



SCHOOL OF ACCOUNTING, FINANCE AND MANAGEMENT

**CEO Duality and Accounting-Based Performance in Egyptian
Listed Companies: A Re-examination of Agency Theory
Predictions**

**Ahmed Kholief
School of Accounting, Finance and Management
University of Essex**

Working Paper No. 08/07

May, 2008

CEO Duality and Accounting-Based Performance in Egyptian Listed Companies: A Re-examination of Agency Theory Predictions

Ahmed Kholeif

School of Accounting, Finance and Management

University of Essex

Wivenhoe Park

Colchester

Essex CO4 3SQ

UK

Tel: +44 (0) 1206874589

Fax: +44 (0) 1206873429

E-mail: aorkho@essex.ac.uk

2008

CEO Duality and Accounting-Based Performance in Egyptian Listed Companies: A Re-examination of Agency Theory Predictions

Abstract

According to agency theory, the interests of shareholders are safeguarded only where different people occupying the two positions of the Chief Executive Officer (CEO) and the chairman of the board of directors. This implies that CEO duality (i.e. the CEO serves also as the board chairman) is negatively associated with corporate performance. However, empirical evidence is mixed with respect to this prediction of agency theory. This paper aims at re-examining the predictions of agency theory with

regard to the negative association between CEO duality and corporate performance using the financial statements for the year 2006 of most actively traded companies in the Egyptian stock market. It examines the role of other corporate governance mechanisms (board size, top managerial ownership and institutional ownership) as moderating variables in the relationship between CEO duality and corporate performance. Moderated Regression Analysis is used to analyse the empirical data. Our findings indicated that the hypothesized relationship between CEO duality, the moderating variables (top management ownership, board size and institutional ownership) and corporate performance has changed. We found that board size was the only moderating variable (a homologizer variable), top management ownership was a suppressor variable, and institutional ownership was simply another independent variable. For companies characterized by large boards and low top management ownership, corporate performance is negatively affected by CEO duality and positively impacted by institutional ownership.

Keywords: corporate governance; corporate performance; Egypt; accounting-based performance; agency theory; CEO duality

1. Introduction

In recent years, the Anglo-American system of corporate governance has received increasing attention because of a series of shocking financial scandals and corporate failures such as Enron, WorldCom, Global Crossing, Arthur Andersen and others (Coles et al., 2001; Eighme and Cashell, 2002; Klein, 2002; Tipgos and Keefe, 2004; Agrawal, and Chadha, 2005; Davidson et al., 2005; Parker, 2005; Seal, 2006; Balgobin, 2008; Bauer et al., 2008; Omran et al., 2008). These corporate crashes refer to the failure of existing corporate governance practices in predicting and preventing corporate failures. At the heart of the Anglo-American corporate governance system is an agency problem that agents (e.g. managers) will not act to maximise the returns

to principals (e.g. shareholders) unless corporate governance mechanisms are implemented to narrow the divergence of interests between shareholders and managers (Jensen and Meckling, 1976). However, the effectiveness of these mechanisms depends critically on the ability of the board of directors to detect managerial mistakes (Donaldson and Davis, 1991). This body is in place to represent and safeguard the interests of shareholders. It monitors and controls managerial actions on behalf of shareholders by setting strategic policies and goals.

According to agency theory, the interests of shareholders are safeguarded only where different people occupying the two positions of the Chief Executive Officer (CEO) and the chairman of the board of directors (Rhoades et al., 2001). This means that CEO duality (i.e. the CEO serves also as the board chairman) is negatively associated with corporate performance. However, empirical evidence is mixed with respect to this prediction of agency theory. Some scholars found that non-executive board chair is positively associated with corporate performance (e.g. Berg and Smith, 1978; Rechner and Dalton, 1991; Daily and Dalton, 1994). Other scholars found that executive-chaired boards are significantly associated with higher corporate performance (e.g. Donaldson and Davis, 1991; Finkelstein and D'Aveni, 1994; Lin, 2005). Still others suggest that no significant difference in corporate performance between executive and non-executive chaired boards (e.g. Chaganti et al., 1985; Molz, 1988; Baliga et al., 1996; Abdullah, 2004).

The present paper seeks to re-examine the predictions of agency theory with regard to the negative association between CEO duality and corporate performance in the context of a developing country, Egypt. It examines other corporate governance mechanisms such as board size, top managerial ownership and institutional ownership that moderate, and possibly change, the relationship between CEO duality and corporate performance. Thus this paper uses Moderated Regression Analysis (MRA) as this technique is the most appropriate form of analysis when the relationship between dependent and independent variables is conditional on the values assumed by other variables (Baron and Kenny, 1986; Russell and Babko, 1992; Dunk, 1993; Hartmann and Moers, 1999; Smith, 2003). MRA assumes that the effect of one independent variable (e.g. CEO duality) on the dependent variable (e.g. corporate performance) depends on the level of one or more other independent variables (e.g. board size, top management ownership and institutional ownership). In particular, Sharma et al.'s (1981) framework for identification and analysis of moderator variables will be used.

The empirical data used in this paper is based on the financial statements for the year 2006 of most actively traded companies in the Egyptian stock market as reported by the Egyptian Market Authority. The Egyptian context is particularly important because the Anglo-American model of corporate governance is recently adopted in Egypt. The Egyptian Institute of Directors, with support from the World Bank, the International Finance Corporation and the Ministry of Foreign Trade, has created a code, guidelines and standards of corporate governance that are based on the corporate governance principles of the Organization of Economic Co-operation and Development (OECD). So this study could highlight the effectiveness of the Anglo-American model of corporate governance in Egypt.

The remainder of this paper is organised in five sections. In the next section, we describe existing practices and recent developments of CEO governance in Egypt. Then, we develop study hypotheses based on agency theory. This is followed by details of the research method employed in this study. The paper then analyses the empirical data. The final section provides a summary of the paper and some conclusions.

2. The CEO Governance in Egypt: Criticisms and Recent Developments

The World Bank and the International Monetary Fund utilise the Organisation for Economic Co-operation and Development (OECD) principles of corporate governance (i.e. the rights of shareholders, the equitable treatment of shareholders, the treatment of stakeholders, disclosure and transparency, and the duties of board members) to assess and produce reports on the corporate governance institutional frameworks and practices in individual countries (Mallin, 2007). In February 2004, they prepare a report that benchmarks the Egyptian corporate governance against the OECD principles of corporate governance. The report identified several weaknesses in the Egyptian corporate governance practices. This section focuses on describing the existing practices and recent improvements in CEO governance rules in Egypt.

2.1 Description of Existing Egyptian CEO Governance Practices

The existing practices of CEO governance in Egyptian companies are as follows:

1- Board structure and independence

Egyptian companies have one-tier board structure¹. This means that one single board comprising executive and non-executive directors. This form of board structure is predominant in countries such as the UK, the USA and the majority of EU Member States (Mallin, 2007). However, there are no rules that govern the board structure from executive or non-executive directors in Egypt. The 2002 listing rules introduced the concept of ‘non-executive director’ for the first time but the concept of the ‘independent board member’ is not clearly applied in Egypt. In most Egyptian companies, there is no clear separation between the board of directors and the executive management. The board of directors does not include independent members, nor does it form *ad hoc* committees to consider assigned subjects.

2- Chairman and chief executive officer

In Egypt, the chairman is often also the CEO. The board member responsible for the executive management is sometimes called the managing director or the chief executive officer. This means that there is CEO duality. The CEO is responsible for the running of the board as well as the running of the company’s business. This duality exists in some other countries. In Australia, only a small percentage of large companies have CEO duality (Donaldson and Davis, 1991). However, about 80 percent of large US companies have CEOs are also the chairman (Kesner and Dalton, 1986; Dalton and Kesner, 1987). In fact, the two roles should not be combined and carried out by one person, as this would give an individual too much power.

3- Board size and appointments to the board

¹ This differs from two-tier board structure that consists of a supervisory board and an executive board of directors. The supervisory board oversees the direction of the business whilst the management board is responsible for the running of the business (Mallin, 2007).

In Egypt, the board of directors consists of an odd number of members, with a minimum of three members. Board members must be shareholders or represent the participating companies which are shareholders with the exception of two members (as a maximum) who are chosen because they are 'experts in the field'. The annual general assembly elects directors on the board for a period of three renewable years, sets their remuneration, and can remove them if necessary. Election conditions include the ownership of a minimum number of shares as indicated in the company's statutes (with the exception of the two experts). These shares will be kept as qualification shares until the expiry of the board's term and the ratification of the last annual financial statements by the annual general assembly. Directors must submit a CV, including a list of companies with which they have been associated during the previous three years. An employee cannot be appointed before having served at least two years with the company. A recent Prime Ministerial decree mandates that directors may serve on a maximum of two boards, but CEOs should only serve on one board with the exception of directors who owns at least 10 % of the company's share capital. If the company experiences losses, board members cannot be re-appointed.

4- The board meeting and the functions of the board of directors:

In Egypt, the board holds its meetings at the request of its chairman or two-thirds of its members. The board meeting is considered valid if the number of attendees is not less than half of its members plus one, provided the number of attendees is not less than three board members. However, there is no disclosure of board meeting attendance. The board of directors has responsible for supervising the implementation of the company's objectives as decided by its general assembly. The board is responsible to the shareholders. The functions of the board of directors include: inviting the shareholders to meet, investing the company's funds, requesting loans, appointing executive managers and submitting financial statements and board reports to the general assembly meeting. According to the World Bank-IMF report on the observance of standards and codes, the boards of most Egyptian companies do not yet play a central and strategic role, and their functions are not clearly distinguished from those of management. They most often lack independence from controlling shareholders and from management. Boards do not have responsibility for monitoring governance practices, or for overseeing disclosure and communications, although board members are liable for false statements.

2.2 Recent Improvements in CEO Governance Rules

In October 2005, the Egyptian Institute of Directors, with support from the World Bank, the International Monetary Fund and the Ministry of Foreign Trade, has developed a code, guidelines and standards of corporate governance that are based on the corporate governance principles of the Organization of Economic Co-operation and Development (OECD). The 'new' Egyptian code of corporate governance consists of a set of guidelines and standards related to the following:

- 1- General assembly,
- 2- Board of directors,
- 3- Internal audit department,
- 4- External auditor,
- 5- Audit committee,
- 6- Disclosure of social policies, and
- 7- Avoiding conflict of interest.

This ‘new’ Egyptian code has introduced a number of improvements in CEO governance. For example, the board of directors should include a majority of non-executive directors and it is preferred that the two posts of the chairman and the CEO should not be held by the same person. However, these ‘new’ governance principles are neither mandatory nor legally binding. So it is less likely to have a real impact on existing corporate governance practices in Egypt. This paper examines the impact of these ‘new’ rules of corporate governance on practice.

3. Agency Theory and Hypotheses Development

In the last decades of the twentieth century, agency theory became the dominant force in the theoretical understanding of corporate governance and it still informs research on this area (Jensen and Meckling, 1976; Fama and Jensen, 1983; Eisenhardt, 1989; Phan and Yoshikawa, 2000; Clarke, 2004; McCarthy and Puffer, 2008). Because of the separation of finance and management in modern large corporations and the self-interested utility-maximising individuals, agency theory suggests that there is an agency problem between shareholders (principals) and the CEO (agents). The relationship between shareholders and the CEO will inevitably be problematic as managerial actions depart from those required by shareholders to maximise their returns and shareholders attempt to prevent their CEO from maximising their utility. From this point of view, corporate governance essentially concerns the constraints that are applied to minimise the opportunistic behaviours of the CEO and, therefore, reduce the agency problem. To align managerial incentives with the interests of stockholders, various corporate governance mechanisms can be used to control these behaviours. In this paper, we examine the agency problem caused by CEO duality and a number of corporate governance mechanisms that minimise this problem, mainly top management ownership, board size and institutional ownership. We argue that top management ownership, board size and institutional ownership have a moderating effect in the relationship between CEO duality and corporate performance (see Figure 1). The following sections develop the study hypotheses based on agency theory.

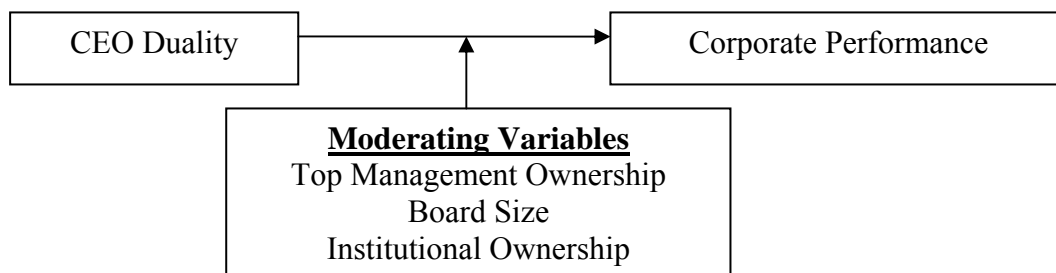


Figure 1: Moderating Variables in the relationship between CEO Duality and Corporate Performance.

3.1 CEO Duality and Corporate Performance

A major corporate governance mechanism that minimises managerial opportunism is the board of directors. This body, in theory, is in place to safeguard the interests of the company’s shareholders and provides a monitoring of managerial actions on behalf of shareholders by setting strategic policies and goals (Mallin, 2007). This protection will occur more fully where board chairman is independent of executive management. The CEO is primarily responsible for initiation and implementation of strategic decisions, while the board has the responsibility for ratifying and monitoring

decisions taken by the CEO. An implicit assumption of agency theory is that CEO is an inherently opportunistic agent who will capitalise on every chance to maximise personal welfare at the expense of shareholders.

Where the CEO is board chairman, the role of the board as an internal monitoring and control mechanism is compromised. Agency theory proposes that when the CEO also serves as board chairman, then board monitoring and control are weakened and the interests of the shareholders will be sacrificed to a degree in favour of executive management, that is, there will be managerial opportunism such as higher levels of executive compensation, adoption of 'poison pills' and payment of greenmail (Levy, 1981; Dayton, 1984; Davis, 1991; Rechner and Dalton, 1991; Pi and Timme, 1993; Brickley et al., 1994). This suggests a negative relationship between CEO duality and firm performance. Hence, we offer the following hypothesis (null form):

H1: CEO duality is not related to corporate performance.

3.2 Interaction of Top Management Ownership and CEO Duality

An agency problem exists when the CEO has established goals which conflict with that of shareholders. Such problem is more likely to occur when the CEO has little or no financial interest in the outcome of his decisions (Jensen and Meckling, 1976; Fama and Jensen, 1983). This is often the norm, as the CEO of many large companies is typically not the majority shareholder. Consequently, the CEO is more likely to pursue strategies which maximise his personal welfare at the expense of shareholders and minimise his personal risk (Boyd, 1995).

An implication of agency theory is that where CEO duality is retained, shareholder interests could be safeguarded by aligning the interests of the CEO and the shareholders by suitable incentive schemes for the CEO. Such schemes typically include plans whereby the CEO obtains shares, perhaps at a reduced price, thus aligning financial interests of the CEO with those of shareholders (Morck et al., 1988). Where there is CEO duality, the presence of top management ownership will align the interests of the CEO with shareholders (Barnhart and Rosenstein, 1998). Thus based on agency theory predictions, we expect that high top management ownership with CEO duality is likely to give rise to high corporate performance, as posited below (null form):

H2: There is no interaction between top management ownership and CEO duality that affects corporate performance.

3.3 Interaction of Board Size and CEO Duality

According agency theory, coordination/ communication problems and agency problems increase as board size becomes larger. Coordination/ coordination problems, on the one hand, arise from the fact that it would be more difficult for the company to arrange board meetings and for the board to reach a consensus as a board increases in size. This suggests that larger boards are less efficient and slower in making their decisions. On the other hand, agency problems result from dysfunctional norms of behaviour in board meetings. Lpton and Lorsch (1992) suggest that directors on the board normally do not criticise the policies of the CEO or hold candid discussions about corporate performance.

With larger boards, the cost to any director of not exercising diligence in controlling and monitoring the decisions taken by the CEO falls in proportion to the total number of directors on the board. Jensen (1993) argues that when a board has more than seven or eight directors, the board of directors is less likely to function effectively and are easier for the CEO to control. With CEO duality, it becomes clear that the CEO will acquire a wider power base and locus of control, thereby leading to a lower level of corporate performance (assuming that CEO is an inherently opportunistic agent) (Yermack, 1996; Eisenberg et al., 1998; Hermalin and Weisbach, 2003; Bennedson et al., 2007; Cheng, 2008). Hence, we posit that high corporate performance will be associated with small board size and CEO duality. This association is consistent with the view that both coordination/ communication problems and agency problems become more severe as a board grows larger. Based on this logic, we develop the following hypothesis (null form):

H3: There is no interaction between board size and CEO duality that affects corporate performance.

3.4 Interaction of Institutional Ownership and CEO Duality

Agency theory argues that in the modern large corporation, share ownership is widely held, which makes effective coordination among shareholders difficult and expensive, making the CEO the de facto policymaker. Thus CEO actions are more likely to depart from those required to maximise shareholder returns. In agency theory terms, there is an agency problem which is the extent to which returns to shareholders fall below what would be if shareholders exercised direct control of the company. The CEO has more inside information than shareholders who therefore face a moral hazard problem because the value of managerial strategic decisions may be difficult to determine fully. In the case of CEO duality, these problems are exaggerated. However, these agency problems are minimized when there is ownership concentration, especially in the case of institutional investors. Where institutional investors are the largest holders of shares in companies, taking into account the voting power associated with their shareholdings, their approval or otherwise of strategies of the CEO can be critical factors in shaping how a company is managed and run (Chung et al., 2002; Mallin, 2002). In addition, institutional investors have more access to inside information like the CEO (Burns, 2001; Cross, 2004). Thus they can closely control decisions and actions taken by the CEO and limit the power of the CEO, especially when CEO and chairman positions are combined (Chaganti and Damanpour, 1991). This suggests that high institutional ownership with CEO duality is likely to be associated with high corporate performance, as posited below (null form):

H4: There is no interaction between institutional ownership and CEO duality that affects corporate performance.

4. Research Methodology

4.1 Sample Selection and Data Collection Method

The annual Disclosure Book issued by Cairo and Alexandria Stock Exchanges (CASE) was the main source of data. This book identifies the most active listed companies in Egypt and contains a complete data on board characteristics, ownership structure, corporate performance and other related variables. The sample used in this study was based on the 50 most active Egyptian companies in July 2007. These companies cover 15 industries. The banks and the other financial institutions were

deleted from the sample because of their huge debt structure which is very much different from the other firms, leaving 40 firms in the sample. The use of secondary data based on the financial statements of the most active Egyptian companies is due to data availability and reliability because these are required by law and are issued by the Egyptian Capital Market Authority. The most recent year (2006) was selected to reflect the impact of recent developments in corporate governance in Egypt on corporate performance.

4.2 Measurement of Dependent, Independent and Moderating Variables

Dependent Variables: Corporate Performance Variables

The dependent variable in this study is accounting-based performance. Previous studies on corporate governance and corporate performance have used accounting measures such as return on assets and return on equity (Muth and Donaldson, 1998; Erhardt et al., 2003). The present paper uses return on assets and return on equity to measure corporate performance because the former mainly reflect operating results and the latter reflect capital structure decisions. Return on assets (ROA) is measured by net profit after tax divided by total assets. Regarding return on equity (ROE), it is measured by net profit after tax divided by shareholders equity.

4.3 Independent and Moderating Variables:

The main independent variable in this study is CEO duality. A dummy variable is used as a proxy for CEO duality. This variable takes the value of 1, if the CEO also served as board chairman and 0 if there are different people occupying the two positions of CEO and board chairman. The moderating Variables examined in this study are board size, managerial ownership and institutional ownership. The board size is measured based on the total number of directors serving on a company's board. Managerial ownership is measured by the proportion of shares owned by top management divided by total number of shares. Finally, institutional ownership is measured by the ratio between shares owned by institutional investors and total number of shares.

5. Data Analysis and Findings:

5.1 Descriptive Statistics

Table 1 reports some descriptive statistics for all dependent and independent variables. With regards to accounting-based performance, there is wide deviation between firms. The minimum and maximum reported returns on assets (ROA) are -8% and 35.6% respectively. The mean ROA is 10% with a standard deviation of 0.1003. Return on equity (ROE) appears relatively stronger with a minimum of -35.5% and a maximum of 94%. While the mean ROE is 21%, the standard deviation is 0.222. For 78% of firms in the sample, the same person holds both the CEO and the board chairman positions. This figure is close to that reported in previous work. For example, CEO duality is 78.7% in Rechner and Dalton (1991), 76% in Donaldson and Davis (1991) and 80.94% in Brickley et al. (1997). This suggests that avenue for agency problems emanating from conflict of interest are exaggerated.

Table 1: Descriptive statistics of dependent and independent variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Return on Assets	40	-0.0813	0.3555	0.101008	0.1002988

Return on Equity	40	-0.3554	0.9397	0.209575	0.2218939
CEO Duality	40	0	1	0.78	0.423
Top Management Ownership	40	0.0000	0.6627	0.065593	0.1547256
Board Size	40	5	24	11.00	4.231
Institutional Ownership	40	0.0034	0.9175	0.474593	0.3037503
Valid N (listwise)	40				

In most of the firms in the sample, top management appears not to have significant ownership with a mean of 6.6% and a standard deviation of 0.155. While the maximum top management ownership is 66.3%, the minimum top management ownership is 0%. As previously suggested, top management ownership is important as it may be a mechanism that aligns the divergence in interests with shareholders (Jensen and Meckling, 1976). Of the firms in the sample, the mean board size is 11 members with a standard deviation of 4.231. The minimum board size is 5 members and the maximum board size is 24 members. This suggests that firms in Egypt have relatively large board sizes. This is not good for corporate performance according to researchers such as Jensen (1993) and Lipton and Lorsch (1992) who argue that large board sizes are less effective for corporate performance. Finally, the mean institutional ownership is 47.5% with a standard deviation of 0.304. The minimum institutional ownership is 0.34% and the maximum institutional ownership is 92%. This implies that institutional investors in Egypt might have a significant impact on corporate performance as expected by researchers such as Salancik and Pfeffer (1980) and Chaganti and Damanpour (1991).

5.2 Moderated Regression Results

Sharma et al. (1981) proposed a framework for identifying and analysing moderating variables, as depicted in Figure 2. According to this framework, MRA is applied by examining three regression equations for equality of the regression coefficients. For example, if we assumed three variables; Y (dependent variable), X1 (independent variable) and X2 (moderator variable).

- (1) $Y = a + b_1 X_1$
- (2) $Y = a + b_1 X_1 + b_2 X_2$
- (3) $Y = a + b_1 X_1 + b_2 X_2 + b_3 X_1 X_2$

If equations 2 and 3 are not significantly different (i.e. $b_3 = 0$; $b_2 \neq 0$), X2 is not a moderator variable but simply an independent variable. For X2 to be classified as a pure moderator variable, equations 1 and 2 should not be different but should be different from equation 3 (i.e. $b_2 = 0$; $b_3 \neq 0$). For X2 to be a quasi moderator, equations 1, 2 and 3 should be different from each other (i.e. $b_2 \neq b_3 \neq 0$). The following sections use this framework to test research hypotheses.

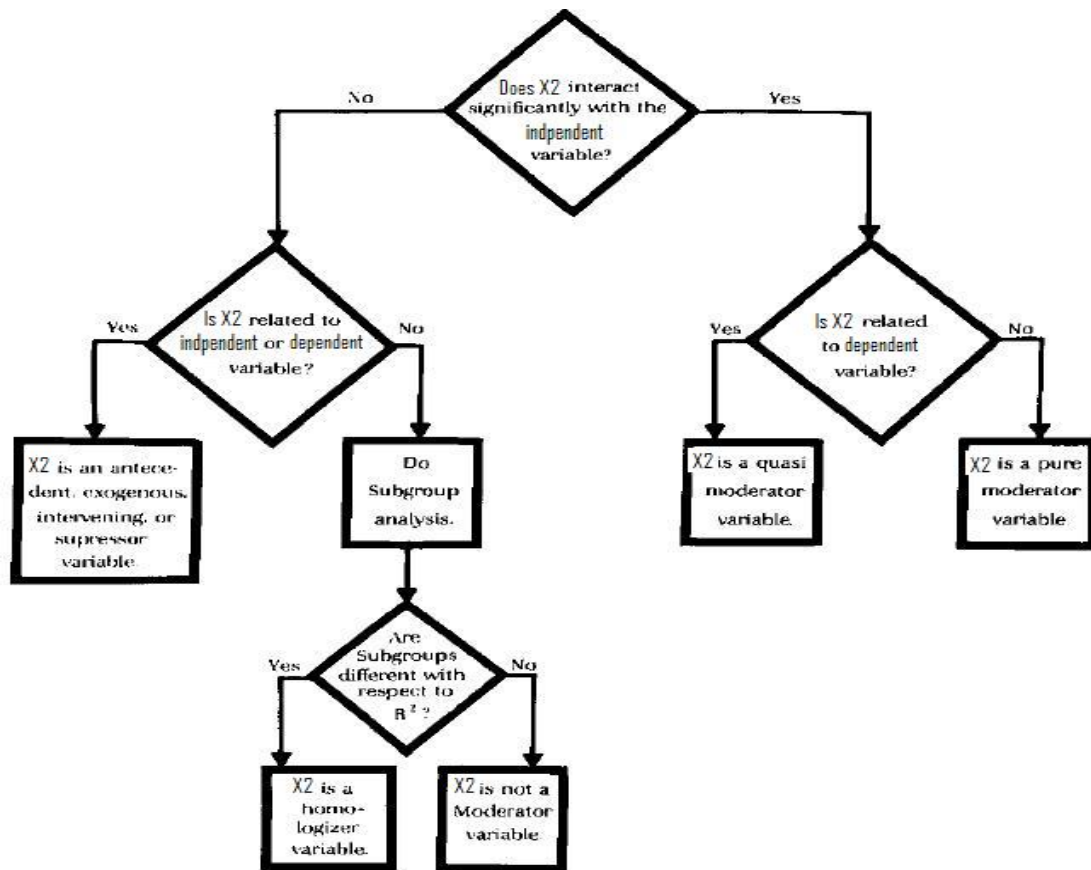


Figure (2): Framework for Identifying and Analysing Moderator Variables
Source: Adapted from Sharma et al. (1981: 297)

5.2.1 Hypothesis 1

To test the first hypothesis, a simple regression analysis was used to analyse the hypothetical negative relationship between CEO duality and corporate performance. The results, presented in Table 2, indicated that CEO duality significantly and negatively affected corporate performance as measured by ROE (p-value = 0.086)² but this relationship is not statistically significant when using ROA as a measure of corporate performance (p-value = 0.149). This gives us mixed evidence. These results are not uncommon in other research on CEO duality and corporate performance (e.g. Daily and Dalton, 1992; Brickley et al., 1997). This issue might be resolved when considering the moderating effect of other corporate governance variables.

Table 2: The Results of the First Hypothesis Test

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.144	0.033	4.361	0.000
CEO Duality	b1	-0.055	0.037	-1.471	0.149
R Square = 0.054; Adjusted R Square = 0.029; F(1, 38) = 2.165; P-value = 0.49					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.321	0.072	4.460	0.000
CEO Duality	b1	-0.144	0.082	-1.762	0.086
R Square = 0.076; Adjusted R Square = 0.051; F(1, 38) = 3.106; P-value = 0.086					

² A moderate significant relationship at the 0.10 level.

5.2.2 Hypothesis 2

We also hypothesised that corporate performance may be influenced by the interaction of top management ownership and CEO duality. Test results (Table 3) indicated no significant interaction between top management ownership and CEO duality relative to ROA (p-value = 0.786) and ROE (p-value = 0.894). By examining the correlation between CEO duality, top management ownership, ROA and ROE (Table 4), it became clear that top management ownership was neither a moderator variable nor another independent variable as it had a significant negative correlation with CEO duality (the main independent variable). This suggested that top management ownership might be an antecedent, extraneous, intervening or suppressor variable (Rosenberg, 1968). Additional analyses were performed to identify the role played by top management ownership in the relationship between CEO duality and corporate performance.

Table 3: The Results of testing the interaction between CEO duality and top management ownership

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.162	0.043	3.724	0.001
CEO Duality	b1	-0.069	0.048	-1.448	0.156
Management Ownership	b2	-0.086	0.132	-0.649	0.520
CEO duality * management Ownership	b3	-0.087	0.319	-0.273	0.786
R Square = 0.074 ; Adjusted R Square = -0.003; F(3, 36) = 0.957; p-value = 0.423					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.358	0.095	3.761	0.001
CEO Duality	b1	-0.174	0.04	-1.674	0.103
Management Ownership	b2	-0.176	0.290	-0.607	0.548
CEO duality * management Ownership	b3	-0.094	0.700	-0.134	0.894
R Square = 0.089 ; Adjusted R Square = 0.014; F(3, 36) = 1.178; p-value = 0.332					

Table 4: The correlation between CEO duality, managerial ownership, ROA and ROE

Correlations					
		Return on Assets	Return on Equity	CEO Duality	Top Management Ownership
Return on Assets	Pearson Correlation	1	0.805**	-0.232	0.001
	Sig. (2-tailed)		0.000	0.149	0.995
	N	40	40	40	40
Return on Equity	Pearson Correlation	0.805**	1	-0.275	0.039
	Sig. (2-tailed)	0.000		0.086	0.813
	N	40	40	40	40
CEO Duality	Pearson Correlation	-0.232	-0.275	1	-0.504**
	Sig. (2-tailed)	0.149	0.086		0.001
	N	40	40	40	40
Top Management Ownership	Pearson Correlation	0.001	0.039	-0.504**	1
	Sig. (2-tailed)	0.995	0.813	0.001	
	N	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

First, we hypothesised that top management ownership may be an intervening variable which comes between the independent variable (CEO duality) and the dependent variable (corporate performance). Three conditions should be met:

- 1- CEO duality predicts corporate performance.
- 2- CEO duality predicts top management ownership.
- 3- Top management ownership predicts corporate performance.

From Table 2 above, the first condition was partially met. The relationship between CEO duality and corporate performance was moderately significant when corporate performance was measured by ROE but was insignificant when using ROA as a measure of corporate performance. With regard to the second condition, Table 5 showed a significant negative association between CEO duality and top management ownership (p-value = 0.001). The third condition was not met as the results of analysis presented in Table 6 were not significant at conventional significant levels. Thus top management ownership failed to be an intervening variable.

Table 5: The Results of Testing the Second Condition

Dependent variable: Top Management Ownership					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.209	0.045	4.624	0.000
CEO Duality	B1	-0.185	0.051	-3.601	0.001
R Square = 0.254; Adjusted R Square = 0.235; F(1, 38) = 12.968; P-value = 0.001					

Table 6: The Results of Testing the Third Condition

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.165	0.041	3.985	0.000
Management Ownership	b1	-0.101	0.119	-0.849	0.401
CEO Duality	b2	-0.074	0.044	-1.694	0.099
R Square = 0.072; Adjusted R Square = 0.022; F(2, 37) = 1.435; p-value = 0.251					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.361	0.091	3.990	0.000
Management Ownership	b1	-0.192	0.261	-0.738	0.465
CEO Duality	b2	-0.180	0.095	-1.885	0.067
R Square = 0.089; Adjusted R Square = 0.040; F(2, 37) = 1.807; p-value = 0.178					

Next, we hypothesised that top management ownership may be an antecedent variable. It comes before the independent variable (i.e. the CEO duality) in the sequence. According to Rosenberg (1968), the antecedent variable does not explain away the relationship between the independent and dependent variables but clarifies the influences which preceded this relationship. Three conditions should be met:

- 1- All three variables – antecedent, independent, and dependent – must be related.
- 2- When the antecedent variable is controlled, the relationship between the independent and the dependent variable should not vanish.
- 3- When the independent variable is controlled, the relationship between the antecedent variable and the dependent variable should disappear.

None of these conditions were met. The correlation only existed between CEO duality and top management ownership, presented in Table 4 above. Furthermore, when the

effect of top management ownership was controlled, the relationship between CEO duality and corporate performance persisted (a moderate significant relationship at the 0.10 level). The third condition was not met as there was not any relationship between top management ownership and corporate performance as presented in Table 4 above. The results of these tests confirmed that top management ownership is not an antecedent variable.

Table 7: the partial correlation between CEO duality and corporate performance (the effect of top management ownership was controlled)

			Correlations		
Control Variables			Return on Assets	Return on Equity	CEO Duality
Top Management Ownership	Return on Assets	Correlation	1.000	0.806	-0.268
		Significance (2-tailed)		0.000	0.099
		Df	0	37	37
	Return on Equity	Correlation	0.806	1.000	-0.296
		Significance (2-tailed)	0.000		0.067
		Df	37	0	37
	CEO Duality	Correlation	-0.268	-0.296	1.000
		Significance (2-tailed)	0.099	0.067	
		Df	37	37	0

Then, we hypothesised that top management ownership may be an extraneous variable. A variable is considered extraneous if it is logically prior to both the independent and dependent variables and if it is controlled, the relationship cancels out. However, as explained earlier in Tables 4 above, top management ownership was only associated with CEO duality and was not related to ROA and ROE. In addition, the relationship between CEO duality and corporate performance did not disappear when top management ownership was controlled, as presented in Table 7 above. Thus we concluded that top management ownership was not an extraneous.

This left us with one more possibility that top management ownership may be a suppressor variable. A suppressor variable is one which may intercede to cancel out, reduce, or conceal a true relationship between two variables. In fact, after controlling on top management ownership, the negative correlation between CEO duality and corporate performance as well as the significance level increased (compare Tables 4 and 7 above). So the relationship between CEO duality and corporate performance improved when controlling the effect of top management ownership. This means that top management ownership was a suppressor variable.

5.2.3 Hypothesis 3

Hypothesis 3 focused on how the interaction between board size and CEO duality may affect corporate performance. Table 8 indicated that the interaction between board size and CEO duality did not affect corporate performance measured by ROA (p-value = 0.485) and ROE (p-value = 0.652). The correlation between CEO duality, board size, ROA and ROE (Table 9) showed that no significant correlation between board size and other variables. According to Sharma et al.'s (1981) framework, board

size either is a homologizer variable³ or is not a moderator variable. It seems that board size has the characteristics of the homologizer variable. To confirm this, we first divided the sample at 8 members⁴ into small and large boards. Then, we regressed corporate performance measures (ROA and ROE) on the control variable (board size) and CEO duality. Table 10 indicates that for large boards, CEO duality significantly and negatively affected ROA (p-value = 0.039) and ROE (p-value = 0.034) and the model explained 14.3%% of the variation in ROA and 15% of the variation of the variation in ROE. Table 10 also indicates that for small boards, CEO duality positively impacted ROA and ROE and the model explained just 0.2% of the variation in corporate performance but the results were not significant at conventional levels. This resulted in concluding that sub-groups (large vs. small boards) were different with respect to R Square and board size was a homologizer variable.

Table 8: The Results of the Third Hypothesis Test

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.023	0.105	0.216	0.830
CEO Duality	b1	0.012	0.116	0.106	0.916
Board Size	b2	0.013	0.010	1.215	0.232
CEO duality * Board Size	b3	-0.008	0.011	-0.705	0.485
R Square = 0.123; Adjusted R Square = 0.050; F(3, 36) = 1.686; p-value = 0.187					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.222	0.237	0.934	0.356
CEO Duality	b1	-0.032	0.262	-0.123	0.903
Board Size	b2	0.010	0.023	0.441	0.662
CEO duality * Board Size	b3	-0.011	0.025	-0.455	0.652
R Square = 0.081; Adjusted R Square = 0.004; F(3, 36) = 1.056; p-value) = 0.380					

Table 9: The correlation between CEO duality, board size, ROA and ROE

Correlations

		Return on Assets	Return on Equity	CEO Duality	Board Size
Return on Assets	Pearson Correlation	1	0.805**	-0.232	0.196
	Sig. (2-tailed)		0.000	0.149	0.226
	N	40	40	40	40
Return on Equity	Pearson Correlation	0.805**	1	-0.275	-0.039
	Sig. (2-tailed)	0.000		0.086	0.809
	N	40	40	40	40
CEO Duality	Pearson Correlation	-0.232	-0.275	1	0.172
	Sig. (2-tailed)	0.149	0.086		0.289
	N	40	40	40	40
Board Size	Pearson Correlation	0.196	-0.039	0.172	1
	Sig. (2-tailed)	0.226	0.809	0.289	
	N	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

³ Homologizer variable is a type of moderators which influences the strength of the relationship, does not interact with the independent variable, and is not significantly related to either the independent or dependent variable. In such a situation, the error term is posited to be a function of the moderator variable.

⁴ The selection of 8 members was based on Jensen's (1993) assumption that when a board has more than seven or eight directors, the board of directors is less likely to function effectively and are easier for the CEO to control.

Table 10: the relationship between CEO duality and corporate performance (the effect of board size was controlled)

Board Size		Large (members > 8)		Small (members ≤ 8)	
Corporate performance		ROA	ROE	ROA	ROE
Coefficient					
Constant	Value	0.200	0.411	0.073	0.210
	S.D.	0.046	0.101	0.033	0.089
CEO duality	Value	-0.109	-0.245	0.006	0.016
	S.D.	0.051	0.110	0.043	0.115
R-Square		0.143	0.150	0.002	0.002
Adjusted R-Square		0.112	0.120	-0.122	-0.122
P-value		0.039	0.034	0.891	0.894

5.2.3 Hypothesis 4

In hypothesis 4, we expected that the interaction between CEO duality and institutional ownership may influence corporate performance. Test results (Table 11) indicated that the interaction between interaction between institutional ownership and CEO duality was not significant relative to ROA (p-value = 0.404) and ROE (p-value = 0.205) but the model as a whole was significant (p-value = 0.003) and explained 31% of the variation in corporate performance. By examining the correlation between CEO duality, institutional ownership, ROA and ROE (Table 12), it became clear that institutional ownership was not a moderator variable as it had a significant positive correlation with both ROA and ROE. This simply suggested that institutional ownership was just another independent variable. By removing the interaction between CEO duality and institutional ownership from the regression model, the significance level of the model was improved (p-value = 0.001) and the model still explained 30% of the variation in ROA and 28% of the variation in ROE, as presented in Table 13.

Table 11: The Results of the Fourth Hypothesis Test

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.057	0.045	1.268	0.213
CEO Duality	b1	-0.041	0.055	-0.758	0.454
Institutional Ownership	b2	0.236	0.093	2.520	0.016
CEO duality * Institutional Ownership	b3	-0.091	0.108	-0.844	0.404
R Square = 0.314; Adjusted R Square = 0.257; F(3, 36) = 5.497; p-value = 0.003					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.112	0.099	1.123	0.269
CEO Duality	b1	-0.067	0.121	-0.551	0.585
Institutional Ownership	b2	0.569	0.207	2.751	0.009
CEO duality * Institutional Ownership	b3	-0.308	0.238	-1.291	0.205
R Square = 0.313; Adjusted R Square = 0.256; F(3, 36) = ; p-value = 0.003					

Table 12: the correlation between CEO duality, institutional ownership, ROA and ROE

Correlations

		Return on Assets	Return on Equity	CEO Duality	Institutional Ownership
Return on Assets	Pearson Correlation	1	0.805**	-0.232	0.443**
	Sig. (2-tailed)		0.000	0.149	0.004
	N	40	40	40	40
Return on Equity	Pearson Correlation	0.805**	1	-0.275	0.393*
	Sig. (2-tailed)	0.000		0.086	0.012
	N	40	40	40	40
CEO Duality	Pearson Correlation	-0.232	-0.275	1	0.191
	Sig. (2-tailed)	0.149	0.086		0.238
	N	40	40	40	40
Institutional Ownership	Pearson Correlation	0.443**	0.393*	0.191	1
	Sig. (2-tailed)	0.004	0.012	0.238	
	N	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 13: The Results of the Fourth Hypothesis Test (without interaction)

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.082	0.033	2.461	0.019
CEO Duality	b1	-0.078	0.033	-2.347	0.024
Institutional Ownership	b2	0.167	0.046	3.613	0.001
R Square = 0.301; Adjusted R Square = 0.263; F(2, 37) = 7.951; p-value = 0.001					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.197	0.075	2.632	0.012
CEO Duality	b1	-0.190	0.075	-2.556	0.015
Institutional Ownership	b2	0.337	0.104	3.252	0.002
R Square = 0.281; Adjusted R Square = 0.242; F(2, 37) = 7.232; p-value = 0.002					

6. Discussion and Conclusions

In this study, we investigated the predictions of agency theory with regard to the negative association between CEO duality and corporate performance. We hypothesized that board size, top managerial ownership and institutional ownership are moderating variables which moderate, and possibly change, the relationship between CEO duality and corporate performance. To accomplish this objective, we used the data of 40 most active non-financial Egyptian listed companies. We examined two accounting-based performance metrics: ROA and ROE. Sharma et al.'s (1981) framework was used to identify and analyse moderating variables.

We predicted that CEO duality would be negatively associated with corporate performance because when the CEO also serves as board chairman, then board monitoring and control are weakened and the interests of the shareholders will be sacrificed to a degree in favour of executive management. Research findings suggest that one of the two performance metrics (ROE) moderately support this hypothesis. This was a preliminary finding as we expected that other corporate governance mechanisms may moderate, and possibly change, the relationship between CEO duality and corporate performance.

In addition, we investigated the interactive effect of top management ownership and CEO duality on corporate performance. We did not find a significant interaction between top management ownership and CEO duality for the two performance measures (ROA and ROE). Then, we concluded that top management ownership is not a moderator variable. By examining the correlation between top management ownership and other variables (CEO duality, ROA and ROE), we found that top management ownership had a significant negative relationship with CEO duality. This resulted in excluding the possibility that top management ownership might be another independent variable. We conducted a number of analyses to identify the role played by top management ownership into the relationship between CEO duality and corporate performance. As a result of these analyses, we also excluded the possibilities that top management ownership might be an intervening variable, an antecedent variable or an extraneous variable. We concluded that top management ownership was a suppressor variable which may intercede to cancel out, reduce, or conceal a true relationship between CEO duality and corporate performance and should be controlled.

We also examined the interactive effect of board size and CEO duality on corporate performance. We found that no significant interaction between board size and CEO duality for both corporate performance measures (ROA and ROE). Furthermore, there was no significant correlation between board size and other variables (CEO duality, ROA and ROE). Additional analysis revealed that board size was a homologizer variable. This type of moderating variable should be controlled as it influences the strength of the relationship between CEO duality and corporate performance, does not interact with CEO duality, and is not significantly related to either CEO duality or corporate performance.

Last not least, we investigated the impact of the interaction between institutional ownership and CEO duality on corporate performance. Our results indicated that the interaction between interaction between institutional ownership and CEO duality was not significant relative to corporate performance measures (ROA and ROE). The correlation between institutional ownership and other variables (CEO duality, ROA and ROE) suggested that institutional ownership was not a moderator variable but was just another independent variable as it had a significant positive correlation with corporate performance.

As a result of our findings, the hypothesized relationship between the independent variable (CEO duality), the moderating variables (top management ownership, board size and institutional ownership) and the dependent variable (corporate performance) has changed (see Figure 3). We found that board size was the only moderating variable (a homologizer variable), top management ownership was a suppressor variable, and institutional ownership was another independent variable.

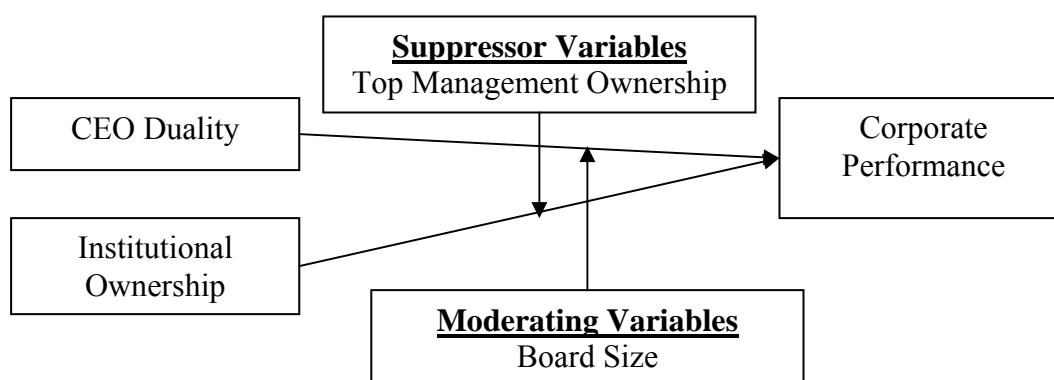


Figure 1: The new relationship between CEO duality, other corporate governance mechanisms and corporate performance.

To test this new model, we controlled the effects of board size⁵ and top management ownership⁶ on the relationship among CEO duality, institutional ownership and corporate performance. The results, presented in Table 14, indicated that the new regression model as a whole explained 45.2% of the variation in ROA (p-value = 0.001) and 38.6% of the variation in ROE (p-value = 0.002). R-Square improved sharply when comparing these results with those reported in Tables 2 and 13. So the new model is better in explaining the variation in corporate performance. This means that for companies characterized by large boards and low top management ownership, corporate performance is negatively affected by CEO duality and positively affected by institutional ownership. This conclusion is consistent with other research such as Daily and Dalton (1994) and Brickley et al. (1997).

Table 14: The relationship among CEO duality, institutional ownership and corporate performance (the effects of board size and top management ownership were controlled)

Dependent variable: ROA					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.119	0.055	2.191	0.038
CEO Duality	b1	-0.123	0.047	-2.594	0.016
Institutional Ownership	b2	0.197	0.058	3.427	0.002
R Square = 0.452; Adjusted R Square = 0.408; F(2, 25) = 10.312; p-value = 0.001					
Dependent variable: ROE					
	Coefficient	Value	S.D.	t-statistics	p-value
Constant	A	0.270	0.126	2.143	0.042
CEO Duality	b1	-0.280	0.110	-2.554	0.017
Institutional Ownership	b2	0.365	0.133	2.742	0.011
R Square = 0.386; Adjusted R Square = 0.337; F(2, 25) = 7.863; p-value = 0.002					

This study contributes to the literature on corporate governance and corporate performance (e.g. Yermack, 1996; Gompers et al., 2003; Klapper and Love, 2004;

⁵ We focused only on large boards (members > 8) as most Egyptian companies have large board sizes (30 out of 40 companies).

⁶ We focused only on low top management ownership as most Egyptian companies in the sample have low management ownership (36 out of 40 companies). In this regard, top management ownership is low when top management owns less than 20% of the company's total number of shares. The selection of this percentage is based on the assumption that 20% or more gives the owner the ability to exercise significant influence over operating and financial policies of the company.

Bauer et al., 2008) by introducing a framework for identifying and analysing moderating variables that affect the relationship between CEO duality and corporate performance. It also highlighted the fact that the 'new' corporate governance principles that have recently been introduced to the Egyptian stock exchange market are still not effective as most Egyptian companies have large boards, low top management ownership and CEO duality.

The findings of this study open new directions for future research. First, other corporate governance mechanisms such as independent auditors, internal auditors, audit committees and ownership structure may influence the relationship between CEO duality and corporate performance. There is great potential for future studies to investigate these relationships. Second, the framework for identifying and analysing moderating variables is a valuable tool that should be used in other corporate governance research as well as other accounting research. Finally, a limitation of this study is the use of accounting-based performance measures because of the expected earnings management behaviours by CEOs (Beasley, 1996; Healy and Wahlen, 1999; Burgstahler and Eames, 2003; Bradbury et al., 2006), taking into account the weaknesses in corporate governance structures in the Egyptian listed companies. Future research should use market-based measures or combine accounting-based measures with market-based measures.

7. References

- Abdullah, S. (2004), 'Board Composition, CEO Duality and Performance among Malaysian Listed Companies', *Corporate Governance*, 4: 47-61.
- Agrawal, A. and Chadha, S. (2005), 'Corporate Governance and Accounting Scandals', *Journal of Law and Economics*, 48(2): 371-406.
- Balgobin, R. (2008), 'Global Governance Practice: The Impact of Measures Taken to Restore Trust in Corporate Governance Practice Internationally', *Journal of Corporate Governance*, 7(1): 7-21.
- Baliga, B., Moyer, C., and Rao, R. (1996), 'CEO Duality and Firm Performance: What's the Fuss?', *Strategic Management Journal*, 17: 41-53.
- Barnhart, S. and Rosenstein, S. (1998), 'Board Composition, Managerial Ownership and Firm Performance', *The Financial Review*, 33: 1-16.
- Baron, R. and Kenny, D. (1986), 'The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations', *Journal of Personality and Social Psychology*, 51(6): 1173-1182.
- Bauer, R., Frijns, B., Otten, R. and Tourani, A. (2008), 'The Impact of Corporate Governance on Corporate Performance: Evidence from Japan', *Pacific-Basin Finance Journal*, 16(3): 236-251.
- Beasley, M. (1996), 'An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud', *The Accounting Review*, 71: 443-465.
- Bennedsen, M., Kongsted, H. and Nielsen, K. (2007), 'The Causal Effect of Board Size in the Performance of Small and Medium-sized Firms', *Journal of Banking and Finance*, (Forthcoming): 1-12.
- Berg, S. and Smith, S. (1978), 'CEO and Board Chairman: A Quantitative Study of Dual vs. Unity Board Leadership', *Directors and Boards*, 3: 34-39.
- Boyd, B. (1995), 'CEO Duality and Firm Performance: A Contingency Model', *Strategic Management Journal*, 16: 301-312.
- Bradbury, M., Mak, Y. and Tan, S. (2006), 'Board Characteristics, Audit Committee Characteristics and Abnormal Accruals', *Pacific Accounting Review*, 18(2): 47-68.
- Brickley, J., Coles, J. and Jarrell, G. (1997), 'Leadership Structure: Separating the CEO and Chairman of the Board', *Journal of Corporate Finance*, 3: 189 – 220.
- Brickley, J., Coles, J., and Terry, R. (1994), 'Outside Directors and the Adoption of Poison Pills', *Journal of Financial Economics*, 35: 371-390.
- Burgstahler, D. and Eames, M. (2003), 'Earning Management to Avoid Earnings Decreases and Losses', *Journal of Accounting and Economics*, 24: 99-126.
- Burns, T. (2001), 'Implications of Information Technology on Corporate Governance', *International Journal of Law and Information Technology*, 9(1): 21-38.
- Chaganti, R. and Damanpour, F. (1991), 'Institutional Ownership, Capital Structure and Firm Performance', *Strategic Management Journal*, 12: 479- 491.
- Chaganti, S., Mahajan, V. and Sharma, S. (1985), 'Corporate Board Size, Composition and Corporate Failure in Retailing Industry', *Journal of Management Studies*, 22: 400-417.
- Cheng, S. (2008), 'Board Size and the Variability of Corporate Performance', *Journal of Financial Economics*, 87: 157-176.
- Chung, M., Michael, F. and Jeong-Bon, K. (2002), 'Institutional Monitoring and Opportunistic Earning Management', *Journal of Corporate Finance*, 8(1): 33-45.
- Clarke, T. (2004), *Theories of Corporate Governance: the Philosophical Foundations of Corporate Governance*, London: Routledge Taylor and Francis Group.
- Coles, J., McWilliams, V. and Sen, N. (2001), 'An Examination of the Relationship of Governance Mechanisms to Performance', *Journal of Management*, 27(1): 23-55.
- Cross, S. (2004), 'Corporate Governance, Information Technology and the Electronic Company in the United Kingdom', *Information and Communication Technology Law*, 13(2): 117-128.
- Daily, C. and Dalton, D. (1992), 'The Relationship between Governance Structure and Corporate Performance in Entrepreneurial Firms', *Journal of Business Venturing*, 7(5): 375-386.
- Daily, C.M., Dalton, D.R. (1994), 'Bankruptcy and Corporate Governance: the Impact of Board Composition and Structure', *Academy of Management Journal*, 37: 1603-1617.

- Dalton, D. and Kesner, I. (1987), 'Composition and CEO Duality in Boards of Directors: An International Perspective', *Journal of International Business Studies*, 28: 33-42.
- Davidson, R., Stewart, T. and Kent, P. (2005), 'Internal Governance Structures and Earnings Management', *Accounting and Finance*, 45: 241-247.
- Davis, G. (1991), 'Agents without Principles? The Spread of the Poison Pill Through the Inter-corporate Network', *Administrative Science Quarterly*, 36: 583-613.
- Dayton, N. (1984), 'Corporate Governance: the Other Side of the Coin', *Harvard Business Review*, 62: 34-37.
- Donaldson, L. and Davis, J. (1991), 'Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns', *Australian Journal of Management*, 16: 49-64.
- Dunk, A. (1993), 'The Effect of Budget Emphasis and Information Asymmetry on the Relation between Budgetary Participation and Slack', *The Accounting Review*, 68(2): 400-410.
- Eighme, J. and Cashell, J. (2002), 'Internal Auditors' Roles in Overcoming the Financial Reporting Crisis', *International Auditing*, 17: 3-10.
- Eisenberg, T., Sundgren, S., Wells, M. (1998), 'Larger Board Size and Decreasing Firm Value in Small Firms', *Journal of Financial Economics*, 48: 113-139.
- Eisenhardt, K. (1989), 'Making Fast Strategic Decisions in High-Velocity Environments', *Academy of Management Journal*, 32: 543-576.
- Erhardt, N., Werbel, J., and Shrader, C. (2003), 'Board of Directors Diversity and Firm Financial Performance', *Corporate Governance: An International Review*, 11: 102 – 111.
- Fama, E. and Jensen, C. (1983), 'Separation of Ownership and Control', *Journal of Law Economics*, 26:301-325.
- Finkelstein, S. and D'Aveni, R. (1994), 'CEO Duality as a Double-Edged Sword: How Boards of Directors Balance Entrenchment Avoidance and Unity of Command', *Academy of Management Journal*, 37: 1079 – 1108.
- Gompers, P., Ishii, J. and Metrick, A. (2003), 'Corporate Governance and Euity Prices', *Quarterly Journal of Economics*, 118(February): 107-155.
- Hartmann, F. and Moers, F. (1999), 'Testing Contingency Hypotheses in Budgetary Research: An Evaluation of the Use of Moderated Regression Analysis', *Accounting, Organisations and Society*, 24(4): 291-315.
- Healy, P. and Wahlen, J. (1999), 'A Review of the Earning Management Literature and its Implications for Standard Setting', *Accounting Horizons*, 13(4): 365-383.
- Hermalin, B. and Weisbach, M. (2003), 'Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature', *Federal Reserve Bank of New York Policy Review*, 9: 7-26.
- Jensen, M. (1993), 'The Modern Industrial Revolution, Exit and the Failure of Internal Control Systems', *Journal of Finance*, 48 (July): 831-329.
- Jensen, M. and Meckling, W. (1976), 'Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure', *Journal of Financial Economics*, 3: 305-360.
- Kesner, I. and Dalton, D. (1986), 'Boards of Directors and The Checks and (Im)balances of Corporate Governance', *Business Horizons*, 29(5): 17-23.
- Klapper, L. and Love, I. (2004), 'Corporate Governance, Investor Protection, and Performance in Emerging Markets', *Journal of Corporate Finance*, 10: 703-728.
- Klein, A. (2002), 'Audit Committee, Board of Director Characteristics, and Earnings Management', *Journal of Accounting and Economics*, 33 (August): 375-400.
- Levy, L. (1981), 'Reforming Board Reform', *Harvard Business Review*, 59: 166-172.
- Lin, Y. (2005), 'Corporate Governance, Leadership Structure and CEO Composition: Evidence from Taiwan', *Corporate Governance: An International Review*, 13: 824-835.
- Lipton, M. and Lorsch, J. (1992), 'A Modest Proposal for Improved Corporate Governance', *Business Lawyer*, 59 (November): 59-77.
- Mallin, C. (2002), 'Corporate Governance, Institutional Investors and Socially Responsible Investment', *Corporate Governance: An International Review*, 10: 1-3.
- Mallin, C. (2007), 'Corporate Governance - 2nd Edition', New York: Oxford University Press.

- McCarthy, D. and Puffer, S. (2008), 'Interpreting the Ethicality of Corporate Governance Decisions in Russia: Utilising Integrative Social Contracts Theory to Evaluate the Relevance of Agency Theory Norms', *Academy of Management Review*, 33(1): 22-31.
- Molz, R. (1988), 'Managerial Domination of Boards of Directors and Financial Performance', *Journal of Business Research*, 16: 235-249.
- Morck, R., Shleifer, A. and Vishny, R. (1988), 'Management Ownership and Market Valuation: An Empirical Analysis', *Journal of Financial Economics*, 20 (March): 293-315.
- Muth, M. and Donaldson, L. (1998), 'Stewardship Theory and Board Structure: A Contingency Approach', *Corporate Governance: An International Review*, 6: 5-28.
- Omran, M., Bolbol, A. and Fatheldin, A. (2008), 'Corporate Governance and Firm Performance in Arab Equity Markets: Does Ownership Concentration Matter?', *International Review of Law and Economics*, 28(1): 32-45.
- Parker, L. (2005), 'Corporate Governance Crisis Down Under: Post-Enron Accounting Education and Research Inertia', *European Accounting Review*, 14(2): 383-394.
- Phan, P. and Yoshikawa, T. (2000), 'Agency Theory and Japanese Corporate Governance', *Asia Pacific Journal of Management*, 17(1): 1-27.
- Pi, L. and Timme, S. (1993), 'Corporate Control and Bank Efficiency', *Journal of Banking and Finance*, 17: 515-530.
- Rechner, L. and Dalton, D. (1991), 'CEO Duality and Organizational Performance: A Longitudinal Analysis', *Strategic Management Journal*, 12: 155-160.
- Rhoades, D., Rechner, P. and Sundaramurthy, C. (2001), 'A Meta-analysis of Board Leadership Structure and Financial Performance: Are "two heads better than one" ?', *Corporate Governance: An International Review*, 9: 311-319.
- Rosenberg, M. (1968), *The Logic of Survey Analysis*, New York: Basic Books, Inc.
- Russell, C. and Babko, P. (1992), 'Moderated Regression Analysis and Likert Scales: Too Coarse for Comfort', *Journal of Applied Psychology*, 77(3): 336-342.
- Salancik, C. and Pfeffer, J. (1980), 'Effects of Ownership and Performance on Executive Tenure in US Corporations', *Academy of Management Journal*, 23: 635-664.
- Seal, W. (2006), 'Management Accounting and Corporate Governance: An Institutional Interpretation of the Agency Problem', *Management Accounting Research*, 17(4): 389-408.
- Sharma, S., Durand, R. and Gur-Arie, O. (1981), 'Identification and Analysis of Moderator Variables', *Journal of Marketing Research*, 18(3): 291-300.
- Smith, M. (2003), *Research Methods in Accounting*, London: SAGE Publications.
- Tipgos, M. and Keefe, T. (2004), 'A Comprehensive Structure of Corporate Governance in Post-Enron-Corporate America', *CPA Journal*, 74 (12): 46-51.
- Yermack, D. (1996), 'Higher Market Valuation of Companies with a Small Board of Directors', *Journal of Financial Economics*, 40 (February): 185 – 212.