The Impact of Corporate Governance Mechanisms on Restatement of Financial Statements: An Empirical Study of the Listed Companies in Egypt

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Abstract

The purpose of this paper is to explore the effects of corporate governance mechanisms with particular reference to (board of director, audit committee and ownership structure) on restatements of financial statements in the Egyptian environment. In particular, these mechanisms are board independence, duality role, audit committee independence, audit committee size, audit committee meetings, managerial ownership, institutional ownership, profitability, leverage and firm size. The sample consists of 678 firm-year observations of listed non-financial Egyptian firms, including 125 observations of firms restated their financial statements over the period 2014-2019, the empirical results of logistic regression model provide evidence that there is a negative association between board independence, audit committee independence, managerial ownership and financial restatements. The results also emphasize that CEO duality, size of audit committee, financial leverage and firm profitability are positively related to financial restatements. However, audit committee meetings, institutional ownership and size of firm are not associated with the incidence of financial restatements.

Keywords: Financial Restatements, Corporate Governance, Structure of Board of Director, Audit Committee, Ownership Structure

1- Introduction

Generally, the issue of financial restatements is an important matter and has received a considerable attention as the number of restatements of financial statements remain to be discovered and made known to the public. Moreover, according to Wang and Huang, (2014)claim that the number of financial restatement incidence is increasing over the years. The Financial Accounting Standards Board (FASB) defines restatement as a revision of a previously issued financial statement to correct an error (SFAS No.154, 2005:3). The determination of whether a prior period error will result in restatement hinges on materiality. While the FASB clearly defines restatement, it provides little guidance on assessing materiality. When the results of financial statements of the firm contain errors, there is the need to restate the financial statements. According to the United States (U.S.) General Accountability Office (GAO), "*A financial restatement occurs when a company, either voluntarily or prompted by auditors or regulators, revises public financial information that was previously reported*." (GAO 2002).

According to the Egyptian Accounting Standard (No. 5) that was issued in 2006 and amended in 2015 -whichis considered as a translation for IAS (8)-defines restatement in retrospective method: "*Correcting the recognition, measurement and disclosure of the values for the elements of the financial statements as if the errors of prior period had not been impaired*".

This paper examines the association between mechanisms of corporate governance and financial restatements in Egypt. Egypt is considered the first Arab country to study and apply corporate governance (CG). For public companies, corporate governance is seen as one of the mechanisms that can effectively protect the interests of a firm's shareholders. According to, agency theory states that managers do not always act in the best interest of shareholders as they have incentives to maximize their benefits (Fama and Jensen, 1983; Shleifer and Vishny, 1997), known as a moral hazard problem. As a result, corporate governance is seen as a tool for ensuring an effective check and balance system for the firm, so that it can ensuring the management acts in the best interests of shareholders. According to previous studies, they defined the process of financial restatements as corrections of accounting misstatements made already be negligent or, in the extreme, opportunistic managers. They also presumed that substandard corporate governance is at least partially responsible for financial reporting errors that eventually result in the occurrence of financial restatements (the U.S. Government Accountability Office "GAO" 2002; Abbott et al., 2004; Agrawal and chadha, 2005; Srinivasan, 2005). The incidence of financial restatements may be due to company characteristics, ownership structure and corporate governance (Zhang, 2012). It means corporate governance can effectively reduce agency problems and information asymmetry, thereby reducing the earnings manipulation, which leads to lower risk for financial restatements.

The board of directors is a part of the internal monitoring system of a firm, and previous studies have found that board characteristics play a significant influence in forbidding different business scandals and accounting concerns, such as financial restatement (Alves, 2011; Wang et al., 2010). From prior studies, it is implied that the independence of directors is negatively related to financial statement frauds of the firm(Beasley, 1996; Dechow et al., 1996). Similarly, Uzun et al., (2004) argued that the higher the number of outside directors, the more likely they are to reduce the fraudulent behavior of the executive directors. In addition, they found that firms with a high percentage of outside directors (independent directors) have less financial restatement. There are previous studies supported the separation of the Chief Executive Officer (CEO) and the Chair as duality since this duality can reduce board's oversight on the management of the firm that leads to an increase in the agency costs (Fama and Jensen, 1983; Rechner and Dalton, 1991). So, this separation between CEO and Chair responsibilities would result in better decisions related to the firm and hence, better performance of the firm resulting in lower occurrence of financial restatements. There are prior researches that indicate the presence of duality role on board may weaken corporate function (Efendi et al., 2007) and other studies that concern financial restatement found that the association between CEO duality and financial restatement is significantly positive because the quality of financial statements that prepared is at a low levels and therefore it can lead to create an agency problem (Rakoto 2012; Jiang et al., 2015).

The effectiveness of audit committee has been a matter of increasing interest due to the increased concerns about the quality of corporate financial reporting process caused by recent accounting scandals. The audit committee is one of the most effective committees that by influencing the corporate governance, is in association with the board of directors and help the board in shouldering its supervisory responsibilities on management, reduce the information asymmetry among managers and shareholders, lower the agency costs, and present a transparent financial report, thus there is no possibility for occurrence of financial restatements. Several audit committee characteristics may have an impact on the incidence of financial restatement. The independence of the audit committee is considered a major issue in corporate governance regulations. For instance, the Egyptian Corporate Governance Code (ECGC, 2016) recommended that audit committee is formed by non-executive and independent board members or from outside the firm. Abdullah et al., (2010) found that independent audit committee reduces financial restatement because any attempt or action taken by management to manipulate earnings or misappropriate assets should be detected and prevented by the audit committee and thus, it can facilitate financial reporting. Al-Najjar, (2011) argued that an increase in the audit committee size is more effective to monitor top management and increase the quality of financial reports, thus it will lead to reduce the probability of financial restatement. The Egyptian Code of Corporate Governance, (2016) and the Blue-Ribbon Committee on audit committees in the USA setting, (1999) recommended that the audit committee should meet periodically at least on quarterly basis (at least once every three months) and the meeting should have a specific agenda. There are two different views regarding audit committee meetings and the incidence of financial restatements. The first view is that audit committee meetings can be effective in monitoring the management of a company, discussion of strategies and its implementation, and thereby reducing the incidence of financial restatements. As a result, the frequency of meetings of audit committee as one of corporate governance mechanism is consistent with the “agency theory” and hence, it may reduce the probability of the occurrence of financial restatements. The second view states that higher frequency of audit committee meetings might indicate presence of problems and will not be effective as an important mechanism in this case, which may increase the possibility of occurring financial restatements.

The ownership structure is defined by the distribution of equity with regard to votes and capital but also by the identity of the equity owners and is considered as an internal as well as external monitoring mechanism that contributes to mitigating agency problems and constraining the likelihood of earnings management (Alves, 2012) that can lead to the incidence of financial restatement. The ownership structure is an important determinant of agency problems in companies; in addition, it also affects financial reporting quality. Ownership structure is considered one of major important mechanisms of corporate governance because it can affect the incentives of managers with regard to earnings management and thereby the efficiency of the firm, and hence it may lead to the occurrence of financial restatement (Wang and Wu, 2011; Wu et al., 2016). The managerial ownership is one of particular importance to the effectiveness of the monitoring mechanisms used in a firm to limit the ability to make earnings management and thereby it will help in reducing the possibility of financial restatements. The agency theory suggests that the managerial ownership may lead to a better quality of accounting information (Gegenfurtner et al., 2009), thus firms which have high levels of managerial ownership imitate to reflect the prepared financial statements in a true matter, which limit the occurrence of restatements in financial statements of the firm. According to institutional ownership, Shleifer and Vishny (1986) implied that large-institution shareholders play a significant role in corporate governance. Xiao et al., (2004) investigated that institutional shares are the percentage of ownership owned by separate legal entities including investment institutions, enterprises, and the foreign partners of joint corporations. Institutional ownership can enhance the efficiency of a firm because this type of ownership may have more incentives to monitor management as their wealth is tied directly to the companies and they have the necessary resources to monitor their investments.

2- Research Problem

Financial restatements can raise several questions about the effectiveness of board of director, audit committee, the independence of the auditor and directors on the board, and the role of ownership structure. To the best of our knowledge, there is little evidence from developing countries such as Egypt about the impact of corporate governance on financial restatements and/or the Middle Eastern countries. So, this research tries to investigate the impact of corporate governance mechanisms (board of directors, audit committee, and ownership structure) on the likelihood of financial restatements in the Egyptian context to fill the research gap and enrich financial restatements literature in the Egyptian environment. The research problem can be summarized in the following main research question: ***What is the impact of characteristics of corporate governance on financial restatement in the Egyptian environment?***

3- Research Objective:

The main objective of this research is to investigate the impact of corporate governance on financial restatements in the Egyptian environment, and whether corporate governance characteristics are associated with the occurrence of financial restatement.

4- Contribution of the Research:

This study contributes to the literature and fills the existence gap by providing evidence of the effects of board of director, characteristics of audit committee and ownership structures on financial restatements in Egypt. Board structure is considered as one of the internal governance mechanisms and the board effectiveness may be affected by the board characteristics. Therefore, the study may help companies make appropriate decisions concerning the board independence, the duality role and the independence of audit committee in detecting and preventing misstatements regarding the financial statements of a firm. Moreover, the size of audit committee and its impact on the incidence of financial restatements and the meetings held by the audit committee of a firm. The study also explores the impact of the ownership structure on the restatements. The results of this study are likely to provide significant implications for researchers, investors, policy makers, and corporate directors.

The rest of the paper is organized as follows. The next section discusses the related literature to develop the hypotheses. Followed by clarifying the research method, then, providing the empirical results. The conclusions and limitations are in the last section.

5- Literature Review and Hypotheses Development

This section reviews relevant literature that investigates the association between corporate governance mechanisms and financial restatements for developing the hypotheses.

5.1. Board Independence

According to the Egyptian Code of Corporate Governance, (2016, p.12) an independent board member is a non-executive board member who is not a shareholder in the company, and he is appointed as a member of experience whose relationship with the company is limited to being a member of its board. The lack of independent directors on the board is one of the elements that causes poor corporate governance (Hasnan et al., 2013). The main objective of appointing independent directors is to provide firms with their expertise and knowledge. Independent directors' abilities are believed to increase the company's transparency. Afify, (2017) study in the Egyptian environment, showed that there is a negative relationship between board independence and the incidence of financial restatement. Also, Cornettet al., (2008) indicated that there is a negative relationship between board of director independence and financial restatement. In addition, there are some prior studies reveal that the proportion of independent directors on the board could reduce the incidence of restatement (Rakoto, 2012; Zhizhong et al., 2011). However, the study of Hasnan and Hussain, (2015)in Malaysia indicated that there is no relationship between board independence and the occurrence of financial restatement. They claimed that board independence is not associated with their effectiveness, indicating that members' independence does not mean they are experts and strict in monitoring the management. And this result is consistent with the findings of some other studies (Agrawal and Chadha, 2005; Abdullah et al., 2010; Wang et al., 2013).

According to the previous literature review about the relationship between board independence and financial restatements, it is obviously stated the presence of independent directors in a firm can reduce the likelihood of financial restatements because of the increasing independence of members on the board of director will decrease agency problem and managers' opportunistic behavior and therefore, at last the incidence of financial restatements will be at lower levels. So, the following hypothesis will be tested in the study:

H_1: There is a negative relationship between board independence and financial restatement.

5.2. CEO Duality

Duality role refers to situations in which CEO position is combined with the Board Chair position. According to Agency Theory, the chairman of the board and the CEO should be different persons (Finkelstein and D'Aveni, 1994). This type of separation may be useful in ensuring the effectiveness of the monitoring role of the board. The Egyptian Code of Corporate Governance, (2016, p.12) stated that the board of director undertakes the nomination of the chairperson and managing director. It is preferred that the two positions not be held by the same person. The Board of Directors of the Financial Supervisory Authority issued Resolution No.

(47) of 2020 with the aim of applying the best rules and principles of governance to listed companies by separating the two jobs of the managing director or CEO of the company, and the company's chairman. This achieves many advantages for the firm, starting with improving the control environment in the company, reducing harmful practices, avoiding conflicts of interest, and focusing on long-term goals that serve the interests of all shareholders of the firm. If joining the positions is necessary, the reasons for doing so should be stated in the annual report of the company. In addition, a non-executive vice chairperson should be appointed and should also head the board meetings that discuss the performance of executive management. Afify, (2017) study in the Egyptian environment, found that there is a positive relationship between CEO duality and the incidence of financial restatement. Also, Efendi et al., (2007) study, on sample consisting of 190 companies and using logistic regression analysis, indicated that firms that restated financial statements had a weaker corporate governance structure, however CEOs of restatement firms more frequently hold the position of board chairmen. Other related studies concern restatements of financial statements, Rakoto, (2012) and Jiang et al., (2015) found that the association between CEO's dual position and restatements is significantly positive, which in turn create an agency problem.

On the other hand, Hasnan et al.,(2017)study in Malaysia on sample consisting of 76 restatement firms and 152 non-restatement firms and using logistic regression model, they found that CEO duality is not associated with the incidence of financial restatement. Also, the study by Abdullah et al., (2010)in Malaysia, they found that CEO duality does not have any significant impact on the likelihood of financial restatements. This result supports the results of that, Agrawal and Chadha, (2005).According to the previous literature review about the relationship between CEO duality and financial restatements, the following hypothesis is to be tested in the study:

H_2: There is a positive relationship between CEO duality and financial restatement.

5.3. Audit Committee Independence

An independent audit committee is critical to perform its financial reporting monitoring. The more independent the audit committee is, the more it can perform financial reporting oversight effectively. Some of prior literature demonstrated that audit committee director independence is associated with greater monitoring for two reasons. First, and most importantly, independent directors are free of any economic or psychological ties to management that may interfere with their ability to question management (Carcello and Neal, 2002, 2003). Second, the preservation of reputational capital provides motivation for better monitoring unique to independent audit committee members. In Egypt, Shaheen, (2012)study, on sample consisting of 48 restatement firms and 48 non-restatement firms during the period 2008-2009, the findings of this study implied that there is a negative relationship between independence of the audit committee and the incidence of financial restatement. Also, Afify, (2017) study in the Egyptian environment, stated that there is a negative relationship between audit committee independence and financial restatement. These results are consistent with Wan Mohammad et al., (2018) study in Malaysia, on sample comprising of 350 restatement firms and 350 non-restatement firms and using logistic regression, the results indicated there is a negative association between audit committee independence and financial restatement. Finally study by Salehi et al., (2021)in Iran, found a negative and significant association between audit committee independence and financial restatement. However, the study by

Lin et al., (2006)in USA on sample including 106 restatement firms and 106 non-restatement firms, indicated that there is no significant relationship between audit committee independence and financial restatements. This result is consistent with the result of Hasnan and Hussain, (2015).The following hypothesis is to be tested in the study:

H_3: There is a negative relationship between audit committee independence and financial restatement.

5.4. Audit Committee Size

Previous studies which examined the relationship between audit committee size and the incidence of financial restatement provided mixed results. For instance, Abbott et al., (2004)found there is no relationship between audit committee size, which consisting of at least three members, and financial restatement. However, in Egypt Afify, (2017) found that there is a positive relationship between audit committee size and financial restatement. This means, the increase in the number of members of the audit committee of the firm may contribute to an increase in the likelihood of financial restatement. While study of Wan Mohammad et al., (2018)in Malaysia, they found there is a negative association between audit committee size and restatement. This finding supports that of some other studies(Lin et al., 2006; Al-Najjar, 2011; Ali et al., 2017). The following hypothesis is to be tested in the study:

H_4: There is a negative relationship between audit committee size and financial restatements.

5.5. Audit Committee Meetings

The effectiveness of audit committees can be assessed through the frequency of meetings held. The more frequent the meetings held by the audit committee, the more effective the committee becomes (Song and

Windram, 2004). Abbott et al., (2004) stated that there is a negative relationship between audit committee meetings and financial restatements. The study of Shaheen, (2012)in Egypt implied that there is a negative association between audit committee meetings and financial restatement. This is consistent with the findings of Afify, (2017)that indicated also there is a negative relationship between the meetings of audit committee and restatement. However, Wan Mohammad et al., (2018)study in Malaysia declared there is a positive relationship between audit committee meetings and the incidence of financial restatement. The following hypothesis will be tested in the study:

H_5: There is a negative relationship between audit committee meetings and financial restatement.

5.6. Managerial Ownership

Managerial ownership can be defined as the percentage of shares owned by the company's management who participate directly participate in corporate decision-making. It is expected that managerial ownership is related with the occurrence of financial restatement because managerial ownership can indicate the extent to which managers are being truthful to other shareholders. Mixed results have been documented by previous studies on the relationship between managerial ownership and the incidence of financial restatement. Study by Jiang et al., (2015)in China indicated that restatement firms tend to have lower levels of managerial ownership than non-restatement control firms. Also, according to Aziz et al., (2017)study in Malaysia, on a final sample consisting of 853 firm-year observations from 2005 to 2013 and using logistic regression, they also found managerial ownership is negatively associated with financial restatement. It means the evidence indicated that managerial ownership lessens the agency costs, and it is effective in controlling management's opportunistic behaviors. However, study by Abdullah et al., (2010)in Malaysia, indicated that managerial ownership does not have any significant impact on the likelihood of financial restatement. The following hypothesis will be tested in the study:

H_6: There is a negative relationship between managerial ownership and financial restatement.

5.7. Institutional Ownership

With regards to the relationship between institutional ownership and the incidence of financial restatements, Zhang (2012) indicated that the presence of institutional investors can strengthen the independent directors' and audit committee's oversight that can prevent the occurrence of financial restatements. Firms with larger institutional holdings should be less likely to manipulate financial statements if institutions chose to engage in agency monitoring. Jiang et al., (2015) study in China proved that there is a negative relationship between institutional investors and financial restatement. Because of the increased monitoring function by these types of shareholders, there is no probability for the occurrence of financial restatements. However, according to Burns et al., (2006) study implied there is a positive relationship between ownership by institution and the occurrence of financial restatements. They implied that the presence of institutional investors may create strong incentives to manage earnings. While Aziz et al., (2017) study in Malaysia implied that there is no significant association between institutional ownership and financial restatement and study of Soroushyar and Ahmadi, (2016)in Iran, their findings investigated that institutional ownership has no significant impact on the likelihood of financial restatement. So, the following hypothesis that will be tested:

H_7: There is no relationship between institutional ownership and financial restatement

6- Research Methodology

6.1. Sample

As shown in table (1),the sample of the study of non-financial firms consists of 678 firm-year observations over a period of 2014-2019. Financial companies are excluded from the sample due to the different requirements of disclosure and corporate governance. The purpose of this study is to examine the effects of board structure, audit committee characteristics and ownership structure, and firm specific characteristics on financial restatements of the Egyptian listed corporations. The study employs a descriptive and correlational research design for the data.

Table1:Thepercentageofsamplesizetothepopulation

Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
Total Egyptian companies listed on Egyptians stock exchange	214	221	222	222	220	218	**1317**
(Less) number of companies within the banking and financial sectors	(38)	(43)	(46)	(47)	(49)	(51)	**(274)**
Number of non-financial companies(the population)	176	178	176	175	171	167	**1043**
Number of companies with in the sample (Initial Sample)	125	125	125	125	125	125	**750**
(Less) number of companies excluded due to the lack of some data for the research variables	(12)	(12)	(12)	(12)	(12)	(12)	**(72)**
Number of companies within the sample (Final Sample)	113	113	113	113	113	113	**678**
Percentage of sample companies to population	**64.2%**	**63.5%**	**64.2%**	**64.6%**	**66%**	**67.7%**	**65%**
Number of companies that did not make restatement	86	89	95	92	93	97	552
Number of companies that made restatement within the sample	26	24	18	21	20	16	125

6.2. Variable Measurement

6.2.1. Dependent Variable

Financial Restatement: is a dummy variable with a value of "1" for firms that restated their annual financial statements, and "0"otherwise.

6.2.2. Independent Variables

Seven independent variables were used in this study: board independence, duality, audit committee independence, audit committee size, audit committee meetings, managerial ownership, and institutional ownership. The board independence is measured as the percentage of non-executive directors on the board. Duality is a dummy variable with the value of "1" if the roles of Chairman and CEO are combined and "0" otherwise. Audit committee independence is equal to the proportion of independent members to total members of the Audit Committee. Audit committee size is measured in two ways: firstly, the number of audit committee members and secondly, the logarithm, of the number of audit committee members. Audit committee meetings is the number of meetings held during the year. Managerial ownership is measured as the total percentages of executives who hold shares directly or indirectly. Institutional ownership is measured as the percentage of firm's share held by institute investors to total outstanding shares.

6.2.3. Control Variables

Consistent with prior studies on the relationship between corporate governance and financial restatement, the control variables including return on assets (ROA), computed as the ratio of net income to total assets, leverage (LEV) is defined as the total liabilities to total assets, and firm size (FSIZE) is measured as the natural log of total assets.

6.3. Regression model

To test the relationship between the corporate governance mechanisms and financial restatements, the following logistic regression model is used.

$$\mathbf{RESTATE}_{it} = \beta_0 + \beta_1\mathbf{BIND}_{it} + \beta_2\mathbf{BDUAL}_{it} + \beta_3\mathbf{ACIND}_{it} + \beta_4\mathbf{ACSZE}_{it} + \beta_5\mathbf{ACMT}_{it} + \beta_6\mathbf{MGOWN}_{it} + \beta_7\mathbf{INSOWN}_{it} + \beta_8\mathbf{PROFIT}_{it} + \beta_9\mathbf{LEV}_{it} + \beta_{10}\mathbf{FSIZE}_{it} + \varepsilon_{it}$$

Where:

$\mathbf{RESTATE}_{it}$: Financial restatement for firm i in year t,

$\mathbf{BIND}_{it}$: Board independence for firm i in year t,

$\mathbf{BDUAL}_{it}$: Board duality for firm i in year t,

$\mathbf{ACIND}_{it}$: Audit committee independence for firm i in year t,

$\mathbf{ACSZE}_{it}$: Audit committee size for firm i in year t,

$\mathbf{ACMT}_{it}$: Audit committee meetings for firm i in year t,

$\mathbf{MGOWN}_{it}$: Managerial ownership for firm i in year t,

$\mathbf{INSOWN}_{it}$: Institutional ownership for firm i in year t,

$\mathbf{PROFIT}_{it}$: Return on assets for firm i in year t,

$\mathbf{LEV}_{it}$: Financial leverage for firm i in year t,

$\mathbf{FSIZE}_{it}$: Firm size for firm i in yeart,

ε_{it}: Random error.

7- Results

7.1. Descriptive statistics

Before data analysis of the study variables, descriptive statistics provide simple summaries about the sample and the observations that have been made. It is used to describe the initial characteristics of the data and to provide background information on the data used in the study before testing study hypotheses. Table (2)presents descriptive statistics for the full sample of 678 firm-year observations after estimating the missing values.

From the table (2), it is notable that the financial restatement (RESTATE) has a mean value of .18 and standard deviation about .388. The board independence (BODIND) has a mean value of .7178; this percentage represents non-executive directors on the board, it indicates that Egyptian firms have complied with the recommendation of the Egyptian corporate governance code to have the majority of the BOD comprising independent non-executive directors. The results of descriptive statistics indicate there is an increase in the mean value of duality role in the Egyptian companies, the value of mean is .63. This means one person performs both the role of CEO and the Chairman of the Board of Directors and it is in contrast to the Egyptian Code of Corporate Governance (ECCG).The audit committee independence (ACIND) has a mean value of .6915; this percentage is almost high and represents the most of members of audit committee are non-executive, this corresponds to the Egyptian Code of Corporate Governance (ECCG). In general, there is a high degree of compliance with the Egyptian corporate governance rules of the Audit Committees and the Board of Directors. However, the minimum zero values of both BODIND and AUDIND indicate the non-presence of independent directors on the board of directors and audit committee in some firms.

The audit committee size (ACSZE) has a mean value of 3.52 members (with a range between 2 & 7 members of the audit committee),the audit committee meetings (ACMT), which is the fifth independent variable, has a mean value of 5.3171 (this percentage is almost high).

With respect to the ownership structure in Egyptian firms, the descriptive statistics indicate that the managerial ownership or ownership by insiders (MGOWN) has a mean value of .08085. The institutional ownership (INSOWN), has a mean value of .5517981.

The table also includes descriptive statistics for control variables; the firm size (FSIZE) has a mean value of 20.4394. The financial leverage (LEV) has a mean value of .49 and the profitability (ROA) has a mean value of .0434.

Table(2): Descriptive statistics

N= 678					
Variable	Min.	Max.	Mean	Median	Std. dev.
RESTATE	0	1	0.18	0	.388
BODIND	0	1	.71776	.77778	.18886
DUAL	0	1	0.63	1	.482
ACIND	0	3	.69148	.75	.3459
ACSZE (log)	0	2.0794	1.2279185	1.0986	.249617
ACSZE (no. of members)	0	8	3.5200	3	.987
ACMT	0	19	5.3171	4	3.0940
MGOWN	0	.89119	.08085	.00015	.16625
INSOWN	0	.99708	.5517981	.62913	.300617
ROA	-1.1667	.78330	.0433941	.0404457	.139628
LEV	.00499	7.18873	.4900955	.417163	.4888126
FSIZE	16.9589	24.9022	20.4394	20.3384	1.4328

7.2. Correlation Matrix

Pearson correlation is used to test the correlations among all variables of the study models. Pearson correlation coefficients are above and the p-values are below. Table (3) shows the correlation matrix between the variables. The correlation matrix in Table (3) reveals that there is a significant negative correlation at 1% ($P= 0.00 < 0.01$) between board independence (BODIND) as an independent variable and financial restatement (RESTATE) as a dependent variable, while CEO duality (DUAL) is positively significantly correlated with financial restatement (RESTATE) at 1% (P= 0.00 < 0.01). Regarding to the characteristics of audit committee and financial restatements, it has been observed that there is a significant negative correlation at 1% (P= 0.00 < 0.01) between independence of audit committee (ACIND) and financial restatements (RESTATE), the audit committee meetings (ACMT) is positively significantly correlated with financial restatements (RESTATE) at 1% (P= 0.0006 < 0.01), and the audit committee size (ACSZE) is positively significantly correlated at 1% (p= 0.0002< 0.01) with financial restatements (RESTATE). Regarding to the structure of ownership, it has been observed there is a significant negative correlation between managerial ownership (MGOWN) and financial restatements (RESTATE) at 1% (P= 0.0001 < 0.01), and the institutional ownership (INSOWN) is positively significantly correlated with financial restatements (RESTATE) at 1% (P= 0.000 < 0.01). Finally, the correlation matrix implied that there is a significant positive correlation between financial leverage (LEV) and financial restatements (RESTATE) at 1% (P= 0.000 < 0.01), the profitability (ROA) is positively correlated with financial restatements and there is a significant correlation between Return on Assets (ROA) and restatements at 5% (P= 0.0342< 0.05), but the firm size has a positively insignificant correlation (P= 0.3045> 0.10) with financial restatements.

Table (3): Person correlations matrix

PEARSON CORRELATION MATRIX (n=678)											
Variable	RESTATE	BODIND	ACIND	ACMT	ACSZE (Ln)	MGOWN	INSOWN	DUAL	FSIZE	LEV	PROFIT
RESTATE	1.000										
BODIND	- 0.1818*** 0.0000	1.0000									
ACIND	-0.1921*** 0.0000	0.2841*** 0.0000	1.0000								
ACMT	0.1316*** 0.0006	-0.0231 0.5490	-0.0544 0.1573	1.000							
ACSZE (Ln)	0.1424*** 0.0002	0.1661*** 0.0000	-0.0530 0.1683	0.2457*** 0.0000	1.000						
MGOWN	-0.1546*** 0.0001	-0.0341 0.3758	0.0827** 0.0313	-0.1775*** 0.0000	-0.0238 0.5357	1.000					
INSOWN	0.1899*** 0.0000	-0.0868** 0.0238	-0.1195*** 0.0018	0.2119*** 0.0000	0.1748*** 0.0000	-0.6398*** .0000	1.0000				
DUAL	0.1965*** 0.000	-0.2177*** 0.000	-0.0720* 0.0611	0.0829** 0.0310	0.1101*** 0.0041	0.1105*** 0.0040	-0.0458 0.2341	1.000			
FSIZE	0.0395 0.3045	0.0208 0.5888	-0.0431 0.2627	0.0804** 0.0363	0.1724*** 0.000	-0.1894*** 0.000	0.2488*** 0.000	-0.1009*** 0.0085	1.000		
LEV	0.2010*** 0.000	-0.1776*** 0.000	-0.1944*** 0.000	0.0486 0.2064	-0.0460 0.2312	-0.1488*** 0.0001	0.2484*** 0.000	-0.0246 0.5221	0.1105*** 0.0040	1.000	
Profit (ROA)	0.0813** 0.0342	-0.0271 0.4805	0.0351 0.3620	0.0749* 0.0513	0.1920*** 0.000	0.0825** 0.0316	0.0387 0.3138	0.0886** 0.0210	0.1719*** .000	-0.3071*** 0.000	1.000
Significant coefficients at the 1%, 5% and 10% levels are noted by ***, ** and *, respectively.											

7.3. Regression results

The logistic regression is used to test the hypothesis of the study. In order to avoid the influence of outliers; all variables are winsorized at 5% and bottom95% percentiles of their distribution. The Robust Standard Error is used to correct for heteroscedasticity and autocorrelation in the case of their presence (Greene, 2012).

The results in Table(3) showed that H_1, H_2, H_3, H_6 and $H_7$are supported. Board independence (BODIND) is negatively linked to the likelihood of financial restatements, consistent with prior studies (Cornett et al., 2008; Marciukaityte et al., 2009; Rakoto, 2012; Soroushyar and

Ahmadi, 2016; Afify, 2017). Thus, having more independency on the board of directors, more control and proper management will be emphasized, and it will also reduce the agency problems. As expected, CEO duality (DUAL) has a relationship with the incidence of financial restatements. It is positively associated with restatements. It means the combination of the two roles will reduce the quality of the prepared financial statements and hence, it will increase the possibility of financial restatements. This result supported prior studies(Dechow et al., 1996; Efendi et al., 2007; Rakoto, 2012; Jiang et al., 2015; Afify, 2017). The presented results of third hypothesis suggest that there is a negative and significant association between audit committee independence and financial restatements. This means that the higher audit independency will cause less restatement in financial statements. In this line of prior studies, (Abbott et al., 2004; Agrawal and Chadha, 2005; Shaheen, 2012; Afify, 2017; Wan Mohammad et al., 2018; Salehi et al., 2021) report similar conclusion. The statistical results of H_6 also indicate that the managerial ownership has a negative impact on restating financial reports. The evidence indicates that the managerial ownership can reduce the agency problems and is effective in controlling the opportunistic behavior of management. Thus, the probability of the occurrence of financial restatements will be reduced. This finding is contrary to the results found by Abdullah et al., (2010) and consistent with that of Aziz et al., (2017).The results investigate there is no relationship between institutional ownership and financial restatements. This result is agreed with the results of prior studies(Soroushyar and Ahmadi, 2016; Aziz et al., 2017).

The other two hypotheses are not supported. The statistical results of the size of audit committee in this study is positively related to the likelihood of financial restatement. This finding is consistent with that of

Afify, (2017) and Wan Mohammad et al., (2018) and inconsistent with that of Lin et al., (2006); Al-Najjar, (2011); and Ali et al., (2017).Regarding audit committee meetings, there is no evidence to support the relationship between the likelihood of financial restatement and audit committee meetings.

Regarding firm characteristic control variables, the results in Table (4)show company performance (ROA) is highly statistically significant at 1% level and positive (β_8 = 4.63698 and p-value = 0.003), which implies that companies with high profitability are more exposed to the presence of restatements in their financial statements. Leverage (LEV) is highly statistically significant and positive (β = 2.193247 and P-value = 0.000), which suggests that highly leveraged firms are more likely to have financial restatements, this finding supports study by Kinney and McDaniel, (1989); Chen et al., (2013); and Wu et al., (2016)and against the result of Afify, (2017).Finally, firm size (FSIZE) has insignificant relationships with financial restatements, the analysis does not indicate a significant ($p > 0.10$) difference between the size (Log of total assets) of restatement and non-restatement firms.

Table (4)shows the value of Wald Chi-Square for the model which equals 87.86 at degree of freedom (df) of 10. The probability of Wald Chi-Square of 0.000 is less than the significance level of 5% and it indicates that there is a statistical significance in the model. The probability of Hosmer - Leme show (H-L) equals 0.2618 and it is more than the determined significance level which is 5% (P. value > 0.05), thus fulfilling the goodness of fit of the model, and matching with data.

The Variance Inflation Factors (VIF) ischecked for Multicollinearity. As the degree of Multicollinearity increases, the estimated coefficients will become unstable as well as the standard errors. A VIF higher than 10 will lead to the conclusion that there is a Multicollinearity (Gujarati and Porter, 2003). As shown in table (4),the VIF for all variables are less than 10. Therefore, there is no Multicollinearity in the study model.

TABLE(4): Logistic regression of the variables

Explanatory variable	Coefficient(β)	Std. Error	Z	P. value	Odd Ratio	VIF
Constant	-2.031869	1.893613	-1.07	0.283	.1310903	-
Board independence (BODIND)	-1.362686	.6192347	-2.20	0.028	.2559724	1.25
CEO Duality (DUAL)	1.066814	.2749352	3.88	0.000	2.906105	1.11
Audit committee independence (ACIND)	-0.7404675	.3138041	-2.36	0.018	.4768909	1.13
Audit committee size (ACSZE)	1.34841	.5314257	2.54	0.011	3.851297	1.24
Audit committee meetings (ACMT)	.034285	.0384118	0.89	0.372	1.034879	1.12
Managerial ownership (MGOWN)	-3.804424	1.336335	-2.85	0.004	.022272	1.82
Institutional ownership (INSOWN)	.0773304	.4991054	0.15	0.877	1.080399	1.97
Profitability (ROA)	4.590378	1.535217	2.99	0.003	98.53164	1.24
Financial Leverage (LEV)	2.188756	.4893823	4.47	0.000	8.924108	1.28
Firm Size (FSIZE)	-0.0904712	.0961284	-0.94	0.347	.9135006	1.15
Number of observations (N)= 678 Wald Chi2 (10)= 87.98 Prob. Value > Chi2= 0.000*** R2 =0.1745 Hosmer and Lemeshow (df=8) = 10.04 Sig. = 0.2624 Correctly Classified= 82.30%						

8- Conclusion

The objective of this study is to examine the impact of corporate governance mechanisms on the likelihood of financial restatements. Results from logistic regression analysis show that the board independence, audit committee independence and managerial ownership have a negative and significant impact on the incidence of financial restatement. It means, the presence of board independence is associated with less likelihood of financial frauds (Beasley, 1996), which means a firm that having board of directors with more non-executive members effectively monitor and oversee the assessment of management and reporting on the internal control system. Thus, it will lead to in fact to reduce the occurrence of financial restatements. The independence of audit committee can strengthen the internal control structure of a firm by reducing the conflicts of interest between managers and shareholders, increasing the effectiveness of the external audit and facilitating financial reporting, thereby it will reduce the likelihood of financial restatements. The presence of managerial ownership is associated with the less likelihood of financial restatement because managerial shareholders can be effective in monitoring and disciplining managers in order to ensure the financial statements prepared are true and fair, and thereby the probability of financial restatements will be reduced, this result is contrary to that of Abdullah et al., (2010).This study shows that there is a positive impact of duality role, audit committee size, financial leverage and return on assets on the incidence of financial restatements. This means that the separation of the two roles can limit the incidence of financial restatements. The increasing in members of audit committee can contribute in occurrence the likelihood of financial restatements, and this is agreed with the result of Afify, (2017)in Egypt. The firms with high levels of debts can increase the likelihood of financial restatements.

Meanwhile, institutional ownership, audit committee meetings and firm size do not have any impact on the incidence of financial restatements in this current study in the Egyptian environment. The finding is not supported result of Afify, (2017)in Egypt, the reason may be due to the different adopted environment or the time period in which the research was conducted.

9- Limitation of the Research

This study has limitations as the research uses data for the period 2014-2019 which was the latest data available at the time of the study. Data of financial firms are excluded as these companies are totally different from non-financial companies, and some attributes may not be comparable between financial and other companies.

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ملخص

يهدف البحث الحالي إلي اختبار أثر آليات حوكمة الشركات علي القوائم المالية المعدلة في البيئة المصرية. ويختبر الباحث العديد من الآليات، والتي تتضمن: إستقلالية مجلس الإدارة، ازدواجية دور المدير التنفيذي الأول، إستقلالية لجنة المراجعة، حجم لجنة المراجعة، عدد إجتماعات لجنة المراجعة، الملكية الإدارية، الملكية المؤسسية، الرفع المالي، الربحية، وحجم الشركة. وباستخدام عينة من الشركات المساهمة غير المالية المسجلة بالبورصة المصرية مكونة من ٦٧٨ مشاهدة خلال الفترة ٢٠١٤-٢٠١٩، متضمنة ١٢٥ مشاهدة لشركات قامت بتعديل قوائمها المالية، توفر النتائج الاختبارية باستخدام نموذج للإنحدار اللوجستي دليلاً على وجود علاقة سالبة بين إستقلالية مجلس الإدارة، إستقلالية لجنة المراجعة، الملكية الادارية و تعديل القوائم المالية. تظهر النتائج ايضاً أن هناك علاقة موجبة بين كل من إزدواجية دور المدير التنفيذي الأول، حجم لجنة المراجعة، الرفع المالي، ربحية الشركة وتعديل القوائم المالية. من ناحية أخرى، توصل البحث إلي عدم وجود علاقة بين كل من عدد اجتماعات لجنة المراجعة، الملكية المؤسسية، حجم الشركة و تعديل القوائم المالية.

الكلمات الدالة: القوائم المالية المعدلة، حوكمة الشركات، هيكل مجلس الإدارة، خصائص لجنة المراجعة، هيكل الملكية