Profitability** respectively are the major determinants of capital structure for this company. The value of R square indicates that 97.60 per cent of variations in debt equity ratio are explained by the Profitability, Firm Size, Tangibility, Growth and Liquidity.

Findings:

This study examines the impact of capital structure on selected ten cement companies of cement industry in India between 2004-05 and 2013-14. The following are the major findings of this study are summarized in the Table-3 below:

Table-3 Observed and Expected Relationships:

Observed Relationship	Company	Profitability	Firm Size	Tangibility	Growth	Liquidity
	Ambuja Cement	Negative	Negative	Negative	Positive	Positive
	Andhra Cement	Negative	Positive	Positive	Negative	Positive
	Binani Cement	Negative	Positive	Negative	Positive	Negative
	Gujarat Siddhee Cement	Negative	Positive	Negative	Negative	Positive
	Heidelberg Cement	Negative	Negative	Negative	Negative	Negative
	HIL Cement	Negative	Positive	Negative	Negative	Positive
	India Cement	Positive	Positive	Positive	Negative	Positive
	JK Lakshmi Cement	Negative	Positive	Negative	Positive	Negative
	Prisam Cement	Negative	Positive	Positive	Positive	Positive
	Ultra Tech Cement	Negative	Positive	Negative	Negative	Negative
Expected Relationship	Pecking Order Theory	Negative	Negative	Negative	Negative	Negative
	Trade Off Theory	Positive	Positive	Positive	Negative	Positive

- Table-3 above indicates that except for India Cement, Profitability is inversely related to Leverage, indicating thereby that, almost all the selected companies are in confirmation with the Pecking Order Theory. Thus the majority of the Cement Manufacturing firms prefer to finance new investment first with internal resources and then by issuing safest security that is debt, thereafter convertibles and finally with new equity. India Cement has a positive relation between Profitability and Leverage. This is confirmation with the Trade Off Theory, which states high profitability promotes the use of debt finance and provides an incentive to firms to avail the benefit of tax shield on interest payment.
- As regards Firm Size, most of the selected Cement Companies follow the Trade Off Theory, which states that the larger firms should borrow more because these firms tend to be more diversified and less prone to bankruptcy and smaller firms should operate with low leverage because these firms are more likely to be liquidated when facing financial distress. Moreover, larger firms have lower agency costs of debt i.e. relatively low monitoring costs because of less volatile cash flows and easy access to capital market. Ambuja Cement and Heidelberg Cement follow the Pecking order theory which states that the problem of information asymmetry is less severe in large firms.
- As regards Tangibility, Seven out of Ten selected companies have an inverse relation between Tangibility and Leverage, indicating that majority of the selected companies are in confirmation with the Pecking Order Theory, which states that the firms holding more tangible assets will be less prone to asymmetric information problems and hence less likely to issue debt.
- Growth has an inverse relationship with Leverage in Six out of Ten selected firms. This is in confirmation with the Pecking Order Theory which states that the firms with high future growth opportunities should use more equity financing, because a highly leveraged company may forgo profitable investment opportunities when it expects by undertaking new project the value goes to firm's existing debt holders. This is also in confirmation with the Trade Off Theory, which states that firms holding future growth opportunities which are a form of intangible assets, tend to borrow less than firms holding more tangible assets because growth opportunities cannot be collateralized. The remaining Four Companies have a positive relation with Leverage indicating that these companies rely more upon their Debt sources for grabbing their Growth opportunities. The results of several empirical studies find a mixed relationship between Growth and Leverage.
- Liquidity has a positive relation with Leverage for most of the selected companies which is in confirmation with the Trade Off theory, which states that higher liquidity ratio can support a relatively higher debt ratio due to greater ability of a firm to satisfy short-term

contractual obligations on time. Binani Cement, Heidelberg Cement, J K Laxmi Cement and Ultra Tech Cement have an inverse relation between Leverage and Liquidity, which is in confirmation to the Pecking Order Theory which states that the firms with ample liquidity may use internally available fund to finance investment. Heidelberg Cement is the only company which fully follows Pecking Order Theory as regards all the explanatory variables.

- Thus the above results indicate a mix relation between the explanatory variables and the Leverage indicating that the selected companies follow different approaches for deciding their capital structure depending upon their financial parameters.
- Profitability, Liquidity and Firm Size are found to be the three most contributing variables in almost all the selected companies and hence they can be considered to be the major determinants of Capital Structure for in Cement Manufacturing Sector in India.

Conclusion:

To conclude with; this study attempts to analyze the determinants of capital structure of Ten listed companies belonging to the Cement Manufacturing Sector of India. The study considered debt equity ratio as dependent variable on one hand and size, liquidity, profitability, tangibility and growth as independent variables. The study reveals varied and mixed kind of relations between the dependent and explanatory variables. All the selected companies rely upon different approaches for deciding their capital structure decisions. It can be noted that Profitability, Liquidity and Firm Size are found to be the common factors among the first three major determinants of Capital Structure for almost all the ten selected companies. Hence it can be concluded that Profitability, Liquidity and Firm Size are the major factors affecting capital structure decisions in Indian Cement Manufacturing Sector. Profitability is inversely related to Leverage in almost all the selected companies except India Cement. This is in confirmation to the Pecking Order Hypothesis and thus most of the Cement Manufacturing firms prefer to finance new investment first with internal resources and then by issuing safest security that is debt, thereafter convertibles and finally with new equity. Relationship between Size and Leverage is found to be positive in most of the selected Cement Companies in confirmation with the Trade Off Theory. This indicates that Large manufacturing firms are relatively more indebted compared to smaller firms. This may be the case since the banks tend to favour large firms, giving them credits, due to the fact that they seem to be more credible. This result also supports the view of size as an inverse proxy for the probability of bankruptcy. Tangibility has an inverse relation with Leverage indicating that most of the selected companies are in confirmation with the Pecking Order Theory. As regards Growth most of the companies confirm Pecking Order Hypothesis, whereas; as regards Liquidity, most of the companies are in confirmation with the Trade Off Theory that higher liquidity ratio can support a relatively

higher debt ratio. Heidelberg Cement is the only company which fully follows Pecking Order Theory as regards all the explanatory variables.

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