



Determinants Of capital Structure: Evidence From Sri Lanka

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ABSTRACT

This study investigates determinants of the Capital Structure of hotel industry in Sri Lanka. The study sample included 20 listed hotels on the Colombo Stock Exchange of Sri Lanka for the period from 2010 to 2014. Some theories suggested that countable factors affects to capital structure, but some theories suggested that it was uncountable also there were many studies attempted to identify this relationship but developing countries it was lacking area. This study explanatory variable were Dividend Pay – out, Growth, Liquidity, Profitability, Risk, Size, Tangibility and Taxation. And dependent variable was capital structure.

Findings revealed that the only significant relationship between capital structure and profit of the firm, Risk Taxation and liquidity. Apart from that consecutively 2010 – 2013 there was a negative relationship between debt capitals, but in 2014 it was positive. This means by considering time effect, there were trends of moving debt financing as well. Also there were significant positive relationships between debt capitals with some hotels. But almost all hotels were negatively affected with debt capitals.

KEYWORDS: *Capital Structure, Dividend Pay – out, Growth, Liquidity, Profitability, Risk, Size, Tangibility and Taxation*

1 Introduction

The Capital Structure decision is essential for the every organization. The theories suggest that the choice of firms' capital structure depending on attributes that determine the various costs and benefits associated with debt and equity financing. According to the Trade-Off theory of Myers (1977), a firm must define a target debt-equity ratio after considering the nature and requirement of business and then put its efforts to attain that target. This theory proposes debt financing offers more benefit to an organization as compared to equity financing since it gets tax shield on interest paid. Further says that a firm's adjustment toward an optimal leverage is influenced by three factors namely taxes, costs of financial distress and agency costs. The Pecking Order Theory, as per Donaldson (1961) was the first introduced the idea of capital structure. He observed, "Management strongly favored internal generation as a source of new funds. Later on, Myers and Majluf (1984) and Myers (1984) observed the conclusion of Donaldson and proposed Pecking order theory with the assumption of information asymmetry. Theoretically, this theory proposes that insiders (managers) have more information about the investment decisions and returns associated with these investments as compared to outsiders in the organization. Thus, investors are willing to buy stocks on discount in case if there is an information asymmetry between managers and investors. Finally the Agency Cost Theory, according that Debt agency costs arise due to a conflict of interest between debt providers on one side and shareholders and managers on the other side (Jensen and Mackling, 1976). Managers have the motivation to invest funds in risky business for shareholders' interest, because if the investment fails, the lenders are likely to bear the cost as the shareholders have limited liability. The use of short-term sources of debt, however, may mitigate the agency problems, as any endeavor by shareholders to extract wealth from debt holders is likely to limit the firms' access to short-term debt in the immediate future. Thus current study investigates what are the significant determinants; determine the Capital Structure of hotel industry in Sri Lanka among selected determinants.

02. Literature Review

In this chapter includes hypothetical and empirical theories have granted many results that attempts to explain the determinants of capital structure. There are several determinants of capital structure.

According to Rajan et al (1995) most Capital structure study data, based on the developed countries, they used data from G7 countries. But according to Booth et al. (2001) there are only a few studies that provide evidence from developing countries. Also, some have used cross country comparisons based data, from a particular region, for example Decsomask et al. (2004) analyzed data from the Asian Pacific region. Chowdhury (2004), based on Bangladeshi and Japanese panel data, did another study on capital structure determinants with agency variables and finds operating leverage to significantly affect the capital structure choice. As per Myers, (2001) there is no universal theory of capital structure and no cause to expect exact one. However, there are several theories relate to capital structure and also several empirical tests relate to the capital structure. Also, different theories suggest different predictions for each determinant. Below has separated literature for selected variables.

2.1 Size

According to the trade - off theory, Size is expected to be positively related to leverage. However, as per Rajan and Zingales (1995) stated, if the costs of financial distress were low, the positive relationship didn't be strong. But the agency theory also puts forward a positive relationship between size and leverage. As per Pecking order theory, larger firms have less asymmetric information problems which imply that they will have a higher preference for equity than smaller ones, so negative relationship predicted for size and leverage. As early mentioned some authors found a positive relationship between size and leverage, for example Friend and Lang (1988). Prahalathan B. (2010) found the estimated coefficient of the variables of firm size was largely consistent with explanations of trade – off theory.

2.2 Profitability

As per trade-off and agency theories expect a positive relationship between profitability and leverage, the pecking order theory predicts a negative one. Most empirical studies observed a negative relationship between leverage and profitability, for example Kester (1986), Friend and Lang (1988), Titman and Wessels (1988). On the other hand, Frank and Goyal (2004) experienced a positive relationship between profitability and leverage in some models. According to Haque (1989) empirically tested in Bangladeshi firms and found that capital structure do significantly vary among industries and it has no significant impact on firm's profitability, dividend and market value. As per Chowdhury (2004) based on Bangladeshi and

Japanese panel data, done another study on capital structure determinants with agency variables and finds profitability significantly affect the capital structure choice. According to Ajanthan A. (2013) results of regression found that profitability was confirmed to be a relevant determinant for Sri Lankan hotels and restaurant companies.

2.3 Growth

Growth rate also taken place to move debt financing rather than equity financing since in normal practice high growth organization move debt. That emphasis by According to Marsh (1982), firms with high growth capture relatively higher debt ratios. But according to the agency cost theory and the pecking order theory explains the opposing relation between the growth rate and capital structure. But the trade-off theory explained negative relationship. Growth rate is negatively related with long-term debt level. Some empirical studies also have shown the negative relationship, such as Kim and Sorensen (1986). On the other hand, Booth et al. (2001) demonstrate, in some models, a positive relationship between growth opportunities and leverage. According to Ajanthan A. (2013) results of regression find Growth variable was confirmed not to have a material effect on capital structure decisions for Sri Lankan hotels and restaurant companies.

2.4 Tangibility

Prahalathan B. (2010) found the estimated coefficient on the variable of tangibility is largely consistent with explanations of trade – off theory. Thus, there was a positive relationship between the tangible and debt level. Agency theory also emphasized same prediction. However, according to Ajanthan A. (2013) results of regression find Tangibility was confirmed not to have a material effect on capital structure decisions for Sri Lankan hotels and restaurant companies. But Titman and Wessels, (1988), Rajan and Zingales (1995) find a positive relationship between tangibility and leverage; the empirical studies in developing countries find mixed relationship. However, as per, Booth et al. (2001) in ten developing countries and Huang and Song (2002) in China, found that tangibility was negatively related to leverage. It was argued, however, this relation depends on the type of debt. Burt Myers (1984) rebutted that there was a positive relationship between tangibility and financial leverage. Similarly Bevan and Danbolt (2000 and 2002) also found a positive relationship between tangibility and long-term debt; although a negative relationship is testified for short-term debt and tangibility in the UK.

2.5 Dividend payout

Some empirical studies have focused on the impacts of capital structure and cost of debt on dividend payout ratio. Jalilvand Harris (1984) examines financing decisions of the U. S. Firms by paying consideration to capital structure and dividend targets. Here Used individual, firm data, they found that financing decisions on the issuances of long-term and short-term debts, maintenance of corporate liquidity, issuance of new equity and payment of dividends are interdependent. As per Sangeetha M. and Sivathaasan N. (2004), found at there was a positive relationship (insignificant 5%) between dividend payout and leverage. This supports the pecking order theory and its prediction that a management prefers the internal financing to external one. However, it's not consistent with the bankruptcy costs theory. It implores for the adverse relation between dividend payout ratio and debt level. The payout ratio provides an idea of how well earnings support the dividend payments. More mature companies tend to have a higher payout ratio.

2.6 Liquidity

The liquidity of a firm's equity is associated to the straightforwardness with which a firm can raise external capital through a stock offering; less liquid stocks tend to have higher issuance costs and thus a higher cost of equity (Weston, Butler, and Grullon, 2005; Hennessy and Whited, 2005). Therefore, firms with most liquid equity are motivated to issue equity than less liquid equity. As a result, capital structure selections are likely influenced by liquidity. As further mention firms prefer internal financing to external financing. Therefore, firms are likely to create liquid reserves from retained earnings. If the liquid assets are sufficient to finance the investments, firms do not need to raise external funds. Hence, liquidity was expected to be negatively related to leverage. Firms with higher liquidity ratios have preferred to acquire more debt because of great ability to meet short term obligations (Ozkan, 2001). As per Ghassanomet&FadiMashharawe, (2003) negative relationship between liquidity and leverage was expected in market oriented economies. Indeed, this result was supported by the empirical findings of Ozkan (2001) and Antonious (2002).

2.7 Firm Risk

As per Kale et al. (1991) the level of risk was primary determinants of a firm capital structure. In Castanias, (1983) mentioned the tax shelter-bankruptcy cost theory of capital structure determines a firm's optimal leverage as a function of business risk. According to Johnson (1997), firms with more volatile earnings growth may experience more situations in which cash flows are too low for debt service. Several studies suggest a positive relationship Jordan et al., (1998), Michaelas et al., (1999). Esperança et al. (2003) also found positive associations between firm risk and both long-term and short-term debt. Also a number of studies have indicated an inverse relationship between risk and debt ratio Bradley et al. (1984).

2.8 Taxation

Taxation also main determinant explained the capital structure because the tax benefit associated with use of debt. Numerous empirical studies have explored the impact of taxation on corporate financing decisions in the major industrial countries. Some authors concluded that changes in the marginal tax rate for any firm should affect financing decisions it has positive relationship between taxation and long term debt as well as short term debt. As per Graham (1996) finds positive relationships between tax and the debt of the firm which support trade - off theory. Green, Murinde and Suppakitjarak (2002) observe tax policy has an important effect on the capital structure decisions of firms.

Based on the above theories and empirical analysis the following methodology was developed to achieve the objectives of this study.

03. Methodology

The present study has used secondary data for the analysis. The data extracted from the comprehensive income statements and statement of financial position. The study focus on 20 hotels of Colombo Stock Exchange over a period of five years from 2010 – 2014 for achieving below objectives, Descriptive statistics and regression analysis were used to interpret the analysis.

3.1 Objectives of the Study

1. To identify the relationship between determinants of the capital structure
2. To identify the trend of capital structure.
3. To identify the entity effect on determining the capital structure.

3.2 Conceptualization

This study conceptual design has shown below. Here explanatory variables are Size, Profitability, Growth, Tangibility, Dividend Payout, Liquidity, Taxation and Risk. As well as explained variable is capital structure so long term debt and total debt ratios were used as proxy variables.

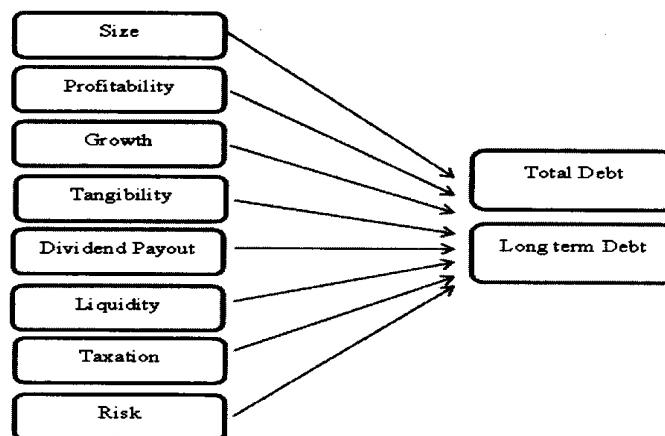


Figure 1 Conceptualization Model

3.2 Variable Description

The following indicators have been identified to measure each independent variables and dependent variables, relating to the study.

Independent Variables

Profitability	= Earnings Before Interest and Tax (EBIT)/ Sales
Tangibility	= Net Fixed Assets / Total Assets
Size	= Natural Logarithm of Sales
Growth	= Natural Logarithm of changes in total Asset
Dividend Payout Ratio	= DPS/EPS
Liquidity	= CA/CL
Taxation	= Tax Paid / Operating Income
Risk	= Natural Logarithm of absolute EBIT variation
<u>Dependent Variables</u>	
Long Term Debt Ratio	= Long Term Liability / Total Assets
Total Debt Ratio	= Total Liability / Total Assets

Figure 1: Variable Description

3.3 Model Specification

This study has analyzed based on classical linear regression assumptions. To analyze the data used SPSS package version 19.0 and developed six equations to achieve stated objectives in this study.

3.3.1 Equation for Basic Model

Equation 01 and 02 developed to identify the relationship between determinants and capital structure.

$$LTD = \infty + B_1SZE + B_2GRW + B_3TAN + B_4PRO + B_5DPO + B_6L + B_7TAX + B_8RISK \dots \text{Equation 01}$$

$$TD = \infty + B_1SZE + B_2GRW + B_3TAN + B_4PRO + B_5DPO + B_6L + B_7TAX + B_8RISK \dots \text{Equation 02}$$

Where;

∞ = Intercept

$B_i(1-5)$ = Regression coefficient of independent variables

SZE = Size

GRW = Growth

TAN = Tangibility

PRO = Profitability

DPO = Dividend Payout Ratio

L = Liquidity

TAX = Taxation

RISK = Risk

U = Error Term

Equation for Time Effect

Equation 03 and 04 developed to identify the time effect. This includes four time dummies to represent five years and 2010 was benchmark year.

$$= \infty + B_1SZE + B_2GRW + B_3TAN + B_4PRO + B_5DPO + B_6L + B_7TAX + B_8RISK + D_1 + D_2 + D_3 + D_4. \text{Equation 03}$$

$$= \infty + B_1SZE + B_2GRW + B_3TAN + B_4PRO + B_5DPO + B_6L + B_7TAX + B_8RISK + D_1 + D_2 + D_3 + D_4. \text{Equation 04}$$

(D1 = 2011, D2 = 2012, D3 = 2013, D4 = 2014)

Equation for Entity Effect

Equation 05 and 06 developed to identify the entity effect to each and every determinant when determining capital structure. It includes 19 dummies for representing fifteen hotels and Trans Asia hotel was benchmark variable.

$$= \infty + B_1SZE + B_2GRW + B_3TAN + B_4PRO + B_5DPO + B_6L + B_7TAX + B_8RISK + D_1 + D_2 + \dots + D_{18} + D_{19}. \text{Equation 05}$$

$$= \infty + B_1SZE + B_2GRW + B_3TAN + B_4PRO + B_5DPO + B_6L + B_7TAX + B_8RISK + D_1 + D_2 + \dots + D_{18} + D_{19}. \text{Equation 06}$$

(D1 = Aitken Spence Hotel, D2 = Amaya Leisure PLC, D3 = Dolphin Hotel PLC, D4 =

in

el PLC, D5 = Hunnas Waterfalls, D6 = John Keels Hotel, D7 = Kandy Hotel Company, D8 = The Kingsbury PLC, D9 = Light House Hotel PLC, D10 = Marawila Ports, D11 = Nuwaraeliya Hotel PLC, D12 = Pegasus Hotel PLC, D13 = Serandib Hotel, D14 = Tal Lanka Hotel PLC, D15 = Pegusus, D16 = Serendib Hotel, D17 = Haweli Reach, D18 = Palm Garden, D19 = Hotel Sigiri, U = Error Term)

Hypothesis of the study

From the literature discussed above, has developed a hypothesis for each and every determinants.

H1a: There is a negative relationship between debt to total assets (TA) and size.

H2a: There is a negative relationship between debt to total assets (TA) and profitability.

H3a: There is a positive relationship between debt to total assets (TA) and growth.

H4a: There is a positive relationship between debt to total assets (TA) and tangibility.

H5a: There is a positive relationship between debt to total assets (TA) and Dividend Payout Ratio.

H6a: There is a negative relationship between debt to total assets (TA) and Liquidity.

H7a: There is a positive relationship between debt to total assets (TA) and Risk.

H8a: There is a positive relationship between debt to total assets (TA) and Taxation.

04. Data Analysis & Interpretation

4.1 Descriptive Statistics

According to descriptive statistics long term debt in the capital structure in Sri Lanka is estimated at 13.71% and also estimated mean was 23.85% of total debt. It indicates hotels add short term financing sources in their capital structure and there were low fluctuations as per table 01 shows in below. When compared to developed countries. It further emphasis according to Lalith P Samarakoon (1991) his mentioned G7 countries debt mean value was 49.7%. In Sri Lanka instead of that debt financing they use equity capital to finance in the companies since most of the hotel's own divided through a small base of investors.

Table 01 : Descriptive Statistics

Determinants	Mean	Std. Deviation
Total Debt	0.2385	0.18567
Long Term Debt	0.1371	0.11472

4.2 Regression Analysis

Table 02 : Model Summary

	Equation 01			Equation 02		
	Standardized Beta	T Value	Sig.	Standardized Beta	T Value	Sig.
Constant	-0.131	-0.636	0.527	-0.481	-1.683	0.097
Growth	-0.001	-0.479	0.634	-0.000	0.125	0.901
Tangibility	-0.008	-0.576	0.567	-0.021	-1.137	0.261
Liquidity	0.007	0.791	0.432	-0.038	-3.235	0.002
Dividend	-0.023	-0.541	0.591	-0.066	-1.139	0.259
Risk	0.027	2.594	0.012	0.021	1.456	0.150
Size	-0.006	-0.477	0.635	0.028	1.518	0.134
Tax	0.438	3.135	0.041	0.433	2.809	0.052
Profit	-0.483	-5.193	0.000	-0.645	-5.007	0.000
R2			40.7			51.6
F value			5.713			10.847

As per table 02; model summary table long debt level explained only 40.7% by its selected determinants. In contrast to long debt level here R square was 51.6%, thus indicate total debt explained only 0.516 by its selected determinants. Also, both equations were significant at the 1 % level. Further, there were significant relationship in between profit, Risk and liquidity of the hotels in Sri Lanka. There was a negative relationship with profit. As well as hypothesis support to that because it mentioned there have been negative relationship between these two variables. It emphasis when debt increases have to pay more interest so decrease profit when increase debt. So it relates with pecking order theory. As well as negative relationship between liquidity and debt level in the hotel industry, here long term debt and liquidity relationship was not significant, but the total debt with liquidity relationship was significant at the 1 % level. So accept the alternative hypothesis that there was a negative relationship between Liquidity and the debt. In contrast, other variables or determinants Risk

and Taxation have shown the significant weak positive relationship between the long term debts of the hotel industry in Sri Lanka. Since when debt increases automatically increase risk. Here both determinants accept the hypothesis.

And also present study second objective was identifying the trend of capital structure. To identify that developed analysis based on the equation 04 and 05. After considering time effect, risk also positively significant to debt capital at the 1% level. As well as when move on to time dummies only 2011 has been significant impact when determining debt in a Sri Lankan hotel industry which was significant at the 5 % level. In 2010 significant negative relationship with liquidity and profitability, but 2013 it was positive. Also in 2011 and 2013 there was a significant impact of tax when determining the capital structure in the hotels. Also consequently 2010 to 2013 there was negative relationship but in 2014 only was positive relationship.

In addition to the identified time effect, current study tries to identify entity effect as well. This discussed results by adding entity dummies for basic equation 01 and 02. Thus try to identify the how results has been changed after adding entity effect for each and every determinants, then determinant of liquidity also significant at the 1 % level. Also highest explanatory power associate with this and it was 80.9%. Even though the overall model mentioned negative relationship between variables, but here by considering entity effect, there is positive dependencies as well. Like Aitken Spence PLC, Amaya Leisure, Dolpin hotel PLC, Hunas waterfalls, John Keells, Kingsbury hotel, Marwila resort, Serandib hotel and the Tal Lanka hotel. Others had negative dependencies.

05. Conclusion

According to data analysis and interpretation, in Sri Lankan context only Tax, Profit, Risk, Liquidity were significant variables when determining capital structure. Thus, there was a positive relationship between Risk and capital structure. It was obviously equal with practical and theory since this study used debt to total assets, so when organization add more debt financing that case to increase risk. But as per research in Sri Lankan hotel more used equity capital so they aren't facing such kind of risk. Oppositely there were a negative relationship between liquidity and the profit. The relationship between liquidity and debt to total assets was really compatible with the theory. However the relationship between profit and debt to total assets not tally with theory. Further, this study emphasis in Sri Lankan hotel industry when adding debt decrease profit. Though there was a negative relationship between debts to total assets in general after adding time dummies in 2014 there was positive impact. Also in general all hotels have a negative relationship between debts to total asset except some hotels. Thus, debt finance over equity finance depends on firms' preferences.

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