

IMPACT OF CAPITAL STRUCTURE ON LIQUIDITY MANAGEMENT: EVIDENCE FROM CAPITAL GOODS SECTOR IN COLOMBO STOCK EXCHANGE

Sherifdeen Nisfa
BBA (Spl. in Finance)
nisfasherifdeen@gmail.com

MCA.Nazar
Department of Accountancy and Finance
South Eastern University of Sri Lanka
mcanazar@seu.ac.lk

Abstract:

This study is intended to examine the impact of Capital Structure on Liquidity Management, an application on Capital goods companies listed in Colombo Stock Exchange. Data for the study is collected from 145 annual reports which are related to 29 Capital goods companies listed in Colombo Stock Exchange for five years from 2014 to 2018. Capital Structure is used as independent variable for the study while Net Liquidity Balance (NLB) is used as the dependent variable. Controlling variables of this study are Firm Size (FS) and Return on Equity (ROE). Regression analysis is used for hypothesis testing. The result of this study shows that Debt to Equity ratio has a negative and significant impact on Net Liquidity Balance from regression analysis. Finally, researchers conclude that there is a significant negative impact of Capital Structure on Liquidity Management of Capital goods companies in Sri Lanka.

Key words: Net Liquidity Balance, Firm Size, Return on Equity, Debt to Equity, Liquidity Management

Introduction

liquidity management means meeting short-term and immediate cash obligations without experiencing significant losses. It means managing assets, including cash to meet all liabilities, cover all expenses and maintain financial stability. Liquidity plays a key role in the uplift of a firm. Liquidity is a measure which represents the ability of a firm having cash to meet immediate and short-term obligation, or portfolio of assets that can be quickly converted to do this. Its high level of trading activity, allowing buying and selling with minimum price disturbance in context of corporation, the ability of the corporation to meet its short-term obligations (Alina Zeb et al, 2016).

Liquidity risk is a type of a risk that a company will be unable to meet all current financial liabilities in due time because of lack of availability of current financial resources. This risk is considered one of the most important in making management decisions, such as – should company take short-term or long-term bank loans to finance some new projects. And the capital structure is one of the most studied topics in finances because of its strong dependency with company's performance (Daiva & Liudmila, 2018)

Capital structure is one of the most exploited topics in corporate finance literature. There are several capital structure theories have been proposed in recent years to explain the variation in debt ratios across firms. Capital structure theory suggests that firms determine what is often referred to as a target debt ratio which is based on various trade-off between the costs and benefits of debt versus equity. The modern theory of capital structure was established by Modigliani and Miller (1958). Also, three conflicting theories of capital structure have been developed. They are trade-off theory (Bradley 1984), pecking order theory (Myers 1984), and agency cost theory (Jensen & Meckling 1976).

The firms have to decide to raise capital, whether it is by taking on debt or by using existing equity, doesn't affect the value of the company. The capital structure of the firm includes the equity capital, debt capital and revenue reserves and capital reserves. The revenue reserves include the retained earnings which contains the earnings before interest and tax for the year. And also, capital structure is the mix of securities e.g., it can issue large amount of debt or little debt, arrange lease, warrants, trade bonds etc.

The capital structure decision is the vital one since; the profitability of an enterprise is directly affected by such decision. Also, capital structure decision is one of the most sensitive issues for any organization because it directly relates to competitive environment. However, its main focus is to find comprehensive combination of that maximize the overall market position.

Capital structure is actually the combination of debt and equity. The proportion of debt funding is measured by leverage or gearing. It also involves the tradeoff between risk and return. In corporate finance, the capital structure has very important role in small as well as large companies. When a company uses more debt, it raises the risk of the company. Even though higher percentage of debt move towards the higher expected rate of return. Therefore, proper attention needs to be given while determining capital structure decision of the companies. In the statement of affairs of an enterprise, the overall position of the enterprise regarding all kinds of assets, liabilities are shown.

The main aim of this research is that to find out the impact of capital structure on liquidity management of all capital goods companies listed on Colombo Stock Exchange (CSE) during the period of 2014-2018.

Brief Review of Literature and Construction of Hypothesis

Daiva & Liudmila (2018) examined capital structure impact on liquidity management of companies in Baltic countries. Current ratio, quick ratio and liquidity ratio are concluded as variables of liquidity management also ROA, ROE, equity ratio, debt capital ratio and leverage are considered as the proxy of capital structure. Researchers concluded that the more equity is used in capital structure of the company, the lesser is the liquidity risk in this company, while the more debt capital is used – the higher is the risk. Also, strong negative relationship can be seen between Current ratio and Quick ratio. This shows that large external debt, including interest payments, means a potential danger of a cash deficit, which in turn can be crucial for the company.

The study done by Asma Salman (2019) on the effect of capital structure on corporate liquidity and growth with the evidence from Tobacco Industry in Pakistan. Leverage is measured by calculating total debt to equity ratio, long term debt to equity ratio, total debt to assets ratio and times interest earned ratio. Liquidity is measured by calculating liquid assets ratio, current ratio, quick ratio and cash ratio. Growth is measured by calculating marketability ratios which include return on assets ratio, return on equity ratio, net profit margin ratio. Results revealed that tobacco companies are depending on debt financing and holding high proportion of short term

debt. It is also explored that tobacco companies are highly liquid, attaining good market position and enjoying high profits which shows that leverage is positively related to corporate liquidity and growth.

Maziar & Nazrul (2016) examined the impact of liquidity on the capital structure of listed companies in the Main market of Bursa Malaysia. Pooled OLS is applied to investigate the impact of liquidity ratios on different Debt ratios. Liquidity of a company, which is the independent variable of this study, is measured by two common ratios which are: quick ratio and current ratio. Additionally, the Debt/Equity and Debt/Asset ratios represent the capital structures based on the short-term, long-term and total debt. The results show that all the measures of liquidity have significant impacts on all the proxies of leverage. According to the results, Quick ratio has a positive effect on leverage; although, Current ratio is negatively related to leverage. Moreover, short-term debt is more influenced by liquidity compared to long-term debt.

The study done by Vahid & Lida (2013) on the impact of capital Structure on liquidity and investment growth opportunity in Tehran Stock Exchange. In this research, capital structure (leverage) is used as the dependent variable and liquidity ratios (the ratio of cash flows to total assets, the ratio of cash flows to net income, the ratio of cash flows to equity) and growth opportunity proxies (the ratio of market value of assets to book value of assets, the ratio of the market to book value of equity, and the earning / price (EP) ratio) were considered to be the independent variables. Research findings says that financial leverage has a meaningful effect on liquidity and growth opportunity.

The study done by Anderson (2002) on the capital structure, company liquidity and the growth, by using panel data sets of Belgian and UK companies, tested the relationships among the company's financial structure, its choice of liquidity asset holdings and growth. Empirically found that the financial leverage is positively related with the liquidity of a company. The impact of company to hold its asset in liquidity form, does affect the growth of the company and the capital structure in a company (Anderson, 2002). Ali et al. (2011) studied in banking sector in Pakistan, reports the negative relations of leverage and liquidity.

The following proposition established considering the above literature,

H1: There is a significant impact of Capital Structure on Liquidity Management of capital goods companies in Sri Lanka.

Methodology

Study Design

The sample of this study covers all capital goods companies (29) listed on the CSE for the period from 2014 to 2018. This study is carried out based on the secondary data. The companies' financial data and information for the past five years period from 2014-2018 are taken into deep consideration in order to carry out the study. Financial data is taken from the secondary source that is annual reports of selected companies from CSE website.

Model Specification

The research attempts to identify the capital structure and its impact on working Capital Management of selected companies listed on CSE.

The regression model as follows

$$NLB_{it} = \beta_0 + \beta_1 DE_{it} + \beta_2 FS_{it} + \beta_3 ROE_{it} + \varepsilon_{it}$$

Where,

NLB_{it} = the net liquidity balance of company 'i' for the period of 't'

DE_{it} = the debt to equity ratio 'i' for the period of 't'

FS_{it} = the firm's size 'i' for the period of 't'

ROE_{it} = the return on equity 'i' for the period of 't'

β_0 = the coefficient of regression

ε_{it} = the error term

Results and Arguments

Descriptive Figures

Various Descriptive statistics are calculated for the variables through SPSS 20.0 to describe the basic characteristics of these variables and to get clear idea about all the variables Table 1 provides the minimum and maximum value, mean, standard deviation, skewness and kurtosis of all variables.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NLB	145	-12656.98	59271.18	-166.4878	9572.35793
DE	145	.05	608.29	87.7312	92.84861
FS	145	7.77	11.11	9.6812	.74006
ROE	145	-55.67	59.35	8.6745	14.29432

From the above table in which descriptive values of all the variables have been calculated as shown that all variables are based on the 145 observations. NLB represents net liquidity balance. This is the dependent variables of this study. The minimum and maximum values of net liquidity balances are -12656.98 and 59271.18 respectively. The average of net liquidity balance is -166.4878. The standard deviation is 9572.35.

DE represents Debt to Equity ratio. This is independent variable of this study. The minimum and maximum values of DE are 0.05 and 608.29 respectively. The mean, standard deviation values are 87.7312 and 92.84861.

FS represents Firm Size. It is measured by log of total assets. This is one of the controlling variables of this study. The minimum and maximum values of FS are 7.77 and 11.11 respectively. The mean, standard deviation values are 9.68 and 0.74. Furthermore, ROE is another controlling variable. It represents Return on Equity. The minimum and maximum values of ROE are -55.67 and 59.35 respectively. The mean, standard deviation values are 8.67 and 14.29.

Correlation Statistics

In statistics, correlation (often measured as a correlation coefficient, ρ) indicates the strength and direction of a linear relationship between two random variables. The correlation between variables is a measure of the nature and degree of association between the variables.

Table 2 : Correlation Matrix

	DE	NLB	FS	ROE
DE	1	-.269**	.136	-.169*
NLB	-.269**	1	.194*	.096
FS	.136	.194*	1	.095
ROE	-.169*	.096	.095	1

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

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

The above Table 2 indicates the relationship between independent variable (DE) and dependent variable of listed companies in terms of correlation coefficient. Correlation coefficient of DE and NLB is -0.269 which indicates the negative relationship. Correlation coefficient of DE and controlling variable FS is 0.136 which indicates the positive relationship. Correlation coefficient of DE and controlling variable ROE is -0.169 which indicates the negative relationship.

Regression Statistics

This study is mainly used regression type of panel data analysis for hypotheses testing.

Table 3: Standardized Coefficient of NLB

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-26673.322	9960.989		-2.678	.008
DE	-30.766	8.344	-.298	-3.687	.000
FS	3008.995	1041.944	.233	2.888	.004
ROE	8.665	54.227	.013	.160	.873

Table 4: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.356 ^a	.127	.108	9040.36673

The decision rule is, if *P* value is greater than 0.05, accept the null hypothesis and if *P* value is less than 0.05, reject the null hypothesis. According to the results indicated in Table 3, the Beta coefficient of debt to equity (DE) is -0.298. *P* value takes 0.000, which is less than 0.05: Thus, providing strong evidence, it is statistically concluded that capital structure has a significant negative impact on liquidity management of capital goods companies in Sri Lanka. Therefore hypothesis H1 stated that there is a significant impact of Capital Structure on Liquidity Management of capital goods companies in Sri Lanka was accepted.

Table 4 reports that the R-value is 0.356 it means that there is a positive linear relationship between capital structure (CS) and net liquidity balance (NLB) with selected controlling variables value of R Square is .127 Its

statically conclude that 12.7% of variability of net liquidity balance (NLB) is explained by debt to equity ratio (DE), firm size (FS) and return on equity (ROE). The remaining 87.3% is influenced by other factors which are not considered in this study.

Conclusion and Recommendation

This study investigated the impact of Capital Structure on Liquidity Management of Capital goods companies listed on Colombo Stock Exchange (CSE) using five years data from 2014 to 2018. The result of this study indicates that Debt to Equity ratio has significant negative impact on Net Liquidity Balance from regression analysis. Finally, researchers conclude that there is a significant negative impact of Capital Structure on Liquidity Management of Capital goods companies in Sri Lanka.

Future research can consider all listed companies on Colombo Stock Exchange (CSE).

This study has considered 29 listed companies in the Capital goods sector. Further, the future researchers may use primary data and secondary data by visiting to every company to collect the actual financial information. The researcher can use different model to analyze data and also researcher can collect the data for long period of time which will give more realistic results and best output for the research.

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