e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
Volume:02/Issue:05/May-2020 www.irjmets.com

THE EFFECT OF DEBT FINANCING ON CORPORATE PROFITABILITY: SPECIAL REFERENCE TO MANUFACTURING COMPANIES LISTED IN COLOMBO STOCK EXCHANGE

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ABSTRACT

The debt financing decision is important for the success of every organization. The objective of this research is to find out the effect of debt financing onprofitability focusing on listed manufacturing companies in Sri Lanka. Therefore, short-term debt, long-term debt and total debt have been considered as independent variables. Return on equity and return on assets considered as dependent variables and firm size and firm growth have been considered as control variables in this study. Data was collected from 29 manufacturing companies listed in Colombo Stock Exchange for five year period from 2015 to 2019. Collected data were analyzed using Descriptive analysis and inferential statistics. Findings revealed thatlong-term debt has significant impact on return on assets, but short-term debt and total debt have an insignificant impact on return on assets.However,long-term debt has significant impact on return on equity. And also short-term debt and total debt have an insignificant impact on return on equity. Finally, it was found that long term debt financing significantly effects on profitability of listed manufacturing companies in Sri Lanka and recommends to the maintaining optimal capital structure is very important for managers to balance their source efficiently.

KEYWORDS: Colombo Stock Exchange, Long term Debt, Profitability, Short term Debt, Total Debt

I. INTRODUCTION

Today, every organization considers about the debt financing system because it helps in continuing without breakdowns. But the company has capability to manage their debt level for increasing their profitability. All companies are thinking about better debt financing system and maintaining good capital structure to achieve their profitability goals. The main financial goal of the company is to provide optimal financial structure that has the purpose of maximizing organization's performance in the sense of maximizing Profitability and Return on Equity (ROE) (Filipovic&Demirovic, 2016). Capital structure decision is the vital and profitability of an enterprise is directly affected by such decision. The successful selection and use of capital is one of the key elements of the firms' financial strategy (Velnampy&Niresh, 2012). Generally, liquidity problems are solved by the debt fund or equity fund or even a combination of the both (Harelimana, 2017). The profit means the excess of revenues over expenses for a set of transaction. The revenue denotes the monetary values of the goods and services that have been supplied to customers. Expenses include the monetary values of the assets used to obtain those revenues. Profit will be occurring when goods or services are sold at a more than cost price, while a loss will be made when the goods and services are sold at less than the cost price (Vahed, 2014).Therefore, this study tries to examine the effect of debt financing on corporate profitability: Special Reference tomanufacturing companies listed in CSE.

II. RESEARCH QUESTIONS

- Is there a relationship between the short-term debt and Corporate Profitability?
- Is there a relationship between the long-term debt and Corporate Profitability?
- Is there a relationship between the total debt and Corporate Profitability?

III. RESEARCH OBJECTIVES

1. Main Objective

The main objective of the study is to identify the effect of debt financing and corporate profitability of listed manufacturing companies in CSE.

2. Sub Objectives

- To examine the effect of short-term debt on corporate profitability.
- To assess the effect of long-term debt on corporate profitability.
- To measure the effect of the total debt on corporate profitability.

IV. EMPIRICAL REVIEW

According to Gill et al. (2011) found that there is a positive relationship between short-term debt and total debt with profitability in the service industry. And also short-term debt, long-term debt and total debt with profitability have a positive relationship in the manufacturing industry. Filipovic and Demirovic (2016) examined the relationship between debt and profitability of stock companies in Montenegro which are listed in the A and B list of the Montenegro Stock Exchange and found that there is a negative impact of debt (leverage) on the profitability.Yazdanfar and Ohman (2015) studied debt financing and firm performance. Finally, confirmed that debt ratios, in terms of trade credit, short-term debt and long-term debt, negatively affect firm performance in terms of profitability. According to Khasawneh and Dasouqi (2017) found a negative relationship between debt financing and corporate profitability. According to Murugesu (2013), examined the effect of debt on corporate profitability during the 2018-2012 (five years) which selected eleven companies of hotels listed in CSE and found that there is a strong negative relationship between short-term liabilities and ROE. Pradhan and Khadka (2017) confirmed that short-term to total assets ratio is significantly positive relationship between ROE.Ahmad et al. (2012) also revealed that short term debt has a significant relationship with ROE. When considering the relationship between short-term debt and Return on Assets (ROA), the impact of debt on profitability of firms; evidence from non-financial sector of Pakistan was investigated by Habib et al. (2016) which is using panel data of ten years, ranging between 2003-2012. ROA is used as the profitability measure and the short-term debt to asset, long-term debt to asset and total debt to asset are used as independent variables, while size, sales growth, and growth opportunity are considered as control variables. Random effect of regression analysis is used to find out the impact of debt on profitability. Results indicate a significant, but a negative relationship between short-term debt and ROA. Ahmad et al. (2012) also found that the impact of capital structure on firm performance by identifying the relationship between operating performance of Malaysian firms, that used to measure by ROA and ROE with the independent variables of STD, LTD and TD. Size, assets growth, sales growth and efficiency are considered as control variables. According to regression analysis, the study found that STD has a significant relationship with ROA. Further Pradhan &Khadka (2017) found a significant positive relationship between short-term debt and ROA. According to Abor (2005) indicated that the return rates present a negative correlation with long-term debt and ROE. Pradhan &Khadka (2017), confirmed that significantly negative relationship between long-term debt to total assets ratio and ROE.Ahmad et al. (2012) also found the impact of capital structure on firm performance by analyzing the relationship between operating performance of Malaysian firms and found that long term debt has a significant relationship with ROE. When considering the relationship between long-term debt and Return on Assets (ROA), the impact of debt on profitability of firms; evidence from non-financial sector of Pakistan was investigated by Habib et al. (2016) found a significant but negative relationship between long-term debt and ROA. Further, Pradhan and Khadka (2017) confirmed that negatively significant for long-term debt with ROA. When considering the total debt and ROE, according to Murugesu (2013), examined the effect of debt on corporate profitability during the 2018-2012 (five years) which selected eleven companies of hotels listed in CSE using correlation and regression analysis are used to find out the effect of debt on corporate profitability. According to correlation analysis, total debt had the strong negative relationship between ROE. And also Pradhan and Khadka (2017) confirmed that total debt is negatively significant with ROE. According to Ahmad et al. (2012) found that Total Debt has a significant relationship with ROE.And also the effect of capital structure on profitability: an empirical analysis of listed firms in Ghana was investigated by Abor (2005), through this research sample based on the listed firms on the Ghana Stock Exchange (GSE) during a five years period. According to regression analysis is used in the estimation of functions relating the ROE with measures of capital structure. The results reveal a significant positive association between the ratio of total debt to total assets and ROE. According to Murugesu (2013), examined the effect of debt on corporate profitability during the 2018-2012 and found that total debt has a strong negative relationship between ROA. Further, Habib et al. (2016) and Pradhan &Khadka (2017) confirmed that significant but negative relationship between total debt and ROA.Ahmad et al. (2012) also found that total debt has significant relationship with ROA.

V. CONCEPTUAL FRAMEWORK

According to the conceptual framework, profitability depends on debt financing. Independent variables are, STD (Short term debt/ Total assets), LTD (Long term debt/ Total assets) and TD (Total debt/ Total assets). And also ROE (Net income/ Shareholders' equity) and ROA (Net income/ Total Assets) identified as dependent variables.

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
Volume:02/Issue:05/May-2020 www.irjmets.com

Further, FS (Natural logarithm of Total Assets) and FG (Δ Total Assets/ Total Assets) represent as control variables.

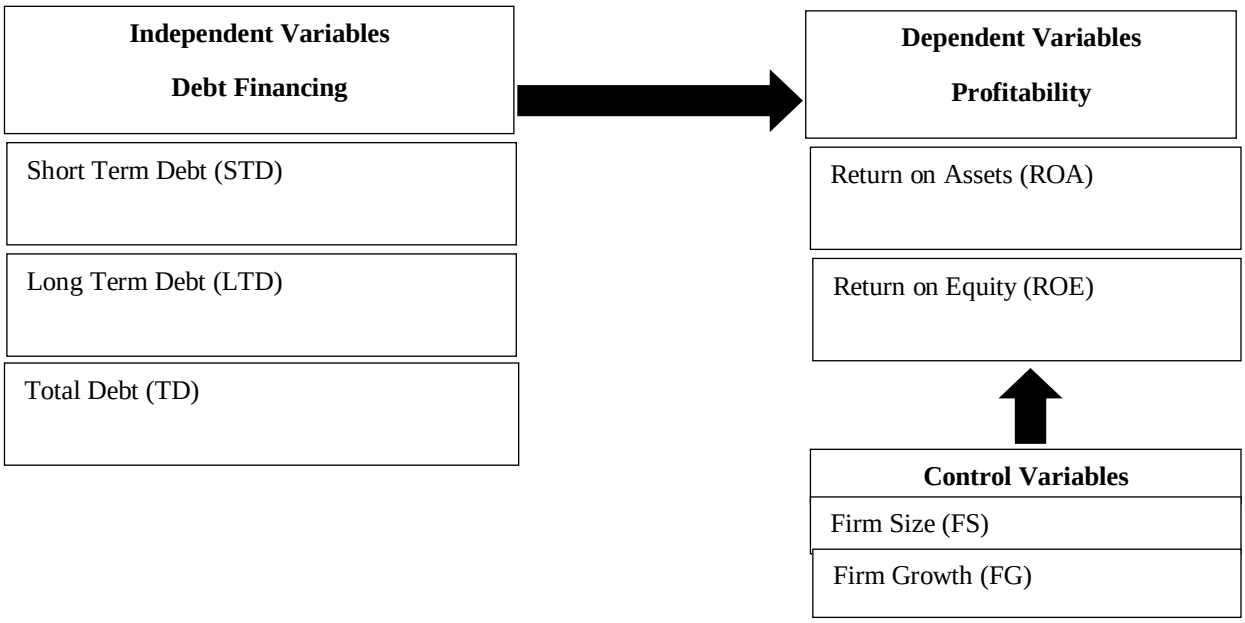

Figure 1: Conceptual Framework

VI. HYPOTHESES

Based on previous literature, following six hypotheses were developed.

H_1: There is a significant relationship between the STD and ROA.
H_2: There is a significant relationship between the LTD and ROA.
H_3: There is a significant relationship between the TD and ROA.
H_4: There is a significant relationship between the STD and ROE.
H_5: There is a significant relationship between the LTD and ROE.
H_6: There is a significant relationship between the TD and ROE.

VII. POPULATION

There are 41 manufacturing companies listed in CSE.The population of the study is comprised of all manufacturing companies which are listed in CSE of Sri Lanka during the period 2015 to 2019.

VIII. SAMPLE

All 41 manufacturing companies that are listed in CSE considered as the sample of this study. But the final sample was as bellow.

Table 1: Sample of the Research

Total Sample	41
Missing data (de-listing and non-submission of data in annual reports)	(12)
Final Sample	**29**

IX. DATA COLLECTION

The necessary data which are used in this study are collected from secondary sources for a period of five years from 2015 to 2019 for all twenty nine listed manufacturing companies in CSE. The annual reports of selected manufacturing companies are used to extract data. The secondary data is obtained from company websites and the website of CSE in Sri Lanka. By these connected data from different sources is applied to interpret and find the effect of debt financing on corporate profitability: evidence from listed manufacturing companies in CSE.

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X. DATA ANALYSIS

Descriptive Analysis

Table 2: Descriptive Analysis

	Minimum	Maximum	Mean	Std. Deviation
ROE	-0.411	0.584	0.105	0.151
ROA	-0.292	0.565	0.069	0.104
STD	0.032	0.758	0.295	0.155
LTD	0.001	20.644	0.238	1.708
TD	0.033	0.815	0.391	0.164
FS	-0.310	23.514	1.350	10.363
FG	-0.230	24.055	8.146	10.499

When considering above table the minimum return on equity is -0.411 and maximum return on equity is 0.584 during the period from 2015 to 2019. The mean value of return on equity is 0.105 and the standard deviation of return on equity is 0.151. Thus, return on equity can be moved within the range -0.151 or +0.151 and it shows the range of data dispersion. Second dependent variable of the study is return on assets. The minimum return on assets is -0.292 and maximum return on assets is 0.565. The mean value of return on assets is 0.069 and the standard deviation of return on assets is 0.104. Therefore, return on assets can be moved within the range -0.104 or + 0.104 and it shows the range of data dispersion. Minimum and maximum values of short-term debt are 0.032 and 0.758 respectively. Then the mean value of the short-term debt ratio is 0.295 and the standard deviation is 0.155. According to that short-term debt can be moved around -0.155 or +0.155. Second independent variable of the study is long-term debt. The minimum value of the long-term debt is 0.001 and maximum value is 20.644. The mean value of long-term debt is 0.238 and the standard deviation of long-term debt is 1.708. Therefore, long-term debt can be moved around -1.708 or +1.708. The minimum and maximum values of total debt are 0.033 and 0.815 respectively. In other hand the mean value and standard deviation are 0.391 and 0.164 respectively. Therefore, total debt can be moved around -0.164 or +0.164.

Correlation Analysis

Table 3: Results of Correlation Analysis

	ROE	ROA	STD	LTD	TD	FS	FG
Pearson Correlation	1						
ROE Sig. (2-tailed)							
Pearson Correlation	.942**	1					
ROA Sig. (2-tailed)	0.000						
Pearson Correlation	-.304**	-.332**	1				
STD Sig. (2-tailed)	0.000	0.000					
Pearson Correlation	-.228**	-.275**	-0.102	1			
LTD Sig. (2-tailed)	0.006	0.001	0.22				
Pearson Correlation	-.209*	-.292**	.871**	-0.111	1		
TD Sig. (2-tailed)	0.011	0.000	0.000	0.183			
Pearson Correlation	0.018	0.000	0.05	0.048	0.039	1	
FS Sig. (2-tailed)	0.826	0.992	0.554	0.568	0.644		
Pearson Correlation	0.016	0.027	-0.041	-0.064	-0.008	-.994**	1
FG Sig. (2-tailed)	0.847	0.745	0.629	0.447	0.924	0.000	

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

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

According to the result of correlation analysis, there is a significant negative correlation between STD, LTD and ROE at 0.01 levels of significance. On the other hand, there is a significant negative correlation between TD and ROE at 0.05 levels of significance. Then considering the second dependent variable of ROA, there is a significant but negative correlation between STD, LTD and TD with ROA.

Regression Analysis

Regression Analysis with ROA

Table 4: Results of Regression Analysis with ROA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.0393	0.153		-2.578	0.011
	STD	-0.093	0.105	-0.139	-0.887	0.376
	LTD	-0.017	0.004	-0.280	-3.812	0.000
	TD	-0.178	0.103	-0.282	-1.735	0.085
	FS	0.026	0.007	2.619	3.589	0.000
	FG	0.026	0.007	2.605	3.562	0.001
R		.524[a]				
R Square		.274				
Adjusted R Square		.248				
F Value		10.510				
Sig.		.000[a]				

a. Dependent Variable : ROA

According to regression results R square value is 0.274. It implies that 27.4% variation in ROA is explained by the selected independent variables in this study. F value is 10.510 and significant value is 0.000 at 0.05 levels of significance. It shows the model significance. According to coefficient values, there is a significant negative impact of LTD on ROA. But other independent variables STD and TD are not significantly effect on ROA.

Regression Analysis with ROE

Table 5: Results of Regression Analysis with ROE

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.699	0.224		-3.115	0.002
STD	-0.290	0.154	-0.299	-1.879	0.062
LTD	-0.019	0.007	-0.221	-2.970	0.004
TD	-0.059	0.151	-0.064	-0.391	0.696
FS	0.043	0.011	2.940	3.978	0.000
FG	0.042	0.011	2.912	3.933	0.000
R	.506[a]				
R Square	.256				
Adjusted R Square	.229				
F Value	9.564				
Sig.	.000[a]				

a. Dependent Variable : ROE

According to regression results R square value is 0.256. It implies that 25.6% variation in ROE is explained by the selected independent variables in this study. F value is 9.564 and significant value is 0.000 at 0.05 levels of significance. It shows the model significance. According to coefficient values, there is a significant negative impact of LTD on ROE. But other independent variables STD and TD are not significantly effect on ROE.

XI. HYPOTHESES TESTING

Table 6: Testing Hypotheses

Hypotheses	Regression Results	Accepted/Rejected
H_1: There is a significant relationship between the short-term debt and Return on Assets (ROA).	Insignificant Sig: 0.376	Rejected
H_2: There is a significant relationship between the long-term debt and Return on Assets (ROA).	Significant Sig: 0.000	Accepted
H_3: There is a significant relationship between the total debt and Return on Assets (ROA).	Insignificant Sig: 0.085	Rejected
H_4: There is a significant relationship between the short-term debt and Return on Equity (ROE).	Insignificant sig: 0.062	Rejected
H_5: There is a significant relationship between the long-term debt and Return on Equity (ROE).	Significant sig: 0.004	Accepted
H_6: There is a significant relationship between the total debt and Return on Equity (ROE).	Insignificant sig: 0.696	Rejected

According to regression results, all hypotheses were rejected except hypothesis two and five.

XII. CONCLUSION AND RECOMMENDATIONS

The debt financing decision is vital for the success of the organization. Equity and debt are the two main sources of finance for a company. The choice of the correct proportion of debt and equity in capital structure will help in increasing the company's profitability. Therefore, it is important to understand the relationship between debt financing and corporate profitability. The aim of the study is to investigate the effect of debt financing on corporate profitability of listed manufacturing companies in Sri Lanka. Debt financing measured through STD, LTD and TD as the independent variables whereas ROE and ROA formed the dependent variables while FS and FG were used as the control variable. This was done period of five years from 2015 to 2019. The sample of the study was listed manufacturing companies in CSE in Sri Lanka.Collected data were analyzed using descriptive statistics, correlation analysis and multiple regression analysis and findings revealed that there is a significant negative effect of long term debt on corporate profitability, but other variables are negatively but insignificantly effect on profitability of manufacturing companies listed in CSE. It means increasing debt in capital structure will decrease profitability. Therefore, companies should prefer internal financing or other sources of financing on debt financing, like wise bond, borrowings and etc. And also this study will lead not only the manufacturing companies, but also all companies which hold debt to be realized how the process of managing optimum debt capital is. Furthermore, this study provides insight for academics or any persons who is willing to engage with this topic in the future.

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