

# The Effects of Corporate Governance Mechanisms on Earnings Management in Egyptian listed firms in the Stock Market

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## Abstract

In fact, the Egyptian environment is an interesting setting in which to assess the relation between corporate governance mechanisms and earnings management. It could be found that few types of research considered the association between corporate governance and earnings management, while there is no research to study this relationship in Egypt for the periods after revolutions. Thus, this research aim is achieved by conducting model to examine the impact of Board of Director, Audit Committee Existence and Ownership Structure on Earnings management. Accordingly, the research objectives are to explain the nature of the relationship between corporate governance mechanisms and earnings management in Egyptian listed firms, identify the characteristics of corporate governance that have the most effects on earnings management, analyze the motivations that may lead managers in Egyptian listed firms to engage in earnings management, and to assess the econometric power and appropriateness of various accruals-based models to detect earnings management in the context of Egyptian listed firms. To verify and validate the relationship between the research variable, the researcher used quantitative secondary data collected from the Egyptian most active listed firms (EGX 50) for a period of six years from 2012 to 2017 and analyses were performed using Eviews. Comparing the results with the previously reviewed literature, the researcher illustrates to which extent the research findings are supported and provides some recommendations by the end of the research.

## Keywords

*Board of Director, Audit Committee Existence, Ownership Structure, Earning Management, Corporate Governance.*

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## 1. Introduction

Accounts manipulation has been a matter of research, discussion and, even, controversy in several countries such as the United States, Canada, the United Kingdom, France, and Africa. Accounts manipulation has been studied from many points of views and with many different methodologies, which had generated different characterizations: earnings management, income smoothing, creative accounting, window-dressing, and big bath accounting [1]. Corporate governance mechanisms are useful for constraining the incidence of earnings management and enhance the quality of monitoring mechanisms. In this regard, it was stressed on the importance of corporate governance for national development due to its growing role in helping to increase the flow of financial capital to firms in developing countries [2].

By the end of the 1990s, a well-tailored economic reform program between Egypt, the World Bank, and the International Monetary Fund was established in 1991. The program aimed at developing the stock market and increasing privatization. The economic reform program had several major elements including lessening consumer subsidies and returning them to the poorest niche in Egypt, privatization of state-owned companies to decrease the public sector and increasing energy and transport prices to realistic levels [3],[4]. From an investment viewpoint, the program required eliminating controls over investment, canceling tariffs on imports and enhancing private investment in all sectors including financial services [3].

In 2005, the first Egyptian Code of Corporate Governance (ECCG) was introduced by the Ministry of Investment and the General Authority for Investment and Free Zones (GAFI) [5]. The guidelines are to be primarily implemented in joint-stock companies listed on the stock exchange, and companies that use the banking systems as a major source of finance. The code indicates that its rules should consider an addition to the corporate-related provisions stated under various laws and the executive regulations and decrees regarding their implementation. Also, the Code's recommendations are additional to legislation and are not mandatory; rather, they promote and regulate responsible and transparent behavior in managing corporations according to international best practices.

The purpose of this study is to examine the association between corporate governance mechanisms and earnings management in Egypt as an example of an emerging market. In fact, the Egyptian environment is an interesting setting in which to assess the relation between corporate governance mechanisms and earnings management. It could be found that few types of research considered the association between corporate governance and earnings management, while there is no research to study this relationship in Egypt for the periods after revolutions. Thus, this research comes to investigate such a relationship. In addition, this research comes to explore the relationship between corporate governance and earnings management, considering the control variables and their impact.

## 2. Literature Review

This section will discuss what recent researches presents related to the current study, including definitions of Board of Director, Audit Committee Existence, Ownership Structure, Earning Management, Corporate Governance.

### ***2.1 Corporate Governance Egyptian Code***

Corporate governance has been defined in various ways by regulators, practitioners, researchers however there is a clear consensus concerning two points. First, its importance in capital markets. Second, that it is a collection of mechanisms and tools that function together to facilitate the monitoring of agents and the preservation of invested capital [6].

In fact, Egypt, among other countries, has responded to the growing attention on corporate governance by reforming the “Egyptian Code of Corporate Governance: Guidelines and Standards” which was issued by the Egyptian Institute of Directors (EIOD), the agency authorized by the ministry of investment in Egypt. The code includes several rules to be considered in addition to the firms-related provisions stated under other laws. The rules included in this code focus on various aspects of corporate governance especially the board of directors, audit committee, internal audit department, external auditor and disclosure of social policies and avoiding conflict of interests. However, the main difference between corporate governance environment in Egypt and other developed countries is that corporate governance rules included in the Egypt Code of Corporate Governance are neither introduced on a mandatory basis (such as USA) nor on a comply-or-explain basis (such as UK). The Egypt Code of Corporate Governance is completely voluntary, there is no obligation for the Egyptian firms to follow it or even offer any explanation about the failure to apply [7].

The Code of Corporate Governance, which was issued in October 2005, is to be primarily implemented by companies listed on the EGX, especially those undergoing active trading operations and financial institutions in the form of joint stock companies. In addition, the Ministry of Investment, in 2006, issued the Code of Corporate Governance for State Owned Companies based on the report of the OECD working group on Privatization and CG of State-Owned Assets. A number of mechanisms which are incorporated in both Codes include: Board of Directors, external auditor and audit committee which play the most important role in accomplishing the Code goals. The Code added some new rules through these mechanisms that expand the corporate governance in Egypt. For instance, the Board of directors may constitute committees such as audit committee and remuneration committee to perform particular tasks and for specific periods. Establishing any committee should include; specifying the function of the committee, its term of operation, authorities granted to it during such terms and means of its monitoring via the board [8].

### ***2.2 Theories Related to Corporate Governance***

This section presents some theories that related to Corporate Governance which could be divided into; Agency Theory, Stakeholders Theory, Stewardship Theory, Institutional Theory, and Signaling Theory.

#### ***2.2.1 Agency theory***

Agency theory refers to the idea that a principle (the owner) hire an agent to perform some tasks that will be in use or be in favor of the principle, the principle

assumes that the agent will pursuing the selected goals with little interference, agent should be observed to act on their own as long as those actions were in the favor of the principle [9]. Agency theory are built on some assumptions 1- all actors are self-interested 2- all the two parties are rational 3- agents are more risk avoiders than principles [10]. In this relation between principle and agent when there is incongruence between the objectives of principle and agent and due to trouble in checking or confirming operator conduct the agency problem appears [11], for example of agency problem when the manager exercises for their claim benefits as opposed to the advantages of the investors or the shareholders. Managers tends to grow the firm beyond the optimal or the announced size to maintain unutilized recourses aiming to increase personal utility.

The agency theory is based on the relationship between the principal (owners) and the agent (managers). Separation of ownership from management in modern corporations provides the context for the function of the agency theory. Modern organizations have widely scattered ownership, in the form of shareholders, who are not involved in the management of their companies. In this context, an agent is appointed to manage the daily operations of the company. This distinction between ownership and control creates the potential for conflicts of interests between agents and principals, which result in costs associated with resolving these conflicts [12].

Taking agency theory into consideration, earnings management may be indicative of an agency problem. Therefore, enhancing corporate governance should result in a reduction in the practice of earnings management. Given these agency assumptions, independent variables will be identified with the aim of detecting associations between corporate governance attributes and earnings management. The agent problems are part of the fundamental driver of agency costs alongside the expenses of contractual monitoring and holding. Different expenses happen considering the Agency problems which are – Monitoring costs – Bonding costs – Residual costs

- **Mentoring Costs**

That cost concerns that the agents are responsible for preparing the financial statements, agent may inform the principle that the profits are much higher than the reality to gain bounce and incentives as reward for this effort.

- **Bonding Costs**

As we have discussed earlier that agents are motivated to increase their gains by hiding their actions and information that could be beneficial for them, so when the principles establish mechanism to hinder that kind of actions made by the agents, those mechanism could be include providing the manager with profit share of the firm based on accounting outcome of the company, to monitor that process highly requires producing financial statements, agents are required to prepare these financial statements which are costly, that cost could be defined as Bonding costs.

- **Residual loss**

Considering the monitoring costs and bonding costs incurred, there will be a loss for the principals because of the conflict between the gains of the agents and the gains of principals, the conflict occurs when the interests of principles differs from

the interest of agents and agents may take actions that may not be in favor of the principles that loss of the principles gains dressed as Residual loss [13].

### ***2.2.2 Stakeholder Theory***

The stakeholder theory is to address the issue of participation between vital accomplices, where a contention is probably going to cause the organization genuine damage and smooth collaboration is of crucial interests for both parties. A Common Distinction between Different stakeholder groups lies in 'influencers', who are powerful and imperative to the organization, and 'claimants', who are less powerful what's more, bound to be misled by a portion of the organization activities. A suggestion was made that to stretch the limits of the profit's expansion as a rule for business activity. It is a decent indicator of a healthy organization, yet it is an outcome as opposed to an objective. The basic idea of the stakeholder theory is that the achievement of an organization is exceptionally reliant on smooth participation with its stakeholders. From that pursues the guidance to give close consideration to the requirements and needs of these stakeholders. There is some conflict between the stakeholders so that the benefit of the organization is an objective that infers a contention with the interests of most stakeholders. There has been an implosion of direct private possession. The number of organizations constrained by a solid proprietor family is diminishing and we are getting an arrangement of free enterprise without industrialists yet with expanding institutional possession [14].

The stakeholder theory depicts the organization as a star grouping of helpful and aggressive interests having natural worth, it also sets up a structure for analyzing the associations, if any, between the act of partner the executives and the accomplishment of different corporate execution objectives,

### ***2.2.3 Stewardship Theory***

Stewardship theory explicitly recognizes the significance of accomplishing economic objectives as well as the improvement of practical connections, making this standardizing and instrumental way to deal with initiative particularly perfect with the objectives of most enterprising endeavors. Stewardship theory recommends that advantage does not totally drive basic leadership. Or maybe, stewardship theory suggests that inborn inspiration assumes a significant job. Lined up with the fundamental premises of necessities speculations, stewardship theory incorporates the possibility that people have an assortment of requirements which impact work fulfillment and spur practices. This methodology expects that managers, who have been chosen, advanced, and prepped to serve the organization, frequently see their interests to be as per investors and both are served by a high performing organization Consequently, stewardship theory offers a differentiating perspective on human inclinations. It passes judgment on that administrators can be star hierarchical, reliable, and collectivist, instead of essentially self-serving and entrepreneurial [15].

The most important aspects of the stewardship theory that - the supervisory broad gives credits and appreciation for the management for the efforts done to achieve the organizational goals. – There is mutual trust between principle and the managers. –Managers gets his utilities from achieving the organization goals –

there are no conflicts between managers and the shareholders. – Financial factors are not the main objectives for the employees. In this theory there is a further details rather than the Agency theory, which revolve around the idea that the interests of the principle and the agency are different but Stewardship theory argues that perspective that conflict of interest is always present but also indicates that managers will consistently take care of the organization's goals to be achieved for the sake of their position in market as a managers and to ensure their further promotions and development [16]. The Stewardship Theory point of view bringing together the CEO and chairman role is viable as this can lessen agency costs bringing about an incredible job of stewards in the association [13].

#### **2.2.4 Institutional Theory**

Institutional theory (IT) consolidates setting straightforwardly into study plans by concentrating on institutional features of the condition that oblige or empower organizations. The peculiarity of rising economies as far as their institutional context normally attracts academic regard for establishments as a point of perception and hypothesizing, IT is regularly referred as a theory, but it's not a whole integrated theory however a general classification of various theories contentions regarding why and how establishments matter, with changing fundamental rationale and suppositions about human behavior.

Institutional theory recognizes two columns whereupon institutionalization happens:

**Regulatory/Coercive:** Legislation frequently makes shifts of interests which effect practices and strengthen certain practices. Changes in laws frequently demonstrate to be a challenging long procedure, in many Arab countries suffer from the issues with execution, even within the sight of enactment, which fundamentally decreases consistence. Coercive weights likewise originate from MNCs where headquarters force branches to pursue a specific set of accepted rules.

**Normative:** HR strategies speak to part of the normative structure key to starting change. These incorporate approaches that contemplate non-relatives and their view of equity it was indicated that organizations with some family impact may have positive effect on firm execution on the off chance that they have a "facilitating family influence," a setting where HR practices guarantee fairness towards non-family individuals. They would likewise incorporate instruments that secure the enthusiasm of non-family administrators and workers. Such practices incorporate increasingly straightforward HR approaches in regard to promotion, progression arranging, and pay. Non-relatives may acknowledge nepotistic rehearses in progression arranging when they understand that the forerunner has put resources into building up the picked successor as far as administration abilities and information move, both important to the expected position. Other policies incorporate clear sets of responsibilities that ought to be regarded, a training not regularly found in family firms [17].

#### **2.2.5 Signaling Theory**

The signaling theory is on a very basic level worried about diminishing data asymmetry among business people and financial specialists using data signals. Centers around the believable correspondence of positive data to pass on positive authoritative properties in circumstances with asymmetric information. Entrepreneur can impart valid sign regarding the possibilities of the endeavor and their responsibility so as to pull in light of a legitimate concern for financial speculators and other potential investors [18]. The administrators have more data instead of outside speculators about the monetary position and present and future organization execution trying not to utilize obligation when the organization execution is poor because of a high probability for bankruptcy [19].

The signaler are insiders who have data that untouchables can't legitimately get to. Receivers are pariahs who lack vital information that they might want to accomplish. Signals are the data sent from the signaler to the receiver to impart data which generally is undetectable for the receiver, for this situation, data about venture quality. Signals might be solid or powerless, pretty much legitimate and dependable, and shift in their relationship with imperceptible quality. Feedback is the reaction to the received signal given by the receiver back to the signaler showing the adequacy of the signal. Consequently, criticism can fill in as the reason for signalers to change or refine their sign, and re-signal them to investors. The viability of signals relies upon their discernibleness and how expensive they are for the signaler. For example, investors have been found to not esteem frail sign and to consider expensive flag as increasingly tenable, Nonetheless, the degree to which signals are esteemed as proposed by the signaler additionally relies upon receiver's consideration, understanding, and recognition. Signaling can be utilized to make up for imperatives in connection to acquiring investors capital. Thus, signals sent by business visionaries to investors may contrast contingent upon the spatial, psychological or social closeness requirements experienced by the business visionary in connection to investors [18].

### ***2.3 Board of Directors and Earnings Management***

There has been continued debate on the role of board size from different perspectives [20]. From an agency perspective, larger boards are more likely to be careful of agency problems because a substantial number of experienced directors can be deployed to monitor and review management actions. The agency theory perspective also conceives that larger boards support effective monitoring by reducing CEO dominance within the board and, thus, they protect shareholders' interests [21]. Larger boards improve the bargaining position of the board with regard to the CEO and, thus, larger boards are more effective in monitoring the management.

For example, [22] find that larger boards are strongly associated with lower levels of discretionary accruals. To examine this effect, various studies measure board size by the total number of the firm's directors. Consequently, this study proposes the following hypothesis:

***H1.1: There is a significant negative relationship between board size and earnings management level in Egyptian listed Firms.***

From the agency perspective, a board that is more active in discharging its responsibilities enhances its effectiveness and the level of its oversight. [22] find that earnings management is significantly negatively related to the number of board meetings. However, [23] do not find any significant differences in board meeting frequency between firms involved in fraud and other firms. Overall, board meetings are considered as a resource that leads to board judgment. Various prior studies examine the impact of board meetings by considering the frequency or number of meetings. This discussion leads to the following hypothesis:

***H1.2: There is a significant negative relationship between the number of board meetings and earnings management level in Egyptian listed Firms.***

Due to the varying size of boards, a percentage variable provides a more accurate and comparable measurement. Additionally, while this variable can be measured in a dichotomous manner, for example, depicting whether or not the majority of the board is considered independent, or whether or not the board is fully independent (both have been used in prior studies), it is believed that the scale type variable used in this study gives greater precision in tests. Consequently, the following hypothesis is proposed.

***H1.3: There is a significant negative relationship between board independence and earnings management level in Egyptian listed Firms.***

“The chairman is pivotal in creating the conditions for overall board and individual director effectiveness, both inside and outside the boardroom” [24]. The chairman of the board has the power to control the agenda and board meetings and is likely to influence the market's perception of the extent of managerial monitoring and of the financial reporting process. From the agency theory perspective, the chairman should be independent of the company's affairs and this is a useful check on a CEO's over-ambitious plans. Moreover, [25] argues that the board chair's independence enables the board to discharge its oversight responsibilities, especially with respect to the CEO. Within firms' corporate governance reports, chairman's details will be judged by the NED independence criteria to determine his or her independence, thus, a dummy variable is introduced that takes the value of one if the chairman is independent and zero otherwise, which leads to the following hypothesis:

***H1.4: There is a significant negative relationship between CEO Duality and earnings management level in Egyptian listed Firms.***

Starting from that assumption and predicts a non-linear association between board size and earnings management. The predicted non-linear relationship was supported. The predicted negative relationship between board size and earnings management is observed within the lower region of board size. A positive relationship is found within the higher board size region. It was also found that the proportion of non-executive directors on the board is negatively associated with earnings management. This is consistent with what was found which indicate consistently that boards comprised of more non-executive members will constrain earnings management activity. In addition, it was indicated that, on average, both board size and board composition have an impact on the levels of earnings



management in Portuguese listed firms. Accordingly, it was suggested that a smaller board and a board composed of mostly non-executive directors are positive steps towards improving earnings quality [26].

Moreover, lower earnings management for firms whose audit committee members possess high financial and governance expertise was documented. It was also examined whether audit committee structures reduce the likelihood of accounting restatement. It was found that firms with high audit committee independence and activity (i.e. whether the committee meets at least four times per year) are less likely to experience accounting restatement. In addition, it was found that firms with high board independence more timely recognize bad news in earnings. Thus, board governance can improve earnings quality [27]. Accordingly, this leads to the first testable hypothesis:

***H1: There is a significant relationship between Board of Directors and earnings management level in Egyptian listed Firms.***

#### ***2.4 Audit Committee Existence and Earnings Management***

It was revealed that the Big 4 auditors and the size of the audit committee are the first governance mechanisms related with earnings management quality. The independent audit committee is a central characteristic for the effectiveness of the financial reporting process. On the other hand, it was shown that an independent audit committee can possibly employ industry specialist auditors. Nevertheless, they discovered no significant association between the audit committee expertise and the employment of industry specialist auditors. Furthermore, it was shown that the independent audit committee that meets at least twice a year is more likely to employ industry specialist auditors [28].

Besides, the effects of audit committee characteristics, namely, audit committee members' attendance at the meetings and changes in audit committee members through the demission or appointment of new members during the year on earnings management in the Sultanate of Oman was examined. A new evidence was provided concerning the relationship between earnings management and audit committee members' attendance at the meetings, as well as changes in members of the audit committee. It is revealed that the DAC and discretionary revenue as a proxy for earnings management are significantly negatively related to audit committee members' attendance at meetings. Furthermore, the changes of members through the demission or appointment of members of the audit committee during the year are significantly positively related with earnings management.

Accordingly, this leads to the first testable hypothesis:

***H2: There is a significant relationship between audit committee existence and earnings management level in Egyptian listed Firms.***

#### ***2.5 Ownership Structure and Earnings Management***

Institutional investors are considered to be an essential monitoring device and able to control managers in more depth than small shareholders can. Large institutional investors with substantial stakes have the power, resources and ability to monitor, as well as stronger incentives to discipline and influence managers behavior [29].

[30] emphasizes the institutional investors "role in corporate governance stating that, "Institutional shareholders should enter into a dialogue with companies based on the mutual understanding of objectives".

Moreover, institutional investors are found to influence executive compensation and to influence board structures. [31] provide some recent empirical studies that examine the association between institutional ownership and aggressive earnings management. They document a negative relationship, which suggests that institutional investors, especially long-term ones, are an effective governance mechanism. However, [31], using UK data from 1993 to 1996, examine institutional investors, measuring institutional ownership as the number of shares owned by institutional investors over total number of shares outstanding, and find no relation between EM and institutional investors. This study hypothesizes the following:

***H3.1: There is a significant negative relationship between high proportions of institutional ownership and earnings management level in Egyptian listed Firms.***

Besides, it was claimed that block-holders have a strong incentive to monitor efficiently and influence firm management in order to protect their interests. Therefore, ownership concentration may be considered as an effective governance mechanism that mitigates agency costs by increasing monitoring. Large shareholders are expected to monitor managerial behavior effectively, which reduces the scope of managerial opportunism to engage in fraudulent financial reporting. However, concentrated ownership involving controlling shareholders in decision making may create another type of agency conflict between controlling owners and minority shareholders. Thus, controlling shareholders may intervene in the firm's management, and encourage managers to manipulate earnings to maximize their private benefits. It was found that ownership concentration reduces earnings management, however, other concluded that ownership concentration increases earnings management [34].

***H3.2: There is a significant positive relationship between high proportions concentration ownership and earnings management level in Egyptian listed Firms.***

The empirical literature documents a positive relationship between a firm's value and high managerial ownership. Other empirical studies support the argument that capital market pressure leads firms with low managerial ownership to make income-increasing accounting choices. [35] examine the association between ownership structure and corporate crime and find that firms with larger managerial ownership commit less corporate crime. Given the impact that managerial ownership is likely to have on earnings management, this study hypothesizes the following:

***H3.3: There is a significant negative relationship between a high proportion of managerial ownership and earnings management level in Egyptian listed Firms.***

As a result of an agency problem which caused growing existence of ownership structure (insider managerial ownership, outsider managerial ownership,

institutional ownership, external block-holder, family ownership and foreign ownership) as directors. Besides, given the significance of ownership structure in allocating capital to firms and their governance role in the company, a comprehensive study, of exactly how their existence on the board of directors' influences earnings management, is undoubtedly needed. An evidence of the influence of ownership structure on FRQ was provided, measured by earnings management. The effectiveness of ownership structure in Jordan – a country characterized by highly concentrated ownership was examined. Thus, it was proposed that the type of ownership structure is a crucial issue in characterizing the role effects on FRQ. Accordingly, different aspects of ownership were focused upon and their influence on earnings management was analyzed. It was suggested that the five aspects of ownership structures are effective as monitors of management, leading to lower earnings management and higher FRQ [36]. Accordingly, this leads to the first testable hypothesis:

***H3: There is a significant relationship between ownership structure and earnings management level in Egyptian listed Firms.***

### **3. Research Framework**

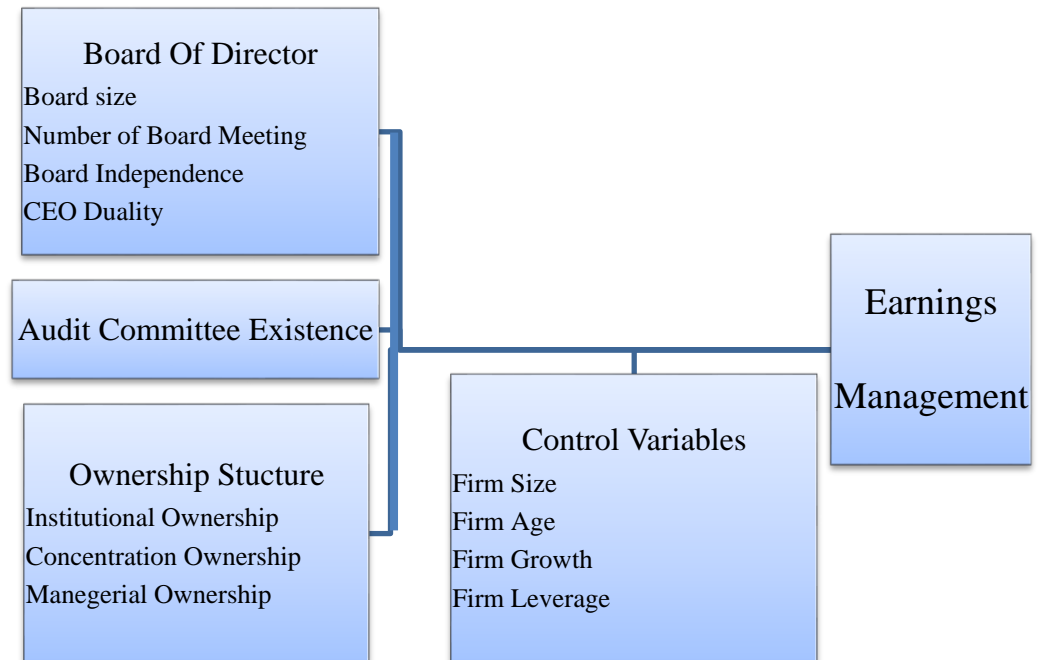
A panel of secondary annual data of Egyptian most active listed firms (EGX 50) will be for a period of Six years from 2012 to 2017. It is considered as a secondary data type, which is used for several purposes and not for this research only. Data will be collected in the form of panel data. The data were set up in a panel form to utilize the advantages of estimation with increased numbers of observations or degrees of freedom, thereby improving the efficiency of estimators. Thus, the literature had been reviewed and the following hypotheses were assumed:

***H1: There is a significant negative relationship between the Board of Directors and earnings management level in Egyptian listed Firms.***

***H2: There is a significant negative relationship between audit committee existence and earnings management level in Egyptian listed Firms.***

***H3: There is a significant relationship between ownership structure and earnings management level in Egyptian listed Firms.***

Hence, the research investigates the relationship between earnings management and corporate governance in Egypt throughout the period of the revolutions besides the period after revolutions to be able to compare and figure out the best scenarios for organizations in Egypt. Accordingly, the research framework could be presented using the following figure:



**Figure 1: Research Framework for the Current Study**

Thus, the research hypotheses could be stated as follows:

**H1: There is a significant negative relationship between Board of Directors and earnings management level in Egyptian listed Firms.**

*H1.1: There is a significant negative relationship between board size and earnings management level in Egyptian listed Firms.*

*H1.2: There is a significant negative relationship between the number of board meetings and earnings management level in Egyptian listed Firms.*

*H1.3: There is a significant negative relationship between board independence and earnings management level in Egyptian listed Firms.*

*H1.4: There is a significant negative relationship between CEO Duality and earnings management level in Egyptian listed Firms.*

**H2: There is a significant negative relationship between audit committee existence and earnings management level in Egyptian listed Firms.**

**H3: There is a significant relationship between ownership structure and earnings management level in Egyptian listed Firms.**

*H3.1: There is a significant negative relationship between high proportions of institutional ownership and earnings management level in Egyptian listed Firms.*

*H3.2: There is a significant positive relationship between high proportions concentration ownership and earnings management level in Egyptian listed Firms.*

*H3.3: There is a significant negative relationship between a high proportion of managerial ownership and earnings management level in Egyptian listed Firms.*

## 4. Results and Findings

To test the hypotheses mentioned above, the current research used regression analysis. This requires testing the validity and reliability of the research variables as well as presenting a descriptive analysis of the research variables under study. After that, the hypotheses testing will be presented through the model constructed. As a preliminary step, the frequency tables are computed for the research variables.

### 4.1 Descriptive Analysis

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. They include mean and standard deviation, as well as the frequency of the variables under study. Therefore, the frequency of an event is considered one of the tools of descriptive statistics, as frequency tables provide a very complete picture of the distribution of data for the variable. Table 1 shows the frequency, Mean and Standard Deviation for Research variables. There are variables that excluded from the analysis as there is no available data in the Egyptian Exchange market those variables are; Family Ownership, State Ownership, Firm Growth, and External Audit Quality. Table 1 shows the descriptive analysis for the research variables such as: Range, Minimum and Maximum, Mean, Standard Deviation, and Variance. It could be observed that the mean rank for Earnings Management is 0.0313, for the CEO Duality is 0.6826, for Board Size is 7.9657, for Board Meetings is 5.05326, for Independence board members is 0.5846, for Audit Committee Meetings is 5.6982, for Managerial Ownership is 0.1630, for Institutional Ownership is 0.5846, for Ownership Concentration is 0.8487, for Firm Size is 8.8609, for Firm Age is 1.3154, for Firm Leverage is 0.5299, finally, for Firm Industry is 4.0600.

**Table 4- 1: Summary for Descriptive statistics of variables**

	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
<b>Earnings Management</b>	1.33	-.75	.57	.0313	.13286	.018
<b>CEO Duality</b>	1.00	.00	1.00	.6826	.46685	.218
<b>Board Size</b>	12.00	3.00	15.00	7.9657	2.53458	6.424
<b>Board Meetings</b>	22.00	3.00	25.00	10.0460	5.05326	25.535
<b>Board Independence</b>	.93	.00	.93	.5846	.27298	.075
<b>Audit Committee Existence</b>	19.00	.00	19.00	5.6982	3.39433	11.521
<b>Managerial Ownership</b>	.92	.00	.92	.1630	.26093	.068
<b>Institutional Ownership</b>	.93	.00	.93	.5846	.27298	.075
<b>Ownership Concentration</b>	.99	.00	.99	.8487	.12738	.016
<b>Log Firm Size</b>	7.20	3.41	10.61	8.8609	1.17440	1.379
<b>Log Firm Age</b>	1.89	.00	1.89	1.3154	.34937	.122
<b>Firm Leverage</b>	27.36	.00	27.36	.5299	1.74077	3.030
<b>Firm Industry</b>	6.00	1.00	7.00	4.0600	1.94654	3.789

### 4.2 Hypotheses Testing

In this section, the researcher will present the findings of the model significance through presenting the correlation and regression analysis results. This will provide a decision whether to accept or reject the hypotheses under study.

### 4.2.1 The Relation between Board of Directors Dimensions and Earnings Management

Table 4-2.1 shows the regression model for the effect of Board of Directors Dimensions; Board Size, Board Meetings, Board Independence, and CEO Duality with the Control Variables; Firm Size, Firm Age, Firm Leverage, and Firm Industry on Earnings Management. It was found that there is a significant negative effect of the Board Independence on Earning Management, as the corresponding P-value is less than 0.05, and the coefficient is -0.1201. However, it was found that there is an insignificant effect of the Board Size, Board Meetings, CEO Duality, Firm Size, Firm Age, Firm Leverage, and Firm Industry on Earnings Management, as the corresponding P-values are more than 0.05, and the coefficients are 0.004, -0.000, -0.025, -0.004, 0.061, 0.000 and 0.007 respectively.

**Table 4- 2: Regression Model of Board of Directors and Control Variables on Earnings Management**

Dependent Variable: Earnings Management				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.002984	0.104897	0.028444	0.9773
Board Size	0.004227	0.005108	0.827495	0.4093
Board Meetings	-0.000181	0.002161	-0.083647	0.9334
Board Independence	-0.120070	0.043835	-2.739129	0.0069
CEO Duality	-0.025123	0.023593	-1.064853	0.2886
Firm Size	-0.003588	0.009910	-0.362073	0.7178
Firm Age	0.061418	0.036002	1.705980	0.0901
Firm Leverage	0.000131	0.004779	0.027502	0.9781
Firm Industry	0.006887	0.005549	1.241133	0.2165
R-squared	0.065617	Mean dependent var		0.025866
F-statistic	1.325506	Durbin-Watson stat		1.500353
Prob(F-statistic)	0.234874			

### 4.2.2 Testing the second Hypothesis: The Relation between Audit Committee Existence and Earnings Management

Table 4-2.2 shows the regression model for the effect of Audit Committee Existence with the Control Variables; Firm Size, Firm Age, Firm Leverage, and Firm Industry on Earnings Management. It was found that there is an insignificant effect of the Audit Committee Existence, Firm Size, Firm Age, Firm Leverage, and Firm Industry on Earnings Management, as the corresponding P-values are more than 0.05, and the coefficients are -0.004, 0.002, 0.056, 0.000 and 0.007 respectively.

**Table 4- 3: Regression Model of Audit Committee Existence and Control Variables on Earnings Management**

Dependent Variable: Earnings Management				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.071846	0.099854	-0.719506	0.4729
Audit Committee Existence	-0.003550	0.003245	-1.093880	0.2756
Firm Size	0.001963	0.008976	0.218671	0.8272
Firm Age	0.055533	0.035370	1.570061	0.1183
Firm Leverage	0.000269	0.004749	0.056541	0.9550
Firm Industry	0.006681	0.005488	1.217366	0.2252
R-squared	0.024465	Mean dependent var		0.027836
F-statistic	0.817560	Durbin-Watson stat		1.346432
Prob(F-statistic)	0.538765			

### 4.2.3 Testing the third Hypothesis: The Relation between Ownership Structure and Earnings Management

Table 4-2.3 shows the regression model for the effect of Board of Ownership Structure Dimensions; Institutional Ownership, Ownership Concentration, and Managerial Ownership with the Control Variables; Firm Size, Firm Age, Firm Leverage, and Firm Industry on Earnings Management. It was found that there is a significant positive effect of the Firm Age on Earning Management, as the corresponding P-value is less than 0.05, and the coefficient is 0.088. Meanwhile, it was found that there is a significant negative effect of the Institutional Ownership on Earning Management, as the corresponding P-value is less than 0.05, and the coefficient is -0.095. However, it was found that there is an insignificant effect of the Ownership Concentration, Managerial Ownership, Firm Size, Firm Leverage, and Firm Industry on Earnings Management, as the corresponding P-values are more than 0.05, and the coefficients are -0.081, 0.043, -0.001, -0.001 and -0.002 respectively.

**Table 4- 4: Regression Model of Ownership Structure and Control Variables on Earnings Management**

Dependent Variable: EARNINGS_MANAGEMENT				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.040443	0.125925	0.321168	0.7485
Institutional Ownership	-0.094769	0.045639	-2.076498	0.0396
Ownership Concentration	-0.080799	0.100605	-0.803130	0.4232
Managerial Ownership	0.043087	0.043214	0.997047	0.3204
Firm Size	-0.001260	0.009023	-0.139687	0.8891
Firm Age	0.087759	0.036654	2.394287	0.0179
Firm Leverage	-0.000449	0.004659	-0.096348	0.9234
Firm Industry	-0.001608	0.007248	-0.221817	0.8248
R-squared	0.084259	Mean dependent var		0.024530
F-statistic	1.905954	Durbin-Watson stat		1.628006
Prob(F-statistic)	0.072587			

## 5. Summary, Conclusion and Recommendations

The current research identifies the research objectives as: explaining the nature of the relationship between corporate governance mechanisms and earnings management in Egyptian listed firms, identifying the characteristics of corporate governance that have the most effects on earnings management, analyzing the motivations that may lead managers in Egyptian listed firms to engage in earnings management, assess the econometric power and appropriateness of various accruals-based models to detect earnings management in the context of Egyptian most active 50 listed firms.

According to the first objective, which is “explaining the nature of the relationship between corporate governance mechanisms and earnings management in Egyptian listed firms”. This objective is represented in the first, second, and third hypotheses of the study. The relationships between variables included in this research were conducted regarding to main hypotheses; The *first objective*, there is a significant negative relationship between the Board of Directors and earnings management level in Egyptian listed Firms, There is a significant negative relationship between audit committee existence and earnings management level in Egyptian listed Firms, There is a significant negative relationship between ownership structure and earnings management level in Egyptian listed Firms.

According to the *second objective*, which is “identifying the characteristics of corporate governance that have the most effects on earnings management”. The variables that present a significant effect on Earning Management are Board Independence that showed a significant negative effect as the corresponding P-value is less than 0.05, and the coefficient is -0.089038. which means that when the Board Independence is reduced the Earnings Management improves. Moreover, Institutional Ownership showed a significant negative effect as the corresponding P-value is less than 0.05, the coefficient is -0.089. which means that when the Institutional Ownership is reduced the Earning Management improves. According to the *third objective*, which is “analyzing the motivations that may lead managers in Egyptian listed firms to engage in earnings management”, based on the analysis it could be observed that the less Board Independence is, the more improvement for the Earning Management, that lead to the improvement of the managers motivations.

Table 5-1 represents the previously reviewed literature and to which extent the research findings are supported.

**Table 5-1: Summary of Hypotheses Results**

Serial	Description	Results	Results
<i>H<sub>1</sub></i>	<i>There is a significant negative relationship between Board of Directors and earnings management level in Egyptian listed Firms</i>		Partially Supported
H <sub>1.1</sub>	There is a significant negative relationship between board size and earnings management level in Egyptian listed Firms	Not Supported	
H <sub>1.2</sub>	There is a significant negative relationship between the number of board meetings and earnings management level in Egyptian listed Firms	Not Supported	
H <sub>1.3</sub>	There is a significant negative relationship between board independence and earnings management level in Egyptian listed Firms	Fully Supported	
H <sub>1.4</sub>	There is a significant negative relationship between CEO Duality and earnings management level in Egyptian listed Firms	Not Supported	
<i>H<sub>2</sub></i>	<i>There is a significant negative relationship between audit committee existence and earnings management level in Egyptian listed Firms</i>		Not Supported
<i>H<sub>3</sub></i>	<i>There is a significant relationship between ownership structure and earnings management level in Egyptian listed Firms</i>		Partially Supported
H <sub>3.1</sub>	There is a significant negative relationship between high proportions of institutional ownership and earnings management level in Egyptian listed Firms	Fully Supported	
H <sub>3.2</sub>	There is a significant positive relationship between high proportions concentration ownership and earnings management level in Egyptian listed Firms	Not Supported	
H <sub>3.3</sub>	There is a significant negative relationship between a high proportion of managerial ownership and earnings management level in Egyptian listed Firms	Not Supported	

## 6. Contribution

There is an ongoing debate about the association between corporate governance mechanisms and earnings management. When the previous relationship has examined extensively in the developed markets (the USA and Europe), much less is known about this association in emerging markets. In China, it was demonstrated empirically that highly corporate governance levels listed companies have lower levels of earnings management. Moreover, it was found in India that the quality of earnings increased after the implementation of the



corporate governance code indicate that boards that have directors with multiple appointments exhibit higher earnings management.

On the other hand, earnings management is positively related to the size of the board of directors in Malaysia, while there is no significant relationship between other corporate governance mechanisms (independence of board and audit committee) and earnings management. Besides, for Pakistani listed firms, it was claimed that a positive relationship between corporate governance and earnings management. Furthermore, in Saudi Arabia, it was found that no evidence that corporate governance factors mitigate against earnings management. Also, it was proposed that mandatory corporate governance mechanisms had no impact on earnings manipulation in Greece. This research helped with providing insight into this ongoing debate by examining the relationship in Egypt as an example of an emerging market.

## **7. Implication**

Financial reporting manipulation (Earnings Management) is an important issue for researchers, industry practitioners, legislative boards, auditors, investors, and individual firms. Consequently, corporate governance mechanisms are some of the most important channels to prohibit the publication of financial statements which could be misleading or bias stakeholders. Therefore, policy makers and corporates managers can rely on the findings of this research to draw their strategies and plans. Other stakeholders, -such as investors, families, and private sector, - can also depend on this research to make their decisions.

## **8. Recommendation**

**Recommendations for Current Research:** The current research is a valuable contribution for the developing countries in measuring the relationship between corporate governance mechanisms and earnings quality. Although the situations of instability into both political and economic environments, the research has many significant and important factors for this area of investigation and examination. It is highly recommended for the current research to stop at the main reasons behind the success of these significant factors despite the current Egyptian situation of instability, especially during the period that was chosen for conducting this research. Therefore, this can help with improving the research and make it more useful for the stakeholders.

**Recommendations for Future Research:** This research is also very important not only for the practical side and decision making, but also very useful for the purpose of academic research. The findings of this study could be the start for other researches into conquering this vital area. It is highly recommended for future researches to investigate the relationship between earnings management and corporate governance in Egypt throughout a longer period to be able to compare and figure out the best scenarios for organizations in Egypt and also to be able to forecast the situation for upcoming periods.

The comparison between periods either before or after the 25th of January 2011 revolution could be also conducted. Although there are many current studies on the developing countries into this field, there are many financial crises that were playing a vital role into redrawing the situation of many of these countries. This could be an interesting area especially when these findings are taken into consideration. In addition, the research could be run on a wider region scale, such as other developed countries that may have different scenarios with the relationship between corporate governance mechanisms and the earnings management. Moreover, examination and investigation for this relationship could be a very precious work as it could help the MENA region open many ways of cooperation into the practical life in the future.

## 9. Limitations

This research faced many obstacles, some of them could be solved and some others could not. In Egypt, as an emerging stock market, there is a lack of alternative information sources other than published accounting reports such as earnings forecasts and industry financial analysis. Therefore, the financial statements are considered the main/only source of information available for stakeholders, and most Egyptian capital market transactions are made based on accounting data, especially earnings. Thus, there are variables that excluded from the analysis as there is no available data in the Egyptian Exchange market those variables are; Family Ownership, State Ownership, Firm Growth, and External Audit Quality.

In addition, there is a period of economic instability in Egypt as a result of the 25th of January revolution. Therefore, the research is conducted depending on data starting from 2012. Finally, as per checking the normality, both of the formal and informal normality tests showed that data is not all normally distributed. Thus, GLS method for estimation was implied instead of OLS. This helped with investigating the research hypotheses into a more accurate way.

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