

# The Effect of Board Characteristics and Ownership Structure on the Corporate Financial Leverage

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## Abstract

The paper aims to investigate the linkage between some corporate governance mechanism such as board characteristics, ownership structure and corporate financial leverage in an emerging market, Egypt. To achieve the objectives of this study, we use a sample of 36 non-financial firms selected from the more actively traded 50 listed Egyptian firms in the Egyptian Stock Exchange (EGX) covering the period from 2007 to 2011. Measures of corporate financial leverage employed are the total debt ratio, the long-term debt ratio and the short-term debt ratio. The explanatory variables of corporate characteristics are board size, outside non-executive directors, CEO duality, and board female proportion. The measures of ownership structure include managerial ownership, institutional ownership, block holder's ownership and governmental ownership. Similarly, the effect of some control variables like firm size, profitability, growth and tangibility has been also examined. The multiple regression models (OLS) were used to analyze the data. Results show that institutional ownership and governmental ownership are significantly positively related to corporate leverage, whereas board size, board female, and block holding are found to be significantly negatively correlated. Although Egyptian firms still have weak corporate governance mechanisms compared to firms in developing countries, the empirical findings suggest that board characteristics and ownership structure playing an important role in deciding the Egyptian corporate financial leverage.

**Keywords:** Boards of directors characteristics, Ownership structure, Corporate leverage, Egypt

## 1. Introduction

Spite of the host of theories, models, and researches that attempt to explain the issue of capital structure. The issue still unresolved yet. However, following the recent advances in agency theory, corporate governance, and behavioral finance, it is worth to search the relation between the results of applying some corporate governance mechanisms, namely the characteristics of the board of director (BC), and ownership structure (OS) on capital structure denoted by the level of financial leverage. The researchers assume a relation between these independent variables (BC and OS) on the level of financial leverage, in other words, the capital structure. So, in this research, we analyze this relation using a research sample of 36 firms selected from the 50 actively traded listed companies in the Egyptian Stock Exchange

### 1.1 Statement of the Problem

Corporate governance researches focused mainly on the experience of developed economies, such as the US and other European nations, therefore corporate governance systems and practice in developing countries is scarce, accordingly knowledge about corporate governance in Egypt is still limited or even non-exist. As a result, the research problem can be stated as "Exploring and identifying the linkage between the board characteristics, ownership structure and the corporate financial leverage in Egypt".

### 1.2 Objective of the Study

This study aims to investigate the effect of board characteristics and ownership structure on corporate financial leverage of Case 50 listed corporations in Egypt by seeking to:

- i. To evaluate how corporate characteristics such as board size, board non-executive directors, CEO duality, and

board female influence corporate financial leverage in Egypt.

ii. To explore the association between the ownership structure, mainly managerial, institutional, block holding and government ownership and corporate financial leverage in Egypt.

### *1.3 Contribution of the Study*

The research contributes to the extant literature and fills the existence gap in the literature by providing evidence of the relationship between board characteristics, ownership structure and corporate financial leverage in Egypt.

As boards are considered one of the main tools of internal governance technicality, therefore, the board effectiveness may differ according to the board features, and, therefore, the results may help firms to take proper decisions concerning the composition and appointment of board members. The results also reveal the importance of ownership structure and its impacts on corporate capital structure, therefore firms must consider a lot of factors whenever issuing equity. Therefore, this study is likely to benefit the firm's management, investors, policy makers, and other interested bodies.

The rest of the paper is organized as follows: Section 2 presents the review of the relevant literature and the development of the research hypotheses. Section 3 presents the data and methodology. Section 4 presents the data analysis and results, and Section 5 presents the conclusion of the research

## **2. Literature Review and Hypotheses Development**

### *2.1 Board Size and Corporate Financial Leverage*

Jensen (1993) argues that board size is negatively correlated with the board's capability to advise and participate in long-term planning as a result of the difficulties associated with organizing and coordinating large numbers of directors. Adams and Mehran (2002) argue that some firms need large boards for effective supervision. However, existing literature related the board size and capital structure are varied, Sheikha and Wang (2011) in Pakistan find that board size has a positive relation to corporate debt ratio. A recent study applied by Hussainey and Aljifri, k (2012) on UAE find that the total number of board directors has a positive relationship with the debt-to-equity ratio. Ganiyu and Abiodun (2012) in Nigeria find a positive relation suggesting that large boards are likely to practice effective monitoring due to the sufficient numbers of directors that can constitute different regular bodies and that apply high debt level to increase the firm value, furthermore, large boards raise conflicts that may lead to difficulty in reaching a consensus in decision making which may weaken corporate governance resulting in higher leverage. In contrast, some other studies such as Heng., et al (2012) investigates how board size can affect firm's leverage in Malaysia. Results show an inverse relation between the total numbers of board members and debt to asset ratio. Bodaghi and Ahmadpour, A., (2010) in Tehran, also find a negative relationship, suggesting that the pressure practiced on managers push them to adopt lower debt levels to enhance the firm performance.

Accordingly, we have constructed this hypothesis as follow;

*H1: There is a significant positive relationship between board size and corporate financial leverage.*

### *2.2 Non-Executive Directors and Corporate Financial Leverage*

External directors can play an essential role in alleviating the agency problems and they can help to improve the quality of decision-making (Fama and Jensen 1983). However, the results of empirical studies are mixed; Berger et al. (1997) analyze the correlation between the percentage of non-executive directors and firm leverage finding a positive significant relation suggesting that those CEOs that are more actively controlled and mentoring by more outside directors, causing managers to employ more debts and raise the firm leverage. In the same line Al-Najjar and Hussainey, K., (2011) find the same positive relation, arguing that firms with a large portion of non-executive members seem to have favorable and easier access to loans and therefore, applied a higher level of debt. This is confirmed by Sheikh and Wang, (2011) in Pakistan. Other studies such as Greene. (2011) find a positive insignificant relation. On the contrary, Abdoli et al (2012) find an inverse correlation between the board independence and the debt ratio, suggesting that the majority of the Iranian outside directors is affiliated in some ways with the company management. In the same line Chang Kuo et al (2012) on Taiwan, and Wellalage and Locke. (2011) in Sri Lanka finds a significant inverse relation, arguing that managers apply a lower debt level upon facing strong corporate governance.

Accordingly, we have constructed this hypothesis as follow;

*H2: The proportion of board non-executive directors are significantly positively correlated with corporate financial leverage.*

### *2.3 CEO-Chairman Duality and Corporate Financial Leverage*

Fama and Jensen (1983) suggest that the role of chief decision management authority (CEO) should be separated from the role of chief decision control authority (chairman). Otherwise; will lead to agency problems. Stewardship theory predicts that when the CEO is also the chairman, both Power and authority will be concentrated in the hand of one person. Accordingly, the corporate leadership will be clearer for subordinate managers and board members as well, which enhance the traditional benefits of the unity of direction and control (Donaldson and Davis 1991). However, empirical findings yield mixed results.

Abor, G., (2006), Vakilifard et al. (2011) and Wellalage and Locke (2012), Mokarami et al (2012) find that CEO duality increases firm debt usage, suggesting that according to stewardship theory the CEO duality decreases communication conflicts and creates a clear sense of centralized decision making. Mokarami et al (2012) analyze this relationship in Iran to find a positive significant correlation with debt ratio indicating that firms with CEO duality use more debts in their capital. On the contrary, a recent study made by Ganiyu and Abiodun (2012) in Nigeria shows a negative correlation between CEO duality and debt equity ratio. Sheikh and Wang (2011) in Pakistan find an insignificant relation between dual leadership and debt ratios, which is further confirmed by (Bokpin and Arko., 2009; Hasan and Ali, 2009; Bodaghi and Ahmadpour, 2010; Saad 2010; Ahmadpour.et al 2012, Heng et al 2012). Accordingly, we have constructed this hypothesis as follow;

*H3: CEOs duality has a positive relation with corporate financial leverage.*

### *2.4 Board Female and Corporate Financial Leverage*

In general, female board is more independent as they are outside the network (Carter et al., 2003). Adams and Ferreira (2009) record that female members are committed to attending the board meetings, and they better record than male directors, accordingly boards female allocates more effort to observe the executive directors. Some studies investigate the influence of board gender on firm performance, such as Ren, and Wang, (2011) and Ujunwa (2012). Other types of researches study the impact of women's presence on the firm value such as Campbell and Vera (2007). Alves et al (2014) investigate empirically how the board diversity affects the financing choice of the firms. The results indicate that the more gender diversified in, the board will enhance the board efficiency and lowering information asymmetries between company management and the shareholders, which leads to a capital structure with less short debt and more long debt resources. Accordingly, we have constructed this hypothesis as follow;

*H4: The proportion of females on the board has a positive relation with corporate financial leverage.*

### *2.5 Managerial Ownership and Corporate Financial Leverage*

Managerial shareholders could give managers an incentive to employ the optimal amount of debt. Managerial shareholders will suffer wealth losses, exactly like other shareholders, if they employ less debt than the optimal level in the corporate capital structure. (Abor 2008). Some studies have found out that a large portion of management shareholdings would employ a high debt policy, such as Kim and Sorensen (1986) who find that firms with more insider holdings have higher levels of leverage. Ooi, (2000) in the UK examines the influence of ownership structure on the debt-equity ratio. The findings declare that managers with a high percentage of ownership have the tendency to perform activities that maximize the shareholders' wealth. This is consistent with Arko and Bokpin (2009), Wellalage and Locke (2012) reveal that managerial shareholding has a significant positive effect on the choice of long-term debt in Ghana. On the contrary Friend and Lang (1988) find that debt level decreases as the level of management shareholdings increases. They suggest that debt has a greater non-diversifiable risk of insiders than it has for outside, investors, inducing insiders to maintain lower levels of leverage. In the same line Sheikh and Wang, (2012) in Pakistan find a negative relationship between managerial ownership and both the long-term and total debt ratios. Accordingly, we have constructed this hypothesis as follow;

*H5: There is a positive relationship between the percentages of shares held by management and corporate financial leverage.*

### *2.6 Institutional Ownership and Corporate Financial Leverage*

Institutional investors play an important role in financial markets and their effect over corporate governance has been highlighted as a result of the privatization policy that has been adopted by emerging countries such as Egypt. The Institutional investors have great experience in gathering and interpreting information about firms' performance and accordingly can minimize agency costs (Jensen and Meckling, 1976; Jensen, 1986; Chidambaran and John 2010).

However, the empirical studies find mixed results. Al- Najjar and Taylor (2008) find a strong negative correlation between debt ratio and the institutional shareholding which indicates that institutional shareholding having

significant effects on supervising the firm's managers and thus can reduce the agency problems. Other research by Hussainey and Aljifri (2012) detect a negative impact on the debt-to-equity ratio. Indicating that firms with a large percentage of shares held by institutional shareholders seems to employ less debt financing which supports the pecking order theory.

On the contrary Abdoli et al., (2012) in Tehran find a positive relationship between the ratio of institutional shares and financial leverage due to their easy access of different sources of financing such as loans or bonds. Joher Huson et al, (2006) find the same significant relation with debt ratio, suggesting that institutional ownership plays an essential role as a monitoring device to minimize agency problem. Other researches made by Hasan and Ali (2009) and Bodaghi and Ahmadpour (2010) in Iran find no significant relation. Accordingly, we have constructed this hypothesis as follow;

*H6: There is a positive relationship between the percentages of shares held by institutional investors and corporate financial leverage.*

### *2.7 Block Shareholding and Corporate Financial Leverage*

The long-term debt ownership may help to reduce the agency problems due to the reduction of the opportunism level of managers that will accordingly lead to a reduction of conflict between the two parties (Chen, et al 2013). Berger et al (1997) reveal that debt increases with the presence of significant long-term debt. They also find that firms with long-term debt have leveraged 1 to 4 percent bigger than other firms. This result proposes that managers are obliged to use more debt when an influential monitor is exists. In the same line Fosberg (2004) study the agency problem and debt financing in US firms. In his empirical study, he investigates the correlation between block holders' ownership that own 5 percent or more of firms' shares and debt/equity ratio. He finds that debt level is positively correlated with the portion of block holders' shares which indicate that block holders exercise effective monitoring on the board so that they can control the debt usage in the firm capital structure. This is further confirmed by Zuoping. (2009) and Ganguli (2013), accordingly, we have constructed this hypothesis as follow;

*H7: There is a significant positive relationship between the percentages of block holding ownership and corporate financial leverage.*

### *2.8 Governmental Shareholding and Corporate Financial Leverage*

Deesomsak et al. (2004), and Ezeoha and Okafor (2009) argue that government partnership with firms gives them more access to different financial resources and a good chance to borrow at favorable rates. However, the empirical results are mixed, Liu et al (2011) in China find that state-owned enterprises (SOEs) have the tendency to employ more debt and accordingly maintain higher leverage ratios than those of non-SOEs. This is further confirmed by Aljifri and Moustafa (2007) who find a positive significant relation, suggesting that managers are likely to choose higher levels of debt to secure their employment risk. On the contrary, Zuoping (2009) argue that the company controlled by a governmental-owned corporation has significant low assets to debt ratios, suggesting that this leads to a strong tendency for equity financing. Huang and Song (2006) in China and Hussainey and Aljifri (2012) in UAE find no significant relation. Accordingly, we have constructed this hypothesis as follow;

*H8: There is a significant relationship between the percentages of governmental ownership and corporate financial leverage.*

## **3. The Data and Methodologies**

### *3.1 Sample and Data Sources*

The study uses the 50 most actively traded companies listed on the Egyptian Stock Exchange for five years from 2007-2011. The banks and non - banking financial institution is excluded. Data collected from the Egyptian Stock Exchange through the disclosure and transparency department and from Misr for Central Clearing Depository, and Registry (M.C.D.R.). The numbers of companies after excluded the banks and the financial institutions reached 36 companies, the data for five years is pooled to obtain 164 observations after excluding the companies with missing data.

### *3.2 The Model*

In this study, we have followed the model used by Wen et al. (2002) with some modifications as follow:

$$\begin{aligned} \text{TDA} = & \beta_0 + \beta_1 (\text{BSIZE}) + \beta_2 (\text{N-EXEC}) + \beta_3 (\text{CEOD}) + \beta_4 (\text{BFEMALE}) + \beta_5 (\text{MANGSH}) + \beta_6 (\text{INSTSH}) + \beta_7 \\ & (\text{BLOCSH}) + \beta_8 (\text{GOVSH}) + \beta_9 (\text{FSIZE}) + \beta_{10} (\text{PROF}) + \beta_{11} (\text{GROW}) \\ & + \beta_{12} (\text{TANG}) + e \end{aligned} \quad (1)$$

$$LTDA = \beta_0 + \beta_1 (BSIZE) + \beta_2 (N-EXEC) + \beta_3 (CEOD) + \beta_4 (BFEMALE) + \beta_5 (MANGSH) + \beta_6 (INSTSH) + \beta_7 (BLOCSH) + \beta_8 (GOVSH) + \beta_9 (FSIZE) + \beta_{10} (PROF) + \beta_{11} (GROW) \quad (2)$$

$$+ \beta_{12} (TANG) + e$$

$$STDA = \beta_0 + \beta_1 (BSIZE) + \beta_2 (N-EXEC) + \beta_3 (CEOD) + \beta_4 (BFEMALE) + \beta_5 (MANGSH) + \beta_6 (INSTSH) + \beta_7 (BLOCSH) + \beta_8 (GOVSH) + \beta_9 (FSIZE) + \beta_{10} (PROF) + \beta_{11} (GROW) \quad (3)$$

$$+ \beta_{12} (TANG) + e$$

Where:

$\beta_0$  = Intercept coefficient

$\beta_1$  = Coefficient for each of the independent variables

TDA = Total Debt ratio (total debt /total assets) \*100%

LTDA = Long-term debt Ratio (long-term debt /total assets) \*100%

STDA = Long-term debt Ratio (long-term debt /total assets) \*100%

BSIZE = the number of directors on the firm board

NON-EXCE = Proportion of non-executive directors sitting on the board

CEOD = (Dummy variable) Value one (1) if the same person occupies the position of the chairman and the chief executive and zero (0) for otherwise.

BFEMALE = Percentage of females to the total board.

MANGSH= Percentage of shares held by top managers.

INSTSH = Percentage of shares held by institutions (non-government).

BLOCSH= Percentage of shares held by block shareholders with equity ownership at least 5per cent.

GOVSH= Percentage of shares held by the government.

FSIZE = the log value of the total asset of the firm.

PROF =EBIT/average total assets\* 100%.

GROW = the percentage change in the value of the asset.

TANG = the ratio of total fixed assets to the book value of total assets (%)

#### 4. Data Analysis and Results

The analysis will start with descriptive statistics of the research variables

##### 4.1 Descriptive Statistics

Table 1. Descriptive Statistics of the variables of the research

	Minimum	Maximum	Mean	Standard Deviation
TDA	4.86	91.41	43.2279	24.75739
LTDA	-1.48	73.55	12.1332	14.51697
STDA	.95	90.33	31.0941	19.96328
BSIZE	3.00	24.00	10.0366	4.06374
N-EXEC	50.00	95.83	83.2523	9.40777
CEOD	.00	1.00	.6280	.48481
BFEMALE	.00	57.14	6.2407	9.22859
MANGSH	.00	66.27	7.5160	16.81220
INSTSH	.00	71.03	18.0281	22.05578
GOVSH	.00	97.30	27.7128	29.37934
BLOCK	.00	93.90	43.8454	26.66219
FSIZE	17.72	25.28	21.4529	1.75878
ROA	-9.63	40.50	8.7377	8.71678
GROW	-54.69	314.02	15.3851	44.52987
TANG	.34	133.44	46.8418	38.73819

Concerning the financial leverage variables we noticed that total debt to asset records overall mean of 43.22 percent, long-term debt ratio has an overall mean of 12.13 percent, and long-term debt has a mean of 31.09 percent, which implying that Egyptian corporations depend more on short term sources of finance than long-term sources. The use of both short and long-term sources of finance varies significantly between firms as the minimum and the maximum ratio for short-term debt record (0.95-90.33%) respectively, it ranges from (-1.48 to 73.55%) for long-term debt, which indicates that some Egyptian firms depend mainly on both long-term debt and equity finance as equity on average accounts for 57% for the study sample. The total debt mean is 43.22 percent, ranging from 4.86 percent to 91.41 percent, which is considered a signal for capital structure risk problem for some firms with a high percentage of total debt.

Concerning the board characteristics, we found that board size is ranging from 3 to 24 with an average about 10 members. However, this is considered a breach to the last amendment of the Egyptian Governance Code states that the total numbers of board members should not be less than five members (Rule 5.2.4). The board outside non-executive directors are ranging from 50 percent to 95.83 percent with an overall mean of 83.25 percent indicates that, on average, 83.25 % of board directors are non-executive directors, which is in compliance with the Egyptian Code of Governance's Recommendations (Rule 3-4). CEO duality records 63 percent indicating that 63 percent of the sample has the CEO and the board chair as the same person, which is against the Egyptian code of governance concerning the split of these two positions (Rule 3-6). The board female is ranging from 0 to 57.14 percent with an average of 6 percent. Concerning the ownership structure the average managerial ownership is 7.52 percent, ranging from 0 to 66.27 percent; institutional share ownership has a mean of 18.02 percent. The average block holders are 43.85 percent; the governmental share mean is 27.71 percent, which indicates that the government has the relatively high portion of ownership, which goes with a country in a transition period from public to private through privatization.

Table 2. Correlation Matrix

**Person's Correlations Matrix between the Dependent and Independent Variables**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>1. TDA</b>	<b>1</b>														
<b>2. LTDA</b>	<b>.573**</b>	<b>1</b>													
<b>3. STDA</b>	<b>.810**</b>	<b>.000</b>	<b>1</b>												
<b>4. BSIZE</b>	<b>-.218**</b>	<b>-.139*</b>	<b>-.168*</b>	<b>1</b>											
<b>5. N-EXEC</b>	<b>-.112</b>	<b>-.059</b>	<b>-.087</b>	<b>.511**</b>	<b>1</b>										
<b>6. CEOD</b>	<b>.052</b>	<b>.020</b>	<b>.033</b>	<b>-.055</b>	<b>-.123</b>	<b>1</b>									
<b>7. FEMALE</b>	<b>-.159*</b>	<b>-.046</b>	<b>-.172*</b>	<b>.218**</b>	<b>.111</b>	<b>.104</b>	<b>1</b>								
<b>8. MANGSH</b>	<b>.114</b>	<b>.090</b>	<b>.070</b>	<b>-.070</b>	<b>.030</b>	<b>-.147*</b>	<b>-.108</b>	<b>1</b>							
<b>9. INSTSH</b>	<b>.060</b>	<b>.191**</b>	<b>-.042</b>	<b>.057</b>	<b>.104</b>	<b>-.300**</b>	<b>-.253**</b>	<b>-.241**</b>	<b>1</b>						
<b>10. GOVSH</b>	<b>-.008</b>	<b>-.134*</b>	<b>.079</b>	<b>.258**</b>	<b>.067</b>	<b>.197**</b>	<b>.239**</b>	<b>-.341**</b>	<b>-.433**</b>	<b>1</b>					
<b>11. BLOCK</b>	<b>.013</b>	<b>.114</b>	<b>-.053</b>	<b>.129</b>	<b>-.066</b>	<b>.056</b>	<b>.104</b>	<b>-.470**</b>	<b>.241**</b>	<b>.595**</b>	<b>1</b>				
<b>12. FSIZE</b>	<b>.194**</b>	<b>.315**</b>	<b>.013</b>	<b>.131*</b>	<b>.149*</b>	<b>-.129*</b>	<b>-.248**</b>	<b>.243**</b>	<b>.218**</b>	<b>.007</b>	<b>.142*</b>	<b>1</b>			
<b>13. ROA</b>	<b>.096</b>	<b>.021</b>	<b>.094</b>	<b>.256**</b>	<b>.179*</b>	<b>.180*</b>	<b>.019</b>	<b>-.001</b>	<b>.111</b>	<b>.138*</b>	<b>.140*</b>	<b>.220**</b>	<b>1</b>		
<b>14. GROW</b>	<b>-.113</b>	<b>-.105</b>	<b>-.064</b>	<b>-.128</b>	<b>-.150*</b>	<b>-.010</b>	<b>-.055</b>	<b>.051</b>	<b>.010</b>	<b>-.221**</b>	<b>-.187**</b>	<b>-.013</b>	<b>.043</b>	<b>1</b>	
<b>15. TANG</b>	<b>-.115</b>	<b>.210**</b>	<b>-.297**</b>	<b>.191**</b>	<b>.248**</b>	<b>.060</b>	<b>.031</b>	<b>-.085</b>	<b>-.013</b>	<b>.289**</b>	<b>.284**</b>	<b>.332**</b>	<b>.230**</b>	<b>-.278**</b>	<b>1</b>

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

#### 4.2 Correlation Coefficients

The correlation coefficients are used to test for multi-collinearity among independent variables; table (3) presents the correlation matrix. It is obviously noted that none of the correlations between independent variables are high enough to justify any problem of Multicollinearity.

From the correlation matrix we can note the following:

TDA is significant negative correlated with both board size and board female at the 0.01 and 0.05 levels, respectively, significantly positively correlated with firm size at the 0.01 level, while it is insignificantly correlated with other variables. LTDA has a negative significant correlation with board size and governmental ownership at the 0.05 levels, while it is positively significantly correlated with institutional ownership, firm size and tangibility at the 0.01 levels. STDA has a negative significant correlation with board size, board female and tangibility at the 0.05, 0.05 and 0.01 levels, respectively, while it is insignificantly correlated with other variables.

Board size has a positive significant correlation with board composition, board female and governmental shareholding, at the 0.01 levels while it is positively significant with firm size at 0.05 levels. CEO Duality is negatively correlated with managerial, institutional ownership and firm size at the 0.05, 0.01, 0.05 levels, respectively, while it is a positive correlated with governmental ownership and ROA at the 0.01, 0.05 levels, respectively. The proportion of board's females has a negative correlation with institutional ownership and positive correlation with governmental ownership at the 0.05 levels. Managerial ownership is negatively correlated with institutional, governmental and long-term debt ownership at the 0.01 levels.

#### 4.3 Results of Regression Analysis

The following part is devoted to testing the study hypotheses and discuss the findings.

Table 3. Predictor of Corporate Financial Leverage – Model Summary

Details	TDA	LTDA	STDA
(Constant)	-5.758 .852	-32.176* .076	25.216 0.290
BOARD SIZE	-1.828*** .001	-.593* .072	-1.248*** .004
NON-EXECUTIVE DIRECTORS	-.020 .934	-.059 .667	.071 .694
CEO DUALITY	3.800 .349	2.873 .226	.612 .845
BOARD FEMALE	-.130 .544	.171 .173	-.312* .061
MANAGEMENT SHARE	.195 .191	.079 .362	.123 .285
INSTITUTIONAL SHARE	.239 .127	.050 .580	.201* .097
GOVERNMENT SHARE	.243* .072	-.123 .119	.356*** .001
BLOCK SHARE	-.112 .363	.106 .141	-.197** .040
FIRM SIZE	3.056** .021	2.238*** .004	.745 .463
RETURN ON ASSETS	.382* .101	-.071 .601	.426** .018
FIRM GROWTH	-.109** .014	-.032 .218	-.076** .026
FIRM TANGIBILITY	-.160*** .005	.061* .062	-.221*** .000
R	.458	.479	.525
R <sup>2</sup>	.210	.23	.275
Adjusted R <sup>2</sup>	.147	.168	.218
Standard Error	22.8671002	13.3558294	17.6361191
F Value	3.340	3.748	4.781
Prob (F-statistics)	.000 ***	.000 ***	.000 ***



With regard to our first hypothesis: *“There is a positive relationship between board size and corporate financial leverage.”*, the results show a significant negative correlation between board size, and total debt ratio, long-term debt and short-term debt at the 0.01,0.10,0.01 levels respectively, accordingly the first hypothesis is rejected. This result supports the argument that larger board practice pressure on managers so that they adopt lower debt levels to avoid this pressure, which is consistent with Anderson et al, (2004), Hasan and Ali (2009), Heng et al (2012), Olubukunola Uwuigbe (2013) and Solomon Mwalati et al (2013) Who find that large boards tend to employ less debt.While it is against the result of Ukaegbu., B, et al (2014) who find a positive relation.

As for hypothesis two which states that: *“The proportion of board non-executive directors is positively correlated with corporate financial leverage”*, the percentage of external non- executive were found negatively insignificant related the total debt and long-term debt while it is positively insignificant related to short-term debt, this indicates that the proportion of non-executive directors has insignificant impact on corporate capital structure and accordingly this hypothesis is rejected. This indicates that the percentage of non-executives directors has an insignificant effect on the corporate capital structure. These results are consistent with Greene (2011), Vakilifard et al (2011), and Heng et al (2012). While it contrasts the result of Ukaegbu., B, et al (2014) as their findings show a significant positive relation with total debt ratio.

As for hypothesis three which stated that: *“CEOs duality has a positive relation with corporate financial leverage”*, the CEO’s duality is found positive insignificantly with the three debt ratios, indicates that the duality of these two powerful positions has insignificant effect on financial corporate leverage and accordingly hypothesis 3 is rejected. These findings are consistent with Sheikh and Wang (2011), Ahmadpour et al. (2012) and Heng et al. (2012), However, other studies find the same relation, but significant such as Vakilifard, H.R., et al. (2011) and Wellalage, N. H. & Locke, S. (2012), and Olubukunola Uwuigbe (2013) assuming that CEO duality increases firm debt usage.

Concerning hypothesis No. four which stated that: *“The proportion of females on the board has a positive relation with corporate financial leverage”*, the study found that the proportion of board female is negatively insignificant related to total debt, positive insignificant with long-term debt, negative significant with short term-debt at the 0.10 level, therefore hypothesis 4 is rejected. The findings are consistent with the results of Alves et al. (2014) who find that gender diversity will boost the board and contributes to lower the information asymmetries between corporate management and its shareholders, which will lead to decrease short debt and increase long-term- debt.

As for hypothesis No. Five which stated that: *“There is a positive relationship between the percentages of shares held by management and corporate financial leverage.”*, the study found that managerial ownership is positively insignificant with the three ratios, accordingly the results don’t support hypothesis 5. The possible explanation for this insignificance could be the low level of managerial ownership of Egyptian listed firms in the sample (mean 7.51%, ranging between zero and 66.27%). Our results are consistent with Florackis and Ozkan (2009). However, many other researchers such as Berger et al. (1997), Ooi, (2000), and Wellalage, N. H, and Locke, S. (2012) find a significant positive relation.

With regard to our hypothesis six which stated that: *“There is a positive relationship between the percentages of shares held by institutional investors and corporate financial leverage”*, the study found that institutional ownership is a positively insignificant with total debt, long-term debt while it is positive significant at the 0.10 level with firm short-term debt. The result indicates that institutional ownership do affect the short term-debt, while they have insignificant effect on both the total and long-term-debt, accordingly hypothesis 6 is partially accepted, which may be attributed to their easy access to obtain short term loans from banks. Similar findings in the existing literature such as Hassan and Ali (2009) in Pakistan, and Bodaghi and Ahmadpour (2010) in Iran. They also find a positive insignificant correlation, suggesting that the reason behind this is the insufficiency of corporate governance practices in their countries. Furthermore, Joher Huson et al., (2006), Abdoli, M et al., (2012) find the same result, but with a significant positive relation. On the contrary, some studies such as Yaseen, and Al-Amarneh (2013) reveal a negatively significant impact on leverage due to the strong monitoring of institutional shareholders.

As for hypothesis seven which stated that: *“There is a positive relationship between the percentages of block holding ownership and corporate financial leverage”*, the study found that block shareholding insignificant negative with total debt, insignificant positive with long-term debt, significant negative with short-term debt at the 0.05 level, which indicate that the block holders tend to use less long-term debt rather than short-term debt, accordingly the results don't support hypothesis 7. On the contrary, some researchers, find a positive significant relationship, such as Berger et al (1997), Fosberg (2004), Zuoping x. (2009) and Yaseen, and Al-Amarneh (2013). However, our results support the active monitoring hypothesis (Friend and Lang, 1988).

With regard to hypothesis eight which stated that: *“There is a positive relationship between the percentages of*

*governmental ownership and corporate financial leverage*”, the study found that governmental shareholding is positive significant with the total debt, short-term debt at 0.10, 0.01 levels respectively while it is negative insignificant with long-term debt, accordingly the results partially support hypothesis 8. However, the results indicate that governmental shareholding in the sample tends to increase the total debt by raising short-term debt, as short-term debt accounts most part of the total debt, which may be attributed to the easy access of various debt resources, at the same time they may be reluctant in obtaining long-term debt in a period of transmission from public to private which may explain the insignificant relation with long-term debt. The results are consistent with Deesomsak et al. (2004), Aljifri and Moustafa (2007), and Ezeoha, A.E., Okafor, F.O. (2009), and Liu, Q, et al (2011), as they find a positive significant relation suggesting that government firms may enjoy credit facilities guarantees and easier access to borrow from banks and the state itself. On the contrary to our results Huang, G, and Song, F.M. (2006), and Zuoping x. (2009) find a significant negative relation.

## 5. The Conclusion of the Research

This paper empirically examined the effect of two main features of corporate governance, the board of directors' characteristics and ownership structure and their effect on corporate financial leverage in Egypt in which corporate governance is voluntarily up to this date. The sample contains 36 corporations out of the most active 50 corporations listed on the Egyptian Stock Exchange for the period from 2007 to 2011. Multivariate Regression Analysis is used to analyze the data. The overall results indicate that the board of directors' characteristics and ownership structure's variables played a significant role in determining corporate leverage level. Results reveal that Board Size plays a significant role in monitoring management and determining the level of debt, and larger boards are more effective in monitoring executives and execute pressure on management to employ less debt than the small boards. Non-Executive Directors and firms with boards of directors that have the chairman and the CEO in one position are found insignificantly correlated with leverage, whereas agency theories, and regulators (e.g. The Egyptian Corporate Governance Code) intensify the need of boards of directors with a majority of non-executive directors, and requires firms to separate the position of chairman and CEO.

Additionally, the findings reveal that the proportion of board female is only negative significant with short-term debt, suggesting that boards female devote more effort to monitor the executive directors and practice pressure on the managers to impose them to lower the short-term debt level. Regarding the ownership structure, the study found that managerial ownership is positively insignificant with the total debt, long-term debt, and short-term debt. This is against the managerial power theory, where the managerial influence over the company leverage as when their share ownership increases this aligned their interest with the shareholders that encourage them to employ more debt to enhance the corporate value, however the insignificant result could be attributed to the very low level of managerial ownership in Egyptian listed firms (mean 7.51%). Furthermore, institutional ownership has a positive significant relationship with firm short-term debt. The result indicates that institutional ownership do affect the short term-debt, and they have a positive insignificant effect on both the total and long-term debt, which is partially against corporate governance philosophy. This may be attributed to their easy access of different sources of financing.

Block shareholding is a significant negative with short-term debt, while it is insignificant affect the total and long-term debt, which indicate that block shareholding tend to use less short-term debt rather than long-term debt. The results are consistent with the active monitoring hypothesis that the block shareholding has an incentive to monitor managers to protect their investments (Friend and Lang 1988) by preferring equity financing rather than debt financing. The results also indicate that governmental shareholding tends to increase the total debt by raising short-term debt, as short-term debt accounts most part of the total debt, which may be attributed to the easy access of various debt resources, and the opportunity to borrow at favorable and government guaranteed rates, besides, they may be reluctant in obtaining long-term debt in a period of transmission from public to private which explain the insignificant relation with long-term debt.

Finally, traditional determinants of capital structure like firm size, profitability, growth and tangibility have a significant effect on corporate leverage, firm size is positively significant with the total debt and long-term debt, it is positively insignificant with short-term debt. Profitability is found positively significant with total debt and short-term debt, and negative insignificant with long-term debt. These results indicate that profitability doesn't hinder the firm from obtaining debt, which doesn't support the Pecking Order Theory of capital structure as companies use internally generated funds as first priority in finance, debt as second priority and equity as a last resort. Growth is found negatively significant with the total debt and short-term debt, which is consistent with the predictions of the agency theory, stipulates that high growth firms used less debt, since they are not willing to be exposed to more risk. Finally, tangibility is found to be negative significantly correlated to total debt and short-term

debt, while it is positive significantly with long-term debt size. The results suggest that high tangibility firms are likely to use less total, short-term debt and more long-term debt for financing their investments than firms with low tangibility. Accordingly, it can be concluded that the board of directors' characteristics and ownership structure have a significant effect on the capital structure of Egyptian listed firms.

### 5.1 Policy-Makers Recommendation

Egypt as an emerging market in Africa aims to attract more foreign direct investment to enhance its economic development. Furthermore, the Egyptian firms keen to sustain and grow in the global market by caring about its capital structure as a way to reduce the cost of capital and increase the expected return of the company, which, will be reflected on the firm's value.

As a result of the empirical research taken on board characteristics and ownership structure of Egyptian listed firms, we have some suggestions for policy-makers:

- The importance of amending the ECCG to be mandatory and not voluntary as it is now, and including punishment for companies that break regulations.
- The establishing of an independent director system based on strict selection process, enhance their role of supervision, and strengthen the awareness of independent directors.
- Enhance the supervision of major shareholders and diversify the ownership by reducing the percentage of long-term debt' shares.
- Enhance the internal control, prevent managers from controlling the company, increase information disclosure, and make an extra effort to encourage the minority shareholders to participate in supervision.

This thesis's finding is clearly usable for both investors and regulators. As for investors, they can depend on the results in the composition of boards of directors so that to enhance internal governance quality, on the other hand, regulators can benefit from these results to realize effective governance features so that to evaluate the current governance principals and to make the appropriate amendments.

### 5.2 Limitations of the Study

The research conducted in this study has the following limitations:

- The study only covers data of firms of the most actively traded 50 listed Egyptian firms in the Egyptian Stock Exchange (EGX). However, this index is considered a preferable index for investors in the Egyptian market.
- The study only focuses on firms listed on the EGX50, and, therefore, does not represent the unlisted companies, besides; the study excluded financial companies due to their unique governance, and ownership structures.

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