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Capital Structure Effect on Shareholders Wealth – A study on NSE Listed Companies

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ABSTRACT
Financing choice is a well-considered choice in any business organization that is thoroughly performed in order to design the optimum capital structure. Studies have shown that Capital Structure has an imperative effect on multiple factors of financial decision making. The objective of this research is to investigate the noticeable association between capital structure and wealth of shareholders. Dependent variable EPS is treated as the proxy for the wealth of shareholders. The proxies for the capital structure are debt equity and debt-to-market cap ratio. Nifty50 firms are considered for analysis over a five-year period (2013-2017). Data from the developed panel is analyzed using Panel Econometric methods. The research findings disclosed the existence of no considerable connection between capital structure and wealth of shareholders.
Keyword head: Capital structure, Financing Structure, Shareholders Wealth, Market Price of the Share, EPS

1. Introduction

In any Public Limited Company, profit maximization and wealth maximization are the two prominent financing goals. Based on its effect on profitability, any economic activities or projects in the business were assessed in previous days. In latest days, there has been a paradigm shift on this approach. Companies offer sufficient significance to maximizing profit and maximizing wealth also. The significance of maximizing wealth continues to escalate as the top MNCs are now initiating zero debt policies in the capital structure.

The company can finance its assets via debt or equity. But it would be the best choice to blend the two. Capital structure is Debt and Equity capital composition. Because of its effect on multiple factors of financial decision making, capital structure happens to be a most complicated one. (Modigliani and Miller 1958) shed light on the evolution of different theories of capital structure. The Impact of Capital Structure Decision on various financial variable has been demonstrated in subsequent research. (Sivathaasan, 2013; Bernard, 1992; Chen, 2002; Abor, 2007; Seppa, 2008; El-Sayed Ebaid, 2009; Propagation, David, & Franzoni, 2012;Maina, 2013; Rajesh, 2013; Chisti, Ali, & Sangmi, 2013; Handoo & Sharma, 2014; Thippayana, 2014; Serghiescu & Văidean, 2014; Sorana, 2015; Alipour, Mohammadi, & Derakhshan, 2015; Chadha & Sharma, 2015; Harris, 2015; Mittal, 2015; Oziomobo & Zahiruddin, 2016; Aff & Nassar, 2016; Jouida, 2017; Phuong, Le, Phan, & Bich, 2017). The relationship between capital structure and the Shareholders wealth of the firm has been proved in many studies. (Venugopal & Reddy, 2016; Bhatnagar, Kumari, & Sharma, 2015; Atiyet, 2014; Chowdhury & Chowdhury, 2010)

The current research is conducted by employing the nifty 50 companies listed in the NSE to evaluate the effect of capital structure on shareholder wealth in the Indian context. Nifty 50 represents the most performing and diversified best fifty stocks on the market. The results of the study would therefore definitely contribute to the new facet of financial literature

2. Literature review

The following studies have demonstrated the impact of the capital structure on the wealth of shareholders.

The effect of capital structure and cost of capital on shareholder wealth maximization was examined (**Bhatnagar et al., 2015**). During a five-year period from 2006-2010, the study considered 12 highest net worth

companies listed in the BSE. Regression analysis used in the research disclosed that there is linearity between cost of capital and capital structure, but there is no linearity or connection between capital structure and wealth of shareholders. The effect of the capital structure on profitability and shareholder wealth was analysed (**Venugopal & Reddy, 2016)** over a period from 2007-2014, the research employed 18 cement firms listed in BSE and NSE. Correlation and Regression Analysis were used to analyze the descriptive statistics. The findings showed that the capital structure (debt-equity ratio) has a positive impact on the profitability, market value and shareholder wealth of the company, but this relationship is not statistically significant. **(Arowoshegbe & Emeni, 2014)** analyzed the impact of the Debt-Equity mix on shareholders wealth. From 1997 to 2011, the study considered 60 non-financial companies listed on the Nigerian Stock Exchange for 15 years. Two panel data regression models were used in the research with two shareholder wealth measurements such as Return on Equity (ROE) and Earnings Per Share (EPS). The research found that there is an inverse relationship between the wealth of shareholders and the debt equity mix. **(Atiyet, 2014)** examined the effect of the funding choice on the value creation of shareholders, taking into account 88 companies listed on the French stock exchange between 1999 and 2005. Panel Data Regression was used by the research to study the association. The research discovered that the creation of shareholder value was explained favourably and substantially by self-financing. **(Chowdhury & Chowdhury, 2010)** has analysed the impact of Capital Structure on firms' value. For the purpose of inquiry, study has considered 77 companies from four different dominant sectors of Bangladesh capital market, i.e. pharmaceuticals and chemicals, fuel and power, food, and engineering industry over the ten years period from January 1, 1994 to December 31, 2003. The study found that wealth of shareholders requires a perfect combination of debt and equity, whereas cost of capital has a negative correlation in this decision and it has to be as minimum as possible. Therefore it is evidenced that capital structure decision has a significant impact of shareholders wealth. Similarly a study conducted by **(Pandey 2004)** also found that there is a significant relationship between capital structure and Shareholders wealth and subsequently the impact of capital structure on shareholders wealth was evidenced in the study.

The above studies have produced a variety of conclusions and results. When some studies have shown a positive relationship between the structure of capital and the wealth of shareholders, others have shown a negative relationship. The present study is an attempt to assess the impact of the capital structure on shareholders ' wealth from Indian perspective, taking into account Nifty50 companies.

3. Data and Methodology

The study employed three variables cross sectional time series (panel) data compiled from the financial statements of Nifty 50 companies for each year from 2013 to 2017. Panel econometric techniques are used for the developed regression analysis. The coverage of the data from the year 2013 to 2017 is due to its availability and convenience. The data is collected from the websites 'www.arcadiastock.com' and 'moneycontrol.com'.

3.1 Hypotheses of the study

The study focuses on analysing the impact of capital structure on Shareholders wealth. In this regard the following hypotheses have been developed.

H_0: There is a no considerable effect by Capital Structure on Shareholders Wealth.

H_1: There is considerable effect by Capital Structure on Shareholders Wealth.

3.2 Specification of the Model

The study uses debt to equity ratio and debt to market cap ratio as independent variable against EPS being dependent. 'Debt to equity ratio' and 'Debt to Market Cap ratio' represents the capital structure and 'Earnings Per Share (EPS)' is the proxy for Shareholders wealth. The linear relationship between the independent and dependent variable is developed. The following panel data regression equation symbolizes this.

$$Y_{it} = \alpha + \beta X_{it} + e_{it}$$

Where,

"Y_{it}" represents EPS

"X_{it}" represents value of Debt to Equity ratio and Debt to market ratio for a five years time period for different companies

"X2" represents the value of Debt to market ratio,

"β" represents the beta co-efficient of Debt to equity ratio and Debt to Market Cap ratio

"α" represents the alpha intercept of the equation.

"e_{it}" represents the error term.

3.3 Data analysis technique

Panel Econometric techniques are employed in this study. Panel data regression considers the individual heterogeneity of various data samples where as time series and cross sectional analysis do not. There are three Panel Econometric techniques. They are,

1. Pooled OLS Regression Model
2. Fixed Effect Model
3. Random Effect model

Pooled regression Model believes that data samples are homogeneous. It believes that in terms of its information features, all the companies are equivalent. It ignores the information samples' heterogeneity. The information feature is heterogeneous in nature since the sample firms in this research are distributed across different sectors. Pooled OLS cannot therefore be used. This model believes that all samples have the same coefficients.

Fixed Effect (FE) Model allows for heterogeneity or individuality among the sample data. It also believes that intercept may differ across companies, but intercept does not vary over time.

Random Effect (RE) Model also allows for heterogeneity. It assumes that the data being analysed are drawn from a hierarchy of different populations whose differences relate to that hierarchy.

Since the sample is distributed across different sectors, sample is thought to be heterogeneous in nature in this research. It is therefore necessary to use either the FE or the RE model. The choice between the FE or RE model should be established using the Hausman's Test.

Hypothesis for the choice between FE and RE Model

H_0: Random Effect Model is Most Appropriate

H_1: Fixed Effect Model is Most Appropriate

4. Analysis and interpretations

Table 4.1 demonstrates the Descriptive Statistics values. Table 4.2 is the correlation matrix between variables. Table 4.3 below demonstrates the FE and RE model outcomes. Table 4.4 demonstrates the Hausman' Test overview.

4.1 Summary of Descriptive statistics

Variables	EPS	TOTAL DEBT TO MCAP	DEBTE QUITY
Mean	50.7271	0.255528	0.57565
Median	35.07	0.02	0.07
Maximum	612.67	4.37	7.06
Minimum	-52.77	0	0
Std. Dev.	65.529	0.512456	1.339346
Skewness	4.24015	3.52946	3.850651
Kurtosis	32.0408	21.41727	17.56683
Jarque-Bera	9381.64	3987.5	2782.903
Probability	0	0	0
Sum	12478.9	62.86	141.61
Sum Sq. Dev.	1052041	64.33968	439.4924
Observations	246	246	246

4.2 Correlation

Variables	EPS	TOTAL DEBT TO MCAP	DEBTE QUITY
EPS	1	-0.159088	-0.064027
TOTAL DEBT TO MCAP	-0.1591	1	0.732292
DEBTEQUITY	-0.064	0.732292	1

4.3. Test summary of Fixed Effect and Random Effect Model

VARIABLES	FE Model		RE Model	
	Probability	t-statistics	Probability	t-statistics
EPS	0	6.0535	0	6.4407
Debt to Market Cap ratio	0.9553***	-0.0.5612	0.5327***	-0.6247
Debt equity ratio	0.4107***	-0.8244	0.6277***	-0.4856

R^2	0.7459	0.0043
***** Not significant at 5% level of significance**		

4.4 Hausman's Test

Hausman's Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.7580	2	0.1527***
***** Random Effect Model is most appropriate. (0.1527>0.05)**			

5. Results and findings

The research believes in the heterogeneous nature of the data sample. Therefore it is essential to choose between FE and RE Model. Hausman's test enables the choice between FE or RE Model. If the Hausman's test 'p' value is less than 0.05, then Null hypothesis will be rejected. On the other side, if the sample 'p' value of Hausman's test exceeds 0.05, Null hypothesis will be accepted. The' p' value of Hausman's test in this research is 0.1527, which is over 0.05, therefore Null hypothesis is accepted and consequently RE Model would be more appropriate for the study.(p>0.05).

The findings of the RE Model are shown in Table 4.3. If the independent variable's probability value is less than 0.05 or 5 percent, the independent variable is believed to be important in determining the dependent variable. In this study, the independent variables are 'Debt to Equity Ratio' and 'Total Debt to Market Cap Ratio vis a vis ' EPS ' being dependent. The probability value of debt-to-equity ratio and the total debt-to-market cap ratio are respectively 0.6277 and 0.5327. The probability levels of both ratios are more than 0.05. The null hypothesis is therefore approved at a significance level of 5% and the alternative hypothesis is dismissed. Hence it is proved that the impact of capital structure on shareholders wealth is not considerably significant. However, the coefficient levels -3.017 and -5.77, respectively, indicate the negative association between the independent and dependent variables. The negative correlation values between the variables in Table 4.2 also supports in finding.

Conclusion

The study has proved that there is not significant relationship between capital structure and Shareholders wealth. With the data from Nifty 50 companies spread over a period of 5 years, panel data is developed and analysed through panel econometric techniques. Through Hausman's test the choice between Random Effect and Fixed effect model is been made. Chosen Random effect Model proved that there is no significant relationship between Capital Structure and Shareholders Wealth. However the weak negative impact of capital structure on shareholders wealth is evidenced with R2 value being 0.004. Further sectorwise or industry specific studies can conducted incorporating large sample size.

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