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Full Length Research Paper

The Impact of Managerial Self-Interest on Corporate Capital Structure: (A Case of Selected Companies in Addis Ababa, Ethiopia)

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Abstract

The literature on the impact of managerial self-interest on capital structure has already been developed in developed markets that have different institutional financing arrangements from those in emerging markets. Therefore this requires a thorough examination of the impact of managerial self-interest on corporate capital structure in developing market. In addition, the study so far has been conducted on listed firms with different proxies of managerial self-interest as indicators of capital structure. This thesis deals with the impact of managerial self-interest on corporate capital structure of eight selected companies in Addis Ababa. The study has examined the impact of managerial self-interest on corporate capital structure using quantitative methods of inquiry. Mainly the study focuses on the questionnaires analysis so as to see the representative proxies of managerial self-interest such as, board independence, managerial shareholding and institutional shareholding, on firms‟ capital structure decision. In addition, performance, risk, company size and tangibility of assets were regressed using ordinary least square (OLS) as a supportive variable in order to compromise the possible deficiencies that might appear in questionnaire analysis. In its main finding the result shows the inverse relationship between managerial shareholding and capital structure in case of banks and manufacturing companies, and relatively positive relationship in case of insurance companies under consideration. This is possibly because of the presence of principal shareholders and management's attitude towards maximizing the company's profit and obtaining tax benefits for employing long term debt.

Key words: Capital structure, performance, leverage, managerial self interest.

INTRODUCTION

Debt and equity are the two different sources of funds for a company. As both involve costs to the company there is a need for the company to choose the right option that minimizes its costs and in most cases, companies tend to choose to create the right combination of debt and equity that might result in the lowest costs. Thus, the use of debt and equity proportions are the measurement tools for capital structure. Capital structure is defined as total debt to total assets at book value, influences both the profitability and riskiness of the company (Bos and Fetherston, 1993).

On the other hand, Managerial self-interest, a concern for one's own advantage and well- being, may prevail when governance mechanisms are weakly placed, as is exemplified by allowing managers a significant amount of autonomy to make strategic decisions. Furthermore, Ownership concentration, as a governance mechanism has received considerable interest because large-block shareholders are increasingly active in their demands that corporations adopt effective governance mechanisms to control managerial decisions.

According to Mehran (1992), the conflict between

managers and shareholders is due to financing decisions. Such conflict could arise as a result of differential risk exposure. Shareholders may care only about the systematic risk of a firm's security because they hold well-diversified portfolios. Managers, on the other hand, may be more concerned with the firm's total risk, for at least two reasons. First, a substantial fraction of their wealth is in firm-specific human capital, which makes their position no diversifiable. Second, managers may damage their professional reputation and, thus, earning capacity if the firm goes bankrupt.

To sum up, this study is designed to examine the impact of managerial self-interest on corporate capital structure and thereby the effect of management's ability and desire to adjust the level of debt in the firm. In addition, so far in Ethiopia no work is done to investigate the relationship between managerial self-interest and corporate capital structure and hence, this study is going to fulfill the gap by incorporating some more variables such as, board independence and managerial ownership, apart from the variables used by friend and Lang (1988) in their findings and is supposed to pave the way for similar researches in the country.

LITERATURE REVIEW

Capital Structure Theories

Most of the capital structure theories have been examined in developed countries but the extent to which the different theories of capital structure are appropriate to developing economies has become increasingly important with the globalization of financial markets in recent years. For instance, Pandey (2001) studied the capital structure choice of firms operating respectively in India, Zimbabwe, Hungary, Turkey and China. One general observation can be made from the studies conducted by Cole and Mehran (1992) and Singh (1995): using data from a number of developing countries, firms in developing countries relied more heavily on equity finance than debt finance compared to firms in Organization for Economic Co-operation and Development (OECD) countries.

This observation is confirmed by Booth et al (2001) who analyzed the capital structure choice of firms in ten (10) developing countries - India, Pakistan, Thailand, Malaysia, Turkey, Zimbabwe, Mexico, Brazil, Jordan and Korea - and concluded that although the capital structure decision is affected by the same variables - average tax rate, asset tangibility, business risk, size, return on assets and market-to-book ratio - as those in developed countries, persistent differences existed across countries, indicating that specific country factors were at work.

In addition, Booth et al, (2001, p 118) state that, "In general, debt ratios in developing countries seem to be affected in the same way and by the same types of variables that are significant in developed countries. However, there are systematic differences in the way these ratios are affected by country factors, such as GDP growth rates, inflation rates, and development of capital markets."

On the other hand, the literature on the determinants of capital structure reveals that the choice of explanatory variables is fraught with difficulty. The very fact that relate explanatory variables have different regression coefficient signs – some positive and others negative – are evidence of the continuing difficulty in coming up with a common theory explaining the capital structure choice of firms within and across countries. As such, different capital structure theories have therefore emerged.

Information Asymmetry Theory (Pecking Order Theory)

According to Myers and Majluf (1984), firms prefer to raise capital by internal financing instead of external financing. Assuming that the firm's managers always obtain better information than investors which will generate adverse selection cost and to dominate the cost and benefits so they raise capital from retain earnings, then risk less debt, followed by risky debt and equity. With better information, they can avoid issue equity in order to maximize the market value. The preferences order reflects the costs of different capital financing option. Hence as per these scholars, firms always prefer situations such as internal finance over external finance, safe debt over risky debt, convertibles debt and finally common stocks.

Static Trade-Off Theory

This theory derives indirectly from the work of Miller and Modigliani (1958). According to static trade-off: "The firm is depicted as balancing the value of interest tax shields against the various costs of bankruptcy or financial embarrassment."

According to Myers (1984), Static trade off theory is the need to balance gains and costs of debt financing. Static trade off theory argues firms will choose the equity and debt financing to balance the costs and benefits of debt in order to achieve optimal capital structure. Optimal capital structure is to maximize the firm value. Firms issue equity when their debt is above the desired target of debt and issue debt when the debt is below the target. Hence, firms issue debt and equity proportionately to stay close to the target if they want to have external financing.

However, debt financing has always limits the free cash flow available for managers which lead to a control agency problem (Jensen and Meckling 1976). Subsequently, the company with debt financing will have greater concentration on shareholding because equity interest between manager and shareholder can be reduced by using debt financing.

Agency Cost Theory

Debt agency costs arise due to a conflict of interest between

debt providers on one side and shareholders and managers on the other side (Jensen and Meckling, 1976). Managers have the motivation to invest funds in risky business for shareholders' interest, because if the investment fails, the lenders are likely to bear the cost as the shareholders have limited liability.

The use of short-term sources of debt, however, may mitigate the agency problems, as any attempt by shareholders to extract wealth from debt holders is likely to restrict the firms' access to short-term debt in the immediate future. Titman and Wessel (1988) point out that the costs associated with the agency relationship between shareholders and debt holders are likely to be higher for firms in growing industries hence a negative relationship between growth and financial leverage is likely.

Determinants of Capital Structure Choice

Previous studies have shown that a number of factors affect firm's capital structure choice, such as tangibility, tax, size, profitability, growth opportunities and volatility etc. In their distinguished works, Harris and Raviv (1991); cited in Niu (2008), summarize that ―leverage increases with fixed assets, non-debt tax shields, investment opportunities and firm size and decreases with volatility of earnings, advertising expenditure, the probability of bankruptcy, profitability and uniqueness of the product.‖ However, the relationship between the factors and capital structure is not consistent. The empirical results vary, and sometimes contradict in many studies.

Tangibility: Theories generally state that tangibility is positively related to leverage. Since the tangible assets can be used as collateral in external borrowing, the presence of a large fraction of tangible assets of a firm help to get bank loans at a lower interest rate and it also helps to reduce the risk the lender suffering from the agency cost of debt. Since the debts can be secured by the collateralization of tangible assets, the firm's opportunity to engage in asset substitution is reduced by the presence of a large fraction of secured debts (Xiaoyan Niu 2008). For firms with more intangible assets, the costs of capital are higher since monitoring is more difficult.

None debt tax shield: Tax deductions for depreciation and investment tax credits are substitutes for tax benefits of debt financing, as a result firms with non-debt tax shields relative to their expected cash flow include less debt in their capital structure(DeAngelo1985). Growth: According to Titman and Wessel (1988),growth opportunities are capital assets that add value to a firm but cannot be collateralized and do not generate current taxable income.

Uniqueness: the firm's liquidation decision is causally linked to its bankruptcy status. As a result, the costs that firms can potentially impose on their customers, supplies and workers by liquidating are relevant to their capital structure decision.

Firm Size

A number of authors have suggested that leverage ratio may be related to firm size. according to Warner (1977), direct bankruptcy costs appear to constitute a large proportion of a firm's value as that value decreases. it is also the case that relatively large firms tend to be more diversified and less prone to bankruptcy.

This argument suggests that large firms should be more highly levered. the cost of issuing equity securities is also related to firm size; in particular, small firms pay much more than large firms to issue new equity and also somewhat more to issue long-term debt. Friend and lang (1988) have explained firm size in terms of total assets of firms.

Business risk: volatility or business risk is a proxy for the probability of financial distress and it is generally expected to be negatively related with leverage. Business risk is another important factor for any company in making their capital structure decision.

Business risk is defined as the uncertainty inherent in projections of future returns on assets (roa) if no debt is used. the greater fluctuation in roa, the larger is the firm's business risk, in which roa is calculated by net income divided by total assets. the larger the firm's business risk, the lower is its optimal leverage level. Business risk could either be determined by fundamental factors or by un-levered beta. un-levered beta is derived from beta equity. beta equity consists of a firm's business and financial risk; consequently the beta equity must be un-levered in order to refine the business risk. a higher levered company will have a higher equity beta since a larger financial risk is used (copeland & weston 1992).

Industry: industry is also one of factors that should be considered when the company decides on its capital structure. it can be assumed that companies belonging to the same industry face the same economic conditions, but the economic conditions may vary among industries.

Board independence: wen (2002); cited in hasan and ali (2009) provide evidence about the existence of significantly negative relationship between gearing level and representation of non-executive directors on the board. the possible reason is that non- executive directors monitor the managers more efficiently and effectively so managers are forced to seek lower gearing levels for achieving superior results. Similarly companies with higher representation of non-executive directors are bound to follow low financial leverage with a high market value of equity.

Board balance and independence

At least half of the board, excluding the chairman, comprises of non-executive directors, all of whom have been determined by the board to be independent. the chairman meets regularly with the non-executive directors both individually and collectively without the executive directors being present.

Institutional shareholding

Institutional investors themselves act as a source of long term debt as they are willing to provide debt to a company over whose board they enjoy an influence and also serve as an effective monitoring device over the company‘s strategic decisions. they bring down the company‘s agency costs and also reduce managerial opportunism.

Financial risk

Financial risk is defined as the portion of shareholders ‘risk, over and above basic business risk, resulting from the use of financial leverage (Weston and Brigham 1990). Cheng (1979), with an example, illustrated clearly that earnings available to common stockholders are higher under the long-term debt proposal than they are under the preferred stock proposal, regardless of the fact that the interest rate on long-term debt is higher than the preferred stock dividend rate.

Management attitudes

The other factor to consider when determining an optimal capital structure is managerial attitudes. Some managers are simply more aggressive than others. Therefore some firms are more inclined to use debt in an effort to increase profits, whereas some managers are very conservative and prefer the capital structure that has always been used, even if it is not optimal (weston and brigham 1990).

THE EFFECT OF MANAGEMENT CONCENTRATION ON CAPITAL STRUCTURE

Friend and Lang (1998) examined those shareholders, having high concentration in firms, play an important role to control and direct the management to take eager interest in benefit of the concentration group. However, the check and balance not only causes to reduce the agency cost but also resolves the issues between managers and owners. On the other hand, Wen et al. (2002) find the relationship between corporate governance and capital structure analyzing the data of Chinese listed companies. The study reveals due to strict rules and regulations, managers of the firm do not employ debt to keep the risk of default at low level.

Empirical Studies

According to the study by Titman and Wessel (1988), by applying LISREL model, developed by K. Joreskog and D. Sorbom, on the determinants of capital structure, suggest that those firms with unique or specialized products have relatively low debt ratios. The study also explores that profitable firm as have less debt relative to market value of their equity. Jensen and Mackling (1976), argue that managerial shareholding reduces managerial incentives to consume perquisites and expropriate shareholders’ wealth and results in alignment of the interests of management and shareholders.

On the other hand, Jensen (1986) addresses the issue of agency theory and finds that managers of a firm may make efforts to expand the firm beyond its optimal size for their personal gains and this may result in increase in gearing levels. These efforts may lead to greater power and status for managers but it will have a negative impact on firm efficiency. A n empirical analysis by Rehman1, Rehman2 and Raoof, (2010), explores the impact of corporate management on capital structure in case of Pakistan banking sector, by taking ownership concentration, Board Independence, Managerial Ownership, Board Size, and Number of meetings held during the year is as proxy variables of Corporate management and their findings shows that there is no relationship between capital structure and corporate management in banks.

To conclude, in the light of these theories and practical evidences discussed above, which mostly undertaken on listed firms with different explanatory variables and strategies of inquiry, this study is designed to examine the impact of managerial self-interest on corporate capital structure using mixed research approaches. And also will try to see the effect of managements’ ability and desire to adjust the level of debt in the firm as a furtherance of the findings by Friend and Lang (1988) via incorporating some more variables like; board independence. In addition, so far in Ethiopia no work is done in this area, to investigate the relationship between managerial self-interest and corporate capital structure. Hence, this study going to fill this gap and is supposed to pave the way for similar researches in the country.

Need For the Study

The researcher believes that the results of this study will provide additional insights into the relationship between managerial self-interest and corporate capital structure.

This paper will be an initiation for those who are interested to conduct detailed and comprehensive study regarding the impact of managerial self- interest on corporate capital structure. It will enable the managing body, policy makers and the higher responsible bodies of selected companies, to be aware of the impact of managerial self- interest on corporate capital structure and give insights how they develop efficient management internally.

PROBLEM STATEMENT

Modern corporate finance literature focuses on two competing issues governing the management behavior. These are agency problem and theory of corporate control. Agency theory describes that there is an inherent conflict of interest between shareholders and

managers because of the existence of separation of ownership and control (Ali and mazrul 2006).

According to Friend and Lang (1988), where corporations have large non managerial investors, management may not be able to adjust debt ratio by its Owen interests, and debt ratio would be expected to be higher than when such investors do not exist and may be closer to the optimal level from the viewpoints of diversified investors. It is also shown that the level of debt decreases as the level of management investment in the firm increases reflects the greater non diversifiable risk of debt to management than to public investors for maintaining low debt ratio. There are constraints on management‘s ability or desire to reduce specific risks to them implied in a higher debt ratio that might otherwise be desired by public investors in view of the tax shield on interest paid on corporate debt.

On the other hand, Jensen and Mackling (1976) argue that managers avoid leverage to reduce the risk of corporate bankruptcy and the consequent transfer of control to Bondholders. The loss to managers from bankruptcy is potentially greater when members of the manager's family are also employed in the firm.

In contest, as a statement of corporate purpose or vision, value maximization is not likely to tap into the power and interest of employees and managers to create value. A firm cannot maximize value if it ignores the interest of its stakeholders (Jensen, 2006). Furthermore, the study on the determinants of corporate capital structure, by Titman and Wessel (1988), suggested that smaller firms tend to use significantly short term debt than larger firms.

On the whole, the literature on the determinants of capital structure has already been developed in developed markets that have different institutional financing arrangements from those in emerging markets. This requires a thorough examination of the predictors of capital structure in an emerging market. In addition, the study so far has been conducted on listed firms with different proxies of managerial self-interest as indicators of capital structure. As a result, the researcher has been inspired by the deficiencies in previous studies regarding the methods used, the variables and study units incorporated. Thus, this study is going to examine the relationship between managerial self-interest and corporate capital structure through the use of mixed strategy by incorporating both management and Performance variables.

OBJECTIVE OF THE STUDY

The main objective of this paper is to examine whether capital structure decisions are at least in part motivated by managerial self-interest and to see the relationship of leverage to management‘s shareholding for selected companies in Addis Ababa. In particular, the study would require to:

1). Determine the influence of the composition of board members on companies’ capital structure.
2). To examine the existence of managers independence.
3). To examine the effect of managerial ownership on companies’ leverage level.

HYPOTHESES

The early literature suggests that managerial ownership serve to control agency costs of the firm. The literature also indicates that the presence of external monitors acts as a self- control on management‘s opportunistic behavior. Institutional investors represent one such group of monitoring agents and it suggests that the managerial ownership is inversely related to the extent of monitoring by institutional investors. In addition, institutional ownership is found to be negatively related to the level of managerial equity holdings in the firm. Thus the results support the idea that institutional investors serve as effective monitoring agents and help in mitigating agency costs. The study mad by Friend and Lang (1988) suggested that the level of debt decreases as the level of management investment (shareholding) in the firm increases, reflecting the greater non diversifiable risk of debt to management than to public investors for maintaining a low debt ratio.

Based on the above literature this study suggests the following hypotheses:

HO. The long term debt to equity ratio is negatively related to managements‘ shareholding.

HI. The long term debt to equity ratio is not negatively related to managements‘ shareholding.

HO There is strong relationship between corporate capital structure and managerial self- interest.

H2. There is no strong relationship between corporate capital structure and managerial self-interest.

RESEARCH METHODOLOGY

Research Design

This study was used quantitative approach an approach to inquiry which deals post positivism paradigm. This study would use survey research design (explanatory research design).

Sampling Frame

As per the data obtained from, Ministry of Trade and Industry as of September 30, 2010 there are around forty five (45) non-public share companies from financial and manufacturing industries in Addis Ababa that are licensed and actively operating in the city. Therefore the study would use purposive sampling techniques so as to select the study units which have relatively more literature in the area. Hence then, the

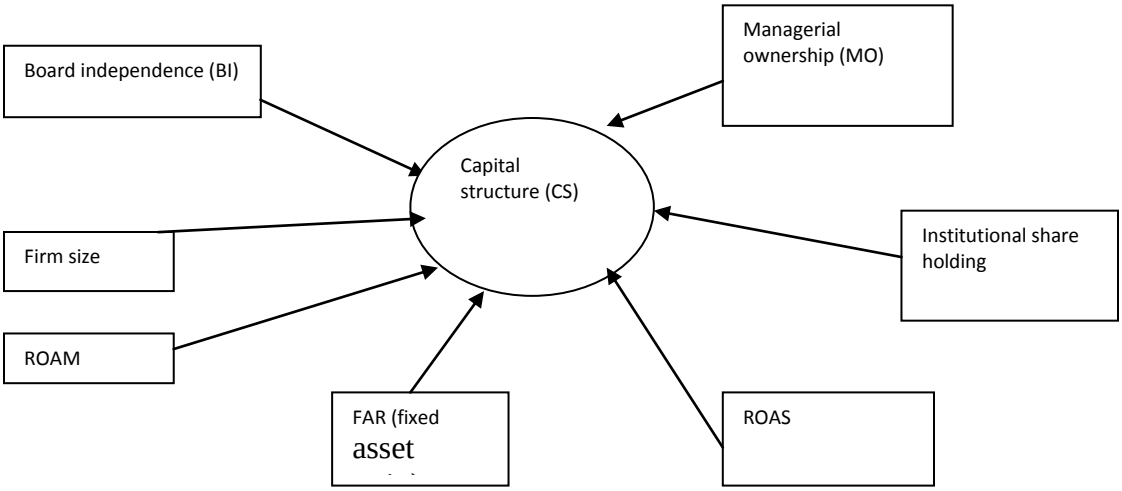

Figure 1: The frame work for dependent and explanatory variables.

study would also use both stratified and random sampling techniques in order to group companies in the same industry together and, avoid selection biases. From the total sample frame the researcher was used eight (8) sample sizes which are around 18% of the total sample frame. The rationale behind using random sampling techniques is that, each study unit would have an equal or non-zero chance of being selected and on the other hand the stratified sampling is used to divide the sampling frame in to mutually exclusive strata or sub groups respectively.

The study covered five years (2006 to 2010) data of different supportive variables, such as, performance, total asset size, total equity and total debts so as to examine the relationship between corporate capital structure and managerial self-interest. The selection of the variables is based on previous relative empirical and descriptive studies by Friend and Lang (1988), and Rehman1 and Raoof (2010). Similarly influence of controlled variables like firm fixed asset ratios, and profitability ratio specifically return on asset (ROA) and standard deviation of earnings before interest and tax payments as a proxy for risk, on firms' financing mechanism was also be investigated so as to see their relationship with the dependent variable, capital structure. The following procedure describes the construction of the independent and dependent variables related to capital structure and managerial self-interest:

Capital Structure (CS) = Long term Debts / Capital Employed.
Managerial Ownership (MO) = Share held by CEO, Directors and Family & Child /Total Share.
Board Independence (BI) = Non-Executive Directors in the Board /Total Number of Directors.
ROAS = standard deviation of earnings before interest and tax payments.
Fixed asset (FA) ratio = Ratio of net property, plant, and equipment to book value of assets.
ROAM=Mean of earnings before interest payments and taxes)/asset ratio defined on book-value basis. It is used as a proxy for profitability of a firm.
Institutional Share Holding is measured as percentage of shares held by institutions as disclosed in annual financial reports.

Firm size-explained by friend and Lang (1988) in terms of total assets of the firm.

METHODS OF DATA COLLECTION AND ANALYSIS

Data Collection Methods

The study was used primary and secondary sources of data. Firstly, Primary data were collected through structured questionnaire covering two candidates; Board of directors and management committee member. There are around an average of nine members of boards, so the researcher has used this figure and distribute 72 questionnaires, out of which 62 are collected with a response rate of 86%. Secondary data sources were collected from; Annual reports and Articles. Websites and other related sources. The sort of data that was seen through these sources is that performance data, through annual reports different ratios related to leverage such as long term debt to equity ratios (the percentage content of capital structure in each company covered in the study), and fixed asset ratio, profitability ratios and thereby the mean and standard deviation of return on asset ratios.

Methods of Data Analysis

Ordinary least square (OLS) model is applied on the panel data that were collected from companies in different industries over a period of time, and regressed as a control (supportive) variable to examine the relation between independent and dependent variables, Eviews 6

was used for data analysis tool.

Dependent Variable: Capital Structure – Leverage

Capital Structure is the dependent variable and it is quantified by using debt to equity ratio. Leverage could be calculated either by using total debt or by using long term debt as a percentage of total equity. There are number of companies that do not have long term debt. There are a number of causes for this state of affair. The first is unwillingness of commercial banks to extend longer term facilities. The second is relative absence of financial institutions specializing in long term financing. The third reason is the emerging state of capital market for long term debt in the country (Hasan and Ali 2009). On the other hand, Rajan and Zing ales, 1995 define the dependent variable, leverage, as total liabilities divided by total assets (TL/TA).

EXPLANATORY VARIABLE

Managerial Ownership (MO)

Large debt increases the threat of bankruptcy so higher managerial self-interests in long term sustainability of the company may encourage managers to reduce gearing levels. Managerial shareholding is measured as percentage of shares held by members of board disclosed in annual financial reports (Hasan and Ali 2009).

Board Independence (BI) = Non-Executive Directors in the Board /Total Number of Directors

According to Hasan and Ali (2009) Non-executive directors are cornerstone of modern corporate governance and suggests that the relationship between presence of non-executive directors and capital structure has been explored by few researchers but evidence in this regard is mixed. Pfeffer and Salancick (1978); cited in Hasan and Ali (2009) found that higher level of representation of non-executive directors on board leads to higher gearing levels (the proportion of relationship between equity share capital to preference share capital and other fixed interest bearing funds or loans).

Fixed asset (property, plant and equipment) ratio

The positive impact of fixed asset ratio on debt ratio bears on the collateral value of assets with an obvious link to debt capacity (Friend and Lang, 1988). Firms holding valuable intangible assets or growth opportunities tend to borrow less than firms holding mostly tangible assets. For example, Long and MaLitz (1983), found a significant negative relationship between rates of investment in advertising and research and development (R&D) and the level of borrowing. They also found a significant positive relationship between the rate of capital expenditure (in fixed plant and equipment) and the level of borrowing. Standard deviation of (earnings after interest and tax) = EBIT/Asset ratio

Profitability- Return on Assets

Pecking Order Theory of capital structure states that companies use internally generated funds as first priority to finance project. Then as second priority debt is used and finally option of equity is exercised to finance company projects (Hasan and Ali 2009). Therefore it is assumed that profitability of firms has negative relationship with leverage levels. In this study Return on Assets (ROA) is used as measure of profitability and it is calculated by dividing a company's net earnings by its total assets. Institutional Share Holding Hasan and Ali (2009) suggested that the Presence of institutional shareholding in a company helps to raise long term finance at an advantageous cost.

Model specification

According to Chris Brooks (2008), inspight of the problems that are encountered in applying financial econometrics such as measurement error and data revision, financial econometrics is applied to analyze basically; time-series, cross-sectional and panel data types so as to examine the relationship between dependent and explanatory variables quantitatively.

$$CS=\alpha +\beta 1\ ROAM+ \beta 2\ FAR+\beta 3\ ROAS + \beta 4\ LA+\mu i$$

In the above model α denotes the fixed effect on capital structure and μi states an overall standard error of the model whereas 1β, 2 β, 3 β and 4β show the coefficients of the independent variables while ROAM, FAR, ROAS and LA are the independent variables. In addition, CS represents as a dependent variable of the model. The study will also investigate the correlation matrix between these variables.

RESULTS AND DISCUSSION

From the below table, the natural log of total asset for the companies under consideration is significantly; positively affect the leverage ratio of these companies at 1% significant level, which implies that as log of total asset is increased by 1%, leverage is also increased by 0.381%. This is in sharp consistent with the predictions of the pecking order theory and trade-off theory where large firms are generally perceived to have higher credit ratings and as such, easier credit access.

On the other hand, the risk measure, SROA, may suggest a negative impact on capital structure. But in the same table it is also depicted that the risk measure (S ROA) is insignificant at p-value of 60.35%, indicates the case that relatively large firms (banks and insurances in

Regression Analysis of supporting variables for banks and insurances:

Table 1: Regression Results for Banks and Insurances

Variables	Coefficient	std. Error	t-statistic	Prob.
constant	-3.862061*	1.209655	-3.192696	0.0061
LA	0.380542*	0.103581	3.673853	0.0023
MO	26.09151*	7.787955	3.350239	0.0044
ROA	-4.525425	8.529381	-0.530569	0.6035
S ROA	0.550619	0.547118	1.006398	0.3302
Adjusted-R squared	0.548458			
Prob.(F-statistics)	0.002545			

Source OLS regression results
*significant at 1% level
LA: log of total asset as proxy for company size
MO ROA: mean of return on asset (ROA) as proxy for profitability of the company
S ROA: standard deviation of ROA as proxy for earnings volatility (risk)
FAR: ratio of plant, property and building as proxy for asset tangibility of the company

Table 2: The impact of tangibility on leverage

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0.651173	0.091217	7.138753	0.0000
FAR	0.986210	0.426049	2.314780	0.0326

R-squared 0.229393
Adjusted R-squared 0.186581
Prob. (F-statistic) 0.032636
Source: OLS regression results

this case) tend to be more diversified and less prone to bankruptcy risks. This result may suggest that more profitable firms borrow less. It is consistent with the findings of Warner (1977) that large firms should be more highly levered.

On the other hand, performance in this case is measured by return on asset. Mean of return on asset (MO ROA) is significantly; positively affect the leverage ratio at 1% significant level, which implies as MO ROA increased by one (1), the leverage of the company increases by 26.1. The result also suggests that companies maximize their profit before interest and taxes in line with their long term debt level. This result is consistent with the trade-off model which suggests that profitable firms should borrow more, since they have a greater need to protect income from corporate taxes. What should also support a positive relationship between profitability and leverage is that the probability of bankruptcy decreases as profitability increases (Myers 1993).

Volatility or business risk is a proxy for the probability of financial distress and it is generally expected to be negatively related with leverage. But as shown in the above table it does not significantly; negatively affect the return on assets of the companies under consideration. The smaller fluctuation in ROA, the smaller is the firm‘s business risk, in which ROA in this study is calculated by dividing profit before interest and taxes to total assets. Similarly, adjusted R-square suggests that all of the explanatory variables explain the dependent variable (capital structure) by 54.85%. Here it is advisable that the higher is adjusted R-square, the higher the specification of the dependent variable by the independent variables. Probability of f-statistics is also explains that, even though, independent variable (S ROA, FAR) in particular shows insignificant effect on leverage, the total effect of the explanatory variables as a whole is significant at 1% significant level.

Table(2) above, the simple regression results of the fixed asset ratio calculated by dividing property, plant and equipment of the companies to total asset, indicates that tangibility is statistically significantly (at 5% significant level) affect the level of leverage for these companies. This result is consistent with the findings of (Xiaoyan Niu 2008), Since the tangible assets can be used as collateral in external borrowing, the

Table 3: Correlation Matrix Among Explanatory Variables

	1	2	3	4
1. LA	1.00			
2. FAR	-0.621175*	1.00		
3. MO ROA	-0.833298*	0.771474*	1.00	
4. S ROA	-0.387541**	0.472522**	0.315465***	1.00

Source OLS regression results

*** Correlation is significant at the 0.1 level (1-tailed).
** Correlation is significant at the 0.05 level (1-tailed).
* Correlation is significant at 0.01 levels (1-tailed).
Note: Profitability (MO ROA) is defined as the average ratio of earnings before interest and tax to total assets. Tangibility (FAR) is defined as the ratio of fixed assets to total assets. Size (LA) is measured by the natural logarithm of assets. Long-term debt ratio (LTD) refers to long-term debt to total equity. Risk or volatility of earnings is defined as the standard deviation of return on asset before interest and tax.

Table 4: Correlation matrix (manufacturing)

	LTD	FAR	MO ROA	S ROA	LA
LTD	1.00	-0.579253			
FAR	-0.579253**	1.00			
MO ROA	-0.119764	-0.395334@	1.00		
S ROA	-0.228634	-0.087057	0.703741*	1.00	
LA	0.815634*	-0.558329**	0.038145	-0.118256	1.00

Source OLS regression results

** Correlation is significant at the 0.05 level (1-tailed).
* Correlation is significant at 0.01 levels (1-tailed).
@ Correlation is significant at 0.1 levels (1-tailed)
Note: Profitability (MO ROA) is defined as the average ratio of earnings before interest tax to total assets. Tangibility (FAR) is defined as the ratio of fixed assets to total assets. Size (LA) is measured by the natural logarithm of assets. Long-term debt ratio (LTD) refers to long-term debt to total equity. Risk or volatility of earnings is defined as the standard deviation of return on asset before interest and tax.

presence of a large fraction of tangible assets of a firm help to get bank loans at a lower interest rate and it also helps to reduce the risk the lender suffering from the agency cost of debt. Then the debts can be secured by the collateralization of tangible assets, the firm's opportunity to engage in asset substitution is reduced by the presence of a large fraction of secured debts.

One of the assumptions of ordinary least square (OLS) linear regression model is that, the mean of the residuals will always be zero provided that there is a constant term in the regression. In other words the variances of the error term are constant-homoscedasticity. If errors do not have constant variance, that will show the presence of hetroscedastic. So with the suspection of such things the researcher makes one of the Heteroscedasticity test, white test, and the result shows that there is no statistically significant variations of the error term-showing a constant variance in the error term from one period to the other. The F-statistic with probability of 79.5% indicts the absence of significant variation in the variance of the error term.

Finally, the t-test of the constant, tests whether the constant is significantly different from zero. If the researcher considers the standard assumption that the residuals are normally distributed with mean zero and at constant variance, then the expected value of the response variable is reduces to a mean. That is, the constant in the regression model is a mean;-the constant is the mean of the response variable. On the other hand, the p-value (0.61%) of the constant term indicates that it is statistically significantly different from zero at 1% significant level.

LA: log of total asset as proxy for company size
MO ROA: mean of return on asset (ROA) as proxy for profitability of the company
S ROA: standard deviation of ROA as proxy for earnings volatility (risk)
FAR: ratio of plant, property and building as proxy for asset tangibility of the company

As presented in the above table, results indicate that the

Summary of Descriptive Statistics

A). for banks and insurances

	LTD	FAR	MO ROA	S ROA	LA
Mean	0.786312	0.137029	0.047458	0.006835	8.844253
Median	0.697269	0.026729	0.049061	0.002808	8.930704
Maximum	1.386587	0.398731	0.065660	0.024861	10.09179
Minimum	0.232632	0.001297	0.026050	0.000351	7.482535
Std. Dev.	0.347529	0.168777	0.015921	0.007459	0.977261

B). for manufacturing companies

	LTD	FAR	MO ROA	S ROA	LA
Mean	0.135661	0.180953	0.039783	0.014090	8.368005
Median	0.055336	0.135514	0.025950	0.009112	8.112386
Maximum	0.554973	0.554607	0.083262	0.034894	9.797928
Minimum	0.007776	0.012123	0.010135	1.73E-07	7.616300
Std. Dev.	0.175410	0.151847	0.032516	0.012941	0.759216

overall model is significant at 1% significant level. The adjusted R2 for the model indicates that 65 percent of the variance in the leverage of the companies is explained by independent variables and the rest by the standard error.

The coefficient (beta) for, firm size is, 0.1486 significant at p = 0.0086. However, the coefficient for the other control variables; profitability (MO ROA), risk(S ROA) and tangibility of assets is insignificant at p = 0.2769, 0.9153 and 0.1593 respectively. The direction of relation between size of the companies and capital structure, leverage is positive indicating that the higher the level of total assets, the higher will be the firm‘s leverage. In other words as the total asset of the companies increased by 1%, the long term debt to equity ratio of the firm will increase by 0.1486%. The relationship of mean of return on asset and tangibility with capital structure is negative, indicating that the higher the level of these items, the lower will be the firm‘s leverage level, but both variables are not statistically significant with their respective p-value. On the other hand, the measure of profitability, mean of return on asset (MO ROA), is negatively related to leverage and the result is consistent with the findings of friend and Lang (1988)-This measure is negatively related to leverage and assures the fact that risky firms borrows less. In addition, the companies will prefer internal financing over external financing as the cost for external capital will be greater for the firm and suggests a negative relationship between profitability and leverage-may be the information asymmetry between the companies and the outsiders. As the researcher examine from the annual reports of these companies, no consistency is there regarding earnings before interest and taxes-assures the presence of business risk.

CONCLUSIONS

According to the researcher, exclusive of insurance companies, all other companies in the sample are minimizing the usage of long-term debt in their capital structure. This conclusion was verified by trend analysis of long term debt to equity ratio for the study period (2006-2010). Concerning the ownership structure of the sample companies, most of the shares are belongs to managerial insiders.

Furthermore, new shares issued by the firms are not proportionally distributed among shareholders. Finally, the overall results of the findings shows that managerial self-interest has partly impact on the capital structure decision of the companies under consideration, provided that, the presence of other possible factors such as information asymmetry between managers and external shareholders.

RECOMMENDATIONS

Based on the findings obtained from regression analysis, the researcher has suggested the following points to the

extent of the findings discussed so far.

It will be advisable for those manufacturing companies if they consider their debt management mechanisms in line with their financing decision about their long- term investment plans. Because there are fiscal years where losses has been incurred with the presence of fixed interest funds in their capital structure and there are also profits where there is no long term finance.

It is better for those banks and manufacturing companies to adopt an anti-dilution provision that may allow current shareholders to avoid dilution and preserve their fractional ownership by providing the right to buy a proportional number of shares upon any issuance of new shares to other shareholders. The anti-dilution provision should be in the corporation's charter to be regarded as valid.

The key point, the researcher believed is that the board of directors is required to fulfill their role effectively and efficiently in conformity with the presence of independent directors. It will be better for reasonable capital structure decisions of the firms, if they balance the number of executive and non-executive directors in the board-half from each.

Firms should maximize the involvement of non-managerial principal stockholder (the non-managerial insiders are those principal stockholders who are not officers and directors), and thereby substantial increase of debt can be realized, which may suggest that the existence of large non-managerial stockholders may balance the interests of managers and outside investors. This is because; in the absence of any external significant shareholding the propensity to have lower long term debt to equity ratio will persist and will result in higher non-diversifiable risk of debt to management.

LIMITATIONS

Finally, the researcher believes some limitations to the this paper; it needs even more extensive work with the same topic by increasing the sample size and obtaining empirical evidences regarding the amount of shares that belongs to managerial insiders, of the study units as far as it goes an using an appropriate multivariate techniques for better investigation.

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APPENDIX I

Table 1: Heteroscedasticity Test: White (banks and insurances)

F-statistic	0.596662	Prob. F(14,5)		0.7950
Obs*R-squared	12.51120	Prob. Chi-Square(14)		0.5653
Scaled explained SS	4.610062	Prob. Chi-Square(14)		0.9905
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.37209	19.68993	0.933070	0.3936
FAR	-7.323661	21.77847	-0.336280	0.7503
FAR^ 2	-6.024326	11.32805	-0.531806	0.6176
FAR*MO	190.4089	322.9509	0.589591	0.5811
ROA FAR*S	17.49194	43.14895	0.405385	0.7020
ROA FAR*LA	-0.092000	1.726281	-0.053294	0.9596
MO ROA	-14.07889	356.8529	-0.039453	0.9701
MO ROA^ 2	-715.2550	2114.657	-0.338237	0.7489
MO ROA*S ROA	103.0179	476.5986	0.216152	0.8374
MO ROA*LA	5.873904	24.46913	0.240054	0.8198
S ROA	-31.13286	79.71759	-0.390539	0.7122
S ROA ^2	-374.1144	494.6446	-0.756330	0.4835
S ROA*LA	3.375222	7.633271	0.442172	0.6768
LA	-3.787569	3.392150	-1.116569	0.3149
LA^ 2	0.189389	0.154262	1.227713	0.2742
Prob.(F-statistics) 0.795022				

Appendix II

Table 2: Computed ratios for banks and insurance companies under consideration

year	comp	LTD	FAR	MO ROA	S ROA	LA	ROA
2006	DB	0.80147	0.013201135	0.03988	0.00063	9.65763	0.04078
2007	DB	1.20625	0.016103435	0.03988	0.00213	9.7811	0.0429
2008	DB	0.94822	0.011970744	0.03988	0.0018	9.89431	0.04242
2009	DB	0.77249	0.011275618	0.03988	0.00259	9.98823	0.03622
2010	DB	0.62205	0.013347152	0.03988	0.00197	10.0918	0.0371
2006	AYB	0.56112	0.012052608	0.02605	0.01041	9.47915	0.04078
2007	AYB	0.77509	0.001296686	0.02605	0.00035	9.55364	0.02655
2008	AYB	0.54122	0.015333475	0.02605	0.01479	9.63042	0.00513
2009	AYB	0.55497	0.013876865	0.02605	0.00035	9.73851	0.02655
2010	AYB	0.23263	0.012122557	0.02605	0.00369	9.79793	0.03127
2006	GIC	0.51038	0.037354105	0.05824	0.01064	7.48253	0.04319
2007	GIC	0.48338	0.03973631	0.05824	0.0027	7.5653	0.05443
2008	GIC	0.52275	0.046127896	0.05824	0.00859	7.64608	0.04609
2009	GIC	0.43395	0.371782862	0.05824	0.00292	7.73236	0.05411
2010	GIC	0.49599	0.398731203	0.05824	0.02486	7.71912	0.0934
2006	AWIC	1.09861	0.25200317	0.06566	0.00682	8.05838	0.05601
2007	AWIC	1.28373	0.30187111	0.06566	0.0022	8.16161	0.06255
2008	AWIC	1.33987	0.395780357	0.06566	0.00195	8.22261	0.0629
2009	AWIC	1.38659	0.390440691	0.06566	0.01316	8.30211	0.04705
2010	AWIC	1.15548	0.386177564	0.06566	0.02413	8.38226	0.09978
year	comp	LTD	FAR	MO ROA	S ROA	LA	ROA
2006	TAS	0.05469	0.28969	0.0101352	1.7E-07	7.6163	0.01014
2007	TAS	0.05616	0.33999	0.01014	0.02099	7.70055	-0.0195
2008	TAS	0.05534	0.30531	0.01014	0.00469	7.70919	0.01677
2009	TAS	0.05405	0.28669	0.01014	0.00911	7.69925	0.02303

2010	TAS	0.05319	0.22676	0.01014	0.00717	7.75619	0.02028
2006	NMO	0.11134	0.13551	0.0832618	0.0328	8.11123	0.03687
2007	NMO	0.1138	0.13292	0.08326	0.00419	8.10502	0.08919
2008	NMO	0.07718	0.09077	0.08326	0.03489	8.31414	0.13261
2009	NMO	0.0552	0.07185	0.08326	0.02838	8.39206	0.1234
2010	NMO	0.04223	0.14687	0.08326	0.03466	8.22104	0.03424
2006	AS	0	0.29317	0.00025	0.030318	7.53049	0.04313
2007	AS	0	0.17652	0.00025	0.036357	7.70611	-0.0512
2008	AS	0.61402	0.43866	0.00025	0.005175	7.687	-0.0071
2009	AS	1.0276	0.27453	0.00025	0.003205	7.82959	0.00478
2010	AS	1.03068	0.25234	0.00025	0.007993	7.82069	0.01155
2009	AMW	0.025139	0.092	0.02595	0.00251	8.11239	0.022401
2010	AMW	0.00778	0.55461	0.02595	0.01305	8.61584	0.044399