DOES CAPITAL STRUCTURE "CAUSE" HIGH FIRM VALUE? EVIDENCE FROM SELECTED COMPANIES IN COLOMBO STOCK EXCHANGE SRI LANKA

Velnampy.T & Pratheepkanth.P

Professor/ Dean, Faculty of Management Studies & Commerce, University of Jaffna
Department of Accounting, University of Jaffna, Sri Lanka

Abstract

This study compares the capital structures and Firm value in selected listed companies in Sri Lanka. That is attempting to investigate the relationship between Equity ratio, Debt ratio, Leverage Ratio and Firm value, taking into consideration the selected ten companies in Sri Lanka. The study uses data for Companies, covering the period 2006-2010. The study finding leads to the conclusion that the equity ratio, and debt ratio have significant impact on Firm Value ratios of the Companies. The researcher proved that these findings are supported the prior empirical findings[Kinsman and Newman(1998) Dhanka,S.D.(1996), Mahdi(2009), Rajan et al (1995),Frank et al (2003)]. Further, The research concluded that capital structure ratios significantly influence on market value that is 68.8% of the variation in equity is explained by the two predictor variables (independent variable) collectively which have taken in the present study remaining 32.2% was unexplained by other variables

Key Words:- Capital Structure, Firm Value, Colombo Stock Exchange

Introduction

To understand how companies finance their operations, it is necessary to examine the determinants of their financing or capital structure decisions. Company financing decisions involve a wide range of policy issues. At the private, they have implications for capital market development, interest rate and security price determination, and regulation. At the private, such decisions affect capital structure, corporate governance and company development (Green, Murinde and Suppakitjarak, 2002). Knowledge about capital structures has mostly been derived from data from developed economies that have many institutional similarities (Booth et al., 2001). It is important to note that different countries have different institutional arrangements, mainly with respect to their tax and bankruptcy

codes, the existing market for corporate control, and the roles banks and securities markets play.

A company applies its assets in its business to generate a stream of operating cash flows. After paying taxes, the firm makes distributions to the providers of its capital and retains the balance for use in its business. If company is all equity financed, the entire after-tax operating cash flow each period accrues to the benefit of its shareholders (in the form of dividend and retained earnings). If instead the company has borrowed a portion of its capital, it must dedicate a portion of the cash flow stream to service this debt. Moreover, debt holders have the senior claim to a company's cash flow; shareholders are only entitled to the residual. The company's choice of capital structure determines the allocation of its operating cash flow each period between debt holders and shareholders.

Modigliani and Miller challenged that view in their famous 1958 article. They argued that the market values the earning power of a company's real assets and that if the company's capital investment program is held fixed and certain other assumptions are satisfied, the combined market value of a company's debt and equity is independent of its choice of capital structure. Since Modigliani and Miller published their capital structure irrelevancy paper, much attention has focused on the reasonableness of these "other assumptions", which include the absence of taxes, bankruptcy costs, and other imperfections those exist in the real world. Because of these imperfections, a company's choice of capital structure undoubtedly does affect its total market value; the significance of corporate leverage is reflected in the articles that have appeared in the financial press following periods like the 1970s when leverage increased significantly. However, the extent to which a company's choice of capital structure affects its market value is debated.

This study analyzes capital structure of Business Companies, selected from Colombo Stock Exchange (CSE) with a specific objective to examine the impact of capital structure on the firm value.. This will also act as a guide for the financial managers to design their optimum capital structure to maximize the market value of the firm and minimize the cost.

Literature Review

Welch, I.(2010) found two common problem in capital structure research. First, although it is not clear whether they should be considered debt, non-financial liabilities should never be considered as equity. research that explained increases in FD/AT explains, at least in parts, decreases in non-financial liabilities. Second, equity issuing activity should not be viewed as equivalent to capital structure changes. Empirically, the correlation between the two is weak. Capital structure and capital issuing literature are distinct.

Chowdhury,A., Chowdhury, S.P.,(2010) found that maximizing the wealth of shareholders requires a perfect combination of debt and equity, whereas cost of capital has a inverse correlation in this decision and it has to be as minimum as possible. This is

also seen that by changing the capital structure composition a firm can increase its value in the market. Nonetheless, this could be a significant policy implication for finance managers, because they can utilize debt to form optimal capital structure to maximize the wealth of shareholders.

Yu-Shu Cheng, Yi-Pei Liu and Chu-Yang Chien(2010), they investigated whether there was an optimal leverage at which point firm is able to maximize its value. An advanced panel threshold regression model is applied to test the panel threshold effect of debt ratio on firm value among 650 A-shares of Chinese listed firms from 2001 to 2006. The results confirm that a triple-threshold effect does exist and show an inverted-U correlation between leverage and firm value. This study shows that it is possible to identify the definitive level beyond which a further increase in debt financing does not improve proportional firm value.

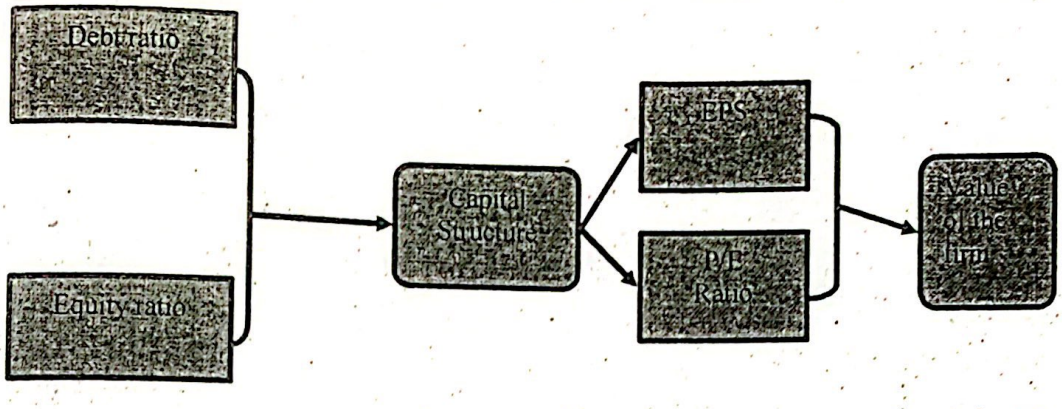
The essence of financial management is the creation of shareholder value. According to Ehrhard and Bringham (2003), the value of a business based on the going concern expectation is the present value of all the expected future cash flows to be generated by the assets, discounted at the company's weighted average cost of capital (WACC). From this it can be seen that the WACC has a direct impact on the value of a business. (Johannes and Dhanraj, 2007).

The choice between debt and equity aims to find the right capital structure that will maximize stockholder wealth. WACC is used to define a firm's value by discounting future cash flows. Minimizing WACC of any firm will maximize value of the firm (Messbacher, 2004).

Titman (1984) concludes that firms manufacturing machines and equipment should be financed with relatively less debt. Titman et al. (1988), while examining the determinants of capital structure, find that debt levels are inversely related to the uniqueness of a firm's line of business. While our model does not study the determinants of capital structure, we do examine the relevance of industry leverage on stock returns. Hull (1999) examines how stock value is influenced by changes in a firm's leverage relative to its industry leverage. He measures industry leverage in terms of the median leverage for a given industry. However, we measure industry leverage as the average leverage for an industry.

Conceptual Frame Work

Based on the research question, the following conceptual model may be constructed. Conceptualization model shows the relationship between capital structure and Firm Value of listed Business companies in Sri Lanka



Objectives

The focus of this study is Does Capital Structure "Cause" high Firm Value?

- How far capital structure influence or is it influenced by Firm Value
- To Evaluate the interrelationship between capital structure and Firm Value
- Which are the determinants of a capital structure

Hypotheses

The following hypothesis is formulated for the study

H1:- There is an inverse relationship between the Equity ratio and earnings per share.

H2:- There is a optimistic relationship between the Debt ratio and earnings per share.

H3:- There is an inverse relationship between the Equity ratio and P/E Ratio.

H4:- There is an optimistic relationship between the Debt ratio and P/E Ratio.

Methodology/ Research design/ Approach

Sample

For the research study ten listed companies selected from Colombo stock exchange.. The selected Companies have been Singer Ceylon PlC, Abans Electronic PLC, ACL cables PLC, Royal Ceramics PLC, Lanka Cement PLC, Richard Peries PLC, Dipped Products PLC, Hayleys Exports PLC, Rocell PLC, and Chevron PLC

Data Sources

To produce the above mentioned research objective, the data for this study was gathered from the financial statements as published by Companies. In addition, another source of data was through reference to the review of different articles, papers, and relevant previous studies. For this purpose, collecting data of firms is used which are listed on Colombo Stock Exchange. All ten firms are taken for the study representing the period of 2006-2010.

Mode of Analysis

1) Equity ratio= Total Equity/ Total Assets

2) Debt ratio = Long term Debt/ Total Assets

4) EPS = Net income / No of Equity shares

5) P/E Ratio = Market value of share / EPS

Results and Discussions

Correlation Analysis

Correlation is concern describing the strength of relationship between two variables. In this study the correlation co-efficient analysis is under taken to find out the relationship between capital structure and Firm Value. It can be said that the what relationship exist among variables

Correlations

		EPS	ER	DR
EPS	Pearson Correlation	1	.497**	.016*
	Sig. (2-tailed)		.000	.44
	N	85	85	85
ER	Pearson Correlation		1	.234*
	Sig. (2-tailed)			.031
	N		85	85
DR	Pearson Correlation			1
	Sig. (2-tailed)			
	N			85

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

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

The above table presents a correlations matrix of the relationship between dependent variable and independent variable. Here EPS is dependent variable equity ratio, debt ratio are independent variables. The correlation between EPS and Debt Equity ratio is -19.9*%. That means weak inverse relationship between them and statistically significant at 0.05 level. But in the case of Debt Ratio value is 1.6*%. This exhibits the weak optimistic relationship and also statistically significant at 0.05 level. At the same time Equity ratio indicate the value of 49.7**%. There are indicate that weak optimistic relationship between

EPS and Equity Ratio correlation, and also statistical significant at 0.01 level but correlation between Equity ratio and Debt ratio is 23.4%*. This means weak optimistic correlation and also statistically significant at 0.05 level

Correlations

		PER	ER	DR
PER	Pearson Correlation	1	.262*	-.017
	Sig. (2-tailed)		.47	.874
	N	85	85	85
ER	Pearson Correlation		1	.234*
	Sig. (2-tailed)			.031
	N		85	85
DR	Pearson Correlation			1
	Sig. (2-tailed)			.
	N			85

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

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

The above table presents a correlations matrix of the relationship between dependent variable and independent variable. Here Price Earnings Ratio is dependent variable equity ratio; debt ratio are independent variables.

The correlation of Debt ratio is -1.7%. That means weak inverse relationship between PER and Debt ratio This exhibits the weak optimistic relationship between EPS and Equity ratio and statistically significant at 0.05 level, but correlation between Equity ratio and Debt ratio is 23.4%*. This means weak optimistic correlation and also statistically significant at 0.05 level.

Regression Analysis

Regression Summary Output

Coefficient of determination – R^2 is the measure of proportion of the variance of dependent variables about its mean that is explained by the independents or predictor variables. (Hair et al. 1998).The adjusted R square value "indicates how well the independent variables influence the dependent one. (Benjamin 1999).

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Regression Statistics	
Multiple R	0.508
R Square	0.258
Adjusted R Square	0.230
Standard Error	21.36

The specification of the two independent variables that the ability to predict the capital structure and value of the firm. Adjusted R^2 value of 0.230 which is in the model denotes that only 25.8 % of observed variability of value of firm can be explained by the differences in the independent variables. Remaining 74.2 % variance of the value of the firm attributed to other variables.

Regression Summary Output

Regression Statistics	
Multiple R	0.67
R Square	0.44
Adjusted R Square	0.317
Standard Error	43.42761

The specification of the two independent variables in the above model reveals that the ability to predict the capital structure and value of the firm. Adjusted R^2 value of 0.317 which is in the model denotes that only 31.7 % of observed variability of value of firm can be explained by the differences in the independent variables. Remaining 68.3 % variance of the value of the firm attributed to other variables.

Empirical Results and Hypotheses Testing

Here the hypotheses of the present study are tested with the help of the proposed model.

Dependent Variables	Earnings per share			P/E ratio		
	â	t	Significant	â	t	Significant
Independent Variables						
Equity ratio	-.088	-0.289	.043	.062	-3.107	.046
Debt Ratio	.514	3.161	.002	.027	.117	.049

The study's hypothesis is formulated a inverse relationship between the Equity ratio and earnings per share.

It is focused on the point of view of standardized coefficients between the equity ratio and value of EPS. There is a inverse association at .088. These relationship is the expected direction. t and significant values are -.289, .043 respectively. It is reflect the t value is significant at the level of 0.05. Based on the above evidence gathered the H1 was accepted. Because, research's result is in inverse relationship between equity ratio and earnings per share.

The study's hypothesis is formulated a optimistic relationship between the Debt ratio and earnings per share.

It is focused on the point of view of standardized coefficients between the debt ratio and value of EPS. There is a optimistic association at .514. These relationship is the expected direction. t and significant values are 3.161, 002 respectively. It is reflect the t value is significant at the level of 0.05.

Based on the above evidence gathered the H was accepted. Because, research's result is in optimistic relationship between equity ratio and earnings per share.

The study's hypothesis is formulated a optimistic relationship between the Equity ratio and P/E Ratio.

It is focused on the point of view of standardized coefficients between the equity ratio and value of EPS. There is a inverse association at .0062. These relationship is not the expected direction. t and significant values are -3.107, .046 respectively. It is reflect the t value is significant at the level of 0.05.

Based on the above evidence gathered the H was accepted. Because, research's result is in optimistic relationship between equity ratio and earnings per share

The study's hypothesis is formulated a optimistic relationship between the Debt ratio and P/E Ratio.

It is focused on the point of view of standardized coefficients between the debt ratio and value of P/E Ratio. There is a optimistic association at .514. These relationship is the expected direction. t and significant values are .117, 049 respectively. It is reflect the t value is significant at the level of 0.05.

Based on the above evidence gathered the H was accepted. Because, research's result is in optimistic relationship between equity ratio and P/E Ratio.

Concluding Remarks

The study exhibits; equity ratio has a inverse relationship in all two market value

measures. Which shows that Sri Lankan companies are prefer internal or external equity finance to fund the new investment than external debt. This is because of the debt market in Sri Lanka is still under developed. The main source of financing in Sri Lanka is by banking sector. Companies find difficulties are fluctuating interest rate and the need for collaterals. Those are the main reasons, which hinder the extensive usage of the debt in Sri Lanka.

The study finding leads to the conclusion that the equity ratio, debt ratio have significant impact on market value ratios of the firm. The researcher proved that these findings are supported the prior empirical findings[Fama et al (1998), Schwartz(1959), Ronal, w.(1983), Kinsman and Newman(1998) Dhanka,S.D.(1996), Mahdi(2009), Rajan et al (1995),Frank et al (2003)].

Equity ratio has a inverse correlation with earnings per share ratio, and Debt ratio has optimistic correlation with earnings per ratio.

The research concluded that capital structure ratios significantly influence on market value that is 68.8% of the variation in equity is explained by the two predictor variables (independent variable) collectively which have taken in the present study remaining 32.2% was unexplained by other variables. In fact other variables, which were not considered in this study, should be the variables that may account for the unexplained variations in leverage level.

This is also seen that by changing the capital structure composition a firm can increase its value in the market. Nonetheless, this could be a significant policy implication for finance managers, because they can utilize debt to form optimal capital structure to maximize the wealth of shareholders.