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## Impact of ownership structure on leverage of non-financial firms in developing countries

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The effects of the ownership structure on the performance of a firm has been widely discussed in the past literature; however, the relationship between ownership structure and capital structure is not much examined. Those that discuss this issue are mostly conducted in developed countries due to the availability of the business sector data. The aim of this study is to focus on whether the ownership structure can help in explaining the variation of capital structure in developing countries, the case of Turkey. In this study, with a comprehensive literature review, the empirical evidence is used through theoretical framework. The analysis of the study is divided into three parts. First, the negative relationship between managerial ownership and capital structure. Second, the impact of ownership concentration (large shareholding) on debt/equity ratio. Last, the impact of both managerial ownership and external block holders on leverage.

Keywords: ownership structure, capital structure, leverage of non-financial firms.

### Introduction:

The corporate governance is a mechanism that stimulates the self-interested managers to make decision that maximizes the shareholders wealth. The managers are the controller of the firms who make decision on the behalf of owners of the firm. The

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Corporate Governance is a mechanism in which the providers of fiancé guarantee their yield on investments. The outsiders who provide the major portion of finance to the company must guarantee their return on investments. The purpose of corporate governance mechanism is to minimize the conflict of interests between principal and agent. There are some internal and external mechanisms. The internal control mechanisms consist of the ratio of independent and dependent members in the composition of board and difference between chairman of board and chief executive officer. Ownership structure is also an internal control mechanism that minimizes the conflict of interests between controllers and owners of firm. Takeover threat to managers is considered external mechanism of corporate governance that minimizes the agency conflict

The report of Asian Development Bank (2000b) suggests that ownership structure determines the corporate governance. The report of Asian Development Bank explained the two main features of ownership structure are composition and concentration. Asian firms are normally family owned firms and highly concentrated. The dispersion level decides the extent and nature of agency problem between owners and managers. Low dispersion means highly concentrated firms and majority of shares are owned by block-holders and agency problem between managers and block-holders. High dispersion means low concentration and majority of shares are owned by minority shareholder and agency problem rises between minority shareholders and managers.

The second feature of ownership structure is the composition. The composition means who are the owners of the firm. The owners of the firm might be family, bank and other financial institutions, government, foreign companies, individuals, non-financial companies. There is a close link between the concentration of ownership and ownership composition may be the result of ownership concentration.

### **1.1 Importance of study:**

The distribution of equity ownership among managers and external block holders has impact on the financial performance of the firm. The corporation is considered the most superior form of business but it has some problems. The conflict between the agent and the principal is the major problem of corporation. Corporate governance is the mechanism that deals with this conflict and solves this problem. Corporate governance explains how managers can ensure to avoid appropriation of wealth of shareholders. The corporation like Baring Bank, Maxwell and Bank of credit are the examples of failure due to poor corporate governance. The most of the research on corporate governance conducted on the developed countries but little research found on devolving countries. The report of World Bank suggests that the failure of corporation due to corporate governance leads to economic disaster not only to national level but also to international level. The capital structure decision is the strategic decision which affects the financial performance of firms. The significance of the study is to determine the effective strategic decision regarding the capital structure by arguing the link between capital structure and ownership structure. The objective of the study is to explain how the ownership affects the choice of financing which is the contribution to corporate governance. The study also helps in explaining the role of managerial ownership and external block holders with respect to agency theory. Furthermore, study examines the effect of ownership structure on capital structure. The relationship between ownership structure and firm performance is well researched. But, the effect of ownership structure on capital structure is little known, especially in the context of non-financial firms in developing countries. This study is an attempt to fill this gap.

The decision of capital structure is very important for any company because it has impact on the company's ability to survive in competition. In last thirty years, the literature is focused on issue of capital structure and dominated in discussion due to irrelevance

hypothesis of Modigliani and Miller (1958). The irrelevance hypothesis proposed that capital structure is irrelevant to the financial performance of the firm in equilibrium. This hypothesis proposed that, a company should be unconcerned as to use of debt or equity to funding its projects because the average cost of capital is totally indifferent to its capital structure.

A sequence of arguments to this hypothesis was developed, founded on the assumption that company chooses the capital structure dependent on the benefits and cost related with the issuance of equity and debt. The tradeoff between cost and benefits related to debt and equity, the companies are able to choose optimal capital structure. The agency cost arises with the issuance of equity or debt to finance the projects of company (Jensen Meckling, 1976). The debt plays an important role in overcoming the agent's discretion by monitoring those (Grossman Hart 1982). The debt can be used to signal the externals about the future visions of the company (Ross 1977). In opposite to Modigliani and Miller proposition, it is suggested that the capital structure is not indifferent to the financial performance and market value of share.

## **1.2 Problem statement**

Ownership structure effects the decision making process and one of the decision is the leverage decision. This means that there is a relationship between the ownership structure and capital structure. Therefore the problem statement of this study is to examine the relationship between ownership structure and capital structure. Since the corporate managers and external block holders are the two groups who influence on the decision making process on the allocation of resources of the firm. Therefore the study focuses on the impact of managerial ownership and external block ownership on capital ratio.

**Research objectives:**

**Main objective:**

To examine the relationship between ownership structure and capital structure

**Sub-objectives:**

- 1) To examine the relationship between managerial ownership and leverage
- 2) To examine the relationship between external block holder with leverage
- 3) To investigate the impact of both managerial ownership and external block holders on leverage.

## **2 THEORITICAL BACKGROUND OF IMPACT OF OWNERSHIP STRUCTURE ON CAPITAL STRUCTURE**

Ownership structure effect the capital structure is very complex issue. The firms which are controlled by managers are not likely to fund their projects with debt. Managerial control firms should retain more earnings as compared to owners controlled firms. The use of debt reduces the manager's discretion and increases the possibility of default (Jensen 1986). Managerial controlled firms usually rely on retained earnings and it is suggested that managerial controlled companies use retained earnings less efficiently than external funds. Therefore the performance of managerial controlled firms is less than the other form of ownership structure (Williamson 1964). The companies controlled by the owners retain more earnings than the managerial controlled firm because of tax treatment of capital income over the dividend (McEarchern 1975).

The capital structure decision is effected by the agency conflict between the shareholders and managers proposed by the agency theory (Jensen and Meckling 1975).

Due to the separation of management and ownership this conflict of interests arises and this conflict determines the level of capital structure (Jensen 1986). Managers have full control on free cash flows of firms and make low return projects without harming the shareholders. This problem can be solved by changing the capital structure of the firm. Debt reduces the management discretion and limits their activities. Debt minimizes the overinvestment of free cash flow (Harvey 2004). The obligation attached with debt is interest payments. Therefore the managers have to pay regular interests payments from free cash flow and this reduces the agency conflict between managers and shareholders. But if the firm doesn't pay interest and principal on due date, this leads to insolvency. This insolvency threat forces managers to work hard and make investment in fruitful projects (Grossman and Hart 1980).

Agency cost of debt proposed the conflict of interest between the shareholders and creditors of the firm (Jensen and Meckling 1976). The managers like to invest in very risky investment to get high return but this can damage the interests of debt holders. The shareholders capture the benefits if the investment succeeded but if the investment fails the debt holders has to suffer loss. Therefore the shareholders get more benefits in investing high risky projects even if the projects fail (Harris & Ravib, 1991). The conflict of interests between the majority and minority shareholders is also result in the decrease value of firm. This problem can be solved by improving the corporate governance standards (Shi, 2010; Hassan & Butt, 2009). The block holders' expropriation the wealth of minority shareholders and this lowers the market value of share (Vishney.1997). Thus, Leverage reduces the conflict of interest between shareholders and managers but increases the conflict between shareholders and creditors of the firm

The ownership can be divided into two groups: inside ownership and external block holders. Inside ownership means the percentage of shares held by managers and board

of directors. Top five shareholders are considered the block holders. External block holders play an important role in monitoring the manager's activities (Jong, 2002). The distribution of equity ownership can be used to minimize the conflict of interest between managers and shareholder (Jensen & Meckling, 1976). Ownership structure can also be used to reduce the conflict of interest between the block holders and small shareholders. This is proposed by the agency theory (La Porta, 1999). Ownership structure determines the different structure of corporate governance and corporate governance impact on the choice of internal or external financing. Therefore, the financing choice between debt and equity is depend on the control (Shi, 2011).

In developed countries, the ownership of the firms is usually dispersed. There are very few block holders and monitoring effect is very low (Xu & Wang 1999). In this system, the shareholders' interests are protected by the legal system of the countries. In developing countries, the ownerships are concentrated and block holder paly important role in safeguarding the interests of shareholders because the legal system is weak. Ownership in developing countries lies in few hands (La Porta, 1999)

Block holders monitor the non-maximizing activities of the managers and control (Shlefer and Vishny, 1986). As the percentage of shares increases, interests of shareholders also increase. Thus the block shareholdings give the right to monitor and control the activities of managers. Leverage is considered the cheaper way to reduce the conflict of interests between managers and shareholders (Short et al., 2002). It is very difficult for the managers to adjust the leverage according to their own benefits in the presence of external block holders (Friend & Lang, 1988). External block holders play very important role in minimizing the conflict of interest between agent and owners. Generally, shareholders like debt financing because shareholders don't like dilution of

ownership. Thus, direct relation is found between external block holding and the leverage.

The substitution hypotheses proposed the inverse relation between the block holding and leverage because the block holders can use substitute debt financing to check the activities of the managers (Grier & Zychowicz, 1994). Furthermore the block holders have incentives to pursue their own benefits and expropriate the wealth of small shareholders (Vishny, 1997). Block holders capture and control over the free cash flows and start using the resources of business for their private use and investing in non-profitable projects for their personal interests (Johnson, 2000). Moreover, the block holders invest in high risky investments for their personal benefits and leave cost of default for bond holders. In this case the firm would prefer to issue more equity than debt, this lead to inverse relation between leverage and block holdings (Lin et al., 2011).

Managerial ownership reduces the conflict of interest between managers and shareholders by aligning the interests of both parties and lowers the perquisites of managers and incentives (Jensen & Meckling, 1976). Managerial ownership like debt is also considered an effective mechanism to minimize the conflict of interest between managers and shareholders and reduces the agency cost (Moh'd et al., 1998). Furthermore the managers bear more risk than shareholders. These risks can't be diversified (Brailsford et al., 2002). The managers usually behave as risk averse and they avoid debt. As the level of managerial ownership rises the motivation of risk averse also increases and leads to decrease in debt level (Huang & Song, 2006). Moreover, managers sometimes give preference on issue more debt over equity as an anti-take-over technique (Slutz 1988).

The ownership structure also includes the family ownership, the ownership of financial institutions and individual owners. The individual owners are usually wide spread and

have no role in determining the capital structure of the firm (Firth, 1995). Institutional investors have important role in deciding the financial structure of the firm. These institutions include investment banks, mutual funds and insurance company's etc. institutional investors play an important role in eliminating the un-systematic risk of firm with the help of portfolio (Wang, 2009). Institutions have great interest in monitoring the activities of managers and profitability of the firm due to their diversified portfolio (Firth, 1995). Institutions always prefer debt financing over equity because debt give them incentive to monitor the management and decrease the managerial opportunism (Zycowicz, 1994). Family owned business are also included in block holder categories and have special incentive structure. Family owners believe in the long run performance of the business. Family business usually focuses on building the trust between owners and creditors of the firm and minimizes the information asymmetry (Schmid, 2013).

In order to avoid the agency cost the company should issue debt instead of issuance of equity. Debt decreases the conflict of interest between shareholders and managers but increases the agency cost of owner and the money lenders. Debt gives the incentive to shareholders to invest in high risky business to get high return in case of success. But if the investment fails the whole burden falls on the external lenders. Therefore, there will be optimal level of capital structure in the world in the absence of bankruptcy cost (Jensen & Mackling, 1975)

### **3Empirical evidence of impact of ownership structure on capital structure**

The empirical evidence of impact of ownership structure on capital structure fall into two categories; Firstly, the impact of managerial ownership on capital structure and

secondly the effect of external block holders on capital structure. This evidence is determined from developed and developing countries both.

Inside ownership has impact on the financing decision of the company. The firms dominated by insiders have positive relationship with leverage. The insiders firms were using 5.7% more leverage than the firms dominated by the outsiders. The analysis was conducted by taking the 84 managerial dominated firms and 84 outside dominated firms. The dependent variable in that study was ratio of long term debt to total market capitalization. These results were found by taking the data of 1970-1980 in the United States of America (Kim & Sorenson, 1986).

Block shareholding on average negatively related to debt ratio. The results were not different for the open and close information structure. The dependent variable was book value of debt divided by book value of debt plus market value of equity. The study was conducted by taking the data of 286 firms for the period of 1988-1989 (Pound, 1990). The positive relationship is found between external block holders and financial leverage of the companies. Brailford (2002) studied the relationship between equity ownership and capital structure of firms by taking the data of Australia. The study was conducted by taking the sample from French companies; Psillaki (2010) investigated the relationship between capital structure and ownership. He found that concentrated ownership is positively related the high financial leverage which confirm that block holders play an active role in monitoring the non-maximizing activities of managers.

The study conducted by La Bruslerie&Latrous (2012) of French companies found the inverse relationship between external block holders and leverage by taking the sample from 1998-2009. The block holders control the resources and issue additional debt, debt ratio increases with the decrease of ownership to avoid the risk of default. The study of Short et al. (2002) confirm the substitution hypothesis of debt, examined the

relationship between leverage and ownership by taking the sample of British companies. He found the inverse relationship between large shareholdings and leverage. The results of study of La Torre (2011) proved that the block holders always like to control the managerial opportunism by taking the Spanish companies and found the direct relationship between external block holders and leverage.

Brailsford et al. (2002) examined the relationship between managerial ownership and leverage and found the negative relation between managerial ownership and debt ratio. When the ownership of managers is low then manager issue to debt, but when the managerial ownership becomes very high they don't like to issue debt due to entrenchment hypothesis. Mehran (1992) examined the impact of ownership structure on capital structure by taking the sample companies from U.S.A for the period of 1973 to 1983. The results showed the direct relationship between ownership of managers and debt financing.

Bathala et al. (1994) and Chen & Steiner (1999) studied the relationship between financial leverage and managerial ownership and found the inverse relationship. This confirmed the substitution hypothesis. Berger et al. (1997) also studied the impact of managerial ownership on capital structure. The main focus of the study was to examine the management entrenchment hypothesis. The results showed the positive relation between managerial ownership and leverage. This confirmed the convergence of interests' hypothesis. Jensen et al. (1992) and Firth (1995) found the inverse relation between financial leverage and ownership of manages by taking the data from U.S.A companies. The results showed that the investments of managers are less diversified than the other stakeholders. Schmid (2013) investigated the relationship between family owned businesses with the debt financing. The results showed the negative

relationship between family ownership and leverage due to avoid the risk of default. This study was conducted by taking the sample firms from Germany.

Pushner (1995) studied the relationship between debt financing and distribution of ownership among managers and institutions. The results showed the direct relation between the ownership of financial institutions and debt financing and inverse relationship between the ownership of non-financial institutions and leverage. This study was conducted by taking the data from Japanese companies. King & Santor (2008) investigated the effect of family ownership on the leverage and found the positive relationship between family ownership and leverage. Family owned businesses tend to issue debt to finance projects in order to avoid the takeovers. The sample firms were taken from Canadian stock exchange for the period of 1998-2005.

Liu et al. (2011) investigated the impact of ownership of block holders on leverage of firms. The sample firms were taken from china. The results showed the ownership of external block holders has positive relation with debt financing. The results confirmed the expropriation hypothesis. The external block holders tend to expropriations wealth of minority stockholders. Céspedes et al. (2010) examined the effect of external block holders on leverage. The data was taken from the companies of Latin American for the period of 1996-2005. The results showed that the level of leverage is inversely proportional to the percentage ownership of external block holders.

Shi (2010) investigated the capital structure of the firms listed on stock exchange of China. The results showed the negative relationship between the concentrated ownership and leverage. The data was taken for the period of 1995-2001. The results showed that external block holders tend to capture the financial control of the firms and expropriates the wealth on the expense of small shareholders. Latrous (2012) investigated that the portfolio of managers are not well diversified. When the managers

have small percentage of ownership, they tend to issue more debt but as the percentage of ownership rises then managers avoid debt. At high level of managerial ownership, the managers behave risk averse and fear to financial distress. Driffield et al (2007) investigated the impact of distribution of equity ownership on leverage of the Asian economies. The results showed that as the percentage of family ownership increases, the level of leverage also increases. These results were consistent with Malaysia, Indonesia and Thailand. The block holders tend to avoid equity financing in order to avoid dilution of ownership structure.

Huang & Song (2006) investigated the factors that impact on the financial structure of the firms. The managerial ownership was found the most important factor of capital structure. The results showed the inverse relationship between the ownership of managers and leverage. The data was taken from Chinese listed companies for the period of 1994-2003. González et al (2012) investigated the impact of family ownership on the leverage. Using the data of Colombian companies, the results showed direct relation with the leverage. Family owners tend to control the firms and avoid dilution of ownership.

Most of present studies have shown that there is nonlinear relationship between managerial ownership and Debt/Equity. The level of debt in company capital structure decreases with the increase in growth rates. Agency theory states by issuing debt the conflict of interest between managers and shareholders decreases. Firstly the level of debt increases with the managerial ownership if managerial ownership is increased to 100% then this relation becomes direct (Wansley and S. Dutta 1996). Capital structure of 41 Ghana Companies which were jointly ventured with the Asian and Western European Companies. The results indicated that two determinants of capital structure

which were the size and type of industry but the most important determinant was the ownership structure (Agymin 2004).

The extent, nature and direction a corporation divide its ownership does impact on the financing decision of the corporation. Regression model is applied by taking the data of 71 companies of Nigeria to examine the relation between leverage and corporate ownership. Consistency with the leverage is much depending on the ownership patterns in Nigeria and ownership is found to be the most dominant determinant of capital structure in firms of Nigeria. The results showed the positive relation of managerial ownership and leverage. This provides the base for the managers for alienating the ownership and capital structure to other determinants such as size of firm, growth, and profitability (Ezeoha and Okafor, 2002).

Determinates of capital structure of real estate limited partnerships are similar to the determinants of manufacturing industry. REIT leverage level has a direct relation with the market price to book ratio and negative relation with the shareholding of institution there is also negative relation between leverage and price to cash flow ratio, results showed that growth rate is not a significant variable which affects the level of debt (Casey, Sumner and Packer 2006). Officers and directors have personal benefits and use fewer debts in capital structure because of risk of default. Default leads to lose the jobs of officer and directors, the level of debt in capital structure declines as shareholdings of directors' increases. So there is a positive correlation between the institutional shareholdings and leverage. The institutional shareholder plays a key role in monitoring and this leads to lower the agency problems. (Fosberg 2007)

There is a relationship between the leverage, corporate ownership and the dividend payout policy. Managerial entrenchment hypotheses and the theory of convergence of interest were tested in this study. The study used the sample data from the non-financial

firm of Korea. It was found that the ownership structure and leverage is having the direct relationship with the dividend payout ratio. Leverage and dividend policy is positively correlated with the ownership structure and these results proved the entrenchment hypotheses and convergence of interests (H. Kim and Rhim 2007).

Leverage and size of board have positive relation. As the size of board increases, leverage also rises. Similarly as the ratio of outside to inside directors increases the level of debt in capital structure also increases. CEO duality and Debt/Equity have negative relationship. CEO misuses his powers and use low debt and this leads to lower the performance .Methodology used to test this relation is multiple regression analysis. (Joshua Abor 2007)

In an environment of poor legal conditions, controlling stockholders would use more debt as compare to equity. Empirical studies showed that if the intervention of government is minimized and legal rights of stockholders protected than the level of leverage can be reduced. The results applied on the economies which are in transitional phase where the investors are not properly protected by law. The research used the ordinary least square regression and panel data to prove above mentioned results (Longhing and Chenbuizhu 2008). There is a relationship between inside ownership and cost of capital. Previous studies disclosed that rights of stockholder are positively correlated with the cost of equity. Research on this relation and results showed that managerial ownership play a vital role to lower the agency problems and this leads to lower cost of equity. This research must focus on improving the standard of Cooperate Governance (Huane and Wan 2009).

Prior studies showed that there is close relationship between agency factors and leverage. Similar study was conducted and the data taken of SMEs listed on Ghanaian Stock Exchange, this research used the least square regression model and results

indicated that inside ownership is inversely related with the leverage. The managers give preference to Debt over equity to lower the risk of bankruptcy; the manager has fear to lose the control so they employ less debt. So the inside ownership is the most dominant determinant of capital structure in Ghanaian Companies (Joshua Abor 2009).

There is a positive relationship among leverage ratio, firm size and government ownership and this is negative with growth, ROA and profit margin in publically owned Saudi companies by using multi linear regression models (Al-Sakran 2001). There is a direct link between internal and external ownership, checking by outsiders is effective in controlling the sub optimal debt usage agency problem. The greater the number of outsiders a firm has the less effective in raising the amount of debt in the firm's capital structure. Dual headship control is effective in raising the amount of debt in an organization's debt equity ratio (Fosberg 2004).

Capital structure has tendency to vary across different sectors of industry. This was investigated in Egyptian economy. Multiple regressions are used to test the four characteristic of capital structure such as liquidity, size, structure of ownership and growth. Results showed the positive relation between managerial ownership and leverage and high risk did not decrease leverage (Omron 2009). Government owned firms use more equity financing as compare to debt financing. The study was conducted to know whether the diversification into the business affects the financing decisions. They used the cluster analysis, to sample T-test and Kruskal Wallis Rank Test. This study focused on the behavior prospects of manager which can help for better understanding of capital structure decisions (Larry D. 2011).

Many times the theories of capital structure are not practical. There are many other tools available for managers which can help them to make good financing decisions. Managers must have professional skills so that they can make better decisions.

Professional managers can benefit the society by applying their skills on decision of debt financing. Practically it is not possible for managers to make their decisions based on theories of capital structure. The decision making should be based on asymmetric information so that they can maximize firm value (Robert and Johnson 2011). The effect of government intervention and controlling rights of shareholders does have impact on the financing decision of the firms. This topic was little known and under researched. A sample of 1079 Chinese firm was taken of non-financial sectors. The research used the panel data due to the institutional background of china. The results disclosed that the leverage is inversely correlated with the ownership control rights of divergence and interference of government (Zuoping 2011).

Empirical results showed that leverage has a negative relation with the block shareholding. Five year data is used by applying the fixed effect panel model regression on Indian companies listed on stock exchange. The results further showed that the debt financing is preferred where the block shareholding is Empirical results showed that leverage has a negative relation with the block shareholding and inversely correlated with the minority shareholdings. This provides support of the managerial entrenchment hypothesis. These results are similar to predicted results shown by literature. Five year data is used by applying the fixed effect panel model regression on Indian economy. The results further showed that the debt financing is preferred where the block shareholding is greater and retained earnings is preferred by the minority shareholders greater and retained earnings is preferred by the minority shareholders (Ganguli 2013)

#### **4. Regression model and analysis:**

The analysis of study is divided into three equations. In first model, the managerial ownership and square of managerial ownership is added with some control variables. This model helps us in explaining the curvilinear relationship between managerial

ownership and leverage. Control variables are taken as exogenous because they are predetermined. Managerial ownership is regressed with the leverage with some control variables to examine the relationship between leverage and managerial ownership. The square of managerial ownership will produce maximum point.

Model 1:

$$\ln(\text{Lev})_{it} = \alpha_1 + \alpha_2 \text{MSO} + \alpha_3 (\text{MSO})^2 + \alpha_4 \text{PRO} + \alpha_5 \text{TAN} + \alpha_6 \text{GROWTH} + \alpha_7 \text{SIZE} + \alpha_8 \text{FCF} + \alpha_9 \text{NDTS} + \alpha_{10} \text{VOL} + \mu$$

$\ln(\text{Lev})$  = natural log of leverage ratio

$\text{MSO}$  = sum of shares of directors, managers and executives divided by total shares

$i_t$  = i-th firm in time period t

Since distribution of ownership among the among external block holders is function of leverage. To test this hypothesis leverage is taken as dependent variable and percentage of external block holders is taken as independent variable together with control variables. The underlying hypothesis suggests positive relation between external block holdings and leverage. High external block holdings, high leverage.

Model 2:

$$\text{Lev}_{it} = \beta_1 + \beta_2 \text{EBO} + \beta_3 \text{VOL} + \beta_4 \text{PRO} + \beta_5 \text{TAN} + \beta_6 \text{GROWTH} + \beta_7 \text{SIZE} + \beta_8 \text{FCF} + \beta_9 \text{NDTS} + \mu$$

This model explains the impact of both managerial ownership and external block holder with leverage. This model helps in explaining the impact of managerial ownership with leverage at different levels of managerial ownership. At low level of ownership of managers, leverage is positively related to managerial ownership but at high level of

managerial ownership the leverage is negatively related to managerial ownership. To examine the impact of different levels of managerial ownership, dummy variable is used. The dummy variable K take the value zero if managerial ownership is less than 20% and 1 if managerial ownership is above 20%.

MODEL 3:

$$\text{Lev it} = \alpha_1 + \alpha_2 \text{MSO} + \alpha_3 (\text{MSO})^2 + \alpha_4 \text{EBO} + \alpha_5 (\text{K} * \text{EBO}) + \alpha_6 \text{PRO} + \alpha_7 \text{TAN} + \alpha_8 \text{GROWTH} + \alpha_9 \text{SIZE} + \alpha_{10} \text{FCF} + \alpha_{11} \text{NDTS} + \alpha_{12} \text{VOL} + \mu$$

Definition and explanation of variables:

4.1 Dependent variable:

Capital structure is the dependent variable and it is computed by debt ratio. Most of the previous finance studies used the debt ratio as a proxy variable of capital structure (Graham 1996, Titman and Wessels 1988) and Debt ratio is calculated by the formula mentioned below:

$$\text{Debt ratio} = \text{Total debt} / \text{Total assets}$$

4.2 Independent variable:

Ownership structure is the independent variable. Ownership structure is divided into two sets.

1) Managerial ownership

2) External block holder ownership

Managerial ownership is represented by the percentage of shareholdings of common shares held by managers, board of directors and C.E.O divided by total shares. And

external block holder ownership is represented by the percentage of shareholdings of financial institutions like insurance companies, banks, Modarba, non-bank finance institutions and mutual funds.

Managerial shareholding (INSH) = the ratio of percentage of shares held by managers and C.E.O divided by to total shares

External block holder shareholdings (EBO) are defined as the financial institutions which have the ownership is equal to 10% or above ten percent. The value of external block holders is calculated by the sum of top five, top three external block holders.

#### 4.3 Control variables:

There are some control variables that have an impact on capital structure and that effect was already established by the earlier studies.

##### 4.3.1 Size of business:

The size of business has a positive relationship with the leverage established by some of earlier studies. The proxy for the size of business usually determines the nature of the relationship between size and leverage (Fama and Jensen 1983). The large firms have less chances of default because these firms are well diversified and large firm's keeps their investors fully informed therefore they might use more debt. Previous researches found the negative relation between the size and cost of financial distress (McConnell 1982).

Size of business = natural logarithm of total assets

##### 4.3.2 Growth of business:

Growth of business has positive relation with the debt ratio. According to signaling theory higher growth firms use more debt because they have to signal the higher performance to shareholders. The tax theory suggests that higher growth firms have higher volatility in their cash flows. The volatility in income is lower than the expected tax payments. Therefore the higher growth firms are less likely to use additional debt (Smith and Watts 1992). Retained earnings don't fulfill the needs of funds of higher growth firms; therefore they might use the debt financing.

The growth of business is defined as

$$\text{Growth} = (\text{Assets } t - \text{Assets } t-1 / \text{Sales } t-1) * 100$$

#### 4.3.3 Profitability:

According to pecking order theory financing from the external funds is the last choice therefore profitable firms don't require debt. Profitability is calculated by the operating profit divided by total assets. The supply arguments state that there is a direct relation of profitability and leverage because profitable firms have better access to debt. Profitable firms don't require debt because of sufficient retained earnings. The demand arguments state the inverse relation between debt and profitability. Interest expense is a deductible expense form profit; therefore the managers prefer external financing over equity Modigliani and Miller (1963). Profitable firms have ability to bear risk of default due periodic interests payments, therefore profitable firms are expected to use more debt. Depreciation is another tool for tax shield. Firms don't use interests' payments as a tax shield because there are some other sources available like depreciation. DE Anglo (1980)

$$\text{Profitability} = \text{EBIT} / \text{Total assets}$$

#### 4.3.4 Volatility:

The volatility is calculated by taking the standard deviation of annual percentage change in EBIT (Earning before interests and taxes). Volatility is also calculated by the variance of operating profits. Higher volatile firms usually don't use high debt because they have to pay interest payments which can lead to default. The periodic interest payments pressurize the managers which managers usually don't like. The companies whose profits are volatile are less likely to use more debts because this might lead to default. The debt and risk are negatively correlated at any level of interests' rate Jensen (1992). The agency cost of debts and business risk also have negative relation. Higher the business risk, lower will be agency cost of debts Mayer's (1977). Friend and Lang (1988), Moon and Roa (1994) found the inverse relation between leverage and risk.

#### 4.3.5 Tangibility:

In many researches tangibility is the sum of plant, equipment and stock. Therefore the tangibility is measured by the formula mention below:

$$\text{Tangibility} = \text{fixes assets} / \text{total assets}$$

The bank offers lower rate of interest when the companies have tangible assets to offer. The higher the tangible assets the lower will be the cost of borrowings. The leverage has a positive relation with the tangibility. The higher the firms have fixed assets the higher will be the leverage ratio. Capital structure theories such as agency theory and asymmetric information theory explain the relationship between leverage and tangibility. Leverage is a mechanism which that reduces the agency conflict between managers and shareholder. To eliminate the agency problem debt may be used as a proxy of monitoring. The managers don't use the optimal level of debt, therefore the might be negative relation between tangibility and leverage. Maltiz (1985), Solberg (1992) and friend and Lang (1988) found the negative relation in the empirical researches.

#### 4.3.6 Free cash flows:

Free cash flow is the proxy variable to measure the agency cost. Jensen argued that firm with higher free cash flows use more debt financing because series of interest payments attached to debt. Managers tend to use free cash flows for their personal needs and benefits instead of paying to real owner. Free cash flows calculated as follows:

Free cash flows= Operating profit before tax+ Depreciation expense+ Amortization- Tax and Dividend paid

#### 4.3.7 Non-debt tax shield:

Non debt tax shield is calculated by dividing the total assets to annual depreciation of the year. The concept of NDTs is first introduced by DeAngelo (1980). He argued that benefits of debt are lower when the value of non-debt tax shield is higher. Therefore, the relationship between non-debt tax shields is negative with the leverage.

$NDTS = \text{DEPRECIATION} / \text{TOTAL ASSETS}$

#### 4.3.8 INTANGIBILITY:

Intangibility is measure by dividing the total assets to intangible assets. Intangibility represents the specificity of assets which creates problems for borrowing debt. Greater the value of intangibility, lower the leverage of business. There is negative relationship between debt ratio and intangibility. Intangible assets include the copy rights, trade mark, brand names, R&D expenditures. The agency cost is higher with intangible assets as compared to tangible assets.

$INT = \text{TOTAL INTANGIBLE ASSETS} / \text{TOTAL ASSETS}$

Summary of selected evidences:

Ownership Variables	Authors	Nature of relationship with leverage
<b>Inside ownerships</b>	Mehran (1992), Berger, et al.(1997), Short, et al.(2002)	Positive relation
	Jensen, et al. (1992), Bathala et al.(1994), Firth(1995),Moh'd, et al.(1998), Chen & Steiner (1999),Huang & Song (2006), Hasan& Butt (2009)	Negative relation
	Brailsford, et al. (2002)	Non-linear
<b>External block holders</b>	Brailsford, et al. (2002), Margaritis&Psillaki (2010), Pindado& La Torre (2011),Céspedes, et al. (2010),Pushner (1995), Firth (1995) Hasan& Butt (2009), Wang (2009)	Positive relation
	Short, et al. (2002) Liu, et al. (2011)	Negative relation

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	La Bruslerie&Latrous (2012) Shi (2010)	Non-linear
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## CONCLUDING REMARKS

In general, this study uses the empirical evidence from non-financial firms in developing countries through different literature review, theoretical framework and from different researcher's results. The analysis of the study is conducted in three stages. In the first stage, the negative relationship between managerial ownership and capital structure is examined. The second stage explains the impact of ownership concentration (large shareholdings) on debt/equity ratio. The third stage explains the impact of both managerial ownership and external block holders on leverage.

This three stage analysis is conducted by using the multiple regression models to examine the impact of variables, as follows:

- Debt ratio (dependent variable)
- Managerial ownership (independent variable)
- External block holders (independent variable)
- The models also explain the control variables:
- Size (control variable)
- Growth (control variable)
- Tangibility (control variable)
- Free cash flows (control variable)

- Intangibility (control variable)
- Volatility (control variable)
- Non-debt tax shield (control variable)
- Profitability (control variable)

### **Contribution and implication of research:**

First of all, this research paper contributes to literature by determining the strategic decision concerning the capital structure by arguing the ownership structure link with capital structure. The practical importance is that the ownership structure impacts the capital structure and financial performance of the firm and a firm, therefore must consider a lot of factors while issuing equity.

Furthermore, this paper contributes to literature review regarding the corporate governance by explaining the effect of ownership structure on capital structure. The study argues that managerial ownership and external block holders have an impact on financial structure of the firm.

Additionally, the managers of the firm can make optimal decision regarding financial structure by issuance of debt or equity and maximize the firm value by minimizing the cost of capital. The leverage decision affects the firm value, and then it is sensible to expect that financial structure impact on the financial health of firm and risk of default. From the point of view of bank, the banks can make decision of granting loan to firm by analyzing the debt to equity ratio of distressed companies. The capital structure decision is very important for both academics and practitioners.

Fourthly, the paper contributes to literature by arguing the relationship between ownership structure and capital structure. Most of the research regarding the relation

between ownership and capital structure conducted in developed countries but this study give the evidence from devolving countries.

Fifthly, as many companies have learned from the past experience that investor and financial markets can be fickle. The most structured capital structure can lead to Un-optimize financial results. Therefore, the firms can increase the probabilities of success by directing the managerial ownerships though the control over external block holders is difficult.

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