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DETERMINANTS OF CAPITAL STRUCTURE: EVIDENCE FROM THE HOTEL SECTOR IN SRI LANKA

H.A.Dimuthu Maduranga Arachchi

Mathalana, Rughawilla, Sri Lanka Email address: slarachchi@yahoo.com

Abstract

The purpose of this paper is to investigate the factors affecting capital structure decisions of listed hotel companies in Colombo Stock Exchange (CSE). Different classical capital structure theories are reviewed such as Modigliani and Miller Model (M & M Theory), trade-off theory (TOT) and pecking order theory (POT) to formulate testable propositions concerning the determinants of debt levels of the companies. The model is estimated using a panel data approach for twenty five CSE companies for the period of 2009-2015. Regression models were used to test variables representing growth opportunities, firm size, profitability, effective tax rate, operational risk, tangibility and net commercial credit position. The findings suggest that profitability, growth opportunities, and net commercial credit position are related negatively to the debt ratio, while firm size, tangibility, operational risk and effective tax rate do not appear to be related to the debt ratio. Although the findings partially support both the pecking order theory (POT) and trade-off theory (TOT), neither the trade-off nor the pecking order theory exactly seem to explain the capital structure of Sri Lankan hotel companies.

Introduction

Capital structure refers to the composition of a firm's liability and owner's equity. It is one of the major concerns encountered by the mangers today. Financing is not just procurement of funds but also their meaningful deployment to generate maximum returns. Capital structure of a firm determines the weighted average cost of capital (WACC). WACC is the minimum rate of return required on a firm's investments and used as the discounting rate in determining the value of the firm. A firm can create value for its shareholders as long as earning exceed the cost of investment (Damodaran, 2000). Managers obviously select the debt to equity ratio which minimizes the WACC.

Since the seminal Modigliani and Miller (1958) paper showing that subject to some conditions the impact of the financing on the value of the firm is irrelevant, the literature on capital structure has been expanded by many theoretical and empirical contributions. Much

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emphasis has been placed on releasing the assumption made by MM, in particularly by taking into account corporate taxes (Modigliani and Miller, 1963), personal taxes (Miller, 1977), bankruptcy cost (Titman, 1984), agency cost (Jensen and Meckling, 1976; Myers, 1977), and informational asymmetries (Myers, 1984). Two main theories dominate currently the capital structure debate: the trade off theory (TOT) and the pecking order theory (POT).

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Hotel companies invest great amounts in fixed assets, requiring substantial amount of capital, especially in the investment stage. In case of a new hotel, land, building, machine, equipment costs have to be incurred. These expenses would reach 75-90% of fixed assets. Moreover, hotel companies have to make frequent replacement, expansion, and modernization investments in order to meet changing consumer behavior and market competition. Although inflation has recent a downward trend in Sri Lanka, real interest rates are still at a high levels. Therefore, hotel companies cannot borrow at favorable rates. Furthermore, there is the lack of alternative sources due to underdeveloped debt markets in Sri Lanka as stated by Samarakoon (1999). Thus, provision of financial sources and design of the capital structure becomes important for hotel companies. Further because of the structure of the industry, hotel companies are highly sensitive to the systematic risks. Therefore hotel companies face high operating and financial risk. Also it is believed that more powerful information and insightful explanations can be garnered by examinations of specific industries instead of assessing the characteristics of a divergent sample of firms. This belief is borne out in the financial literature with research regarding the capital structure decision of specific industries such as restaurants (Upneja & Dalbor, 2001). Accordingly, this research focuses on the factors that influence the critical longterm debt decision of hotel companies in Sri Lanka.

Statement of the Problem

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All the business have same source of funds, but still some businesses are able to do better than the others. If the logic is better business ideas for higher performance, then why it is that some companies still fail to achieve success even with ample funds and other resources. The above indicate clearly that there is something beyond the above factors. So the research question, what are the determinants of capital structure of hotel companies and what is the relationship between capital structure and each determinant?

Numbers of theories have made some progress on the Capital Structure determinants and their consequences on the leverage of the company. But, most of the theories are largely based on US and western firms and the empirical relevance of these evidences are questionable to other countries. Several empirical studies investigated the optimal capital structure of a firm such as Gaud, et al., (2003); Akhtar (2005), Deesomsak, et al., (2004), Samarakoon, (1999), Panno, (2003), Titman and Wessels (1988), Rajan and Zingales (1995), Upneja & Dalbor, (2001), Viviani (2008). These studies pointed out the importance of the relationships among the capital

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structure, cost of capital, capital budgeting decisions, and firm's value. But, there is no enough empirical works on these theories in Sri Lankan perspective. Samarakoon (1999) has done research on Capital Structure in Sri Lanka companies and Seneratne (1998) has done study on Pecking Order of financing. Apart from the above two, it is difficult to find some studies on this topic.

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Objective of the Study

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This article investigates the empirical determinants of capital structure decisions of firms, and tries to provide some contributions that may help to fill the existing gap between theory and empirical evidence. As a secondary objective, validity of pecking order theories and trade-off theories for hotel companies is also tested.

Methodology

Study specifies a panel data model to investigate the factors that affect the capital structure of hotel companies. OLS estimation technique is used for the estimation. In the theoretical model specified to test the capital structure decisions of the hotel companies in Sri Lanka the dependent variable is specified as the debt ratio. The debt ratio is defined as the book value of liabilities divided by the book value of total assets. This variable measures the share of liabilities in total assets of a company and is widely used in capital structure studies. Explanatory variables are identified based on the previous literature and studies. For each company, the data set includes 25 annual time series observations for the period from 2009 to 2015.

Literature Review

The capital structure decision centers on the allocation between debt and equity in financing the company. An efficient mixture of capital reduces the price of capital. Lowering the cost of capital increases net economic returns which, ultimately, increases firm value (Groth and Anderson, (1997)). An efficient capital structure refers the capital structure which minimises the cost of capital of a particular company. Therefore it is important to determine the cost of each item in the capital structure and their contribution to the capital structure. It is not difficult to determine the cost of each component. But it is difficult to measure the factors which affect on each components such as tangibility, profitability etc. Capital structure decisions are very much significant in creating shareholder's value. But the optimal capital structure is some what debatable.

Although financing is a very subjective decision and is a function of multiple factors, a firm that is operating above the break-even point (a point of no profit, no loss) and has assured profits should always introduce debt in its capital structure. An ideal mix of debt-equity would be

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the one, which would ensure maximum ROE. It would not only enable a firm to magnify returns to ordinary shareholders but also ensure that the inherent risks are controllable (Madan, 2007).

Deesomsak, et al, (2004), observed that differences in the institutional traditions, legal framework and corporate governance practices may have implications on the capital structure choices. They further observed that firms in more developed countries have better access to external finance. Byoun, (2008), results about how and when adjust their capital structure suggest that most adjustment occur when firms have above- target debt with a financial surplus or when they have below-target debt with a financial deficit. Also he observed that firms finance their deficits with more debt when they have below-target debt than when they have above-target debt.

According to Samarakoon (1999), study reveal that the use of debt financing in Sri Lankan firms is significantly low, and this is largely due to the use of less long-term debt. He further states that lack of a developed long-term debt market may explain the low use long-term debt in Sri Lanka.

Modigliani and Miller Model (M & M Theory)

Capital structure decision is one of the important financing decision and the relationship between capital structure decisions and firm value has been widely investigated in the past few decades. Over the years, numbers of capital structure theories have been developed in order to explain the factors that affect capital structure decisions.

Modigliani and Miller (1958) is a milestone among capital structure studies. In their first propositions, Modigliani and Miller (1958) state that market is fully efficient when there is no taxes. Thus, the capital structure and financing decisions affect neither cost of capital nor market value of the firm. Therefore, the financing decisions are irrelevant when the tax is zero. In their second propositions, they maintain that interest payment of debt decrease the tax base, thus the cost of debt is less than the cost of equity. The tax advantage of debt motivates the optimal capital structure theory, which implies that firm may attain optimal capital structure and increase firm value by altering their capital structure.

Trade-off Theory

Bankruptcy and financial distress costs (Myers, 1977) and agency cost (Jensen and Meckling, 1976), constitute the basis of Trade-off theory. Trade-off theory asserts that firms set a target debt to value ratio and gradually move towards it. According to this theory, any increase in the level of debt causes an increase in bankruptcy, financial distress and agency cost, and hence decreases firm value. Thus, an optimal capital structure may be reached by establishing

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equilibrium between advantages (Tax Advantages) and disadvantages (Bankruptcy and financial distress costs) of debt. In order to establish this equilibrium firms should seek debt levels at which the cost of possible financial distress offset the tax advantages of additional debt.

Findings of Akhtar's (2005) suggest that, growth related agency cost is significant determinants of the leverage. He further observed that Bankruptcy cost is a significant determinant of leverage in case of multinational companies.

Pecking Order Theory

An alternative to the trade-off theory is the pecking order theory (Myers and Majluf, 1984). Myers and Majluf (1984) assume that there is an information asymmetry among investors. The existence of information asymmetries between the firm and likely finance providers causes the relative cost of finance to vary between the different sources of finance. For an instance, an internal source of finance where the funds provider is the firm will have more information about the firm than new equity holders. Thus, the new equity holders will expect a higher rate of return on their investment. This means that it will cost the firm more to issue fresh equity shares than using internal funds. Also managers avoid issuing new equity shares when the shares of the company are undervalued. So, outsiders tend to interpret a share issue as conveying unfavorable information as to the value of the firm. As a result, managers are reluctant to raise equity capital because it is typically followed by a decrease in valuation of the company. Similarly, this argument could be provided between internal finance and new debt holders. Therefore, the pecking order theory states that firms prefer internal to external financing and debt to equity, if they issue securities. When firms use external funds, first they prefer issuing the safest security that is debt, then convertible securities and equity as last resort. They use external financing only when their internal funds are insufficient.

Titman and Wessels (1988), as well as Rajan and Zingales (1995), whose works are referred to as the most important empirical studies in the field, find strong evidence and consistence with pecking order behavior. According to Viviani (2008), observation about the French wine industry suggests that Pecking order theory seems to better explain leverage of French wine companies. Byoun, (2008) conclude that adverse selection costs associated with the information asymmetry influence firm's capital structure adjustment decision- but not in the manner hypothesized by the traditional Pecking order theory. Thus, adverse selection costs, along with other costs and benefits, must be part of a unified theory of capital structure.

The trade-off theory underlines taxes, while the pecking order theory emphasizes asymmetric information. Several studies investigated the empirical validity of these theories. In these studies identified that capital structure of a firm is related to factors such as growth opportunities, firm size, profitability, free cash flows, and net commercial credit position (interenterprise debt). These determinants are analysed under Trade-off and Pecking Order theories as follows,

Determinants of Capital Structure

In this section, paper present a brief discussion of the attributes that different theories of capital structure suggest may affect the firm's debt-equity choice. These attributes are denoted asset structure, growth, size, earnings volatility, inter-enterprise debt, effective tax rate and profitability. The attributes, their relation to the optimal capital structure choice, and their observable indicators are discussed below.

Growth Opportunities

Growth opportunities represent non-collateralisable assets. Firms with a high proportion of non-collateralisable assets (such as growth opportunities or intangible assets) could find it more difficult to obtain credit because of the asset substitution effect (Titman and Wessels 1988). According to Trade-off theory, firms with high growth opportunities use less debt and there is negative relationship between growth and debt ratio. But according to the Pecking order theory, growing firms place a greater demand on internally generated funds of the firm. Consequently, firms with relatively high growth will tend to issue safest security that is debt. This should lead to firms with relatively higher growth having more debt. Therefore according to the Pecking order theory there is a positive relationship between growth and debt.

Esperanca, (2003), Mazur, (2007), Viviani (2008), observed a positive relationship between growth and debt ratio. Gaud, et al., (2003), Deesomsak, et al., (2004), observed a negative relationship between growth and debt ratio. Empirical evidence in support of the negative relationship can be found in Titman and Wesssels (1988), Rajan and Zingales (1995).

According to the research findings of Karadeniz, et al., 2009, growth opportunities do not appear to be related to the debt ratio. Samarakoon (1999) state that growth opportunities are not determinants of leverage.

Share of fixed Assets

Share of fixed assets refers the degree to which firm's assets are tangible and generic should result in the firm having a greater liquidation value. Company can use these assets as collateral to financial institution and access to debt with out any adverse terms and at lower rates, especially in long term borrowing. Firms with large proportions of tangible assets are likely to face low costs of debt because the presence of collateralisable assets reduces the scope for asset substitution (Titman and Wessels 1988). The amount of physical assets in place such as plant and equipment may show creditors that these assets are being gainfully employed. Because lodging firms usually have a majority of their capital invested in fixed assets, it follows that the direct

relationship between the use of debt and the amount of physical assets employed should operate for lodging firms (Upneja & Dalbor, 2001).

Therefore according to the trade-off theory, there is a positive relationship between leverage and share of fixed assets. Pecking order theory also suggests that there is a positive relationship between long-term debt financing. But there is a negative relationship between short-term debts financing, because firms with few tangible assets should be more sensitive to the informational asymmetries.

Gaud, et al., (2003), Viviani (2008), observed a positive relationship between tangibility and debt ratio. Esperanca, (2003) observed a strong positive relationship between tangibility and debt ratio. Deesomsak, et al., (2004) observed a positive relation between leverage and tangibility, but it is not statistically significant. But they noted there is a variation among different countries. Results obtained for developed countries (Rajan and Zingales 1995; Titman and Wessels 1988) confirm positive influence of assets structure on debt ratios.

Karadeniz, et al., (2009); Akhtar (2005), Mazur, (2007), finding suggest that share of fixed assets are negatively related to the debt ratio. Samarakoon (1999) state that tangibility is not related to the leverage.

Effective Tax Rates

According to M & M theory, interest payment of debt decrease the tax base, thus the cost of debt is less than the cost of equity. Therefore there is positive relationship between debt and effective tax rate. Trade-off theory seek debt levels at which the cost of possible financial distress offset the tax advantages of additional debt. Hence, there is positive relationship between debt and effective tax rate. But Pecking order theory does not specify any relationship between effective tax rate and debt ration. Karadeniz, et al., 2009, finding suggest that effective tax rate is negatively related to the debt ratio.

Firm size

Another consideration may be firm size. Debt issues have a significant fixed cost component that may not be afforded by smaller firms. Moreover, larger firms have a more diluted ownership structure, encouraging the use of debt as the potential for personal bankruptcy losses decreases. Lower the bankruptcy cost allows firms to take advantage of leverage. Also larger firms are well diversified and have a lower probability of experiencing financial distress. Small firms are subject to severe asymmetric information problems and have less access to external funds than do large firms, while large firms have relatively easy access to the capital market. Thus, small firms incur much higher costs of issuing debt or equity (Titman and Wessels (1988)) and are more likely to face liquidity constraints on real investment than are large firms. Smaller firms may find it relatively more costly to resolve informational asymmetries with

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lenders and financiers, which discourages the use of outside financing (Titman, 1998) and should increase the preference of smaller firms for equity relative to debt (Rajan and Zingales, 1995). However, this problem may be mitigated with the use of short-term debt (Titman and Wessels, 1988). Relative bankruptcy costs and probability of bankruptcy (larger firms are more diversified and fail less often) are an inverse function of firm size (Titman and Wessels, 1988). A further reason for smaller firms to have lower leverage ratios is that smaller firms are more likely to be liquidated when they are in financial distress.

Therefore according to the trade-off theory, there is a positive relationship with firm's debt ratio. Because of the less information asymmetry in large firms, their cost of capital should be less than small firms. Therefore, according to the pecking order theory, there is negative relationship between firm size and debt ratio.

Gaud et al., (2003); Akhtar (2005), Deesomsak et al., (2004), Samarakoon (1999), Panno (2003), observed a positive relationship between size and debt ratio. Mazur (2007), observed a negative relationship between size and debt ratio. According to the research findings of Karadeniz, et al., 2009, Viviani (2008), firm size does not appear to be related to the debt ratio.

Profitability

High profitability levels allow firms to increase the borrowing capacity. This situation uses tax-shied. Therefore, trade-off theory implies a positive relationship between profitability and debt ratio. In addition, if past profitability is a good proxy for future profitability, profitable firms can borrow more as the likelihood of paying back the loans is greater. According to Pecking order theory, high profit firms outperform than low profit firm due to use of retained earnings in internal financing. Therefore, pecking order theory implies a negative relationship with debt ratio. Panno (2003) observed some evidence that the profitability of firms exerts a positive influence on firm's borrowing decisions.

Karadeniz et al., (2009); Gaud et al., (2003); Esperanca (2003), Deesomsak et al., (2004), Samarakoon (1999), finding suggest that profitability is negatively related to the debt ratio. Akhtar (2005), Viviani (2008), observed a negative and highly significant coefficient on the profitability variable. This provided a strong support to Pecking Order theory. Mazur (2007), observed a negative relationship between size and debt ratio. Viviani (2008), observed a negative impact of profitability on Leverage. Titman and Wessels (1988), as well as Rajan and Zingales (1995), whose works are referred to as the most important empirical studies in the field, find strong negative relationships between debt ratios and profitability.

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Volatility/Business Risk

Many authors have also suggested that a firm's optimal debt level is a decreasing function of the volatility of earnings. Therefore, the risk position of a company is a potentially important determinant in the capital structure. Business risk can be twofold, first with more variable cash flows and the second with high earning volatility causes to avoid excessive debt levels. Business risk is usually reported to be inversely related to debt ratio. Since the higher volatility in earning indicates that probability of bankruptcy increases. According to the Trade-off theory, the firms with higher income volatility have lower leverage (Titman & Wessels, 1988). Firms with high operating risk can lower the volatility of the net profit by reducing the level of debt. Pecking order theory states a negative relationship between volatility and leverage. Firms with high volatility in earnings of results try to accumulate cash during the good years, to avoid underinvestment issues in the future.

Net commercial credit position (inter-enterprise debt)

In the pecking order theory net commercial credit position is accepted as an internal fund, since net commercial credit position is internal funds that arise from lending and borrowing activities in the firm. In this sense, this theory suggests a negative relationship between net commercial credit position and debt ratio.

Data & Methodology

Data

The variables discussed in the previous section were analyzed over the 2004 through 2009 time period. The source of data is from the "Published Annual Reports and obtained from Colombo Stock Exchange (CSE). Also the hotel sector share index is also from Colombo Stock Exchange (CSE). This paper uses a panel data for period. The data set includes 6 years time series observation of listed Hotels in Sri Lanka for the period from 2009 to 2015. This study will exclude recently listed hotels due to non availability of financial information.

Sample selection and Problems

Lack of consistence in accounting principals and the revaluation adjustment will badly effect to the consistency over the sample. Smaller population and sample size is another issue. Total listed companies in the hotel sector are about 32 companies including holding companies. Out 32, some companies listed very recently and the data is not available for 7 years. Therefore, this study will consider only 25 listed companies.

Measures of Capital Structure & Variables

This section describes the measures of each variable in line with the past research in order to maintain the consistency over the findings.

Measures of Leverage

Two measures of financial leverage are used in this study. They are long-term liabilities to total assets and total liabilities to total assets. The debt ratio is defined as the book value of liabilities divided by the book value of total assets. This variable represents the share of liabilities in total assets of a company and is widely used in capital structure studies.

The explanatory variables are specified as follows,

Growth

Growth opportunities (GROWTH) are defined as the market-to-book value of assets. Other proxies also have been used in the literature, such as R&D and marketing expenses, or capital expenditures (Titman and Wessels, 1988), but such items are difficult to measure from published financial statements, and hence are not considered in this study.

Share of fixed Assets (tangibility)

Capital structure theories argue that the type of assets or share of assets owned by a company in some way affect its capital structure. Tangibility is defined as the net fixed tangible assets divided by total assets.

Effective tax rates

Effective tax rate is another important determinant of the leverage as per M & M theory. It can be defined as the corporate income tax liability divided by profit before tax.

Firm size

Study uses the natural logarithm of sales as proxy for size (SIZE). This measure is the most common proxy for size (Titman and Wessels, 1988; Rajan and Zingales, 1995). An alternative proxy could be the natural logarithm of total assets, but it is subject to more accounting problems.

Profitability (Return on assets (ROA)

The best proxy is the return on total assets, which is calculated as the ratio of EBIT to total assets (Rajan and Zingales, 1995). But due to lack of information, this study would consider the earning before taxation (EBT) to total assets as a proxy for ROA.

Volatility/Operating Risk

This study will consider the deviation of the profit from market return as proxy for leverage. Market return will calculate based on the Share Index changes in the Hotel Sector. Average market return is the annual average of the index. Titman and Wessels, 1988) use volatility of the profit as proxy for operating risk.

Net commercial credit position

Net commercial credit position (inter-enterprise debt) defined as the difference between commercial receivables and liabilities divided by total assets.

The Model Specification

The above discussed a number of determinants and their indicators that may in the theory which affect a firm's capital structure. But, the theories do not specify the functional forms describing how the determinants relate to the indicators and the leverage ratio. The statistical procedures are used to estimate the model require that these relations be linear. This study uses explanatory variables to proxy for the determinants of capital structure and posits that leverage can be explained by the following variables.

Leverage [Firm *it*] = $\alpha + \beta$ GROW *it* + β TANG *it* + β ETR *it* + β FS *it* + β ROA *it* + β IED *it* + β OPR *it* + ε *it*

where i stand for the i th firm, t indicates time period, and the variables are defined as follows:

DR i t = debt ratio of firm i at time t,

GROW i t = growth opportunities of firm i at time t,

FS i t = logarithm of the sales of firm i at time t,

TANG i t = share of fixed assets of firm i at time t,

EFT i t = effective tax rate of firm i at time t,

ROA i t = return on assets of firm i at time t,

OPR i t = volatility of firm i at time t,

IED i t = net commercial credit position of firm i at time t,

 ε *it* = stochastic error term for firm i at time t.

Empirical results

Tests for stationarity

Unit root tests are important in examining the stationarity of panel series. In general, a stationary series is considered to have a constant mean and variance and time invariant covariances. To test for stationarity this study applied the well-known Augmented Dickey-Fuller (ADF) tests which are now standard in time series applications. The tests were applied with a constant or intercept.

For the ADF statistic indicates that the null hypothesis contains a unit root cannot be rejected at the 95 per cent at 1st difference. I therefore conclude that the first difference of each series is stationary and that this transformation is appropriate for estimation purposes. All the estimations undertaken in this study are therefore based on the stationary series.

Descriptive Statistics

Next, the report presents the descriptive statistics of the dependent variable and independent variables considered in the study of the capital structure determinants of listed hotel companies for the period 2009 to 2015. The results are presented in Table I. It is observed that volatility of variables is very low, since the respective standard deviations are less than the respective averages. It should be noted that the debt of listed hotel companies represents values on average of 0.2560, with a minimum value of 0.0103 and maximum of 1.5448. This evidence suggests that the leverage in hotel companies is significantly low and the results support Samarakoon (1999). Most of the hotel companies, select short term financing such as bank loans and other sources to finance their short term financing problems.

| | DR | GROW | TANG | ETR | FS | ROA | OPR | IED |
|-----------|--------|---------|--------|---------|--------|---------|---------|---------|
| Mean | 0.2560 | 1.1701 | 0.7869 | 0.3653 | 8.3748 | 0.0288 | 0.3479 | -0.0101 |
| Median | 0.2122 | 0.8679 | 0.8314 | 0.0361 | 8.3128 | 0.0217 | 0.3399 | 0.0029 |
| Maximum | 1.5448 | 6.5279 | 3.0721 | 48.5234 | 9.8203 | 0.4244 | 1.1589 | 0.0882 |
| Minimum | 0.0103 | -3.6797 | 0.0560 | -2.9288 | 7.0988 | -0.5254 | -0.5153 | -0.4205 |
| Std. Dev. | 0.2304 | 1.2456 | 0.2733 | 3.6800 | 0.5076 | 0.0844 | 0.3581 | 0.0604 |
| Skewness | 2.8813 | 1.2755 | 2.5019 | 13.0240 | 0.6396 | -0.7841 | 0.0401 | -3.0751 |

Table I – Descriptive Statistics

Note: Table presents descriptive statistics for each explanatory variable. The data are from CSE (Colombo Stock Exchange) and the sample contains 25 hotel firms listed on the CSE for which the study has a seven consecutive years of data for the period 2009-2015. Debt rate (DR) is the ratio of total debt to total assets where the total assets are

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measured with book values. ETR = Effective tax rate, FS = firm size, GROW = growth opportunities, IED = Inter-enterprise Debt, OPR= operational risk (volatility), ROA = return on assets, TANG = tangibility.

Simple Regression results

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Estimates from the simple regression estimation method are presented in Table II. The results presents in Table I suggest that GROW, IED and ROA are negatively related to debt ratio of hotel companies with significant parameter estimates. On the contrary, TANG, ETR, FS and OPR have insignificant parameter estimates at the 5 per cent level and do not appear to be related to the debt ratio of hotel companies.

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Table II– Simple Regression results

| Description | GROW | TANG | ETR | FS | ROA | OPR | IED |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Coefficient | -0.017224 | -0.032252 | -0.000088 | -0.007425 | -0.225695 | -0.009185 | -0.707490 |
| P-value | 0.040400 | 0.393600 | 0.957400 | 0.870900 | 0.025400 | 0.757300 | 0.003500 |

Note: Table simple regression estimates of Debt rate versus each explanatory variable. The data are from CSE (Colombo Stock Exchange) and the sample contains 25 hotel firms listed on the CSE for which the study has a seven consecutive years of data for the period 2009-2015. Debt rate (DR) is the ratio of total debt to total assets where the total assets are measured with book values. ETR = Effective tax rate, FS = firm size, GROW = growth opportunities, IED = Inter-enterprise Debt, OPR= operational risk (volatility), ROA = return on assets, TANG = tangibility.

The trade-off theory hypothesizes a negative relationship between Growth opportunities and debt level, while the pecking order theory specifies a positive relationship between them. The results show a negative relationship between these two variables for the hotel companies. Empirical evidence in support of the negative relationship can be found in Titman and Wesssels (1988), Rajan and Zingales (1995). This provided a strong support to trade-off theory.

The estimates regarding the ROA suggest that it is negatively related to debt ratio. This result is consistent with the prediction of the pecking order theory. The results also do not support the prediction of the trade-off theory that the RAO is negatively related to the debt ratio. Empirical evidence in support of the negative relationship can be found in Karadeniz et al., (2009); Gaud et al., (2003); Esperanca (2003), Deesomsak et al., (2004), Samarakoon (1999), finding suggest that profitability is negatively related to the debt ratio. Akhtar (2005), Viviani (2008), observed a negative and highly significant coefficient on the profitability variable. This provided a strong support to Pecking Order theory.

The pecking order theory hypothesizes a negative relationship between net commercial credit position and debt level, while the trade-off theory does not specifies a relationship between them. The results show a negative and highly significant relationship between these two variables for the hotel companies. This provided a strong support to Pecking Order theory.

Multiple Regression results

Before discussing the results, it seems logical to review the correlation matrix of the variables used in the regression analysis as a preliminary check of the model. The correlation coefficients are shown in Table III. The correlation matrix does not indicate multicollinearity issues between the variables.

| | С | ETR | FS | GROW | IED | OPR | ROA | TANG |
|-------|---------|--------|---------|---------|---------|---------|---------|---------|
| С | 0.0001 | 0.0000 | 0.0001 | 0.0000 | 0.0000 | -0.0001 | -0.0003 | 0.0000 |
| ETR1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0000 | 0.0000 | 0.0000 |
| FS1 | 0.0001 | 0.0000 | 0.0027 | 0.0000 | 0.0009 | 0.0002 | -0.0032 | -0.0002 |
| GROW1 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 | 0.0000 | -0.0001 | 0.0001 |
| IED1 | 0.0000 | 0.0001 | 0.0009 | 0.0002 | 0.0663 | 0.0008 | -0.0111 | -0.0010 |
| OPR1 | -0.0001 | 0.0000 | 0.0002 | 0.0000 | 0.0008 | 0.0008 | 0.0001 | -0.0001 |
| ROA1 | -0.0003 | 0.0000 | -0.0032 | -0.0001 | -0.0111 | 0.0001 | 0.0156 | 0.0007 |
| TANG1 | 0.0000 | 0.0000 | -0.0002 | 0.0001 | -0.0010 | -0.0001 | 0.0007 | 0.0016 |
| AR(1) | 0.0000 | 0.0000 | -0.0006 | 0.0001 | 0.0041 | -0.0001 | 0.0019 | -0.0001 |

Table III. Correlation Matrix of OLS Regression Variables

Note: The table reports the Pearson correlation coefficients for the different variables used in the regression analysis. ETR = Effective tax rate, FS = firm size, GROW = growthopportunities, IED = Inter-enterprise Debt, OPR= operational risk (volatility), ROA =return on assets, TANG = tangibility.

Estimates from the multiple regression estimation method are presented in Table IV. The results show the relationship between debt ration versus each explanatory variables.

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| | С | ETR | FS | GROW | IED | OPR | ROA | TANG |
|-------------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
| Coefficient | 0.011068 | -0.001098 | 0.051604 | -0.021226 | -0.696416 | -0.018967 | -0.191074 | -0.049541 |
| P-Value | 0.1487 | 0.5097 | 0.3262 | 0.0119 | 0.0078 | 0.5105 | 0.1292 | 0.2132 |

 Table IV: Multiple Regression Estimators

Note: Table presents multiple regression estimators for each explanatory variable. The data are from CSE (Colombo Stock Exchange) and the sample contains 25 hotel firms listed on the CSE for which the study has a seven consecutive years of data for the period 2009-2015. Debt rate is the ratio of total debt to total assets where the total assets are measured with book values. ETR = Effective tax rate, FS = firm size, GROW = growth opportunities, IED = Inter-enterprise Debt, OPR= operational risk (volatility), ROA = return on assets, TANG = tangibility.

The results presents in Table IV suggest that growth opportunities (GROW) and net commercial credit positions (IED) are negatively related to debt ratio of Sri Lankan hotel companies with significant parameter estimates. A simple regression analysis result presents a negative significant relationship between profitability (ROA) and leverage. But the multiple regression shows negative insignificant relationship with the debt ratio. Tangibility, effective tax rate (ETR), firm size (FS) and volatility of earnings (OPR) have insignificant parameter estimates at the 5 per cent level and do not appear to be related to the debt ratio of hotel companies.

The results show a negative relationship between Growth opportunities (GROW) and debt level for the hotel companies. Empirical evidence in support of the negative relationship can be found in Titman and Wesssels (1988), Rajan and Zingales (1995). This provided a strong support to trade-off theory. This result was expected that the sign would be negative, similar to other firms and also to restaurant firms (Upneja & Dalbor, 2001). It is possible that hotel companies find it more convenient to finance fixed assets with debt. As the market value increases, firms will want to expand but do not have enough internal funds to finance growth and choose debt. Additionally, it may be the case that even though hotel firms have growth opportunities, they are better off using more debt. Hotel firms are generally fixed-asset intensive with large incremental investment expenditure requirements. The use of debt may be better for the owners, because the additional cash investments are prohibitively large and debt is readily available for large firms that invest in tangible assets (Upneja & Dalbor, 2001).

The results show a negative and highly significant relationship between net commercial credit (IED) position and debt level for the hotel companies. This provided a strong support to Pecking Order theory. The estimates of coefficient of IED are significant and negative, which is consistent with the prediction of the pecking order theory. These results indicate that most of the hotel companies seek external financing only to face the working capital requirements. As long

as their working capital is sound, debt financing is not important. Also they preferred bank financing in all most all the cases.

The study does not detect a significant relationship between Tangibility (TANG) and debt level in both the simple and multiple regression analysis. Thus, in regard to tangibility and debt level, the finding supports neither the pecking order nor the trade-off theory. Likewise, our findings are not in line with the empirical studies that found a positive relationship (Rajan and Zingales 1995; Titman and Wessels 1988) or a negative relationship Karadeniz et al., (2009); Akhtar (2005), Mazur (2007) between tangibility and debt level. Nevertheless, Samarakoon (1999) state that tangibility is not related to the leverage. Thus, finding supplements the result in Samarakoon (1999). This may be due to the existence of practice, which leads to less weight being given to collateral in lending decision (Samarakoon (1999)).

The study does detect a significant relationship between effective tax rate (ETR) and debt level in both the simple and multiple regression analysis. Thus, in regard to ETR and debt level, finding does not support the trade-off theory. Likewise, our findings are not in line with the empirical studies that a negative relationship Karadeniz et al., (2009).

The study does not detect a significant relationship between firm size (FS) and debt level in both the simple and multiple regression analysis. Thus, in regard to firm size and debt level, the finding supports neither the pecking order nor the trade-off theory. Likewise, our findings are not in line with the empirical studies that found a positive relationship Gaud et al., (2003); Akhtar (2005), Deesomsak et al., (2004), Samarakoon (1999), Panno (2003) or a negative relationship Mazur (2007) between firm size and debt level. Nevertheless, Karadeniz et al., 2009, Viviani (2008) state that firm size is not related to the leverage. Thus, finding supplements the result in Karadeniz et al., 2009, Viviani (2008). Firm size was not found to be a significant factor in the selection of long-term debt for hotel firms (Upneja & Dalbor, 2001) and further state that the type of assets financed is more significant for hotel firms than firm size. These results do not support the Samarakoon (1999), as he observed positive significant relationship between leverage and size irrespective of the definition of size. This may be due to industry specific nature or any other reason.

The study does detect a significant relationship between volatility (OPR) and debt level in both the simple and multiple regression analysis. Thus, in regard to volatility and debt level, the finding supports neither the pecking order nor the trade-off theory. My findings are in line with the empirical study that does not find any significant impact by Viviani (2008).

The study does not detect a significant relationship between profitability (ROA) and debt level in both the simple and multiple regression analysis. Thus, in regard to profitability and debt level, the finding supports neither the pecking order nor the trade-off theory. The findings are not

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in line with the empirical studies that found a positive relationship Panno (2003) or a negative relationship Karadeniz et al., (2009), Gaud et al., (2003), Esperanca (2003), Deesomsak et al., (2004), Samarakoon (1999), Akhtar (2005), Viviani (2008), and Mazur (2007).

Generally, these findings seem to support predictions of the pecking order theory rather than the trade-off theory. Nevertheless, both the trade-off and the pecking order theory fail to fully explain the capital structure of hotel companies in Sri Lanka.

Conclusions

The results are not conclusive; they serve to document empirical regularities that are consistent with existing theory. In particular, we find that debt levels are negatively related to the "growth opportunities" of hotel companies. This evidence is consistent Titman (1988) that Firms with a high proportion of non-collateralisable assets (such as growth opportunities or intangible assets) could find it more difficult to obtain credit because of the asset substitution effect. The results also indicate that net commercial credit position may be an important determinant of capital structure choice. The net commercial credit position is accepted as an internal fund, since commercial credit positions are internal funds that arise from lending and borrowing activities in the firm. The debt ratio was shown to be negatively related to profitability, possibly high profit firms outperform than low profit firm due to use of retained earnings in internal financing.

The results do not provide support for an effect on debt ratios arising from volatility, tangibility, firm size or effective tax rate. This may be due to the industry specific characters as Upneja & Dalbor, (2001) or due to definition of the determinants.

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