Capital Structure and Market Value of Listed Beverage, Food and Tobacco Companies in Sri Lanka.

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Abstract:
The market value of a firm is influenced by various factors. The market value movement is based on the firm's fundamentals, market efficiency, macroeconomic indicators and perception of the investors. Several studies have proven that market value of firms are explained by its capital structure. In line with that the study conducted to find out the Impact of Capital Structure on Market Value in Listed Food and Beverage Tobacco companies in Colombo Stock Exchange (CSE) for the period from 2011- 2017. The study incorporated 18 companies out of 23 companies listed in Colombo Stock Exchange under Beverage Food and Tobacco industry using simple random sampling method. It analyzes the relationship between market value and capital structure by employing panel least square method approach. Debt to Equity ratio is considered as the independent variable and the market value of the company is considered as the dependent variable for the purpose of this study. Based on the regression analysis, the results show a positive relationship between debt to equity ratio of the companies and market value. The results were statistically significant at 5% level of significance. Also, the results indicate that adding more debt to overall capital positively affects the market value of the company. The results therefore suggest that the firms are with higher market capitalization is incorporating more debt into their capital structure in Food, Beverage and Tobacco Sector in CSE.

Key Words: Capital Structure, Market Value, Debt: Equity Ratio, Colombo Stock Exchange.

I.*INTRODUCTION*

This paper investigates the impact of capital structure on market value. In depth, we test the direct effect of leverage on market value, following the agency cost theory introduced by Jensen and Meckling (1976). Market value of share of a company is determined by various factors. Capital Structure is one of the variables which determines the market price of the share.

The concept of capital structure received much attention after Modigliani and Miller (1958) demonstrated that the choice between debt and equity does not have any material effects on the value of the firm. This proposition indeed holds assuming perfect capital markets. A perfect market is called as a market in which there are no frictions such as bankruptcy, transaction costs. But in real world the markets are not 100% perfect. There is imperfections in the markets. Therefore the transaction, bankruptcy costs are considered with in the market the capital structure may well be relevant. Strabulaev (2007), stated that small changes in the costs may cause large variations in capital structure. Further Modigliani and Miller (1963), proposed the model including taxes. Because, the firms paying interest costs are tax deductible. Therefore firms might reduce their tax payment by increasing their debt portion. As the debt to equity ratio increases, the market value of the firm increases by the present value of the interest tax shield. This indicates that the cost of capital will not rise, even if the use of leverage increases to excessive levels. (Myers, 1977; Myers & Majluf, 1984; Harris & Raviv 1991; Shleifer & Vishny 1997)

Jensen and Meckling (1976) argues that the agency theory is based on the view that managers will not always act in the best interest of the shareholders. Further, he developed the concept by identifying two main conflict between stake holders of the company. One is between managers and shareholders. Another concern he proposed the conflict between shareholders and creditors. In the first scenario, managers are motivated to pursue the profits of the firms they manage to their own personal gain at the expense of the shareholders. Second scenario states that debt provides shareholders with the incentive to invest sub-optimally. According to Harris and Raviv (1991), if an investment of the firms give higher return than the nominal value of the debt, the excess benefits attributable to the shareholders only. On the other hand, if the investment fails, shareholders are prevented by limited liability through exercising their right to walk away. The burden will remain with the debt

holders with a firm whose market value is less than the face value of the outstanding debt.

Further a theory proposed by Myers (1977) regarding potential agency cost of debt. He states that the managers of the firms that are going to bankrupt in near future, would not incentive to invest more in equity capital, even such investments can throw back a positive net present value. The reason behind this is that the gain through such investments will be received by the debt holders. This kind of trends explain that high debt levels will reject the value increasing projects. Another concern based on 'pecking order theory' of capital structure developed by Myers and Majluf (1984). According to which, firms are initially using internal funds for their investments. If more funds required, debt fund and then equity fund will be obtained. Therefore the firms generating sufficient cash flows and in the profitable position will use less debt.

With the aim of finding the real impact of capital structure on market value, different authors discussed in this topic. Jayarathna (2015) analyses the effect of capital structure on stock price of manufacturing sector in Sri Lanka. The results indicate that there were debt to equity ratio and interest coverage ratio significantly impact to the stock price as negatively and positively respectively while debt to total asset ratio was not significant with the stock price. Using 11 Indian public sector banks over a five year period, Jayaraman and Ramaratnam (2017) report that capital Structure influences on the market value of share and have a significant and positive relationship between capital structure and market value of shares.

Muthukumaran (2012), analyses the relationship between leverage and stock returns, using a sample of the 60 largest companies of the construction industry, for the period from 1999 to 2008. The findings indicate that there exists a statistically significant positive relationship between leverage and stock returns. The study explain to the readers that leverage risk factor contains significant information content and it can also be used as a strategic investment. Further she recommends to the companies that during debt equity restructuring, firms should take into account the positive relationship existing between leverage and stock returns. Also leverage risk factor provide the information that it adds a considerable portion in the explanation of stock returns. Therefore researcher indicates that investment and financing strategies must be examined jointly. According to her finding, it's clear that in the presence of financial market imperfections, leverage and investment are generally correlated so that highly levered firms are also mature firms with relatively safer book assets and less risky growth opportunities.

Khan, Naz, Madiha, Waseem and Ahmad (2013), in their study they analyze the impact of capital structure on market returns of Pakistan textile industry. The study incorporates impact of debt to equity ratio, in profitability and earnings per share on stock returns. By conducting this study they have been concluded that variation in capital structure and firm performance does affect the stock returns of Pakistani textile industry.

Vijayakumaran (2017), finds the relationship between capital structure decisions and corporate performance using 4181 firm year observations over the period of 8 years in Chinese industrial firms. Researcher considered leverage as independent variable and ROA, ROE as proxies to firm performance. Based on the findings, researcher concluded that leverage is positively related to firm performance. Further, he suggests that debt financing acts as a governance mechanism for Chinese listed firms to enhance their performance.

On the other hand, Menon and Vidhyasagara (2016), proposes the relationship between share price and capital structure based on the sample of 113 listed companies registered in Muscat Securities Market for three main sectors for a period of eight years from 2008 to 2015. The findings show an inverse relationship between amount of debt and share prices. Also the study reveals the results that there is a positive

relationship between amount of equity and share prices and debt equity ratio. Based on the findings, it can be concluded that adding debt to overall capital inversely effects the share prices.

Further Anandasayanan (2015), analyses whether capital structure affect the listed manufacturing companies' profitability in Sri Lanka. Based on 12 manufacturing companies listed on Colombo Stock Exchange, the researcher considers debt equity ratio, long term loans to total asset and short term loan to total assets ratios as independent variable and net profit ratio as dependent variable for the study. The findings show that debt and profitability is significantly and negatively associated with each other.

According to the different concerns, proposed by different authors, the impact of capital structure and market value is a researchable area. Although an impressive body of research from developed and developing countries (see for example, Titman & Wessels, 1988; Rajan & Ziangales, 1995; Harris & Raviv, 1997; Booth, Aivazian, Demirguc-Kunt & Maksimovic, 2001; Frank & Goyal, 2009; Vijayakumaran, & Vijayakumaran, 2011; Du, Guariglia & Newman, 2013; Guariglia & Vijayakumaran, 2013) has been devoted to understanding the determinants of capital structure decisions, only a handful of studies examines the effect of these capital structure policy choices on stock prices (e.g: Jayarathna, 2015; Jayaraman & Ramaratnam, 2017; Jane, Caroline & Yusufkibet, 2016; Menon & Vidhyasagara, 2016). This study fills this gap in the literature by analyzing the impact of capital structure decisions on market value for a sample of listed beverage, food and tobacco companies in Sri Lanka.

By considering controversies in the findings and the lack of research within the beverage, food and tobacco sector within Sri Lanka, this study aims to find out 'The Impact of Capital Structure on Market Value of Sri Lankan Beverage, Food and Tobacco Companies Listed in Colombo Stock Exchange'

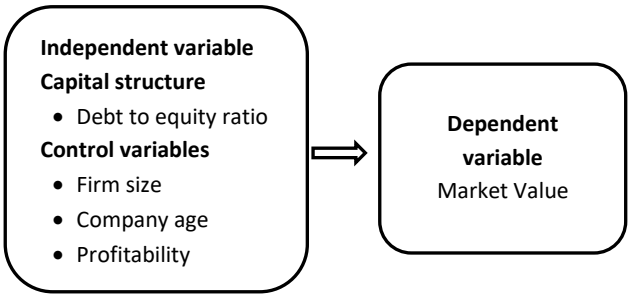
The reminder of the paper is organized as follows. Section 2 reviews materials and methods. Research design including sample, model and estimation methods and variables are discussed within this section. Section 3 discusses empirical results and concludes with summary and suggestions for potential avenues for future research.

II.MATERIALS AND METHODS

The sample is composed of all the publicly listed Beverage, Food and Tobacco companies traded on Colombo Stock Exchange (CSE). The data used in this study are obtained from the companies' annual report published on the CSE website for the period of seven years. After computing variables as defined below and screening, we end up with a panel of 126 firm-year observations on 18 companies over the period 2011-2017 for our empirical analysis.

A.Conceptual Framework

After the careful study of review of literature the following conceptual model is developed by the researcher.



Source: developed by researcher

In the above model variables Capital structure variable is considered as independent variable and market value is considered as dependent variable.

B.Definitions of variable

Table 1

Variables	Acronyms	Measures
Dependent Variable		
Market value	MVPS	Obtained the market value of proceeding year from CSE at www.cse.lk
Independent variable		

Debt to equity Ratio	DER	Divided total debt of the firm by total Equity.
Control variables		
Firm size	FSIZ	Natural Logarithm of total assets.
Company age	CAGE	Measured using company's established year.
Profitability	EPS	Earnings per share directly obtained from CSE at www.cse.lk

C. Hypothesis of the study

As discussed above, empirical studies provide mixed evidence on the performance effects of capital structure. We would expect the financing decisions to work as a governance mechanism to constrain managers' opportunistic behavior, reduce agency costs of equity and thus positively affect capital structure of Sri Lankan listed Beverage, Food and Tobacco firms. We therefore hypothesize that:

H1: There is a significant relationship between Debt to Equity ratio and Market Value.

D.Data collection and sampling

This study utilizes the listed companies in Sri Lanka as its population. As the sampling methods differ in the type of study to be conducted, the research technique applied to get the sample of this study is the random sampling. The listed firms under Beverage, Food and Tobacco sector considered as sample for the study. Because it is one of the largest sectors of Sri Lanka in term of number of companies listed under this sector. The Sample size of the study is 18 companies out of 23, randomly selected from Beverage Food and Tobacco companies listed in Colombo Stock Exchange. After computing variables as defined above (Table 1) and screening, the paper end up with a panel of 126 firm year observations on 18 companies over the period 2011-2017 for this empirical study. The research is based on secondary data. Debt, Equity and Market Values are taken directly through annual reports, handbook of listed companies and CSE official website. Data analysis is carried out with the help of software packages Eviews 8. The panel has an unbalanced structure.

III. METHODOLOGY

To examine the extent to which Capital Structure variables impact on Market Value, researcher estimates following regression model that links capital structure variables with, market value:

$$MVPS_{it} = \beta 0 + \beta 1\ DER_{it} + \beta 2\ FSIZ_{it} + \beta 3\ CAGE_{it} + \beta 4\ EPS_{it} + \varepsilon_{it} \quad (1)$$

To investigate the impact of capital structure on market value, the above model is developed using regression analysis. Where i, t indicates the firm and year respectively.

IV.RESULTS AND DISCUSSIONS

A. Descriptive Statistics

Table 2 presents descriptive statistics for the variables used in the analysis for our pooled sample. Descriptive statistics are useful to make general observations about the data collected. The pooled mean (median) Market Value is 417.173 (140), respectively. The average of debt to equity ratio is 91.296 (the median is 42.986). With respect to the control variables included in our model, the average (median) firm size is 9.644 (the median is 9.469). The average company age of the firms is given by 41.872 years (32 years). Finally the average of earnings per share is about 22.461(the median is 10.234).These summary statistics indicate that the sample used in this study is comparable to those used in prior research in the context of Sri Lanka.

Table 2: Descriptive analysis

Variable	Obs	Mean	Median	Std. Dev	Min	Max
MVPS	125	417.2	140.0	646.6	0.0	2800.0
DER	125	91.3	43.0	128.0	0.3	922.6
FSIZ	125	9.6	9.5	0.6	8.7	10.8
CAGE	125	41.9	32.0	32.1	6.0	151.0
EPS	125	22.5	10.0	42.8	-233.4	204.4

B. Multicolonearity Test

Multicollinearity can be measured using Variance Inflation Factor (VIF) or Tolerance test. In this study, VIF was used:

Table 3: VIF

Variable	Coefficient Variance	Centered VIF
C	377872.6	NA

DER	0.079	1.235
FSIZ	4352.714	1.324
CAGE	1.206	1.189
EPS	0.628	1.100

According to the Table 3 VIF values are below 10 and when VIF values are less than 10 then there is no multicollinearity problem. (Gujarati, 2009)

C. Correlation analysis

Table 4 reports the Pearson correlation coefficients between variables. To find out the relationship among variables correlation analysis was carried out. Debt to Equity ratio, Firm Size, Company Age and Profitability show a positive correlation with market value. If the firm' debt to equity ratio get increase, the market value of the firm also get increase. On the other hand, if the firm reduces its' debt portion over equity, the market value also will get reduce.

Furthermore, Table 4 suggests that given that the observed correlation coefficients between independent variables are relatively low, multicollinearity would not be a serious problem in our study.

Table 4: Correlation Table

	DER	FSIZ	CAGE	EPS	MVPS
DER	1.000				
FSIZ	4.788	1.000			
CAGE	0.980	3.878	1.000		
EPS	-2.041*	0.014	2.550*	1.000	
MVPS	2.413*	1.656	2.879*	12.822*	1.000

Notes: This table reports Pearson correlation coefficients. * denotes significance at the 5% level or more. See Table 1 for definitions of all variables.

D. Regression analysis

Table 5 demonstrates the findings of the regression analysis. The model expresses the effect of independent variable (Debt to Equity Ratio) on Market Value.

According to regression analysis, the results show that Debt to Equity ratio has a coefficient of 1.817 with t statistics of 6.472 and with a p value of 0.000. Thus, from the results, it can be stated that there is significant impact of Debt to Equity on Market Value. Developed *H1* by the researcher is supported with the findings of the study. Previous literature also in line with the above findings. (Khan et al., 2013; Jayarathna, 2015). In respect to control variables, Firm Size and Company Age doesn't show any significant relationship with market value. Profitability of the company shows a significant impact on market value. The results shows that the F-statistics indicates the value of 0.000. Which indicates that the model perfectly fits for the study. Durbin Watson test is a test used to detect auto correlation. From the Table 5, Durbin Watson stat value is 1.150. This value less than 3 indicating that there is no auto correlation issues.

The R square shows that the model explained 70% of total variations of the dependent variable. It means that 70% of the changes in dependent variable are described by both independent and control variables. As a point of focus, the hypotheses of this study states that the capital structure significantly impact on market value of Beverage, Food and Tobacco companies listed on CSE.

Table 5: Relationship between audit committee characteristics and net margin

Dependent Variable: Market Value
Method: Least Squares
Sample: 1 126
Included observations: 125

Variable	coefficient	std error	t-statistic	prob
DER	1.817	0.281	6.472	0.000
FSIZ	-10.690	65.975	-0.162	0.871
CAGE	0.817	1.098	0.744	0.458
EPS	12.272	0.793	15.484	0.000

R-squared	0.700	Mean dependent var	417.173
Adjusted R-squared	0.690	S.D. dependent var	646.588
S.E. of regression	360.175	Akaike info criterion	14.650
Sum squared resid	15567148	Schwarz criterion	14.763
Log Likelihood	910.640	Hannan-Quinn criter	14.697

F-statistic	69.906	Durbin-Watson stat	1.150
Prob(F-statistic)	0.000		

V.CONCLUSIONS & RECOMMENDATIONS

This study has empirically provided evidence on the relationship between capital structure proxy by debt to equity ratio and market value of beverage, food and tobacco companies listed in CSE. Consequently, based on the findings of the study, the following conclusions are drawn.

The presence of positive significant impact between debt to equity ratio and market value of listed beverage, food and tobacco firms in Sri Lanka concluded that during debt equity restructuring, firms should take into account the positive impact existing between leverage and stock returns Muthukumaran (2012). In real world, due to market imperfections, companies can enjoy tax shields by incorporating debt portion into their finance structure. Therefore based on the theory proposed by Modigliani and Miller (1963), its' stated that when markets come up with taxes the value of a firm increases with more debt due to the tax shield. On the other hand, it is crucial to the firms to maintain the debt to equity finance structure in the optimal level. However, the research results enhance the basic theories and principles proposed by different people in the finance arena and previous findings of different authors.

In addition to this, the study only considers Beverage, Food and Tobacco sector for 7 year period data for the analysis purpose. But the results can be further developed by including different sectors in order to find out the overall effect of capital structure on market value of the firms.

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