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By Bayeh Asnakew Kinde
*University of Gondar, Ethiopia*

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*Keywords :* *capital structure, ethiopia, firm level factors, insurance companies.*

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# Impact of Firm Level Factors on Capital Structure: Evidence from Ethiopian Insurance Companies

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## I. Introduction

In one way or another, business activity must be financed. Without finance to support their fixed assets and working capital requirements, business could not exist. There are three primary sources of finance for companies: Cash surplus from operating activities, new equity funding, borrowing from bank and non- bank sources. By taking into account a company's particular circumstances, management should decide what the most appropriate mix of internal and external funding i.e. how the company should structure the necessary capital to finance its activities. This leads to capital structure decision, which affects the financial performance of the firm and it is one of the tough challenges that firms face (Abor, 2005).

The roots of the modern capital structure theory can be assumed to be grown up on the seminal paper of Modigliani and Miller (1958) commonly known as the MM theory, dating back to 1958 as one of the most influential papers in the economics literature. It states that based on the assumption of no brokerage, tax and bankruptcy costs, investors can borrow at the same rate as corporations and they would tend to have the same information as management about the firm's future investment opportunities. The MM theory proves that under some restrictions a firm's value would be unaffected by its capital structure and thus assumes that earnings before income tax (EBIT) would not have been related to the use of debt, that leads to the inference that capital structure may be considered irrelevant, and the fundamental assumptions of the theory can be assumed unrealistic in the eyes of investors and other economic agents (Modigliani & Miller, 1963). In line with these theoretical fundamentals, the preceding arguments lead to the development of trade off theory which suggests that a firm's target leverage is determined by taxes and costs of financial distress.

## II. Statement of the Problem

Brounen & Eichholtz (2001) explain that in the trade off theory the interest payments tend to be tax deductible, this makes debt less expensive than the use of equity financing; which leads us to assume that there would be a positive relationship between the corporate tax shield and the value of the firm. Brounen & Eichholtz (2001) further states, in practice, the firms rarely use 100% debt financing. Because, when a firm raises excessive debt to finance its operations, it may default on this debt and thus can be exposed to bankruptcy costs. For these reasons, trade off theory claims that tax shield benefits of debt financing need to be adjusted for financial distress costs that rise with increasing debt levels, creating an optimal capital structure that balances both forces.

However, according to the pecking order theory of Myers (1984), companies prioritize their sources of financing - from internal financing to equity issues- according to the law of least effort, or preferring to raise equity as a financing means of last resort. Hence, internal funds are likely to be used first, and only when they are depleted, the firms apply to the new debt issues. Similarly, Mary *et al.* (2011) put in plain words that in case of using external financing, the firms issue the cheapest security first so they start with debt, and then possibly apply to hybrid securities such as convertible bonds, and they issue equity only as a last resort. Thus, in contrast to the trade-off theory, there is no well-defined target leverage ratio in the pecking order theory.

Mary *et al.* (2011) further elucidate that if a company has too much debt; it may overextend its ability to service the debt and can be vulnerable to business downturns and changes in interest rates, and thus would be viewed to be financially risky. On the other hand, too much equity dilutes ownership interest

*Author : Lecturer, Faculty of Business and Economics, University of Gondar, P. O. Box 196, Ethiopia. E-mail : basnakew@yahoo.com*



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and exposes the company to outside control. This may be discouraging to investors, because it means less profits being distributed to them. All these lead to non-stopping debates that make the topic to be researched in various countries.

So far most studies have been conducted on an effort to preview capital structure decision and its impact on firm value on developed countries perspective. Thus, the purpose of this paper is to present empirical evidence on the determinants of capital structure of insurance companies in the context of a developing country since a design feature that works well in one country may not in another. As Bird 2005 (cited in Yesegat, 2009) noted this may be referred to as The No-One-Size-Fits-All (the NOSFA) principle. Specifically in Ethiopia, though few studies have been conducted on the determinants of capital structure, to the best of the researcher's knowledge, insurance industry has received little attention. Therefore, the current study investigates empirically the firm-specific determinants of capital structure of insurance companies in Ethiopia over the period 2004-2010.

## III. Objective of the Study

The main objective of the study is to empirically examine the link between a number of potential firm-specific capital structure determinants and debt level, and to identify relevant theories as well, for the insurance industry in Ethiopia.

## IV. Literature Review

This section discusses the literature concerning the capital structure determinants. First it considers the general theory of capital structure. This is followed by a review of the empirical studies on the determinants of capital structure choice.

### *a) Theoretical Framework*

The theoretical principles underlying the capital structure, financing and lending choices of firms can be described either in terms of a static trade-off choice or pecking order framework. Trade-off hypothesis, developed by Myers (1984), proposes that firm should have optimal capital structure based on balancing between the benefits of debt and costs of debt. It also postulates that a firm will borrow up to the point where the marginal value of tax shields on additional debt is balanced by increasing the present value of possible bankruptcy costs (Myers, 2001).

According to the trade-off theory, higher profitability lowers the expected costs of distress; however, firms increase their leverage to take advantage from tax benefits. Moreover, agency theory supports this positive relation because of the free cash flow theory of Jensen (1986). Therefore, leverage and profitability are positively related. On the other hand, according to pecking order theory, Myers (2003) discusses that firms prefer to finance with internal funds rather than debt if internal equity is sufficient due to the asymmetric information. Hence, profitability is expected to have negative relation with leverage.

The pecking order theory was developed by Myers and Majluf (1984) and it focuses on asymmetric information costs. It states that external investors do not have access to required information on the topic of the value of the firm's assets and growth opportunities. The information asymmetry may also explain why existing investors do not support new equity financing. The reason is that the new investors may require higher returns to reimburse the risk of their investment and this request dilutes the returns of existing investors, and thus the firm should follow specific hierarchy for financing its assets. At the outset, the firm utilizes internally produced fund i.e. retained earnings followed by debt and if more funds are required, as a final option, assets are financed by equity capital. Therefore, according to the pecking order hypothesis, firms that are profitable generate high earnings are expected to use less debt capital than that do not generate high earnings.

### *b) Review of Empirical Studies*

Following from above theoretical standpoints, a number of empirical studies have identified firm-level characteristics that affect the capital structure of firms. Among these characteristics are: liquidity, firm risk, growth, tangibility of assets, size of the firm, profitability and firm age.

i. *Liquidity*

Various researchers investigated the link between liquidity and capital structure, and some find positive relation and some others provided negative relation evidences.

Morellec (2001) gives a comprehensive analysis of the implications of liquidity that build up the asset transformation theme by applying dynamic model of a levered firm; and they showed that partial asset sale increases the value of equity and reduces the value of debt. Thus, asset liquidity reduces the value of the firm and the debt capacity of the firm. Consequently, asset liquidity can result in underinvestment relative to the illiquid asset benchmark case, and leads to an inverse relationship with the level of debt. Similarly, Lipson and Mortal (2010) discover that firms with more liquid equity carry less debt, as predicted by the trade-off model. Further, when considering external financing, firms with more liquidity are more inclined to raise equity than debt. Likewise, the finding of Naveed *et al.* (2010) empirical investigation on Pakistan Life Insurance Sector shows a negative relation between liquidity and leverage.

ii. *Business Risk*

Despite the broad consensus that firm risk is an important inverse determinant of corporate debt policy, empirical investigation has led to contradictory results.

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For instance, unusually, Rafiq et al. (2008) found positive relationship between leverage and risk. Likewise, an empirical study by Mary *et al.* (2011) on the determinants of capital structure in listed Egyptian Corporations also indicates a positive relation between business risk and leverage, which contradicts the theoretical background and the findings observed in most developed and developing countries. However; most theories and empirical findings (Titman & Wessels 1988) indicate an inverse relationship between risk and debt ratio.

iii. *Growth*

Most researchers evidenced that higher growth firms use less debt. For instance, Rajan and Zingales (1995) performed upon a firm-level sample from each of the countries, and although the results of their regression analysis differ slightly across countries, they appear to uncover some fairly strong conclusion; and find a negative relationship between growth and the level of leverage on data from the developed countries. This is consistent with trade-off theory. On the other hand, some others found positive relationships between growth and leverage; for example, Booth *et al.* (2001).

The empirical investigation of Naveed *et al.* (2010) on Pakistan life insurance companies indicates a positive relationship between growth and debt ratio. However, this positive relationship is found statistically insignificant. Though positive sign confirms that growing firms are expected to have high debt ratio (Pecking order theory) but insignificant result indicates that growth is not considered as a proper explanatory variable of leverage in life insurance sector.

iv. *Asset Tangibility*

Tangible assets are likely to have an impact on the borrowing decisions of a firm because they are less subject to informational asymmetries and usually have a greater value than intangible assets in case of bankruptcy. Static trade-off and pecking order theories maintain that there is a positive correlation between debt ratio and tangibility. The majority of empirical studies in developed countries also found a positive relationship between tangibility and leverages (Rajan & Zingales, 1995). However, empirical studies for developing countries found mixed relationship between these variables. On the other hand, some studies reported a negative relation between tangibility of assets and debt level; for example, Booth et *al.* (2001).

v. *Firm Size*

The effect of size on debt ratios is ambiguous from the theoretical point of view; some authors encountered a positive relation between size and leverage; some others reported negative relation and others also found statistically insignificant relationship between them.

Mary *et al.* (2011) recent work on the actively listed Egyptian corporations, the findings of the estimated model and the various other tests confirm the existence of a significant positive relation between the firm size and the debt-equity ratio. This finding conforms to those of the other empirical studies conducted in countries all over the world. These results also confirm the notion that large firms are employed more debt because these are less risky and diversified in nature (static trade- off theory). In addition, larger firms are preferred to issue more debt because it reduces direct bankruptcy costs due to market confidence. Moreover, smaller firms prefer to acquire lower debt because these firms might face the risk of liquidation at the time of financial distress.

Contrary to the above, Faris (2010) found a negative relationship between leverage and firm size. A quite different result was also obtained by Dilek *et al.* (2009) using panel data analysis within the time period 2000-2007 on Turkish firms; and they report as the coefficient of the size of the firm is statistically insignificant and also its coefficient takes a value about zero.

vi. *Profitability*

Chittenden *et al.* (1996) state that empirical evidence from previous studies examining on capital structure is consistent with pecking order arguments with leverage being found to be negatively related to profitability. Akhtar (2005) also found significant and negative coefficients of profitability variable which conform to the pecking order theory. Similarly, Naveed *et al.* (2010) analysis on Pakistan Life Insurance Sector indicates the negative relationship between leverage and profitability and predicts that, in Pakistan, profitable life insurance companies are preferred to utilize small portion of debt. This result confirms the notion that Pakistani life insurance companies follow pecking order pattern i.e. preferred to employ internal financing than debt.

However, Mohammad (2007) made empirical analysis on Bangladeshi companies and found that the coefficient of profitability is positive which is contrary to the researcher's previous argument; but statistically insignificant. Finally, the researcher gave the conclusion that the positive signs could be explained by the argument that profitable firms will be able to attract more debts from banks and the capital market and these firms will prefer debt in order to reduce their higher tax rate on profit. However, the fact that the coefficients are not significant implies that profitability does not have any material impact on capital structure decision for Bangladeshi companies. Likewise, Dilek *et al.* (2009) also found profitability to be the most significant variable with a positive sign.

vii. *Firm Age*

Age of the firm is a standard measure of reputation in capital structure models. As a firm continues longer in business, it establishes itself as an ongoing business and, therefore, increases its capacity to take on more debt; hence age is positively related to debt (Myers, 2001).



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Contrary to the theory, negative coefficient of variable age by Naveed *et al.* (2010) on Pakistan insurance companies specifies the negative relationship between age of the insurance companies and debt ratio. This inverse relationship predicts that in Pakistan older or mature insurance companies are preferred to utilize small portion of debt in formation of capital. According to Naveed *et al.* (2010) one key reason to employ less debt ratio is that when firm survives in business for a long time then it can accumulates more funds for running the operations of the business and subsequently keeps away the firm to go for debt financing.

## V. Research Methodology

The study examines firm level factors that determine the capital structure of insurance companies in Ethiopia. Currently, twelve insurance companies are working in Ethiopia; and the researcher believe that, for meaningful analysis, there is no need to sample from the twelve insurance companies as they are already few in number to collect information over the period of 2004-2010. However, three insurance companies (Lion, Oromia and Ethio-Life) did not have information for the required period; their year of service was below five, and thus they were excluded in the sampling frame to make the panel data model structured.The data was collected from each insurance company's annual report over the proposed period. Following (Chkir & Cosset, 2001; Dilek *et al.*, 2009) the two dependent variables were total debt and long term debt ratios.

The debt (DEBT) ratio is total debt to total asset while the long-term debt (LTD) ratio is the total long-term debt divided by total asset. The explanatory variables include liquidity (LQ), business risk (BR), growth (GR), tangibility (TA), size of the firm (SZ), profitability (PR) and age of the firm (AG). The entire variable for this study is based on book value in line with the argument by Myers (1984) that book values are good proxies for the value of assets in place.

The nature of data used in this study enables the researcher to use panel data model which is deemed to have advantages over cross section and time series data methodology. As Brook (2008) states the advantages of using the panel data set; first it can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time-series or pure cross-sectional data alone. Second, it is often examine how the relationships between variables change dynamically. Besides, by combining cross-sectional and time series data, one can increase the number of degrees of freedom, and thus the power of the test. It can also help to mitigate problems of multicollinearity among explanatory variables that may arise if time series are modeled individually. Third, by structuring the model in an appropriate way (fixed or random effect), we can remove the impact of certain forms of omitted variables bias in regression results and it can allow controlling for individual unobserved heterogeneity among the cross sections. Thus, the general model for this study, as is mostly found in the extant literature is represented by:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \text{----} + \beta_k X_{kit} + e_{it}$$
$$= \beta_0 + \beta X_{it} + e_{it} \qquad (1)$$

With the subscript *i* denoting the cross-sectional dimension and *t* representing the time series dimension. The left-hand variable, $Y_{it}$, represents the dependent variable in the model. $X_{it}$ contains the set of explanatory variables in the estimation model, $\beta_0$ is the constant, $\beta$ represents the coefficients and $e_{it}$ is the error term.

In this study, the empirical methodology is adopted mainly from Naveed *et al.* (2010) with some modifications. Therefore, the models for the empirical investigation, built in line with the findings of previous studies, are given as follows:

$$LTD_{it} = \beta_0 - \beta_1(LQ_{it}) - \beta_2(BR_{it}) + \beta_3(GR_{it}) + \beta_4(TA_{it}) + \beta_5(SZ_{it}) - \beta_6(PR_{it}) + \beta_7(AG_{it}) + \varepsilon \qquad (2)$$

$$DEBT_{it} = \beta_0 - \beta_1(LQ_{it}) - \beta_2(BR_{it}) + \beta_3(GR_{it}) + \beta_4(TA_{it}) + \beta_5(SZ_{it}) - \beta_6(PR_{it}) + \beta_7(AG_{it}) + \varepsilon \qquad (3)$$

Where $LTD_{it}$, ratio of long-term debt to total asset for firm *i* in period t; $DEBT_{it}$, ratio of total debt to total asset for firm *i* in period *t*; $LQ_{it}$, current asset to current liability for firm *i* in period *t*; $BR_{it}$, standard deviation of operating income for firm *i* in period *t*; $GR_{it}$, annual changes in total assets for firm *i* in period *t*; $TA_{it}$, ratio of fixed assets to total assets for firm *i* in period *t*; $SZ_{it}$, natural log of total assets for firm *i* in period *t*; $PR_{it}$, operating income to total asset for firm *i* in period *t*; and e¨ the error term.

## VI. Empirical Results

*a) Regression Analysis*

To test the capital structure theories, the relationship between the leverage and explanatory variables representing liquidity, business risk, growth, tangibility, size, profitability and age of the firm were analyzed over the period 2004-2010. This relationship belonging to leverage can be explained as follows:

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*Book leverage= f (liquidity, business risk, growth, tangibility, size, profitability and age)*

The relationship was analyzed by the panel data analysis. An appropriate model for this analysis, testing random versus fixed effects models, was selected in this study. To perform this comparison, the character of the individual effects is tested through the Hausman's specification test. According to the Hausman's test, as indicated in Appendix 1 the fixed effects estimate was found to be more appropriate with the significance level of 1% for DEBT model whereas the significant level for LTD model was 5%. Thus, the relationship between leverage and the explanatory variables were examined by the fixed effects model in this study and the results obtained by the fixed effect models are reported in Appendix 2.

The results of fixed effect model indicate that liquidity has a positive impact on long term debt and total debt. This result implies that considering external financing, firms with more liquidity are more inclined to raise debt than equity. According to trade-off models of capital structure there is a positive relationship between the liquidation value of the firm and its leverage. Thus, expected liquidation values are higher for firms with more liquid assets, which imply that firm's debt is positively associated with asset liquidity (Harris and Raviv, 1990). In addition, companies with higher liquidity ratios might support a relatively higher debt ratio due to greater ability to meet short-term obligations. Thus, a high asset liquidity ratio could be considered by institutional investors to be a positive signal because it indicates that the firm can easily pay its obligations and hence face a lower risk of default. The positive and statistically significant influence of liquidity in this study is consistent with the theoretical analysis of firms with high liquidity ratios may have relatively higher debt ratios due to their greater ability to meet short-term obligations and the trade-off theory. It is also in line with the empirical investigation of Faris (2010) and Basil and Peter (2008).

The results also show a positive relationship between risk and leverage and its relationship was statistically significant at 1% level with total debt ratio. This may suggest that higher risk may leave the indebted firms to demand more debt; it is in line with the agency theory and supported by Naveed *et al.* (2010) and Mary *et al.* (2011) empirical study. This indicates that in order to fulfill the claims of the insurance policyholder and depositors, risky companies acquire external funds. A probable justification of such result could be that investors in Ethiopian insurance companies might be highly risk averse and low-trusting relative to their counterparts in other foreign countries.

According to the theoretical discussions above, the researcher expect a positive relationship between growth and leverage due to higher costs of financial distress (trade-off and agency theory). Contrary to the theory, growth has significant negative impact on long term debt and total debt ratio, significant at 5% level, in this study. The negative association between growth with long term debt and total debt ratio is in line with Akhtar (2005), agency theory and trade-off (financial distress) theory. This suggests that firms with more investment opportunities have less leverage ratio because they have stronger incentives to avoid under-investment and asset substitution that can arise from stockholder-bondholder agency conflict.

A positive relationship is expected between tangibility and leverage from the theoretical point of view. In this study, tangibility was found to be positive but insignificant impact on long-term debt. The positive correlation is in line with the pecking order theory. On the other hand, the relationship was found negative with total debt ratio. This implies that since it has a positive relation with long term debt, tangibility has significant negative relation with short term debt. Consistent with the findings of previous studies (Ebru, 2011); the relationship between tangibility and short term debt was negative and significant. It is generally expected with respect to the short term debt that firms tend to match their duration of assets and debts. This means that firms with more fixed assets rely more on long term while those with more contemporary assets depend more on short term debt for financing their assets (Abor, 2005). A negative relationship between tangibility and total debt ratio, in this study, is also in line with information asymmetries theory. According to this theory, companies with smaller share of tangible assets tend to be more subject to information asymmetries. It is because intangible assets are more difficult to price. Therefore, intangible firms will face underinvestment problem more often. Hence, ceteris paribus, these firms will tend to accumulate more debt over time. However, insignificant result indicates that tangibility is not considered as a proper explanatory variable of leverage in Ethiopian insurance companies since this sector holds less fixed assets.

As firms size increases, they become more diversified and have more stable cash flows. They are less often bankrupt compared to small firms so that they can afford higher levels of leverage. Similarly in this study, size positively affects leverage ratios, and it is in line with trade-off theory and agency theory. This result is also supported by Rajan and Zingales (1995) and Akhtar (2005) findings. However, it was statistically insignificant; the reason might be that the inability of log of assets to serve as a good proxy for firm size; other more significant results might be obtained by using another measures (proxy) for size, for instance, log of sales, commonly used proxy for size of insurance companies. Otherwise, almost nil regression coefficients of size can also taken to show absence on the part of lending institution of considering size of the firm as a component of their credit analysis.



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The coefficient estimate for profitability was negative for long term debt ratio, suggesting that as profitability increases, leverage decreases. Firms follow pecking order theory (Myers & Majluf, 1984); they use retained earnings first and then move to debt and equity. In this study, supporting the hypothesis, profitability negatively affects long term debt ratio. The negative association between profitability and long term debt is in line with pecking order theory and agency theory. It is also in line with the findings of Rajan and Zingales (1995), Cassar and Holmes (2003), and Akhtar (2005). However, the coefficient was positive and significant (p-value=0.0448) for total debt ratio, which is in line with the tax trade-off model, predicts that profitable firms will employ more short term debt since they are more likely to have a high tax burden and low bankruptcy risk. Also, profitable firms are more capable of tolerating more debt since they may be in a position to service their debt easily and on time. Besides, profitable firms are more attractive to insurance companies as lending prospects; therefore, they can always take on more debt capital.

The regression result also indicates that positive and significant coefficient of variable age for total debt and long term debt ratio. Consistent with the information asymmetry theory and the empirical study by Onaolapo and Kajola (2010), this positive relationship predicts that in Ethiopia older or mature insurance companies prefer to utilize large portion of debt in formation of capital. One key reason to employ more leverage is that when firm survives in business for a long time then it can accumulate more funds for running the operations of the business and uses its reputation in accessing more debt, as firms grow older more information regarding their future viability becomes available and reduces information asymmetries. Lower information asymmetries imply higher leverage. Bondholders would be more likely to lend to firms they know more about than lending to firms they know less about. Besides, Myers (2001) states that as a firm continues longer in business, it establishes itself as an ongoing business and therefore increases its capacity to take on more debt.

To sum up, the difference in long-term versus short-term debt is much pronounced in Ethiopian insurance companies; this might limit the explanatory power of the capital structure models derived from developed economy settings. However, the results of this empirical study suggest that some of the insights from modern finance theory are portable to Ethiopia because certain firm-specific factors that are relevant for explaining capital structures in developed countries are also relevant in Ethiopian insurance companies. Besides, the findings of the fixed effect model on liquidity, business risk, growth, tangibility, size, profitability and age of the firm for this study are in line with the findings of Faris (2010), Naveed *et al.* (2010), Akhtar (2005), Abor (2005), Rajan and Zingales (1995), Cassar and Holmes (2003), Onaolapo and Kajola (2010) respectively. But the magnitude in contribution of these determinants is quite different. These differences may be partly explained by the following factors: sample size, proxy used in the measurement of variables, methodology of data analysis, the difference in the sectors in which the studies were conducted and the different the economic background beyond the industry that differs across countries.

## VII. Conclusion

The results of this study provide some useful information about the capital structure of Ethiopian insurance industry. Results obtained from the empirical investigation indicate that growth, profitability, age of the firm and liquidity have significant effect on Ethiopian insurance companies. Moreover, it can also be stated that the findings show evidence that static trade-off theory; pecking order theory and agency theory are partially accepted in insurance sector of Ethiopia though the trade-off theory appears to dominate the Ethiopian insurance sector capital structure.

## VIII. Recommendation

- In the study periods, the analysis indicates that the proportion of long term debt is low, and thus it might be advisable for insurance companies to place greater emphasis on the facilitation of equity capital since it provides a base for further borrowing and reduces businesses' uncertainty.
- Having less proportion of long term debt means being more risk averse and this may also slow down the growth of insurance industry. Thus, the firm should increase its leverage without suffering from financial distress. Therefore, it is always recommended to think the capital structure in the way that minimizes the firm's cost of capital and thus maximizes firm value.

## IX. Further Research Directions

This study addressed only firm level determinants of capital structure specifically on Ethiopian insurance industry. Therefore, further study can also incorporate macro variables, and it might also extend its scope on Sub-Saharan Africa.

## References Références Referencias

1. Abor, J. (2005), "The effect of capital structure on profitability: empirical analysis of listed firms in Ghana", *Journal of Risk Finance,* vol.6, pp. 438-45.
2. Akhtar, S. (2005), "The determinants of capital structure for Australian multinational and domestic corporations", *Australian Journal of Management,* vol. 30, pp. 321-41.
3. Basil Al-Najjar & Peter, T. (2008), "The relationship between capital structure and ownership

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structure", *Journal of Managerial Finance,* vol. 34, pp. 919-933.
4. Booth, L., Aivazian, V., Demirgüc-Kunt, A. & Maksimovic, V. (2001), "Capital structure in developing countries", *Journal of Finance, vol.* 56, pp. 87-130.
5. Brooks, C. (2008), *Introductory Econometrics for Finance,* 2nd ed., the ICMA Centre, University of Reading.
6. Brounen, D. & Eichholtz, P. (2001), "Capital structure theory: Evidence from European property companies capital offerings", *Journal of Real Estate Economics,* vol. 2, pp. 4-21.
7. Cassar, G. & Holmes, S. (2003), "Capital structure and financing of SMEs: Australian Evidence", *Journal of Accounting and Finance,* vol. 43, pp. 123-47.
8. Chittenden, F., Michaelas, N. and Poutziouris, P. (1996), "Financial policy and capital structure choice in UK SMEs: empirical evidence from company panel data", *Journal of Small Business Economics,* vol. 12, pp. 113–30.
9. Chkir, E. & Cosset, J. (2001), "Diversification strategy and capital structure of multinational Corporations", *Journal of Multinational Financial Management,* vol.11, pp. 17-37.
10. Dilek, T., Ozlem, T. & Ayca, T. (2009), "Determinants of capital structure for Turkish firms: A panel data analysis", *International Research Journal of Finance and Economics,* vol. 29, pp. 1450-2887.
11. Ebru,Ç. (2011), "An empirical investigation on the determinants of capital structures of Turkish firms", *Journal of Finance and Economics,* vol. 9, pp. 35-42.
12. Faris AL- Shubiri (2010), "Determinants of capital structure choice: A case study of Jordanian Industrial Companies", *An-Najah Univ. J. of Res,* vol. 24, pp. 2457-94.
13. Harris, M. & Raviv, A. (1990), "Capital structure and the informational role of debt", *Journal of Finance,* vol. 45, pp.321-49.
14. Insurance Companies 2004-2010, 'Annual report', Ethiopian Insurance Companies, Addis Ababa Jensen, M. C. (1986), "Agency costs of free cash flow, corporate finance, and take-overs", *American Economic Review,* vol. 76, pp. 323-29.
15. Lipson, M. & Mortal, S. (2010), "Liquidity and capital structure", *Journal of Financial Markets,* vol. 28,pp. 345-56.
16. Mary, A., El-Sayeda, M. & Mohamed, S. (2011), "The determinants of capital structure in Egyptian", *Journal of Middle Eastern Finance and Economics,* vol. 9, pp. 84-99.
17. Modigliani, F. & Miller, M. (1958), "The cost of capital, corporation finance and the theory of Investment", *American Economic Review,* vol. 48, pp. 261-97.
18. Modigliani, F. & Miller, M. (1963), "Corporation income taxes and the cost of capital: a Correction", *American Economic Review,* vol. 53, pp. 433–43.
19. Mohammad, S. (2007): "The determinants of capital structure for selected Bangladeshi listed Companies", Working Paper, Jahangirnagar University.
20. Morellec, E. (2001), "Asset liquidity, capacity choice and the pricing of corporate securities", *Journal of Financial Economics,* vol. 61, pp. 173-206.
21. Myers, S C. (1984), "The capital structure puzzle", Journal *of Finance,* vol. 39, pp. 575-92.
22. Myers, S C. (2001), "Capital structure", *Journal of Economic Perspectives,* vol. 15, pp. 81–102.
23. Myers, S C. (2003), "Financing of corporations", *Handbook of the Economics of Finance,* vol. 1, pp. 216-253.
24. Myers, S C. & Majluf, N. (1984), "Corporate financing and investment decisions when firm have information that investors do not have", *Journal of Financial Economics,* vol. 13, pp. 187-221.
25. Naveed, A., Zulfqar, A. & Ishfaq, A. (2010), "Determinants of capital structure: A case of life insurance sector of Pakistan", *European Journal of Economics, Finance and Administrative Sciences,* vol. 24, pp. 7-12.
26. Onaolapo, A. & Kajola, S. (2010), "Capital structure and firm performance: Evidence from Nigeria", *European Journal of Economics and Finance,* vol. 25, pp. 70-82.
27. Rafiq, M., Iqbal, A. & Atiq, M. (2008), "The determinants of capital structure of the chemical industry in Pakistan", *The Lahore Journal of Economics,* vol. 13, pp. 139-58.
28. Rajan, R. & Zingales, L. (1995), "What do we know about capital structure? Some evidence from international data", *Journal of Finance,* vol. 50, pp. 1421-60.
29. Titman, S. & Wessels, R. (1988), "The determinants of capital structure choice", *Journal of Finance,* vol. 43, pp. 1- 19.
30. Yesegat, W A. (2009): "Value added tax in Ethiopia: A study of operating costs and Compliance", PhD thesis, University of New South Wales, Australia.



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*Appendix 1:* Hausman and Redundant fixed effect tests

| / | LTD Model | DEBT Model |
|---|---|---|
| Results of Hausman Test (Ho: an appropriate model is random effect model) | | |
| Chi-sq | 15.383 | 30.708 |
| | (0.0437) ** | (0.0000) *** |
| Results of Redundant Fixed Effect Test (Ho: There is no fixed effect) | | |
| Cross-section/period chi-sq | 64.718 | 46.466 |
| | (0.0000) *** | (0.0000) *** |

**, *** significant at 5% and 1% level, respectively.
***(Source:** Eviews output)*

*Appendix 2:* Fixed effect model result

| Variable | LTD model | DEBT model |
|---|---|---|
| Constant | -0.509321 | -0.100380 |
| | *(0.5456)* | *(0.8967)* |
| LQ | 0.026680 | 0.020468 |
| | *(0.0159) ** * | *(0.3459)* |
| BR | 0.036130 | 0.081820 |
| | *(0.1941)* | *(0.0017) *** * |
| GR | -0.040257 | -0.066524 |
| | *(0.0126) ** * | *(0.0393) ** * |
| TA | 0.028891 | -0.038400 |
| | *(0.8614)* | *(0.8050)* |
| SZ | 0.048901 | 0.022682 |
| | *(0.5632)* | *(0.8953)* |
| PR | -0.086345 | 0.192904 |
| | *(0.0336) ** * | *(0.0367) ** * |
| AG | 0.205432 | 0.612086 |
| | *(0.0245) ** * | *(0.0066) *** * |
| Adj $R^2$ | 0.683645 | 0.751532 |
| F-Statistics | 8.5869 | 11.8372 |
| Prob(F-statistics) | (0.00000)*** | (0.00000)*** |

*, **, *** indicate significance at the level 10%, 5% and 1%, respecti-respectively; Figures in brackets are p-values.

***(Source:** Eviews output)*



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