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**THE RELATIONSHIP BETWEEN AUDIT QUALITY AND NON-FRAUDULENT FINANCIAL STATEMENTS - AN EMPIRICAL STUDY ON COMPANIES LISTED IN THE EGYPTIAN STOCK EXCHANGE**

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**ABSTRACT**

This study aims to examine the relation between external audit quality and Financial Statements' Fraud Prevention. As a result of the increase of manager's desires toward maximizing their personal benefits on account of the benefits of other parties; they tend to follow unethical behavior, through committing fraud, which has a negative impact on the reliability of the information represented by the financial Statements. To restrict this unethical behavior some studies (Okoli and Izedonmi, 2014; Al- Nimer, 2015 ; Rahimi and Amini, 2015) pointed to the possibility of relying on external audit process, particularly when it is of a good quality, because of its ability to prevent Fraud in the Financial Statements.

The Study uses correlations design to investigate this relationship. The sample consists of 100 firms listed in the Egyptian stock exchange for the period starting from 2012 till 2015. Where audit quality is measured by accounting conservatism, which is measured by MTB. While financial statement's fraud is measured by integrated results of three models that detect fraud which includes; Altman Z Score, P Score, Beneish M- Score. The results of correlation indicates that there is non-significant negative relationship between audit quality and financial statement's fraud, and there is no significant effect for firm size and audit firm size on this relationship; the results reveal that audit quality isn't a good predictor for Financial Statements' Fraud Prevention in Egypt.

**Keywords:** Audit Quality, Financial statements' fraud, Altman Z Score, P Score, Beneish M-Score, Accounting conservatism, MTB.

**1. INTRODUCTION**

As a result of the increase in cases of fraud in financial statements in the recent times which led to the breakdown of multiple companies in many countries and the loss of stakeholders' confidence in the capital market, A necessary need of an effective mechanism to be relied on

emerged , to ensure the safety and integrity of the process of preparation of financial statements and increasing reliability of information of t financial statements (Okolie and Izedonmi, 2014; Rahimi and Amini, 2015; Goodwin and Wu, 2015). This matter has been supported by some studies (ELserafy, 2015; Abdul Latif, 2015) in environment of the professional practice in Egypt.

In this regard, some studies stresses on the vital role of the external audit with respect to providing reasonable assurance about the absence of material misstatement from financial statements, and the role it provides as a way to monitor and control the actions of management. As well as its` ability to reduce the information asymmetry, the opportunistic behavior of management and the conflicts in the interests. That may prevent fraud perpetration, thereby increasing the confidence in t accounting information included in the financial statements (Memis and Cetenak, 2012; Okoli *et al.*, 2013; Johnstone *et al.*, 2014; Okolie and Izedonmi, 2014; Birjandi *et al.*, 2015; Goodwin and Wu, 2015; Nawaiseh *et al.*, 2016).

It is accepted that the achievement of the supervisory role of external audit depend on increasing its quality, As high audit quality sends positive signals to the market regarding to the extent of financial statements` information reliability (IAASB, 2013; Okoli and Izedonmi, 2014; Al-Nimer, 2015 ; Rahimi and Amini, 2015).

the researcher concludes from the above that, in order to increase the confidence of stakeholders in the capital market, once again, and to reduce the immoral behavior of managers, made by committing fraud in the financial statements, audit quality must be improved, because of its positive impact on restricting managers ability to mislead the users of accounting information, through committing fraud. Consequently the question of this research revolves around the the validity of the relationship between Audit Quality and financial statements fraud prevention of Companies listed in the Egyptian Stock Exchange. This will be verified theoretically and practically.

The research is based on the empirical methodology, to test the relationship between Audit Quality and fraud prevention in the financial statements of the firms. The population of the research is firms listed in the Egyptian stock exchange during the period 2012 and 2015. listed companies were chosen because of the availability of information about it. The sample consists of 100 company that the researcher was able to access it`s full financial reports, as well as excluding banks and financial institutions because of their different natures and the separate laws and regulations of it, also excluded any company whose financial reports were prepared in other currency than the Egyptian pounds and any firm with incomplete financial reports.

The contribution of this research stems from addressing a contemporary research issue which is the audit quality of firms, which is widely discussed in different developed environments affecting all participants of different capital markets. This research address the same topic but in an emerging capital market, in an Arab country, as that of Egypt as to my knowledge is not

widely discussed. In addition to using conservatism as a measurement of audit quality gauged through market to book value ratio. Which it is not widely used measurement in emerging economies. It perfectly suits my study because of the weak legal system .As in the light of high conservatism, stakeholders becomes more trusting in firms financial reporting.

The empirical importance of this research stems from testing those relationships on the Companies Listed of Egyptian Stock Exchange. This leads to enriching the accounting literature in this field, and increases the awareness and understanding of auditors and users of accounting information, on the importance of External Audit Quality in improving the quality of financial statements of listed companies. All that reflects positively on the decisions of traders in the Stock Market, Which is a vital role required from audit now in Egypt more than ever.

The remainder of this study is organized as follows; the first section is Back ground and theoretical framework that is the literature review and hypothesis formulation. the second section is the relation between Audit quality and fraud prevention in the financial statements, the third section is Data and Methodology, the forth section presents the study results and discussion of this results, finally the fifth section provides the conclusions and recommendations.

**Research problem:**

As a result of the increase pursuit of managers to maximize their personal benefits, by committing fraud in the financial statements, which reflected negatively on the reliability of the financial statements. Several researchers intrigued to determine the relationship between audit quality and the existence fraud in the financial statements. This study aims to investigate the relation between audit quality and non- fraudulent financial statements. Especially in environment of high uncertainty and emerging capital markets as in the Egyptian Stock Exchange.

**Research objective:**

The broad objective of the study to audit quality in Egypt and ti answer the following questions:

1. What is meant by the audit quality, how it can be measured and what are its most important proxies?
2. What is the importance of audit quality to stakeholders generally?
3. What is meant by the fraud, how it can be measured and what are its most important proxies and its limitations?
4. What is the relationship between audit quality and non-fraudulent financial statements generally and on the firms listed in the Egyptian Stock Exchange particularly?

5. What are the most important determinants of this relationship and what are the most influential control variables affecting It.?

## **2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT**

### **2.1 The concept and measurement of audit quality**

As a result of the vital role of audit process in increasing financial information reliability and ensuring its` credibility, hence increasing trust of the users in the financial statements, the interest of professional bodies and researcher to the verify of the concept of auditing, its determinants and how to measure them were revived, so that audit can achieve its functions and users can benefit from the various effects arising (Al- Khaddash *et al.*, 2013; Aobdia *et al.*, 2015).

With regard to the concept of audit quality, Despite the lack of a specific definition some previous studies agreed to the possibility of relying on the definition of (De Anglo, 1981) for the audit quality as; The ability of auditors to detect and report on the material misstatement (Al-Khaddash *et al.*, 2013; Okolie and Izedonmi, 2014; Blay *et al.*, 2014; Anis, 2014; Johnstone *et al.*, 2014; Bills *et al.*, 2015; Ball *et al.*, 2015; Birjandi *et al.*, 2015; Tyokoso and Tsegba, 2015; Nawaiseh *et al.*, 2016), which requires that the auditor have the minimum skills, the experiences, and independence necessary to detect and report on those misstatements. Also (Ali, 2011) pointed that the audit quality depends on auditor compliance with professional standards and the rules and ethics of the profession.

Consequently it can be said that the audit quality depends on two elements,; efficiency of the auditor, and his ability to detect material misstatements on one hand, and auditor independence, which enable him to report on those misstatements that have been discovered, on the other hand, in light of his commitment to the professional standards and the rules and ethics of the profession.

To achieve audit quality, some have pointed to the presence of many determinants related to planning the audit, field work and final review and preparation of the audit report (Kilgore *et al.*, 2011; Deng *et al.*, 2014; Bills *et al.*, 2015). While others (Kilgore *et al.*, 2011; Deng *et al.*, 2014; Bills *et al.*, 2015; Svanberg & Ohman, 2015; Ettredge *et al.*, 2014) agreed on the impact of some determinants related to audit firm on the audit quality, which are; industrial specialization, the size of audit firm, the commitment with mandatory rotation policy, Reducing the provision of advisory services to clients, favorable reputation of the audit firm, Finally the possibility of audit firms exposure to litigation.

Also , Some studies pointed out to the impact of some of determinants of auditors and audit team on the audit quality, and such consists of ;Technical training and proficiency of the auditor and the various members of the audit team , the development of competencies and different

skills, also maintain auditor mental independence to perform his work objectively and impartially, the deep knowledge of the nature of the client's operations and the various operational complexities of the potential risks that face the customer, and finally mandatory rotation of auditor (Kim and Yi, 2009; Kilgore *et al.*, 2011; Ettredge *et al.*, 2014; Johnstone *et al.*, 2014; Aobdia *et al.*, 2015)

And finally (Kim and Yi, 2009) pointed to the impact of the environment of professional practice on audit quality, where the audit quality is affected by many environmental factors such as; the strength of the control environment which is affected by the prevailing cultural factors, as well as the extent of attention provided by regulating bodies to the audit profession and their the work to improve its` quality. Also strong legal environment ,which contribute in ensuring compliance with auditing and accounting standards, hence increasing the credibility of financial statements and the confidence of stakeholders in them, especially investors, who can rely on them in making more rational investment decisions.

With regard to how the audit quality is measured , these researchers (Alam and Petruska, 2012; Maria and Pavlovic, 2013; Aobdia *et al.*, 2015; Cahan and Sun, 2015; Ching *et al.*, 2015; Al-Nimer, 2015; Azinfar and Mohammadi, 2015; Omid, 2015; Cameran *et al.*, 2016; Nawaiseh *et al.*, 2016) agreed on The possibility of relying on several of indicators to measure the audit quality as ; appropriateness of the auditor opinion, audit firm size, audit fee, auditor experience, the level of unconditional accounting conservatism, earning management, the relative importance of the client, auditor independence, performing consulting services and auditor industry specialization.

## **2.2 The importance of audit quality to stakeholders**

As a result of the vital role of the external audit process in ensuring the reliability of the accounting information in the financial statements and the extent of their representation of the reality of the company, as well as the their ability to reduce information asymmetry between the various relevant parties, the demand for audit quality increased (Birjandi *et al.*, 2015).

The main goal of audit process is to enable the auditor to express his technical and neutral, opinion with regard to the absence of material misstatements from the financial statements and it`s faithful representation about all important aspects of company (IAASB, 2013). This results in increasing the confidence of the users of financial statements, and their ability to rely on the information of the financial statements in the making various economic decisions, and assessing the financial position and the performance of the company, as a result of increased quality and credibility of the financial statements.

Accordingly it is illustrated that there are many positive effects for high audit quality, which has positive impacts on the different stakeholders. In that context previous studies indicated the

presence of negative correlation between increasing audit quality and earning management practices, because of ability of high audit quality in enhancing the likelihood of discovery those practices, and restricting opportunistic behavior of managers, and then reducing those practices, as well as minimizing the level of manipulation in the annual profit (Okolie and Izedonmi, 2014; Kwon *et al.*, 2014; Birjandi *et al.*, 2015; Ching *et al.*, 2015; Goodwin and Wu, 2015; Nawaiseh *et al.*, 2016). Which is reflected positively on the decisions of users of the financial statements, as shareholders and potential investors.

Along the same, previous studies indicated the positive effects of high audit quality on the market value of the company, and increasing stock returns, which represent a positive indicator about the company to investors (Okolie and Izedonmi, 2014; Aobdia *et al.*, 2015; Birjandi *et al.*, 2015). Also one of studies found that high audit quality has an effect on decreasing the cost of borrowing, which is reflected in increasing external funding opportunities for the company (Aobdia *et al.*, 2015).

Finally, (Ziaee, 2014) found positive reflections of high audit quality on the financial performance of company, market efficiency and financial stability. As high audit quality leads to; ensure the credibility of the financial statements, increase confidence in the markets, increase the ability of risk management, support corporate governance and increase effectiveness of the internal control structure.

Based on the above, there is an agreement between the previous studies on the positive impact of the audit quality and it's positive effects on the economic decisions of the different stakeholders. That illustrates the need to focus on audit quality, especially in the light of increased awareness of users of financial statements with respect to the advantages of audit quality. This depends on the environment of professional practice and countries' cultures. This relationship varies, according to the state of the country whether it is a developed economies like USA, UK, France or an emerging economies such as Egypt.

### **2.3 Concept, determinants, and measurement of fraud**

Fraud is considered one of main motivations for breakdown of companies and the exacerbation of financial scandals (Ozkul and Pamukcu, 2012; Ching *et al.*, 2015), which led to loss of confidence of the stakeholders in the accounting information and consider to the financial statements as fraudulent financial statements (Tyokoso and Tesgba, 2015).

While the concept of fraud emerges from considering it as one of the intentional illegal acts, which is done by breakthrough the internal control structure of the company and the circumventing on laws to achieve personal benefit (Ali, 2011; Abdellatif, 2015). The professional publications and previous studies agreed that Fraud is considered a material misstatement in the financial statements resulting from misleading financial statements and asset

misappropriation (ISA No. 240; SAS No. 99; Ozkul and Pamukcu, 2012; Modugu *et al.*, 2012; Modugu and Anyaduba, 2013; Taheri *et al.*, 2014; Tyokoso and Tesgba, 2015).

There are also several major motivations for committing fraud such as; financial pressures, weakness of internal control structure and the ineffectiveness mechanisms of corporate governance (Ozkul and Pamukcu, 2012; Abdellatif, 2015). Also there are several fields for committing fraud as ; manipulations or modifications in accounting records, non-representation or the intentional omission of certain transactions, the wrong application of the accounting principles, and the false recording of daily transactions (ISA No. 240; Ozkul and Pamukcu, 2012; Taheri *et al.*, 2014).

With regard to measurement of fraud in financial statements, some have pointed out to the possibility of depending on three models that are based on the factors associated with committing fraud (Carcello and Hermanson, 2008; Tugas, 2012; Shelton, 2014; Abdullahi and Mansor, 2015; Yusof *et al.*, 2015; Manurung and Harsika, 2015; Ruankaew, 2016). The first model is Fraud Triangle which includes; the Incentive to commit fraud that expresses the exposure of management to external or internal pressure which forces them to achieve a certain level of the profits, whether legally or illegally, the Opportunity that refers to appropriate environment to committing the fraud, as the existence of weaknesses in the internal control structure, Rationalization which refers to the ability to justify committing the fraud.

The second model is Fraud Diamond which includes the same factors of the Fraud Triangle Model in addition to a fourth factor, Capability, which refers to the skills and characteristics of the individuals, that enables them to commit fraud (Ozkul and Pamukcu, 2012; Abdullahi and Mansor, 2015; Yusof *et al.*, 2015; Manurung and Harsika, 2015; Ruankaew, 2016).

Finally, the third model is Fraud pentagon that includes the same four factors in Fraud Diamond in addition to a fifth factor, the External Regulatory which refer to the extent of the existence of mechanisms to punish those who breakthrough the rules (Tugas, 2012; Yusof *et al.*, 2015).

In the same way, some literature (Pustylnick, 2011; Fanceschetti and Koschtial, 2012; Nia, 2015; Mahama, 2015) have pointed out to the possibility of identifying the fraudulent companies, or non- fraudulent companies, by relying on three other models; Altman Z-Score, P-Score, Beneish M-Score. Those models are depending on several ratios, which explains the reason, field, and the possibility of committing the fraud. These models will be clarified subsequently on measuring fraud in the Empirical study.

#### **2.4 The relationship between the external audit quality and preventing fraud in financial statements and hypothesis development**

As a result of fraud being one of the main reasons for the breakdown of several companies, a need for an effective mechanism to prevent it has emerged .This lead to depending greatly on

audit quality because of its` ability in detecting and reporting the fraud, hence preventing committing fraud in financial statements (Alarlooq *et al.*, 2014; Taheri *et al.*, 2014; Noor *et al.*, 2015; Tyokoso and Tesgba, 2015; Ching *et al.*, 2015).

By analyzing the responsibility of auditors with regard to the fraud, it revealed that there is an agreement between the professional publications and previous literature (ISA No. 240; SAS No. 99; Chui and Pike, 2013; Taheri *et al.*, 2014; Saladrignes and Grano, 2014; Wudu, 2014; Sarwoko and Agoes, 2014; Aobdia *et al.*, 2015) that the responsibility of auditor is to detect and report any fraud throughout their implementation the audit process.

With regard to the relation between Audit quality and preventing fraud in financial statements, literature agreed on the presence of negative relation between External Audit Quality and the existence of fraud, through planning and implementing of sufficient Audit procedures to detect and report cases of fraud, as well as implementing other additional audit procedures to ensure tracing all cases of fraud, therefore increasing the confidence of users in the accounting information and the reliability of financial statements (Sarwoko and Agoes, 2014; Saladrignes and Grano, 2014; Wudu, 2014; Birjandi *et al.*, 2015; Caskey and Laux, 2015).

While with regard to the relationship between level of Audit quality measured by the level of unconditional conservatism, and the prevention of fraud in the financial statements, studies indicated that As a result of the increase in the level of unconditional conservatism in case of high quality audit on one hand, and the positive association between the level of unconditional conservatism and the ability of auditors to detect and report about fraud on the other hand. (Maria and Pavlovic, 2013; Caskey and Laux, 2015; Paskaki and Kheradyar, 2015; Smii, 2016). There is a negative relation between audit quality and the existence of fraud in financial statements.

Based on the above, there is vital role of high audit quality in preventing fraud in financial statement, through increasing effectiveness and efficiency of the audit procedures, used for detecting and reporting about the fraud. And this result needs further analysis to test this relationship in the firms listed in Egyptian Stock Exchange, especially in the context of high uncertainty existing in the Egyptian capital market. **The research hypothesis can be derived as follows:**

**H1:** external audit quality is a negatively correlated with the existence of the fraud in the financial statements of Egyptian listed Companies.

## **2.5 Factors affecting the relationship between external Audit quality and preventing fraud in the financial statements**



In this context, Audit Firm's specific characteristics affects the relationship between audit quality and preventing fraud in financial statements (Ahsan and Shahneaz, 2015; Ball *et al.*, 2015; Smii, 2016; Nawaiseh *et al.*, 2016), which includes; leverage, industrial specialization, the size of audit firm, the commitment with mandatory rotation policy, Reducing the provision of advisory services to clients, favorable reputation of the audit firm, Finally, the possibility of exposure of audit firm to litigations as the important control variables studied by previous researches (Lennox *et al.*, 2014; Svanberg and Ohman, 2015; Deng *et al.*, 2014; Johnstone *et al.*, 2014; Bills *et al.*, 2015; Cahan and Sun, 2015; Ahsan and Shahneaz, 2015; Ball *et al.*, 2015; Smii, 2016; Nawaiseh *et al.*, 2016).

In the same way, Firm's specific characteristics affects the relationship between audit quality and the preventing of the fraud in the financial statements (Okoli *et al.*, 2013; Okolie and Izedonmi, 2014), which includes; leverage, firm size, profitability, the return on equity, the return on sales, and firms productivity as the important control variables studied by previous researches (Okoli *et al.*, 2013; Okolie and Izedonmi, 2014; Tyokoso and Tsegba, 2015; Omid, 2015; Nawaiseh *et al.*, 2016)

So, the researcher will focus on Firm size and Audit firm size as the most important control variables studied by previous researches (Okoli *et al.*, 2013; Ani, 2014; Tyokoso and Tsegba, 2015; Ching *et al.*, 2015; Omid, 2015; Smii, 2016; Nawaiseh *et al.*, 2016), affecting the relationship under study in the Egyptian environment.

### **3. METHODS**

The research based on the empirical methodology, to measure the relationship between Audit Quality and preventing fraud in financial statements of firms, and the control variables affecting it. Correlation design is used. As it allows for testing of expected relationships between and among variables (Gul *et al.*, 2003; Okolie and Izedonmi, 2014; Taheri *et al.*, 2014; Nawaiseh *et al.*, 2016)

#### **3.1 Population and Sample selection**

The population of the research is firms listed in the Egyptian stock exchange during the period 2012 and 2015. The sample consists of 100 industrial and trading company that the researcher was able to access it's full financial reports. After screening several firms following the literature (Perols and Lougee, 2011; Okolie and Izedonmi, 2014; Taheri *et al.*, 2014; Nawaiseh *et al.*, 2016) the sample excludes banks and other institutions because of their different natures and the separate laws they follow, also excluded any company whose financial reports were prepared in other currency than the Egyptian pounds and any firm with incomplete financial reports.

#### **3.2 Measurement of Variables**

▪ **Audit Quality:**

Audit quality means the ability of auditors to detect and report on the material misstatement (Al- khaddash *et al.*, 2013; Ziaee, 2014; Omid, 2015; Ching *et al.*, 2015; Nawaiseh *et al.*, 2016), measured by the degree of accounting Conservatism, which implies a more timely incorporation of economic losses into accounting earnings than of economic gains (Smii, 2016), **through the following formula** (Wang, 2009):

$$MTB = MV \text{ equity} \div BV \text{ equity}$$

Whereas MTB ratio represent the level accounting conservatism in the company, if it is more than one then it means that the accounting system lowers the book value of equity than its market value(Wang, 2009), which is an indicator for conservative accounting practices, Thereby increasing audit quality.

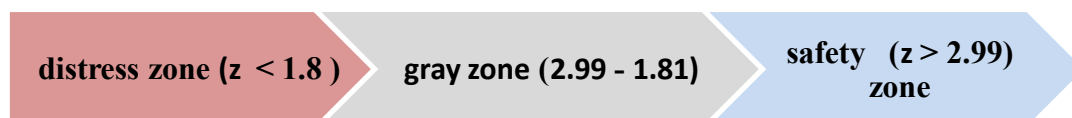
▪ **Fraudulent financial statements:**

Fraud means material misstatement in the financial statements resulting from management preparing misleading financial statements to achieve their personal interests, from the employees embezzlement of assets (SAS No. 99; ISA No. 240; Perols and Lougee, 2011; Franceschetti and Koschtial, 2012; Sarwoko and Agoes, 2014).

As a result to the lack of a proper database to classify and identify companies committing fraud from others in Egypt, it is measured based on fraud possibility detection models, and integrating the results of these models to improve accuracy of manipulations prediction rate to 96.55% (Pustylnick, 2011; Abdul Latif, 2015). Following is review of those models according to (Pustylnick, 2011; Fanceschetti and Koschtial, 2012; Nia, 2015; Mahama, 2015):

❖ **Altman Z- Score model:**

This model is used to predict companies` financial distress (Abdul Latif, 2015), which is considered an early warning for the possibility of manipulation (fraud),and a measurement to determine companies that are more likely to manipulate its` financial statements (Pustylnick, 2011; Nia, 2015; Mahama, 2015). Whereas Z scores represent financial distress in companies if its` value is more than 2.99 then it means that company is not in financial distress, while if it`s value is less than 1.81 then it means that company is exposed to financial distress, which can be illustrated as follows according to (Nia, 2015; Mahama, 2015):



**And (Z-Score) measured through the following formula:**

$$Z = 1.2 * X1 + 1.4 * X2 + 3.3 * X3 + 0.6 * X4 + 1.0 * X5$$

**X1**= Working Capital ÷ Total Assets.

**X2**= Retained Earnings ÷ Total Assets.

**X3**= EBIT ÷ Total Assets.

**X4**= Market value of Equity ÷ Book value of Equity.

**X5**= Net Sales ÷ Total Assets.

❖ **P- Score Model:**

This model is used to predict the possibility of manipulations in the financial statements through the manipulation of revenue and intangible assets, to verify the possible existence of fraud, we will estimate the value of  $\Delta P$  and compare it with the value of  $\Delta Z$ , if it is ( $\Delta P > \Delta Z$ ) then it means possible existence of fraud in the financial statements (Pustynick, 2011; Abdul Latif, 2015).

**And (P-Score) measured through the following formula:**

$$P = 1.2 * X1 + 1.4 * X2 + 3.3 * X3 + 0.6 * X4 + 1.0 * X5$$

**X1**= Shareholders Equity ÷ Total Assets.

**X2**= Retained Earnings ÷ Total Assets.

**X3**= EBIT ÷ Total Assets.

**X4**= Market value of Equity ÷ Book value of Equity.

**X5**= Revenue ÷ Total Assets.

**And ( $\Delta P$ ,  $\Delta Z$ ) measured through the following formulas:**

$$\Delta P = \frac{P(t) - P(t-1)}{|P(t-1)|} \quad ; \quad \Delta Z = \frac{Z(t) - Z(t-1)}{|Z(t-1)|}$$

❖ **Beneish M- Score Model:**

This model is used to predict of possibility of committing fraud by relying on (8) indices. They can also be relied on separately to determine the fields of committing fraud and classifying of companies as fraud committer in the case presence of two or more of these indicators (Abdel-Latif, 2015). Also integrating those indicators to estimate the value of (M) and determine the possibility of company to commit fraud. if its` value is ( $M > -2.22$ ) then this means the possible existence of fraud in the financial statements (Fanceschetti and Koschtial, 2012; Mahama, 2015; Nia, 2015).

**And (M) measured through the following formula:**

$$M = -4.84 + 0.920 \text{ DSRI} + 0.528 \text{ GMI} + 0.404 \text{ AQI} + 0.892 \text{ SGI} + 0.115 \text{ DEPI} - 0.172 \text{ SGAI} + 4.679 \text{ TATA} - 0.327 \text{ LVGI}$$

These indicators can also be classified into two groups; the first group reflects the existence of manipulation in profits depending on its field, and it includes both of (DSRI, AQI, DEPI, TATA), if ( $\text{DSRI} > 1$ ),/or ( $\text{AQI} > 1$ ),/or ( $\text{DEPI} > 1$ ) and/or (the value of TATA is positive) it's means that the company committed the fraud. Whereas the second group reflects the company's willingness to get involved in profit manipulations (Mahama, 2015), and it includes both of (GMI, SGI, SGAI, LVGI), if ( $\text{GMI} > 1$ ),/or ( $\text{SGI} > 1$ ),/or ( $\text{SGAI} < 1$ ) and/or ( $\text{LVGI} > 1$ ) it's means that the company committed the fraud, Following is review of those indicators (Abdul Latif, 2015; Mahama, 2015; Nia, 2015):

❖ **The First Group:**

➤ 
$$DSRI = \frac{\text{Receivables}(t)/\text{Sales}(t)}{\text{Receivables}(t-1)/\text{Sales}(t-1)}$$

➤ 
$$AQI = \frac{[1 - \text{Current assets}(t) + \text{PP\&E}]/\text{Total assets}(t)}{[1 - \text{Current assets}(t-1) + \text{PP\&E}]/\text{Total assets}(t-1)}$$

➤ 
$$DEPI = \frac{\text{Depreciation}(t-1)/(\text{Depreciation}(t-1) + \text{PP\&E}(t-1))}{\text{Depreciation}(t)/(\text{Depreciation}(t) + \text{PP\&E}(t))}$$

➤ 
$$TATA = \frac{\Delta \text{Current asset}(t) - \Delta \text{Cash}(t) - \Delta \text{Current Liabilities}(t) - \Delta \text{Current Maturities of LTD}(t) - \Delta \text{Income tax payable}(t) - \text{Depreciation and amortization}(t)}{\text{Total assets}}$$

❖ **The second Group:**

➤ 
$$GMI = \frac{[\text{Sales}(t-1) - \text{Cost of goods sold}(t-1)]/\text{Sales}(t-1)}{[\text{Sales}(t) - \text{Cost of goods sold}(t)]/\text{Sales}(t)}$$

➤  $SGI = \frac{\text{Sales}(t)}{\text{Sales}(t-1)}$

➤  $SGAI = \frac{\text{sales,general,and administrative expense}(t)/\text{Sales}(t)}{\text{sales,general,and administrative expense}(t-1)/\text{Sales}(t-1)}$

➤  $LVGI = \frac{[\text{LTD}(t)+\text{current liabilities}(t)]/\text{Total assets}(t)}{[\text{LTD}(t-1)+\text{current liabilities}(t-1)]/\text{Total assets}(t-1)}$

• **Control Variables:**

- ❖ **Size of company:** refers to the amount of assets the company have, it is measured by Log of total assets (Okolie *et al.*, 2013; Lennox *et al.*, 2014; Ettredge *et al.*, 2014; Noor *et al.*, 2015; Ching *et al.*, 2015).
- ❖ **Size Audit firm:** refers to dominance of the office on a large percentage of customers in the market, especially those with huge assets and revenues, it is measured as Dummy variable taking the value of zero if audit firm is non big4 and one if audit firm is big4 (Johnstone *et al.*, 2014; Kwon *et al.*, 2014; Ball *et al.*, 2015; Omid, 2015)

### **3.3 Data collection and Analysis**

The data used in this study is secondary data, collected from the actual financial reports of the companies, published in their official websites. Market prices of stocks are collected from the data of Egyptian stock exchange. The financial report includes the financial statements. Financial ratios and models used were calculated. Then emptying the data in Microsoft excel sheet in preparation of analyzing it using SPSS to test the research hypothesis.

### **3.4 Statistical methods used in data analysis and model selection**

Correlation Coefficient, especially person Coefficient is used to determine the relationship between audit quality and fraudulent financial statements, as well as the use of Partail Person Correlation Coefficient to test this relationship with the control variables, when (p-value 0.05).

**4. RESULTS AND DISCUSSIONS**

**4.1 Results:**

		Fraud	Audit Quality (MTB)	Size Audit Firm	Log Size
N	Valid	400	400	400	400
	Missing	0	0	0	0
Mean		.46	1.64	.5850	8.6697
Median		.00	1.01	1.0000	8.6933
Std. Deviation		.499	3.054	.49334	.77644
Minimum		0	0	.00	5.36
Maximum		1	5.2	1.00	10.45

Table (1) provides the descriptive statistics for all variables in the study. The number of companies investigated in this study are 100 for 4 years representing 400 observations. The mean of MTB is equal to 1.64, which indicate that most firms located in Egyptian stock exchange has more than 1 MTB which means those companies are audited by audit firms having high quality. While the mean of fraud is 0.46 which means that about 46% from companies in this study committed fraud. While mean size audit firm is 0.5850 which indicates the most of audit firms are Big4. The mean company size is 8.67.

Also, the decrease in the Mean value of Fraud than its Std. Deviation, by a lower percentage compared to the decrease in the Mean value of Audit quality than its Std. Deviation, implies the presence of volatility and Anomalous values in Audit quality variable (Nashwan, 2005).

**Table (2) Correlation between Audit quality and Fraud:**

		Audit Quality(MTB)
Fraud	Pearson Correlation	0.020-
	Sig. (1-tailed)	0.347
	N	400

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

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

Table (2) presents the correlation matrix of the variables, from which, it is observed that the correlation between Audit quality and Fraud is -0.020. The correlation analysis show weak insignificant relationship between Audit quality measured by MTB and Non-fraudulent financial statements, because of the significance level is (0.347) which is higher than 0.05.

**Table (3) The Correlation between Audit quality and Fraud with firm size as control variable:**

Statute	Audit Quality(MTB)		
<b>The relation between audit quality and fraud without Log size firm as Control variable</b>	Fraud	Pearson Correlation	0.020-
		Sig. (1-tailed)	0.347
		N	400
<b>The relation between audit quality and fraud with Log size firm as Control variable</b>	Fraud	Pearson Correlation	0.020-
		Sig. (1-tailed)	0.347
		N	400

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

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

Table (3) presents the correlation matrix of the variables using Partial Correlation with Log Firm size as a control variable, from which, it is observed that the correlation between Audit quality and Fraud is (-0.020), that it does not differ in the case of the correlation between these variables but without the control variable. As well as the correlation analysis show the same weak insignificant relationship between Audit quality and Non-fraudulent financial statements with Log firm size, as the significance level does not change at (0.347) which is higher than 0.05.

**Table (4) The Correlation between Audit quality and Fraud with Audit firm size as control variable:**

Statute	Audit Quality(MTB)		
<b>The relation between audit quality and fraud without Audit Firm Size as Control variable</b>	Fraud	Pearson Correlation	0.020-
		Sig. (1-tailed)	0.347
		N	400
<b>The relation between audit quality and fraud with Audit Firm Size as Control variable</b>	Fraud	Pearson Correlation	0.018-
		Sig. (1-tailed)	0.363
		N	400

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

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

Table (4) presents the correlation matrix of the variables using Partial Correlation with Audit Firm size as a control variable, from which, it is observed that the correlation between Audit quality and Fraud is (-0.018), that is less than the correlation coefficient in case of the correlation between these variables but without the control variable. the correlation analysis show weak insignificant relationship between Audit quality and Non-fraudulent financial statements with Log firm size greater than the weak insignificant relationship in the case of the absence of control variable, where the significance level is (0.363) compared to (0.347), which is higher than (P-value 0.05).

#### **Dissuasions of the results:**

The correlation analysis show weak insignificant negative relationship between audit quality measured by MTB and the existence of the fraud in the financial statements, where the significance level is (0.347) which is higher than 0.05 and the Coefficients of Correlation is (0.020-). This indicates that there is no the negative relation between audit quality and the existence of the fraud in the financial statements. Therefor the research hypothesis is not accepted, that is different from several studies in the previous literature (Saladrigues and Grano, 2014; Wudu, 2014; Tyokoso and Tsegba, 2015; Birjandi *et al.*, 2015; Caskey and Laux, 2015), these difference in the results is related to the environment of professional practice in the emerging counties such as Egypt, and the absence professional regulating bodies of the audit profession in such countries.

Also the results show that firm size has no significant effect on the relationship studied, where the significance of the relationship didn't change when firm size is added as a control variable where significance level remained constant at (0.347) . This results differs from the previous literature (Yasar, 2013; Okoli *et al.*, 2013; Okolie and Izedonmi, 2014; Tyokoso and Tsegba, 2015; Omid, 2015), the contradicted findings is related to the environment of professional practice in the emerging counties such as Egypt and the inefficiency of its capital market.

Finally, the partial correlation analysis show, Audit firm size has no significant effect relationship studied. Where the significance of the relationship increased from 0.343 to 0.363 on adding audit firm size as a control variable. That differ from several studies in the previous literature (Yasar, 2013; Okoli *et al.*, 2013; Okolie and Izedonmi, 2014; Tyokoso and Tsegba, 2015; Omid, 2015) but it agrees with (Bills *et al.*, 2015). the contradicted findings is related to the environment of professional practice in the emerging counties such as Egypt ,where legal systems is weak and no proper sanctions applied on the violators. Where the effect of audit firm size in enhancing audit quality is related to the legal systems applied in different countries.



## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions:**

The researcher concludes from the foregoing results; firstly with regard to audit quality, we can define it as the ability of auditors to detect and report on the material misstatement, in addition to its dependency on many determinants related to audit firm which consists of; industrial specialization, the size of audit firm, the commitment with mandatory rotation policy. As well the determinants of auditors themselves and the audit team on the audit quality, which consists of; Technical training and proficiency of the auditor and the various members of the audit team and the development of competencies and different skills, as well as maintain auditor on mental independence to perform his work objectively and impartially, in addition to taking into account the characteristics of professional practice environment

Finally as result of absence of a single direct measurement of audit quality, many indicators can be relied upon in that regard, they can be divided into; Indicators related to auditors which are: appropriateness of auditor opinion, experience and independence and the extent of industrial specialization and performance consultancy services. And indicators related to audit firm which are: audit firm size, audit fee, the auditor's experience, the materiality of the client. Finally indicators related to client companies, represents: level of unconditional accounting conservatism and earning management.

And in the same way with regard to Fraud, it is considered one of main motivations for the breakdown of companies and the exacerbation of financial Scandals, it can be defined as material misstatement in the financial statements, resulting from misleading financial statements prepared by management to achieve their personal interests, or the employees of embezzlement of assets. Also there are several major motivations for committing fraud such as; financial pressures, weakness of internal control structure and the ineffectiveness mechanisms of corporate governance. Fraud fields can be summarized as follows; manipulations or modifications in accounting records, non-representation or the intentional omission of certain transactions, the wrong application of the accounting principles

With regard to measurement of fraud in financial statements, we can depend on three models based on the factors associated with committing fraud; which includes Fraud Triangle, Fraud Diamond, and Fraud pentagon. As well as we can depend on three other models which are; Altman Z-Score, P-Score, Beneish M-Score.

Finally By analyzing the previous literature, it is illustrated that there is negative relation between audit quality and the existence of fraud in financial statements, in addition to the significant effect of audit firm size and the firm size on the relationship in question. While the empirical result of this research shows the absence of significant negative relationship between

audit quality and the existence of fraud in financial statements, also shows no effect for both; the audit firm's size and the firm size on the relationship in question, on applying the study in emerging economy as that of Egypt. This contradicted results stems from the environment of the study where Egypt suffers from several defects in the environment of professional practice, as the absence of professional regulating bodies to supervise the work of the auditors and the quality of the audit process.

### **Recommendations:**

The importance of the existence professional regulating bodies for the audit profession in Egypt, in order to activate the legal responsibility of auditors with both its types of criminal and civil responsibility. And also auditors' Professional and social responsibility. The necessity of de-listing companies from Egyptian Stock Exchange, when the auditors detect cases of fraud.

The importance of the availability of a database updated annually with Egyptian Financial Supervisory Authority (FSA), which includes the classification of the fraudulent companies and Non- fraudulent companies like global stock markets. Audit firms must train its auditors on the use of Decision Support tools, specially Fraud Models and the Mathematical models, when detecting the fraud in the financial statements. Egypt must support FSA role in monitoring on Audit Firms Quality and listed companies in Egypt.

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