



**THE IMPACT OF MANAGERIAL SELF-INTEREST ON CORPORATE
CAPITAL STRUCTURE
(EVIDENCE FROM SELECTED FIRMS)**

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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 paper deals with the impact of managerial self-interest on corporate capital structure of eight selected companies representing for Financial Services (Banking and Insurance) and Manufacturing sectors found in Addis Ababa, Ethiopia. Mainly the study focuses on the quantitative analysis with the use of ordinary least square (OLS) Method so as to see the impact of representative proxies of managerial self-interest such as, board independence, managerial shareholding and institutional shareholding on firm's capital structure. 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. The result shows 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 attitude towards maximizing the firm's profits and obtaining tax benefits for employing long term debt.

(Keywords: *Managerial Interest, Capital Structure, Return on Assets, Managerial ownership and agency costs*)

Introduction:

The term capital structure refers to the percentage of capital (money) at work in a business by type. Broadly speaking, there are two forms of capital namely equity capital and debt capital. Each has its own benefits and drawbacks and a substantial part of wise corporate stewardship and management is attempting to find the perfect mix of these two in capital structure in terms of risk or reward payoff for shareholders. 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). Agency costs arise due to the conflicts of interest between firm's owners and managers. Jensen and Meckling (1976) introduce two types of conflicts: conflicts between shareholders and managers; and conflicts between shareholders and bondholders.

Shareholders-managers conflicts: This kind of conflict stems from the separation of ownership and control. If managers do not own the whole (100% of the firm), they can only capture a fraction of the gain earned from their value enhancement activities but they need to bear the entire costs of these activities.

Shareholder-bondholder conflicts: The typical phenomenon of these conflicts is that the shareholders or their representatives make decisions transferring wealth from bondholders to shareholders. Certainly, the bondholders are aware of the situations in which this wealth expropriation may occur, therefore, will demand a higher return on their bonds or debts. Debt aggravates agency conflicts between shareholders and bondholders in three distinguished categories that have been theoretically analyzed: The direct wealth-transfer from bondholders to shareholders, Asset-substitution is another source of the conflicts and under investment problem is another agency problem results in shareholder-bondholder conflicts. On the other hand,

Managerial self-interest, a concern for one's own advantage and wellbeing, may prevail when governance mechanisms are weakly placed, as is exemplified by allowing managers a significant amount of autonomy to make strategic decisions.

The 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. Furthermore, Groth (1997) suggested that Investors should guard against a form of management agency costs, namely, the use of bad debt capacity to further management's objectives and interests at the expense of stockholders, and possibly creditors. For example, management may employ excessive debt to protect against takeover, and thus preserve their positions. On the other hand, a management might use excess debt rather than raise equity, because raising equity would dilute its equity position, including the proportion of votes it controls—which is important in preserving board or management control. This dilution could occur for one or both of the these reasons; managers own the stock but are not willing to purchase the correct proportions of the new equity; ownership of stock is dispersed in a way such that newly issued shares are held by those who are less supportive of management. On top of that, Capital structure of the company may face many challenges such as; Self-interested management bodies with little regard for what is best for the corporation like value maximization and risk sharing, lack of primary attention to shareholders or a broader group of stakeholders. 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.

Research questions

In light of above stated problem this research study tries to answer the following research questions.

1. Does managerial ownership of firms influence the attributes of corporate capital structure?
2. Do the benefits of stock holders given priorities?
3. Which proxies of the managerial self-interest highly affect the corporate capital structure?
4. Does the level of debt determine the performance of the firm?

5. Does the level of composition of board members influence the attributes of corporate capital structure?

Research Objectives: The main objective of this paper is to examine whether capital structure decisions are motivated by managerial self-interest and to see the relationship of leverage to management's shareholdings of the selected companies.

In particular, the study also examines:

The impact of managerial self-interest on corporate capital structure

Influence of the composition of board members on company's capital structure.

Literature Review:

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. According to Agrawal and Nagarajan(1990), the managers of all-equity firms have significantly larger stockholdings than managers of similar-sized leveraged firms in their industry, there is significantly greater family involvement in the corporate operations of all-equity firms than in leveraged firms, managerial ownership in all equity firms is positively related to the extent of family involvement, and all equity firms are characterized by greater liquidity positions than leveraged firms.

Jensen and Meckling (1976); cited in Ali and Hasan, (2009, pp. 51) 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. It also reduces the tendency to involve in non-maximizing behavior. Managerial shareholding may still have adverse effects on agency conflicts and it may entrench the present management leading to an increase in managerial opportunism. 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. Friend *et al.* (1988) discussed the role of managerial self-interest in making capital structure decisions. They find that there exist negative relationship between leverage ratio and management's shareholding. This indicates that in the absence of any outsider principal stockholder the tendency of low debt to equity ratio will continue which will lead to higher non diversifiable risk of debt to management. In contrast, Anderson *et al.* (2003), confirm that firms with a high ownership concentration structure have higher leverage level than firms with dispersed ownership, but Nam *et al.* (2003), has suggested the opposite outcome. In addition, through the use of multiple regression models, Brailsford (2002) finds that the managerial ownership and leverage may be related in nonlinear fashion. He provides evidence about the presence of negative relationship among managerial equity holding and gearing levels and discovers that low level ownership by managers leads to low level of agency conflicts and results in higher level of debt.

In addition, higher levels managerial ownership results in managerial opportunism and ultimately leads to lower debt levels. On top of that, Margaritis¹ and Psillaki (2008) have tested empirically the effect of ownership concentration on firm performance by applying multiple regression econometrics model and suggested that the concentrated ownership should lead to better firm performance by lowering agency costs while dispersed equity ownership should be associated with more debt in the firm's capital structure. Guo *et al.* (2010), empirically showed the effect of ownership concentration on market leverage through the use of multiple regression econometrics model and suggested that is the effect of ownership concentration on market leverage is negative, which is consistent with the argument that large shareholders are more opposed to increasing the debt level, because of the risk of bankruptcy and financial distress. However, in firms with low ownership concentration the effect is positive.

In addition they also find that, the change in firms' leverage around the security issuance is positively associated with the level of ownership concentration, signifying that firms with highly concentrated ownership are more likely to choose more debt and less equity issuance than are firms with dispersed ownership. Moreover, the impact of ownership concentration on firms' external finance decisions varies under different stock market conditions. The impact is insignificant when the stock market is cold, but exists under median and hot stock market conditions. Otnet (2006) examined the relationship between ownership structure and

capital structure. Moreover, the work indicates that the agency cost arises due to internal and external set of mechanism and ownership structure has positive and negative impact on the capital structure. According to this study, a negative relation between ownership structure and capital structure is due to short term financing and a positive relationship between ownership structure and capital structure is due to sustainability in financing and enforcement of block holders (shareholders) to avail the opportunity of high debt. On the other hand Suto(2003) suggested that increase in ownership does not effect on corporate management. Further, the study investigates the external ownership reduces the agency cost as well as high debt ratio attracts excessive investments. While, Driffield *etal* (2007), find that higher ownership concentration has a positive impact on capital structure and firm value. In the case of lower ownership concentration, the relationship depends upon the strictness of managerial decision making which enforce to bring change in the capital structure.

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. 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.

Research design and Methodology

This study is uses quantitative Research designs. As per the information collected from Ministry of Trade and Industry as of September 30, 2013 there are around forty five (56) share companies (Non-Government) licensed and actively operating in financial and manufacturing industries in Addis Ababa, From these 56 firms eight (8) firms, four firms from each financial and manufacturing industry are selected randomly for the purpose of this study. The study uses secondary data collected from annual reports of the selected firms. The study covered five years (2009 to 2013) 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.

Methods of Data Analysis:

In this study quantitative data analysis methods, econometrics model, such as, 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. Capital structure is taken as dependent variable while managerial self-interest was used as an independent variable. Board Independence, institutional shareholders and Managerial Ownership is used as proxy variables for managerial self-interest. 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.

Dependent Variable: Capital Structure is the dependent variable and it is quantified by using debt to equity ratio. Debt to equity ratio can be calculated either by using market value or by using book value. The use of book value measure of leverage was preferred in this study. The reason is that optimal level of leverage is determined by the trade-off between the benefits and costs of debt financing.

Capital Structure (CS) = Long term Debts / Capital Employed.

Explanatory variable (Independent Variables):

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 Ratio (FA) = 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 (ISH) is measured as percentage of shares held by institutions as disclosed in annual financial reports.

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

Model specification:

According to Chris Brooks (2008), in spite 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. And hence this study is designed to use panel data; it will apply the linear regression for selected explanatory variables by making the other variables that will be analyzed through SPSS, qualitatively.

$$CS = \alpha + \beta_1 ROAM + \beta_2 FAR + \beta_3 ROAS + \beta_4 LA + \mu_i$$

In the above model α denotes the fixed effect on capital structure and μ_i states an overall standard error of the model whereas $\beta_1, \beta_2, \beta_3$ and β_4 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. However a descriptive statistics, such as mean, mode and standard deviation of dependent and independent variables of the selected companies, were analyzed through SPSS analysis. And then tables, graphs and accordingly charts would be used to present the research findings. In addition the simple regression model was also used to analyze variables related to managerial self-interest such as managerial shareholding. $Mo = \alpha + \beta + \mu_i$

Analysis and Results

Based on the related theoretical and empirical literatures have been stated. By using a sample of eight companies from financial and manufacturing industries for the period 2009 to 2013, the following regression results of some supportive variables are obtained so as to support the main findings that are going to be discussed next in the questionnaire analysis part. To analyze the impact of managerial self interest on capital structure of the companies under consideration and thereby management's ability and desire to reduce the level of debt by their own interest, this paper classifies the companies in to financial and manufacturing industries of equal observations- to see the relationship between leverage and supportive variables as follows. But the researcher's main finding is going to be discussed through questionnaire analysis next to the empirical results

of these supportive variables. The main purpose of the regression results is just to support the results in the questionnaire analysis.

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 ROA	26.09151*	7.787955	3.350239	0.0044
S ROA	-4.525425	8.529381	-0.530569	0.6035
FAR	0.550619	0.547118	1.006398	0.3302
R-Square				
Adjusted-squared	0.548458			
Prob.(F-statistics)	0.002545			

Table 1: regression results for banks and insurances

Regression Analysis of supporting variables for banks and insurances:

*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

From the above 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, S ROA, may suggest a negative impact on. 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 this case) tend to be more diversified and less prone to bankruptcy risks. This result may suggest that more profitable firms borrow less. This result is consistent with the findings of Warner (1977) that

large firms should be more highly levered. There are several theoretical reasons why firm size would be related to the capital structure of the firm. Firstly larger firms are likely to have a higher credit rating than smaller firms and thus have easier access to debt financing due to lower information asymmetry. Hence this result also suggests the findings by Rajan and Zingales, (1995), that larger firms are more likely to have higher debt capacity and are expected to borrow more to maximize the tax benefit from debt because of diversification-this is true for these insurance companies. In case of banks, their leverage level shows a decreasing trend even though they are well diversified-since they are profitable they do not want to go for more debt-declines their debt level.

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). But the researcher also examines the financial reports of these companies which reveal a decreasing trend in the level of long term debts. This may be the impact of managerial shareholding as it was examined in the questionnaire analysis below.

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.

Regression results for supporting variables of manufacturing companies.

Table 2: Regression results for manufacturing companies

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.979764	0.422415	-2.319432	0.0428
FAR	-0.386153	0.253927	-1.520723	0.1593
MO ROA	-1.588242	1.381194	-1.149906	0.2769
S ROA	0.345968	3.172102	0.109066	0.9153
LA	0.148615	0.045598	3.259220	0.0086
R-squared			0.747709	
Adjusted R-squared			0.646793	
Prob.(F-statistic)			0.004843	

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 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.

The coefficient 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 equity 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 profitable 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. The next figure explains more this fact.

Conclusions:

In this paper, the researcher has provided some information concerning the impact of managerial self-interest on capital structure decision process of the companies under consideration. The sample consisted of eight companies, four from financial industries and other four from manufacturing industries.

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 (2009-2013).

The risk measure (volatility of earnings before interest and tax in this case), shows its negative effect on the capital structure of manufacturing companies, but it is not statistically significant with the recommended significant levels of (1%, 5% &10%). In case of banks the result assures the fact that profitable firms borrow less, whereas these insurance companies are increasing their leverage levels; as they become large and well diversified, they are in need of maximizing their long term debt to maximize the debt tax benefits. This is verified by multiple regression analysis. On the other hand, regarding manufacturing companies practically there is high volatility of earnings; they are riskier than that of banks and insurances under consideration. Thus, borrows less long term debt-risky firms borrow less. By the same token it is also shown by multiple regression analysis.

Concerning the ownership structure of the sample companies, most of the shares are belongs to managerial insiders. This is verified by the questionnaire analysis that on average from 41-50% of the share are held by managerial shareholders. On the other hand, again on average the questionnaire analysis reveals that the shares occupied by outside shareholders are fallen in the range of 5-10%-which is very minimal as compared to shares that belong to insiders.

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.

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