Listed Banks of Bangladesh

Determinants of Capital Structure: Empirical Evidence from Listed Banks of Bangladesh

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Abstract

Financing decision is one of the vital decisions that organizations need to take. Finance executives often require to decide the optimal level of debt and equity so that the performance of the firm gets maximized. This study intends to find the determinants of optimum capital structure from the perspective of Bangladesh in banking industry. For this purpose, Debt to Equity Ratio (DER) is taken as dependent variable, while firm size, profitability, growth, firm age, tangibility of assets and liquidity are taken as independent variables. Relevant data has been collected from the annual reports of 25 listed banks of Bangladesh from the year 2013 to 2017. The results of OLS regression reveal the significant negative relationship of firm size, profitability and tangibility with Debt to Equity ratio (DER), whereas positive relationship between firm age and DER. Other two variables, such as liquidity position and growth of firms are not found as significant determinants for capital structure decision. The results indicate that large firms with high profitability and tangibility are prone to utilize equity capital, whereas aged firms are inclined to use debt financing.

Keywords: Capital Structure, Firm Performance, Debt to Equity.

1. Introduction

Capital structure is considered as one of the most important factors for an organization because it can affect the financial position of the company and the stakeholders' value. As the organizations try to maximize their benefits or profits, the managers are expected to choose the optimal level of debt and equity. When the firm chooses to use the high debt financing, it might face high interest payment obligation. On the other hand, using more

equity can be a cause of less profitability because debt financing has tax deductibility feature unlike equity financing. So, identifying the optimal capital structure is an important area of research.

Besides, capital structure provides the signals to the market that might affect the overall value of the firm. For instance, if a firm is interested to exchange debt for equity, it may aggrandize the value of the firm or relinquish the firm risk, because a signal may reach to the market regarding the rise of debt capacity (Myers, 1984). Several researchers have tried to find the optimal capital structure of the firm over these years, but no specific way has been found for executive to determine optimal capital structure in accordance of Sheikh and Wang (2011). Therefore, Simerly and Li (2000) stated that selecting an effective capital structure is a complicated decision for any organization.

Most of the previous studies found the determinants of capital structure from the perspective of developed countries like UK, New Zeland, USA, Canada and others (Fauzi, 2013; Myers, 1984; Rajan and Zingales, 1995 and Hovakimian et al., 2004), while a few researchers carried out related research in developing nations like India, Pakistan, Srilanka, Iran, and so on (Gupta & Gupta, 2014; Sayılgan et al., 2006; Mishra, 2011; Booth et al., 2001; Huang and Song, 2006). But, research on finding the determinants of optimal capital structure has not been yet executed in Bangladesh. Many factors segregate Bangladesh from other nations including ownership structure of firms, regulations, corporate governance practice, external factors (export and import, trade systems etc.). So, it is essential to find the nature of capital structure of banking companies of Bangladesh along with the factors attribute to such structure. So, this research has been initiated by using data from banking industry of Bangladesh to fill the mentioned research gap.

This paper will contribute to the relevant capital structure literature in several ways: First, this paper will be a rectification for the lack of capital structure related research in Bangladesh. Second, it will provide the significant evidence regarding the maze of capital structure in Bangladesh. Third, the study identifies important determinants of capital structure. This paper starts with an introduction part in section 1 followed by literature review and hypothesis development in section 2, whereas Section 3 displays research design/method that include the sample selection, research model, definition of the variables and the collection of the data. Section 4 tests the empirical results that include the descriptive statistics, correlation matrix and regression results. Finally, Section 5 represents the conclusion along with precise findings.

2. Literature Review and Hypothesis Development

2.1 Literature Review

Financing decisions are often appeared as complex decisions for management because high amount of debt can cause an increase in interest expense or low amount of debt can raise in corporate tax payment. So, the optimal level of debt and equity must be managed with efficacy in an organization. This optimum amount of debt and equity in capital structures mainly depends on different factors or determinants. Ahmed et al. (2010) found that profitability, size, age, risk and liquidity are important determinants of capital structure. Omet et al. (2015) found that size, growth, profitability and tangibility are significant determinants of capital structure when working with Saudi 100 and Palestinian 24 firms from 2006 to 2012. They found positive relationships of capital structure with growth and size, and negative relations with profitability and tangibility of the firm. Qaisi & Shubita (2013) found capital structure of business has positive relation with firm size but negative relation with profitability. In addition to this, Alzomaia (2014) also stated that size, growth, leverage, tangibility and profitability are prominent determinants of capital structure, finding positive relationships of capital structure with size and growth and negative relationships with tangibility and profitability. Mishra (2011) worked on 48 profit making manufacturing companies during 2011 and found negative association of capital structure with profitability, tax, and firm size but a positive association with growth. These results are identical with the studies of Gupta & Gupta (2014) who worked 25 Indian construction companies from 2008 and 2013. Besides, Fziau et al. (2013) studied on 79 listed firms of New Zealand during 2013 and found mostly negative relationships of capital structure with tangibility, profitability, ownerships, firm size, but a positive relation with growth of the firms. These results are almost similar to the result of Alipour et al. (2015) who studied the capital structure determinants on total 1,562 firm-year observations from 2003 to 2007 in Iran.

Kariuki & Kamau (2014) found positive association with growth but negative association with firm size and no relation with tangibility and profitability. Sayılgan et al. (2006) identified that growth, firm size profitability, tangibility and non-deducted tax are prominent determinants of capital structure, while Pratheepan & Banda (2016) found approximately same result while studying with 55 listed companies of Colombo Stock Exchange and the obtained results are identical mostly with the study of Sheikh & Wang (2011).

Table-1: Summary of Literate Review

Author(Year)	Country	Methodology	Overall Findings
Omet et al. (2015)	Saudi and Palestinian	Panel data, OLS regression	Capital structure is positively related with size, growth, but negatively related with profitability and tangibility.
Alzomaia (2014)	SAUDI ARABIA	Panel data, OLS regression	Capital Structure is positively associated with firm size, Growth, Leverage, but it is negatively related with Tangibility and Profitability.
Gupta & Gupta (2014)	India	Panel data, OLS regression	Capital Structure is negatively related with Growth, Firm Size, Profitability, Tangibility, but positively related with NDTS.
Kariuki & Kamau (2014)	Kenya	Multiple Regression Analysis	Capital Structure is negatively related to firm size, but negatively related with growth.
Fauzi (2013)	New Zealand	Panel data, OLS regression	Capital Structure is negatively related to Tangibility, NDTS, ROA, ownership structure, firm size but negatively related with growth.
Mishra(2011)	India	Panel data, OLS regression	Capital Structure is negatively related to ROA, Tax, Firm Size, but positively related to Growth rate.
Ahmed et al. (2010)	Pakistan	Panel data, OLS regression	Capital Structure is negatively related to ROA, Liquidity, Firm age, but positively related to firm size.

Source: Prepared by authors

2.2 Hypotheses development

Firm Size: Size of a firm has significant impact on firm's capital structure. Big firms have greater access to different types of capital whereas smaller firms may mainly depend on equity financing. Titman and Wessels (1988) said that debt to equity ratio should have positive relationship with size, because large firms have tendencies to be well diversified and have minimum variance of earnings that enable them to tolerate maximum debt. However, Marsh (1982) stated that large firms have greater access to equity funding than those of small firms.

Several researchers came to conclusions that capital structure is positively related with the size of the firm (Yu and Aquino, 2009; Du and Dai, 2005; Huang and Song, 2006; Ezeoha, 2011; Hovakimian et al., 2004; Agrawal and Nagarajan, 1990). On the other hand, Deloof and Overfelt (2008); Rajagopal (2011) found a negative relationship between capital structure and firm size may be because of the fact that a larger company has the capability of getting financed through the issuance of stocks instead of issuing of debt; so, a large-sized firm usually use minimum amount of debt in its capital.

From the above discussion, the following hypothesis can be derived:

H1: There is a relationship between firm size and capital structure.

Profitability: Modigliani and Miller (1958) provided their research work on the conflict between capital structure and profitability. Over the years, several researchers revealed that profitability is positively related to capital structure, while few researchers found that the profitability has significant negative relationship with capital structure. It is presumed that greater profitable firms should have higher leverage and debt because firms with great profitability are less prone to bankruptcy.

Various researchers like Chiang et al. (2010), Jordan et al. (1998), Margaritis and Psillaki (2007), Reinhard and Li (2010) found positive relationship between capital structure (debt) and profitability. On the other hand, Strebulaev (2007), Rajan and Zingales (1995), Viviani (2008), Graham (2000), Sheikh and Wang (2011), Lasfer (1999), Amidu (2007); Ezeoha (2008), Eldomiaty (2007), Sogorb-Mira and How (2005), Huang and Song (2006), Al-Najjar and Taylor (2008) confirmed significant negative relationship between capital structure (debt) and profitability of the firms. Based on the above discussion, the following hypothesis can be inferred:

H2: There is a relationship between profitability and capital structure

Tangibility: Capital structure theories recognized that the tangibility is significantly related to capital structure (debt). Several researchers including Rajan and Zingales (1995), Titman and Wessels (1988) revealed that tangibility of the firm must be a significant factor for determining the capital structure (leverage). Moreover, if tangible assets of a company are higher, then these tangible assets may be used as collateral in getting loan by reducing the risk of lenders regarding defaults. Therefore, the higher amount of tangible assets may give the enrichment of higher debt in capital structure of a company.

Um (2001) in Korea reported a positive relationship between tangibility and leverage followed by Bevan and Danbolt (2002) who also found a positive relationship between tangibility and long-term debt. On the other hand, Smith (2012) and Bayrakdaroglu et al. (2013) found negative relationship. Based on above discussion, our next hypothesis to test is:

H3: There is a relationship between tangibility and capital structure

Liquidity: Firms should hold enough liquidity by financing debt capital to meet the commitments; hence, there might have positive relationship between capital structure and liquidity. On the other hand, Myers and Rajan (1998) argued and stated a negative relationship between liquidity and capital structure that indicates if liquidity of a company is high, creditors from outside would diminish the debt financing in capital structure. This result is similar to the studies of Eldomiaty and Azim (2008), Deesomsak et al. (2004), Eriotis et al. (2007) and Sheikh and Wang (2011). Based on the above explanations the following hypothesis can be formulated:

H4: There is a relationship between liquidity and capital structure

Growth: A growing firm has the maximum opportunity to collect funds externally. It means that firms with higher growth rate may have higher leverage. Viviani (2008) found that firms with higher growth opportunities would have more option to get financed through debt and the result is consistent with the study of Rajan and Zingales (1995). Heshmati, (2001), Cassar and Holmes (2003), Karadeniz et al. (2009), Amidu (2007) experienced significant positive relationship between growth and capital structure. On the other hand, Lasfer (1999), Ooi (1999) and Huang and Song (2006), Berens and Cuny (1995) and Deesomsak et al. (2004) revealed significant negative relationship between capital structure (debt) and growth rate. Based on the above discussed theories, we can derive the following hypothesis:

H5: There is a relationship between firm's growth and capital structure.

Firm Age: Age of the firm may have significant positive effect on capital structure. Chadha & Sharma (2015), Kayo & Kimura (2011) mentioned that firm age must be a significant factor in making capital structure decision. Abor and Biekpe (2009) experienced that age of the firm is important determinant in obtaining debt. Menike (2015), Bhaird and Lucey (2010) found a positive relationship between debt and age of the firm, while Ahmed et al. (2010) experienced a reverse relation. So, out next hypothesis to test is:

H6: There is a relationship between firm age and capital structure.

3. Research Method

Based on the objectives and hypotheses proposed, in the next section we explain the sample, data collection and data analysis methods to test the hypotheses and the estimation model.

3.1 Sample Selection and data collection

Total 30 banks are listed in Dhaka Stock Exchange till now. Among these 30 banks, the researchers could collect necessary data from the annual reports of 25 listed banks from the year of 2013 to 2017. So, final data consists total 125 company year observations.

The information regarding total debt and total equity are taken from the balance sheet of listed banks. Besides, the data for computing FS, ROA, TA, LQ, GR and FA are taken from income statement and balance sheet of each banks. Collected data was analyzed through correlation and multiple regression using OLS to find out the relationship among the variables.

3.2 Model development and definition of variables:

To examine the given hypotheses, the following capital structure model is used-

CapitalStructure=+F.Size+Profitability+Tangibility+Liquidity+Growth+F.Age +ε… (1)

In order to estimate the model (1) empirically, we obtain the following model:

DER=+FS+ROA+TA+LQ+GR+FA +ε……(2)

Here,

- DER is the Debt to Equity measured by total debt divided by total equity.
- FS is Firm Size measured by Natural Logarithm of Total Assets
- ROA is Profitability measured by net income divided by average total assets
- TA is Tangibility of assets measured by fixed assets divided by total assets
- LQ is Liquidity measured by current assets divided by current liabilities
- GR is Growth rate measured by percentage change in sales.
- FA is Firm Age measured by Natural Logarithm of firm age.

4. Empirical Results

4.1 Descriptive Statistics

Table 2 states descriptive statistics for all variables on 25 banks starting from 2013 to 2017. Firstly, the mean of debt to equity ratio (DER) is 13.76 that ranges from the minimum of 1.00 to the maximum of 161.80 with a standard deviation of 17.76. Secondly, firm size (FS) measured by total assets in million Tk. shows mean amount of Tk. 226276.80 (million), which ranges from the minimum amount of TK 6622.76 to the maximum amount of TK 899599.10 (million) with a standard deviation of 17.76.

Table-2: Descriptive Statistics

Descriptive Statistics						
	Obs.	Mean	Minimum	Median	Maximum	SD
DER	125	13.76	1.00	11.17	161.80	17.76
FS (million)	125	226276.80	6622.76	209719.40	899599.10	130188.60
ROA (%)	125	2.14	0.02	1.81	48.29	4.22
TA (%)	125	74.15	0.14	84.23	99.78	25.47
LQ	125	0.30	0.03	0.16	5.07	0.73
GR (%)	125	9.79	-52.66	9.39	49.53	13.13
FA (years)	125	24.00	12.00	20.00	56.00	10.22

Source: Calculated by the authors.

Thirdly, return on assets (ROA) is expressed in percentage form that has a mean of 2.14% and it ranges from the minimum of .02% to the maximum of 48.29% with a standard deviation of 4.22%. Moreover, the median ROA is 1.81%. Fourthly, tangibility of assets (TA) is expressed in percentage that represents the mean of 74.15%, ranging from minimum .14% to maximum 99.78% with a standard deviation of 25.47% and a median of 84.23%. Fifthly, liquidity (LQ) is presented in decimal that shows the mean of .30, ranging from the minimum LQ .03 to the maximum LQ 5.07 with a standard deviation of .73 and median of .16. Sixthly, growth rate (GR) is expressed in decimal that experienced the mean of 9.79% ranging from the minimum of -52.66% to the maximum GR

49.33% with a standard deviation of 13.13% and a median of 9.39%. Finally, firm age (FA) is expressed in years that showed the mean of 24 years, ranging from the minimum FA 12 years to the maximum FA 56 years with a standard of 10.22 years and a median of 20 years.

4.2 Pearson Correlation Coefficient:

Table 3 presents Pearson correlation coefficients that result among all variables in matrix form. Firm size (FS) is negatively associated with DER (-0.1089) that indicates the rise in FS reduces DER. Moreover, ROA, TA, LQ and GR are also negatively related to DER that indicates the increase in ROA, TA, LQ and GR results the reduction in DER in the listed banks of Bangladesh. However, FA (0.2846) is positively associated with DER that means the increase in FA results the rise in DER.

Table-3: Pearson Correlation Matrix

Pearson Correlation Matrix							
	DER	FS	ROA	TA	LQ	GR	FA
DER	1						
FS	-0.1089	1					
ROA	-0.0837	-0.4434	1				
TA	-0.1719	-0.1848	-0.0392	1			
LQ	-0.0214	0.0367	-0.0086	0.038	1		
GR	-0.011	0.1854	-0.0048	-0.0047	0.0583	1	
FA	0.2846	0.3019	-0.1344	-0.1226	-0.0543	-0.1014	1

Source: Calculated by the authors.

To check the severity of multicollinearity problem among the variables, variance inflation factor (VIF) has been calculated. Table 4 shows that there is no significant collinearity problems among the variables.

Table-4: Multicollinearity Check

Variable	VIF	1/VIF
FS	1.49	0.669658
ROA	1.28	0.781253
TA	1.06	0.940135
LQ	1.01	0.990523
GR	1.08	0.928561
FA	1.14	0.876253
Mean VIF	1.18	

Source: Calculated by authors

4.3 Multivariate Analysis

4.3.1 Determinants of Capital Structure

In this paper, determinants of capital structure is tested on the basis of FS, ROA, TA, LQ, GR and FA. Table 5 represents the multiple regression result based on OLS.

The calculated result shows that Firm size (FS) is negatively (-0.8.5785) related to DER and it is significant at 1% level. Therefore, the result supports the hypothesis 1 and the result is consistent with the studies of (Alipour et al. 2015; Kariuki & Kamau 2014; Mishra 2011; Gupta & Gupta 2014; Fziau et al. 2013). So, when firm size (FS) is higher, the firms are less dependent on debt.

Secondly, Profitability (ROA) and Tangibility (TA) are negatively (-0.8561 and -0.1418 respectively) associated with DER and the relationships are significant at 5% level respectively that are consistent with the studies of (Omet et al. 2015; Alipour et al. 2015; Alzomaia 2014; Gupta & Gupta 2014; Sayılgan et al.2006; Fziau et al. 2013). Therefore, it can be inferred that banking companies are less dependent on debt when profitability (ROA) and tangibility (TA) are high.

Table-5: Determinants of Capital Structure

	Coefficient	Standard Error	P Value
Constant	196.792	61.6909	0.002
FS	-8.5785	2.41774	0.001
ROA	-0.8561	0.39456	0.032
TA	-0.1418	0.0596	0.019
LQ	0.28188	2.01743	0.889
GR	0.11974	0.11635	0.306
FA	16.3675	4.13511	0.000
R-Square	0.1896		
Adjusted R-Square	0.1484		
No. of Obs.	125		

Table 5 illustrate coefficients from the OLS regression of capital structure which is denoted by capital structure and measured by DER., FS stands for firm size and it is calculated by using natural logarithm of total assets. Moreover, ROA stands for return on assets and it is calculated by dividing net income with average total assets, while TA (tangibility) is computed by dividing total fixed totals divided by total assets. Moreover, LQ stands for liquidity of the firm and is calculated by dividing current assets with current liabilities, whereas GR indicates growth rate that is computed by taking the percentage changes in sales. Finally, FA stands for firm age that is calculated by taking natural logarithm of firm age.

On the other hand, firm age (FA) is positively (16.3675) related to DER and it is significant at 1% level. This is the highest significant variable among all other variables considered in this study. Therefore, it can be derived that firms with higher operating lives are more dependent on debt in banking sector of Bangladesh.

Finally, Liquidity position and growth opportunity of firms have positive relationship with high capital structure but these variables are not statistically significant.

In a nutshell, it is verified that size, profitability, tangibility and age of the firms are significant determinants of capital structure in baking sector of Bangladesh. To check the robustness of these findings, robust regression has also been performed and that also confirm the above findings (see appendix-A).

Conclusion

Capital structure decision is a prominent decision because executives frequently require to decide the optimal amount of debt and equity capital to maximize the wealth of the firm. This study finds the major determinants of capital structure in banking sector of Bangladesh. It is found from empirical results of the study that firm size, profitability and tangibility of the firms are negatively associated with capital structure (DER) and the relationships are significant at 1%, 5% and 5% level respectively and the results are consistent with the studies of (Alipour 2015; Kariuki & Kamau 2014; Mishra 2011; Gupta & Gupta 2014; Fziau et al. 2013 and others). So, the results are identical with the hypotheses that there exist relationships of capital structure with firm size, profitability and tangibility of the firms and the relationships are negative. In contrast, firm age is positively related to capital structure and it is statistically significant at 1% level. So, the result does match with the hypothesis that there exists a positive relation between capital structure and firm age. To conclude, it is found that firms in banking sector of Bangladesh are less prone to utilize debt financing while the size, profitability, and tangibility of the firms are better. On the other hand, banks that were established earlier use the debt financing most.

References

Abor, J. & Biekpe, N. (2009) How do we explain the capital structure of SMEs in sub-Saharan Africa?: Evidence from Ghana, Journal of Economic Studies, 36(1), pp. 83-87.

Ahmed, N., Ahmed, Z. & Ahmed, I. (2010) Determinants of capital structure: A case of life insurance sector of Pakistan, European Journal of Economics, Finance and Administrative Sciences, 24, pp. 7–12.

Amidu, M. (2007) Determinants of capital structure of banks in Ghana: an empirical approach, Baltic Journal of Management, 2(1), pp. 67-79.

Al-Najjar, B. and Taylor, P. (2008) The relationship between capital structure and ownership structure new evidence from Jordanian panel data, Managerial Finance, 34(12), pp. 919-933.

Agrawal, A. and Nagarajan, N. (1990) Corporate capital structure, agency costs and ownership control: the case of all-equity firms, Journal of Finance, 45(4), pp. 1325-1331.

Alipour, M., Seddigh, M.F. & Derakhshan, H. (2015) Determinants of capital structure: an empirical study of firms in Iran, International Journal of Law and Management, 53(1), pp. 53-83.

Alzomaia, T. S. (2014) Capital Structure Determinants of Publicly Listed Companies in Saudi Arabia, The International Journal of Business and Finance Research, 8(2), pp.53-67.

Bayrakdaroglu, A., Ege, I., & Yazici, N. (2013) A panel data analysis of capital structure determinants: Empirical results from Turkish capital market, International Journal of Economics and Finance, 5, pp. 131-140.

Bhaird, C.M. & Lucey, B. (2010) Determinants of capital structure in Irish SMEs, Small Business Economics, 35, pp. 357–375.

Booth, L., Aivazian, V., Demirguc-Kunt, A. and Maksimovic, V. (2001) Capital structure in developing countries, Journal of Finance, 56(1), pp. 87-130.

Berens, J.L. and Cuny, C.L. (1995) The capital structure puzzle revisited, Review of Financial Studies, 8(4), pp. 1185-1208.

Bevan, A. A. & Danbolt, J. (2002) Capital Structure and its determinants in the UK-a decomposition analysis, Applied Financial Econ, 12, pp.159-170.

Cassar, G. and Holmes, S. (2003) Capital structure and financing of SMEs: Australian evidence, Accounting and Finance, 43(2), pp. 123-147.

Chiang, Y.H., Cheng, E.W.L. and Lam, P.T.I. (2010) Epistemology of capital structure decisions by building contractors in Hong Kong, Construction Innovation, 10(3), pp. 329-345.

Chadha, S. & Sharma, A.K. (2015) Determinants of capital structure: An empirical evaluation from India, Journal of Advances in Management Research, 12(1), pp. 3–14.

Deloof, M. and Overfelt, W.V. (2008) Were modern capital structure theories valid in Belgium before world war I?, Journal of Business Finance & Accounting, 35(3/4), pp. 491-515.

Du, J. and Dai, Y. (2005) Ultimate corporate ownership structures: evidence from East Asian economies, Corporate Governance, 13(1), pp. 60-71.

Deesomsak, R., Krishna, P. and Pescetto, G. (2004) The determinants of capital structure: evidence from the Asia Pacific region, Journal of Multinational Financial Management, 14 (4/5), pp. 387-405.

Eldomiaty, T. and Azim, M.H. (2008)The dynamics of capital structure and heterogeneous systematic risk classes in Egypt, International Journal of Emerging Markets, 3(1), pp. 7-37.

Eriotis, N., Vasiliou, D. and Ventoura-Neokosmidi, Z. (2007) How firm characteristics affect capital structure: an empirical study, Managerial Finance, 33(5), pp. 321-331.

Ezeoha, A.E. (2008) Firm size and corporate financial-leverage choice in a developing economy evidence from Nigeria, The Journal of Risk Finance, 9(4), pp. 351-364.

Eldomiaty, T. (2007) Determinants of corporate capital structure: evidence from an emerging economy, International Journal of Commerce and Management, 17(1/2), pp. 25-43.

Fauzi, F., Basyith, A., & Idris, M. (2013) The Determinants of Capital Structure: An Empirical Study of New Zealand-Listed Firms, Asian Journal of Finance & Accounting, 5(2), pp. 371-403.

Gupta, N. K. & Gupta, H. (2014) Determinants of Capital Structure: Evidence from Indian construction companies, Elk Asia Pacific Journal of Finance and Risk Management, 5(1), pp. 1-12.

Graham, J.R. (2000) How big are the tax benefits of debt?, Journal of Finance, 55(5), pp.1901-1941.

Hovakimian, A., Hovakimian, G. and Tehranian, H. (2004) Determinants of target capital structure: the case of dual debt and equity issues, Journal of Financial Economics, 71(2), pp. 517-540.

Huang, G. and Song, F.M. (2006) The determinants of capital structure: evidence from China, China Economic Review, 17(1), pp. 14-36.

Heshmati, A. (2001) The dynamics of capital structure: evidence from Swedish micro and small Firms, Research in Banking and Finance, 2(1), pp. 199-241.

Jordan, J., Lowe, J. and Taylor, P. (1998) Strategy and financial policy in UK small firms, Journal of Business Finance and Accounting, 25(1), pp. 1-27.

Karadeniz, E., Kandir, S.Y., Balcilar, M. and Onal, Y.B. (2009) Determinants of capital structure: evidence from Turkish lodging companies, International Journal of Contemporary Hospitality Management, 21(5), pp. 594-609.

Kayo, E.K. & Kimura, H. (2011) Hierarchical determinants of capital structure, Journal of Banking & Finance, 35, pp. 358–371.

Kariuki, S. N. & Kamau, C. G. (2014) Determinants of Corporate Capital Structure among Private Manufacturing Firms in Kenya: A Survey of Food and Beverage Manufacturing Firms, International Journal of Academic Research in Accounting, Finance and Management Sciences, 4(3), pp. 49-62.

Lasfer, M.A. (1999) Debt structure, agency costs and firm's size: an empirical investigation, Working Paper, City University Business School, London.

Mishra, C.S. (2011) Determinants of Capital Structure – A Study of Manufacturing Sector PSUs in India, International Conference on Financial Management and Economics, 11, pp. 247-252.

Menike, L.M. (2015) Capital structure and financing of small and medium-sized enterprises: Empirical evidence from a Sri Lankan survey, Journal of Small Business and Entrepreneurship Development, 3(1), pp. 54-65.

Myers, S.C. (1984) The Capital structure puzzle, Journal of Finance, 39, pp. 575-592.

Myers, SC and Rajan, R.G. (1998) The paradox of liquidity, The Quarterly Journal of Economics, 113(3), pp. 733-771.

Modigliani, F. and Miller, M. (1958) The cost of capital, corporation finance and the theory of investment, American Economic Review, 53, pp. 261-97.

Margaritis, D. and Psillaki, M. (2007) Capital structure and firm efficiency, Journal of Business Finance & Accounting, 34(9/10), pp. 1447-1469.

Marsh, P. (1982) The choice between debt and equity: an empirical study, Journal of Finance, 37(1), pp. 121-144.

Ooi, J. (1999) The determinants of capital structure: evidence on UK property companies, Journal of Property Investment & Finance, 17(5), pp. 464-480.

Omet, G., Sharari, T. A., Khalaf B. A., & Yaseen, H (2015) Determinants of Capital Structure in various circumstances: Could they be similar?, Research Journal of Business and Management, 2(2), pp. 158-167.

Pratheepan, T. & Banda. Y. K. W. (2016) The Determinants of Capital Structure: Evidence from Selected Listed Companies in Sri Lanka, International Journal of Economics and Finance, 8(2), pp.94-105.

Quaisi, K. M. A. & Shubita, M.F. (2013) The Determinants of Capital Structure: Palestinian Case, Interdisciplinary Journal of Contemporary Research in Business, 4(12), pp. 385-398.

Rajan, R.G. and Zingales, L. (1995) What do we know about capital structure? Some evidence from international data, Journal of Finance, 50(5), pp. 1421-1460.

Reinhard, L. and Li, S. (2010) A note on capital structure target adjustment-Indonesian evidence, International Journal of Managerial Finance, 6(3), pp. 245-259.

Rajagopal, S. (2011) The portability of capital structure theory: do traditional models fit in an emerging economy?, Journal of Finance and Accountancy, 5, pp. 1-17.

Smith, G.P. (2012) Capital structure determinants for tax–exempt organizations: Evidence from the UK. Financial Accountability and Management, 28, pp. 143-163.

Sheikh, N.A. and Wang, Z. (2011) Determinants of capital structure an empirical study of firms in manufacturing industry of Pakistan, Managerial Finance, 37(2), pp. 117-133.

Strebulaev, I.A. (2007), Do tests of capital structure theory mean what they say?, Journal of Finance, 62(4), pp. 1747-1788.

Sogorb-Mira, F. and How, S.M.E. (2005) Uniqueness affects capital structure: evidence from a 1994-1998 Spanish data panel, Small Business Economics, 25(5), pp. 447-457.

Sayılgan, G., Karabacak, H. & Küçükkocaoglu, G. (2006) The Firm-Specific Determinants of Corporate Capital Structure: Evidence from Turkish Panel Data, Journal of Investment Management and Financial Innovations, 3(3), pp.125-139.

Simerly, R. and Li, M. (2000) Environmental dynamism, financial leverage and performance: a theoretical integration and an empirical test, Strategic Management Journal, 21(1), pp.31-49.

Titman, S. and Wessels, R. (1988) The determinants of capital structure choice, Journal of Finance, 43(1), pp. 1-19.

Um, T. (2001) Determinants of capital structure and prediction of bankruptcy in Korea, Ph.D Thesis, Comell University, Ithaca, New York.

Viviani, J. (2008) Capital structure determinants: an empirical study of French companies in the wine industry, International Journal of Wine Business Research, 20(2), pp. 171-194.

Yu, D. and Aquino, R. (2009) Testing capital structure models on Philippine listed firms, Applied Economics, 41(15), pp. 1973-1990.

Appendix-A: Determinant of Capital Structure by using robust regression

	Coefficient	Standard Error	P Value
Constant	196.792	54.2527	0.000
FS	-8.5785	2.30021	0.000
ROA	-0.8561	0.22652	0.000
TA	-0.1418	0.11627	0.015
LQ	0.28188	0.35233	0.425
GR	0.11974	0.0607	0.051
FA	16.3675	5.51842	0.004
Adjusted R-Square	0.1896		
No. of Obs.	125		