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CAPITAL STRUCTURE CHOICE AND FIRM VALUE: AN EMPIRICAL ANALYSIS OF SELECT CEMENT COMPANIES QUOTED IN NSE INDEX.

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Abstract
Financing decision is considered as important decision in the domain of corporate finance; Capital structure describes the mix of various internal and external funds used to finance a business. The author intends to examine the impact of capital structure decisions on firm value, also made a humble effort to examine how long term debt to asset ratio and long term debt to equity ratio affects firm value. The review upholds the works related to capital structure decisions and firm value.

Research Methodology*: The present study is purely based on secondary data. Author has collected key financial ratios from capital line data base and articles have been collected from Ebscohost, proquest, JSTOR Elsevier Science direct, articles published in peer-reviewed journals, textbooks etc. Data pertaining to Long term debt to asset, long term debt to equity, firm value ratios were collected. Correlation analysis is used to analyze data and spss 21 version software is used. Ten years financial data related top 10 cement companies listed in NSE Index has been chosen based on market capitalization. Multistage sampling technique is used, further researcher used inclusion and exclusion criteria for data selection.*

Results: *The results of the study have revealed that there is significant association between Firm value and long term debt to asset, long term debt to equity at 1% and 5% level of significance.*

Keywords: Capital structure, firm value, correlation analysis, multistage sampling, NSE Index.

Introduction

Capital structure of any firm represents the proportion of external funds and internal funds used to finance business operations. Any firm can raise funds in two methods. Either it may be equity or debt finance. The objective of any firm is to maximize the wealth of shareholders, so that they can maximize firm value. There are major theories related to capital structure which is supported by set of assumptions. Capital structure theories are majorly classified into relevant and irrelevant theories. Modigliani miller is the proponent of capital structure irrelevance theory, he opines firm value is independent of its financing decision and use of debt fund in capital structure helps in tax shield advantage which may reduce in tax payable amount. David Durand (1952) proponent of Net Income Approach (NI Approach) supports relevance theory, he opines any change in debt proportion may affect firm value i.e, an increase or decrease in debt fund in capital structure may affect firm value. An increase in debt capital results in reduced overall cost of capital.

Review of Literature

Myers and Majluf (1984) opines profitable firms have low debt ratio, those firms use internally generated funds have low capital gearing ratios also found a positive association between capital structure choice and other variables. Antwi et.al (2012) has examined impact of capital structure on firm value statistical analysis was carried out for 34 companies listed in Ghana stock exchange for year end 31st December 2010. The results of the study depict long term debt is major determinant of capital

structure which affect firm value during study period, he suggests that usage of more long term debt in capital structure increases firm value. Draniceanu et.al (2013) has examined the association between capital structure and corporate value. Sample of 48 firms is used for statistical analysis and the firms are listed on Bucharest Stock exchange (Romania) during the year (2003-2012). The results of the study revealed that market capitalization have impact on firm value. Hoque et.al (2014) the study was conducted to examine the impact of capital structure decisions on firm value a sample of 20 manufacturing firms listed in Dhaka Exchange Limited is used and 80 respondents were included to collect primary data. The secondary data is collected from 2008-2012 the study reveals that financial risk, profitability, availability of funds, growth rate, operating risk are found be significant with capital structure decisions. Farooq et.al (2016) examined the impact of capital decisions on firm value of select cement companies listed in Karachi stock exchange during the year 2008-12 a sample of 19 companies included and financial data is used. The results of the study reveals capital structure decisions have significant influence at 1% significance level. Ater D.K (2017) has studied relationship between capital structure and firm value. Researcher has used 36 listed firms in Nairobi securities exchange as sample for the period 2011-2015. The results have shown positive association between capital structure and non-financial firms. Long term debt is found to be major determinant affecting firm value. Rajhans et.al (2013) examined the determinants affecting firm value a sample of 16 companies IT, Metal, FMCG and automobiles listed on BSE index during the year 2002 to 2011 based on market capitalization. The findings of the study reveal that capital structure decisions have no impact on firm value. Asin et.al (2014) examined the impact of financial ratios representing firm value i.e, market to book ratio, p-e ratio for the year 1995-2013 listed in Bahrain stock exchange. It was observed that Return on asset is major determinant of Firm value.

Statement of problem

The manager of firm needs to formulate effective and suitable financial policies for development of sustainable business. Capital structure decisions are important in financing its operations. The optimum capital structure is best mix of equity and debt finance that enhance firm value. According to theory, debt finance is considered as cheap source of funding due to tax advantage and minimized cost of capital. On the other hand, too much of debt funds in capital structure leads to financial distress and affects shareholders wealth. Hence, it is important for any firm to maintain optimum capital structure which helps in minimization of financial risks and contribute towards firm value.

Objectives of the study

1. To look over the empirical reviews pertaining to capital structure and firm value.
2. To examine the impact of capital structure decisions on firm value.

Research Methodology

The present study is empirical in nature and the required secondary data of financial ratios has been collected from capital line database. Financial statements of select cement companies has been extracted from official websites of companies, besides that research used databases like Ebscohost, Proquest, Elsevier science direct, JSTOR, Peer-reviewed were used for literature survey. A sample of 10 companies based on market capitalization and firms listed in NSE Index were used is major criteria for sample selection. Financial ratios of companies from 2012-2022 were collected from database, correlation analysis is used as a statistical tool to examine the influence of capital structure on firm value. Data analysis is carried out with SPSS 21 version software. Long term debt to asset ratio (LTDAR) and Long term debt to equity ratio (LTDER) as independent variables' representing capital structure and firm value is dependent variable based on market capitalization and Tobin Q ratio is used. Besides that author have been used inclusion and exclusion criteria for defining sample.

Inclusion Criteria

1. Firms should be listed in NSE index.
2. Financial data should be available for all ten years i.e., 2012-2022.
3. Non-financial firms are sample units in the present study.

Exclusion Criteria

1. Excluded financial companies from the present study.
2. Mergers and acquisitions of companies should not happen during study period.

Variable Description

Dependent variable

Firm Value (FV)

Independent Variables

Long Term Debt to Asset Ratio (LTDAR), Long Term Debt to Equity Ratio (LTDER).

Long term debt to Asset Ratio (LTDAR): it is the ratio which determines the firm leverage proportion in its capital structure. Ratio explains how much percent of company assets are financed with debt funds and also gives the solvency position of a company. The formula is presented below:
LTDAR: Long term debt/ Total Assets of Company.

Long term debt to Equity Ratio (LTDER): it is a leverage ratio used to compare total amount of debt to its shareholders equity it is very important in determination of financial risk of company.
LTDER: Long term debt/ Shareholders equity.

Tobin Q Ratio: it is the key ratio which measures the relationship between market value and intrinsic value of stock over its replacement costs and it is represented by
Market value of firm/replacement value of assets.

Market capitalization: it is a measure to determine the relative worth of companies in stock market by its market value of outstanding shares. It is generally used to define the size of company in market. The formula is stated below:
Market Capitalization: current market price per share * total number of outstanding shares.

Table showing sample cement companies listed in NSE Index.

SL.NO	NAME OF THE COMPANY	MARKET CAPITALISATION (in Crores)
01	Ultra Tech Cement	194,340.45
02	Shree Cements	78,916.17
03	Ambuja Cements	75,682.87
04	ACC	35,380.06
05	Dalmia Bharat	31,730.96
06	J.K Cement	19,992.77
07	Ramco Cements	15,382.63
08	Nuvoco Cements	12.509.39
09	JK Lakshmi Cements	8380.46
10	India Cements	5894.24

Source: Money control.com, NSE website

Based on the above research methodology, the author has formulated research hypothesis as presented below:

H_0: Capital Structure Choice has no impact upon firm value.

H_A: Capital Structure Choice has significant impact on firm value.

Data Analysis and interpretation:

			Long term debt to asset	**Long term debt to equity**
ACC	Firm value	Pearson Correlation	-0.622	-0.687*
		Sig. (2-tailed)	0.060	0.040
Ambuja	Firm value	Pearson Correlation	-0.635	-0.628
		Sig. (2-tailed)	0.056	0.060
Dalmia Bharat	Firm value	Pearson Correlation	-0.692*	-0.576
		Sig. (2-tailed)	0.024	0.083
India	Firm value	Pearson Correlation	-0.212	0.385
		Sig. (2-tailed)	0.550	0.273
Nuvoco	Firm value	Pearson Correlation	-0.579	-0.330
		Sig. (2-tailed)	0.080	0.340
J.K Lakshmi	Firm value	Pearson Correlation	0.208	0.305
		Sig. (2-tailed)	0.570	0.391
Ultra tech	Firm value	Pearson Correlation	0.897**	0.812**
		Sig. (2-tailed)	0.001	0.001
JK Cement	Firm value	Pearson Correlation	0.389	0.697*
		Sig. (2-tailed)	0.273	0.036
Ramco	Firm value	Pearson Correlation	-0.658*	-0.762**
		Sig. (2-tailed)	0.047	0.009
Shree	Firm value	Pearson Correlation	-0.427	-0.711*
		Sig. (2-tailed)	0.230	0.024

Source: SPSS Output

*** Significance level at 0.05 (2-tailed)**

**** Significance level at 0.01 (2-tailed)**

The above results depict LTDE is(**r = -0.687)** is negatively correlated with firm at 5% significance level of ACC ltd, LTDAR (**r = -0.692**) is negatively correlated with firm value at 5% significance level of Dalmia Bharat cements, LTDAR and LTDER is positively correlated (**r =0.897**) and (**r =0.812**) at 1% significance level with firm value of ultra tech cements, The LTDER (**r = 0.697**) at 5% significance level with firm value of JK cements.

It was observed that (**r = -0.658**) of LTDAR and (**r =-0.762**) LTDER respectively correlated negatively at 5% and 1% level of significance respectively with firm value of Ramco cements. It was found that (**r = -0.711**) at 5% significance with firm value of shree cements. From the findings it was found that an increase in debt proportion results in negative correlation with firm value vice-versa. Also it was observed that Ambuja cement, India cement, Nuvoco cements and JK lakshmi cements doesn't have any impact of capital structure decisions on firm value during the study period. Whereas, ACC Ltd, Dalmia Bharat, Ultratech cement, JK cement, Ramco and Shree cements have significantly influenced by capital structure decisions. Hence null hypothesis is rejected and in case of Ambuja cement, India, Nuvoco cements and JK lakshmi cement there is no capital structure influence on firm value. Hence, Author failed to reject null hypothesis. The results of the study have shown theories of capital structure MM and NI approach are aligning with empirical analysis.

Principal findings of the study

1. The firms with negative correlation is due to excess usage of debt funds in capital structure and positive correlation between firm value and capital structure is firms to use more debt funds in their capital structure.
2. Ambuja Cement, India cement, Nuvoco cements and JK lakshmi cements have no impact of capital structure decisions on firm value such firms can use effective strategies to finance it business operations.
3. It was observed that theories of capital structure align with statistical outcomes of the study.

Conclusion

The author has made an attempt to examine the impact of capital structure decisions on firm value. A judicious mix of debt and equity funds in capital structure is important for maximizing wealth of shareholders. An optimum capital structure helps the firm to reduce its overall cost of capital. Generally, firms prefer to use debt funds in their capital structure since it is cheaper than equity, there are advantages like tax benefits and fixed interest payments. Capital structure decisions are very important in financing any business. Outcomes of the study revealed that capital structure decisions have both negative and positive impact on firm value among cement companies listed in NSE Index. Findings of the study may help executives of cement companies to maintain optimum capital structure which help them to take better decisions in Capital structure design which may leads to wealth maximization of shareholders.

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