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**Determinants of restatement of Egyptian Companies`  
Financial Statements and the Market Reactions: An  
Empirical Study**

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## **Determinants of Restatement of Egyptian Companies' Financial Statements and the Market Reactions: An Empirical Study**

### **Abstract**

**Purpose** – The purpose of this study is to identify the determinants of restatement in the Egyptian companies and its market reactions and examine the role of IFRS adoption in managing the restatement of financial statements to enhance the relevance and reliability of an entity's financial statements. More specifically, the researcher tried to explain the financial restatement according to IFRS.

**Methodology/Approach** – The researcher depended upon the positive approach in analyzing the problem, explaining its causes and predicting the behavior of this phenomenon in the future.

**Findings** – The results indicated that determinants of restatement in the Egyptian firms has a significant effect on the reclassification and errors as restatement classifications; but has insignificance effect on the standard application. Also, restatement has a significance effect on the stock prices; the determinants of restatement have a significant effect on income change.

**Research Scope**– This study is applied on a sample of companies listed on the Egyptian Stock Exchange. All study data results for Egyptian companies only.

**Importance** – This study contributed to the literature by determining the determinants of restatement in the Egyptian companies. Moreover, this study exhibits the role of IFRS and the effect of accounting quality on the performance quality. Also, it shows the relationship between restatement and market reaction in the Egyptian companies.

**Key Words:** IFRS, IAS, Restatement, Fraud, Errors, Irregularities, Motivations for restatements, Revenue Recognition, Corporate Governance and Market Reactions.

## **1. Introduction**

One of the essential keys to ensuring market efficiency is high-quality financial information. The disclosure of such information will help the users to effectively allocate their resources in the capital market. So, financial statements, as the primary source of information, become an important element in firm information disclosures. Stakeholders often depend on the information provided in financial statements to estimate the vision of a company, assess its market value, and make strategic decisions. The transparency of financial statements is secure through full disclosure and by providing fair presentation of useful information necessary for making economic decision to a wide range of users. Therefore, it is assumed that the restatement of financial statements has a negative impact on the stock market and the investors, which may lead to a decline in the firm value, reputational damage and losing the investor's trust. Financial restatements have a rapid increase in recent years. Restatements are serious failures of company reporting which cause investors' doubts about the restated firms' financial reporting credibility. As restatements usually report bad news such as overstatements of revenues, profits turning to losses or other accounting irregularities, the restatements consequences are often severe

In this respect, the main questions of this study are:

- What are the determinants of restatement in Egyptian companies?
- What are the motivations of Misstatement?
- What is the market reaction toward restatement in Egypt?

The objective of this study is to identify the determinants of restatement in the Egyptian companies and its market reactions and examine the role of IFRS adoption in managing the restatement of financial statements.

The research derives its significance from both scientific and practical point of view:

**In the Scientific view**, this study provides research strategy allowing the identification of academic articles addressing restatements and its effect on the stock markets, and recognition to some issues in the connection between the restatement and financial markets and the recent updates

**In the Practical view**, high quality financial statement is the most important thing that we can expect from companies. So, this study is beneficial for both investors and managers: **Managers** will try to reduce at maximum restatements by the establishment of strong internal controls and **Investors** may perhaps make enhanced investment decisions, whether those investors are buying stocks or bonds or making private investments, they need to know the truth. To achieve the objective of the research; the researcher will depend upon the positive approach in analyzing the problem, explaining its causes and predicting the behavior of this phenomenon in the future.

The remainder of this research is organized as follows: section 2 Literature review; section 3 Theoretical Framework; section 4 Empirical Study; section 5 Conclusion, Recommendation, and Suggestions for Future Research.

## 2. Literature Review

The essential motivations for earnings manipulation are the desire to raise external financing at low cost and to avoid debt covenant restrictions

(Dechow et al. 1996). According to (Agrawal & Chadha 2005), the likelihood of restatement is significantly lower in companies whose boards or audit committees include an independent financial expert; and it is higher in companies whose CEO belongs to the founding family. The effect of restatement is to increase the likelihood of turnover and external prompting of restatement is positively associated with CEOs and CFOs turnover. Also, restatement represents significant threats to organizational legitimacy that requires an organization to respond decisively for example; by removing stigmatized leaders to protect its access to key resources (Arthaud-Day et al. 2006). In addition, restatement takes place twice as often at smaller companies as they do at larger companies. Corresponding with it, material weaknesses are twice as prevalent at smaller companies as they are at larger companies (Turner & Weirich 2006). In the study of (Plumlee & Yohn 2010) internal company error is the primary cause to which company disclosures attribute restatements, although a significant portion of restatements is attributed to accounting standards. (Badertscher & Burks 2011) provided an understanding of the degree of the firm's failure to provide timely progress updates and delay announcements of earnings and regulatory filing by examining the length of disclosure lags around restatements, and examining the causes of disclosure lags estimate whether the reforms would address the root causes of the lags. The study discovered that lags increase when a restatement includes multiple long-standing or extensive errors although fraud is certainly the most economically important cause of lags. Material restatement firms with rapid CEO/CFO turnover and auditor dismissal experience a smaller change in external financing choices, consistent with such firms being able to regain investors' trust (Chen et al. 2013). According to (Chi & Sun 2014) decreasing the likelihood of restatement reoccurrence within organization is critically influenced by the

management, quality of auditors, and internal control systems; a decline in the probability of future restatement should be positively related with performance of firms' stock market. Also, non-reoccurrence firms, relative to reoccurrence firms, have significantly higher market-adjusted returns over three years after restatement announcements and a decrease in the probability of reoccurrence of financial restatement is associated with an increase in stock market returns. There is an association between the timeliness of restatement detection and disclosure and the greater financial reporting credibility after restatements (Hirschey et al. 2015). Restatement of financial statements has a direct impact on information asymmetry (Rahmanian et al. 2016). (Wans 2020) stated that restatements are lower for firms that are more aware of corporate social responsibility but higher for firms with less CSR awareness. Also, investors react less negatively to restatement by firms that are more CSR responsible. Audit quality was negatively associated with restatement period and the audit committee characteristics and the audit report lag negatively associated with the period of restatement (Sambuage et al. 2021). Restatement companies that are larger and reported higher pre-restatement profitability are associated with more negative post-announcements returns, as are companies whose restatements decreased reported income (Hirschey et al. 2005). (Jarry 2013) stated that there is typically a negative impact on net income following a required restatement by a company. Also, the industry is not related to whether a company will have a negative market reaction, but more probable than not it will be negative. In (Hennes et al. 2014) study, after more severe restatements, auditors are more probable to be dismissed but that the severity influence is mainly attributable to the dismissal of non-big four auditors rather than Big 4 auditors. In the (Mun 2021) study, investors responding in a positive manner to restatement became less positive in

their response to subsequent restatements as more restatements are announced while those respond in a negative manner became less negative to subsequent restatements.

### **3. Theoretical Framework**

#### **3.1. Background of restatement of financial statements**

Taking into consideration the rapid increase in the financial restatements, and the various restatement definitions, the researcher will focus on definitions and classifications of restatement based on several items. Also, the researcher will exhibit the main motivations of misstatements and causes of restatement with illustration of the IFRS role in developing accounting quality.

##### **3.1.1. The Definition of Restatement**

A correction of previously issued financial information that is inaccurate. In many cases, the restatement is a result of governance weakness and the breakdown of the management reward system. In the most severe cases, accounting restatements can lead to the discovery of horrible accounting frauds, for instance in the cases of Enron and WorldCom (Agrawal & Chadha 2005)

The restatement of financial statements means that financial information is provided before it is incorrect. The restatement of financial statements reduces the quality of financial reports, thus confusing users of the information to make investment decisions, which extremely affects the efficiency of resource allocation in the capital market (Firth et al. 2011). "Management has to correct statements made in any filing if the statements "are later discovered to have been false and misleading from

the outset, and the issuer knows or should know that persons are continuing to rely on all or any material portion of the statements".

### **3.1.2. Classifications of Restatement**

Restatement of financial statements can be classified based on several items: severity, initiator, and other classifications.

For the severity classification; restatement should be differentiated from fraud, where Fraud is used to describe a fraction of a restatement sample that has been caused by intentionally made mistakes in some studies (Sievers & Sofilkanitsch 2018). Also, errors must be differentiated from irregularities; irregularities are restatements that embody one of the following aspects:

- Irregularity or fraud is used to describe the restatement;
- The SEC or Department of Justice are involved;
- An independent investigation is involved in the disclosure

And to distinguish between revision and reissuance, restatements can be subdivided into little r (revisions) and big R (reissuances) restatements. Little r firms are more profitable, provide some evidence of more robust corporate governance, and have higher audit quality than big R firms. It is also equipped with lower free cash flows, higher board expertise, and experience a higher CFO tenure compared to big R firms. Little r firms are also less complicated, less expected to have material internal controls weaknesses, less expected to use a specialist auditor compared to big R firms (Tan & Young 2015)

For the initiator of restatement classification (the party that makes the restatement or the requirement of a correction public). Restatements initiated by the auditor or the SEC in the case of the previously issued financial statements are incorrect and the auditor detects that he should advise his client to make appropriate disclosures of the newly discovered facts and their impacts on the financial statements to persons who are interested in the financial statements and auditor's report. If the auditor brings the issue to the auditor committee and they fail to follow his advice, only then he is required to disclose the information to SEC (Jorgenson 2004).

### **3.2. Characteristics of Companies that restate its financial statements**

There are fundamental characteristics for the restated firms, they are smaller, less profitable, have higher debt and slower growth compared to non-restatement firms (Scholz, 2014). Also, restatement companies often have diffuse ownership, lower growth in earnings, and fewer income-increasing GAAP alternatives available (Richardson et al. 2002). In addition, firms restating earnings have high market expectations for future earnings growth, more frequent external financing needs, and raise more massive amounts of cash (Efendi et al. 2007).

Managers' misreport to facilitate acquisitions and firms misstating their financial statements are more likely to make stock based acquisitions after the start of the misstatement (Kravet et al. 2015). Besides, Firms experience fewer restatements, higher accruals quality, and fewer internal control violations when these firms have a high-quality workforce. These results are noticeable when high-quality employees are located at the firm's headquarters (Call et al. 2017).

Moreover, Location, geographic distance, and religious beliefs have a significant role because honesty and risk aversion are deeply embedded in religion; therefore, managers in religious areas prefer real earnings management over accruals manipulation (McGuire et al. 2012).

### **3.3. Causes of Restatement**

There are many reasons for restatements, including accounting complexity, second-guessing of management judgment, and proliferation of accounting rules and implementation guidance, application of the Sarbanes-Oxley Act of 2002 (SOX) section 404 requirements, transaction complexity, and earnings management ( Bardos et al. 2013).

So, each restatement can be classified to one of the following four causes:

- a) Internal company error (Internal Error).
- b) Intentional manipulation (Manipulation).
- c) Transaction complexity (Complexity).
- d) Accounting standards (Standards).

For restatement attributed to some characteristic of the accounting standards, the researcher also considers whether the companies' disclosures suggest that the restatement is most consistent with either (1) a lack of clarity in the standard and the proliferation of the accounting literature because of the lack of transparency in the original standard; (2) the use of judgment in applying the standard; or (3) the misapplication of detailed and complex rules.

A restatement is classified as being caused by **Internal Error**. The disclosures suggest that the error was because of a “book or records deficiency.” A simple misapplication of an accounting standard and the company disclosures did not discuss that these errors were intentional or because of any notable characteristics of the accounting standard or the transaction (Plumlee & Yohn, 2010).

A restatement is classified as being caused by **Manipulation**. The disclosures suggest that earnings manipulation was involved if there is an SEC enforcement action or shareholder class-action lawsuit related to the restatement, or if any news articles indicate that the restatement was associated with earnings manipulation. Essentially, if at the time of the restatement, some public suggestion implies that the error was intentional, it is classified as such (Plumlee & Yohn, 2010).

A restatement is classified as being caused by **Complexity** if the disclosures suggest that the transaction itself created difficulties in the accounting that caused the error (Plumlee & Yohn, 2010).

A restatement is classified as being caused by **Standard**. The disclosures suggest that a misapplication of an accounting standard caused the error, and some factors related to the accounting standard contributed to the restatement (Plumlee & Yohn, 2010).

### **3.4. Restatement According to IFRS**

International Financial reporting Standards are distributed by the International Accounting Standards Board (IASB) in London. IASB aims at developing international accounting standards of high quality for the benefit of accounting harmonization worldwide (Gjerde et al. 2008).

The value of restatements due to differences in accounting standards (IFRS versus U.S. GAAP) had no significant difference when the rule of law is high in the international market. Also, firms tend to have smaller restatement amounts or less earnings manipulation if it has better law enforcement and higher traditions of law and order. The quality of financial reporting is affected by the country's legal rules and quality of law enforcement for the capital markets of the reporting entity rather the use of IFRS or U.S. GAAP (Shelton et al. 2011).

International accounting standard 8 (IAS No.8) is concerned three different aspects of performance, all of which affect the income statement and the measurement of profit:

- 1) Accounting policies.
- 2) Changes in accounting estimates.
- 3) Errors.

The goal of IAS No. 8 Is putting the standards for selecting, applying, and changing policies of accounting, together with the accounting treatment and disclosure of accounting policies changes, changes in accounting assessments, and the errors corrections. IAS 8 is anticipated to improve the reliability and relevance of an entity's financial statements and the comparability of those financial statements over time and with the financial statements of other entities (IAS 8, 1).

The Main Requirements of IAS 8 include:

- Apply the IFRS that addresses the specific issue to determine the accounting policies.

- In case of the absence of IFRS, the improvement of an accounting policy shall be based on providing information characterized by reliability and relevancy. IFRSs dealing with similar and related issues have a primary consideration, and then followed by the definitions, criteria of recognition, and concepts of measurement for assets, liabilities, income, and expenses in the Framework.
- Similar transactions, events, and conditions must apply consistent accounting policies to unless an IFRS provides otherwise.
- Upon the initial adoption of IFRS, a change in accounting policy is made subsequent to the particular transitional provisions in that standard. If there are no transitional provisions, the standard is applied retrospectively unless it is impracticable to do so.
- If the voluntary changes in accounting policy provide more relevant and reliable information, they are to be made. It accounted for retrospectively unless it is impracticable to do so.
- Accounting estimates changes, such as depreciation, growth in the useful life of assets, shall be accounted for prospectively.
- Errors of previous period are corrected by restating comparative information and opening retained earnings of the earliest previous period presented unless it is impractical to do so.

### **3.5. Likelihood to Financial Restatement**

As it's mentioned in previous chapters, publicly traded company may restate its financial reports, after disclosing it, if the previous statements include material errors. The companies with high expectations for future earnings growth and with higher levels of outstanding debt have a great

probability to restate its disclosed reports, essentially, due to the pressure of the capital market; the restating companies are encouraged to adopt destructive accounting policies (Richardson et al. 2002).

On the other hand, there are other factors that might make accounting restatement more likely. For example, companies act unethically as a result of stresses from executive incentives and poor performance of company. The aggressive accounting behavior adoption that can lead to subsequent restatements can considerably influenced by the compensation packages of CEO especially the option component.

Four conditions should be met for the previously audited financial statements are more possible to be restated. These four conditions are as follows (Eilifsen & Messier, 2000)

- 1) A material misstatement resulted from some types of inherent risk.
- 2) Weakness in the internal control leading to neither prevent nor detect the misstatement.
- 3) Failure of the external auditor to detect the misstatement and the financial statements are issued.
- 4) Later, the material misstatement is discovered and necessitates the correction, restatement, and reissuance of the original financial statements.

Regarding the areas of financial statements that are mostly subject to subsequently restatement, these areas are in the following five groups.

- Revenue recognition: restatements due to improper revenue accounting (revenue was improperly recognized and/or fabricated revenue were recognized). A failure to properly interpret sales

contracts for the hidden rebate, return, barter or resale clauses lead to revenue restatements.

- Core expenses: any restatements including correction of continuing operating expenses.
- Non-core expenses: any restatement involving correction of expense (or income) items that resulted from accounting for non-operating activities.
- Reclassifications and disclosures: any restatements containing reclassification or disclosure issues, that usually doesn't affect reported net income.
- Underlying events: conditions underlying some misstatements.

### **3.6. Determinants of Financial Restatement**

Restatement has different determinants, the researcher tries to exhibit the most significant determinants and classifies them to corporate governance related determinants and Firm characteristics related determinants as follow:

#### **3.6.1. Corporate Governance**

Good corporate governance is central to the effective and efficient process of the corporation, and it also plays a significant role in protecting shareholders' interests and maximizing shareholder value. Two signals are sent by restating firms to market participants. The first signal deals with the firm's estimated future cash flows and the second signal deals with the uncertainty or quality of those future cash flows based on the supposed quality of the firm's corporate governance

(Kryzanowski & Zhang, 2013). The effective corporate governance is a constraining factor for restatement. Governance mechanisms supervise the policies and procedures that are prepared and, in this manner, ensure their effectiveness in interpreting trustworthy financial reports to market participants, among other things (Habib et al. 2021). When governance fails, all parties bearing governance responsibilities are expected to react to such events, so that, the occurrence of restatements also grants a unique ex-post assessment of the governance function.

My research selects and discusses a comprehensive range of corporate governance variables:

- Audit firm and audit engagement characteristics.
- Board structure attributes and Audit committee attributes.
- CEO related factors
- Ownership structure variables

#### **36.1.1. Audit firm characteristics**

- **Audit firm attributes:** Audit quality is the ability of an auditor to detect and to report misstatements. The audit firm size is the first category of auditor quality variables. Large auditors with a greater number of clients are incentivized to achieve high-quality audit because if audit fails, they have more to lose (DeAngelo 1981).
- **Auditor economic dependence:** Regarding the relatively dependence on fees received from a company, previous research has provided contradicted results. The higher (lower) audit fees are likely to be associated with a higher (lower) level of audit service

and examination which may result in lower (higher) rates of financial restatement (Asthana & Boone 2012).

- **Audit opinion and audit report timeliness:** The issuance of modified audit opinions (MAOs) by auditors expresses their concerns to, as well as disagreements with, management regarding potential financial misstatement. Following this opinion, even the least severe form of MAO, i.e., assurance and/or descriptive paragraph in an unqualified audit report, can expect consequent financial restatements (Czerney et al. 2014).
- **Auditor change:** An auditor change indicates financial reporting risk, which could result in either a lower or a higher likelihood of a misstatement. An external auditor tries to diminish litigation risk by adopting strict internal control in excess of the new client's plan, which develops financial reporting quality and, therefore, diminishes the possibility of consequent restatements (Defond & Subramanyam 1998).
- **Auditor tenure:** Longer auditor tenure can increase auditors' economic bonding and, thus, have a harmful effect on audit quality, which might be later expressed as an increase in financial restatements (Habib et al. 2021).

#### 3.6.1.2. Board structure attributes and CEO related factors

- **Gender diversity:** The gender diversity of firm executives also matters with respect to financial reporting. Women are more likely to accept ethical behavior and are less motivated by self-interest than are men in the workplace: a result of mutual and nurturing personality traits (Plockinger et al. 2016).

- **Board structure:** Board independence and board size are two important board-related variables expected to affect financial restatements (Pelled et al. 1999).

**Board size:** firms with a large board size have lower earnings management practices and better financial reporting quality because of the higher degree of monitoring by deploying a significant number of experienced directors. Board size affects negatively on earnings management (Hasnan et al. 2020).

**Board independence:** the board independence related to the number of independent directors. The presence of independent directors can reduce the conflict of interests and conserves the board independence to control which leads to a fair management judgment (Hasnan et al. 2020).

**Multiple directorships:** it means that a director holds a board position in other firms. Multiple directorships may either provide directors with better experience which enhancing their effectiveness to supervise or making them too busy to effectively monitor management (Hasnan & Marzuki 2017).

- **CEO duality:** Increasing the conflict of interest in the organization and role ambiguity are caused by holding both CEO and Chairman Positions by an individual, in this manner, weakening the internal corporate governance system. CEO duality would decrease board effectiveness and, particularly, the effectiveness of the audit committee in monitoring the financial statements quality (Habib et al. 2021).
- **Executive compensation:** Executive compensation plans have a strong relationship with manipulation of earnings. Companies

whose CEOs have more stock options are more likely to file earnings restatements. Hence, managers might manage the results of the company to look more favorable than the actual performance, to keep a constant level of bonuses and maximize the variable compensation value which may also affect the occurrence of financial restatement (Burns & Kedia, 2006).

#### **3.6.1.3. Audit committee attributes**

- **Audit committee structure:** An audit committee, a subcommittee of the board, supervises the financial reporting and auditing substances of a company. The audit committee members are all from the board, and more than half members should be independent directors. Moreover, audit committee should include at least one independent director of accounting professional, this is effective to improve the quality of accounting information and encourage the financial restatement opportunity ( Habib et al. 2021). Audit committee size is rarely imagined and investigated separately. Number of members (size) represents the authority and resources being allocated to audit committees. Consequently, it is combined with other structure characteristics (independence and expertise) to describe the quality of audit committees. Audit committee expertise is important in explaining the financial restatement occurrence and, audit committee financial expertise had a positive association with earnings quality which means that there is an important negative relationship between audit committee financial expertise and the occurrence of financial restatement (Hasnan et al. 2020).

#### 3.6.1.4. Ownership structure variables

Ownership structure depends on ownership concentration and ownership nature. Both ownership concentration and ownership nature affect the way that managers use to run the business of the company reporting process

- **Ownership concentration:** In modern companies, ownership have a tendency to be more and more decentralized, so owners' power is increasingly in name, actually the companies that the managers control. As a result, the unsupervised managers can pursuit their own interests by sacrificing shareholders' interests. For that reason, shareholders should supervise the companies operating (Zhang, 2012).
- **The nature of controlling shareholders:** The relatively low governance efficiency is significantly increasing the likelihood of financial restatement in state-owned listed companies. The features of company's ownership structures play an important role in financial restatement literature. First, with few exceptions, shareholders invest in firms to achieve financial goals, while financial restatements significantly reduce the value of the firm. Second, the degree of shareholding confers upon owners the power to exercise a range of influence on managers' decisions, including those affecting financial reporting quality. Third, firm owners are heterogeneous (Habib et al. 2021).

### 3.6.2. Characteristics of the Firm

There are several items of firm characteristics such as structural, monitoring, demographical, and performance characteristics. These firm characteristics are associated with the probability of financial restatement.

- **Firm size:** For the relatively accounting system imperfections, small companies are more expected to make financial restatement; while large companies use restatement as a tool to send company information to outside (Zhang 2012).
- **Firm age:** It has been identified as an attribute that influences on the financial statements quality. As time passes, firms gain more experience and are more probable to develop their internal control procedure and governance systems which include decreasing the probability of financial restatement (Hasnan et al. 2020).
- **Firm performance:** The likelihood of financial restatement was closely related to performance and financial condition, the better performance, the lower likelihood. That is earnings management is one of the key reasons of financial restatement. The profitability ratio is significantly related to the probability of fraud in financial statements. So, firms with high performance have a higher tendency to manage the firms' earnings (Hasnan et al. 2020).
- **Firm leverage:** It is defined as the ratio of a firm's debt to its assets. Firms with high leverage levels are expected to have a lower tendency to announce restatements as a result of less probability of earnings management practices. Briefly, there is a significant positive association between financial reporting quality and leverage (Hasnan et al. 2020).

### **3.7. Accounting Restatement and Market Reaction**

Accounting irregularities, errors, aggressive accounting practices, all of these lead to an adjustment of a company's previously audited and published annual report. Consequently, the number of financial reporting restatement has increased significantly in recent years providing an indicator of audit failure.

From the investor's point of view, restatements are bad signals; a negative market reaction is the most immediate consequence of a restatement announcement. Based on resources allocation efficiency, financial statements prepared by managers who have information asymmetry with other stakeholders are verified by auditors. The market reaction to companies audited by restatement-related auditors is more negative than it is for companies audited by non-restatements-related auditors, and the returns are significantly more negative for reports of clients audited by Big Four restatement-related auditors than they are for clients of Big four non-restatement-related auditors (He & Chiang, 2013). Restatements could; ( Callen et al. 2006).

- 1- be a signal for investors that there are maybe other errors in the accounting system and could be an indication of the accounting system weaknesses,
- 2- be the consequence of opportunistic managerial behavior, and
- 3- Have associations for future cash flows and from the time when future cash flows are a determining factor of stock prices this will influence the stock price.

There are noticeable declines in market values and increase in information asymmetry at the announcements of accounting problems

related to revenue recognition issues. Then, this proposes that accounting problems related to revenue recognition issues to be reasonably more important than accounting problems related to other issues for the market and dealer perceive. There are three factors, if they are available, a significant decrease in stock prices can be identified:

- 1) Accounting system weakness.
- 2) A downward revision of future cash flow expectations encouraged by the newly restated information.
- 3) Opportunistic managerial behavior as evidenced by the attempt to report higher profits than justified.

Involving the above three factors, the market reacts negatively to income-decreasing restatements.

Market reactions to financial restatements differs based on who stimulates the restatement, if restatement had prompted by an external body such as SEC or the auditor of the company , the problem is likely to be severe and it will be an indication that the company needs to change its governance structure. Also, if the outside entities discover errors/ frauds in the companies' financial statements, the reputation loss and loss of currency in the market is probable to be more pronounced for managers and directors of a company (Gondhalekar et al. 2012).

Finally, the market reaction is significantly negative during the year prior to the announcement, at the time of announcement, and the negative reactions continues for four years after the announcement. So, financial restatement forces significant loss on the shareholders of the company and hence on the company (as a result of cost of capital increase) for at

least four years before company credibility returns to a pre-restatement level (Gondhalekar et al. 2012).

## **4. Empirical Study**

### **4.1. Hypotheses:**

Based on the theoretical framework provided in this chapter, the study seeks to provide an understanding of what factors lead the firm to restate its financial statements after publishing them. In this respect, the study tests three hypotheses according to three types the restatements: reclassification, correcting errors, and applying accounting standards. The first three hypotheses representing determinants of restatement are as follows:

**H1:** there is a significant effect of determinants of restatement on restatement that reclassifies items in the financial statements.

**H2:** there is a significant effect of determinants of restatement on restatement that corrects an error in the financial statements.

**H3:** there is a significant effect of determinants of restatement on restatement that account for items in the financial statements according to new accounting standards.

It is expected that any restatement may have negative impact on the share price of the restating company. However, some exceptions may be found in the empirical test because the restatements that correct an error resulting an increase in restated income may result in positive impact on share price. On the other hand, mandatory restatement to adjust comparative numbers according to the application of an accounting standard may not affect share prices. Accordingly, the fourth hypothesis

concerning the market reaction does not expect a direction for the relationship of restatements and share prices.

The fourth hypothesis is written as the following.

**H4:** there is a significant effect of restatement on the stock prices change.

## 4.2. Study Models

### 4.2.1. First Model

$$R_t = b_0 + b_1 AU_t + b_2 BI_t + b_3 IO_t + b_4 FF_t + b_5 N_t + b_6 LI_t + b_7 T_t + \epsilon_{i,t} \quad (1)$$

**Where:**

<b>R:</b>	Restatement with its three types “errors, reclassification, or standards application”	<b>AU:</b>	Audit firm size
<b>BI:</b>	Board independence	<b>IO:</b>	Institutional ownership
<b>FF :</b>	Free float	<b>N:</b>	Firm size
<b>LI:</b>	Firm leverage	<b>T:</b>	Time lag
<b>t:</b>	The year	<b>€:</b>	Random error

### 4.2.2. Second Model

$$P = b_0 + b_1 E_t + b_2 RC_t + b_3 S_t + \epsilon_{i,t} \quad (2)$$

**Where:**

<b>P:</b>	Change in stock price	<b>b<sub>0</sub>:</b>	Model constant
<b>RC:</b>	Reclassification	<b>E:</b>	Error
<b>S:</b>	Standards application	<b>€<sub>i,t</sub>:</b>	Random error
<b>b<sub>1</sub>- b<sub>3</sub>:</b> Beta coefficients of model independent variables			

### **4.3. Sample and Data Collection**

The required data are mainly collected from the financial statements published on the following sites:

- 1) The Egyptian Stock Exchange: <http://www.egx.com.eg/>
- 2) Mubasher: <http://www.mubasher.info/countries/eg>

The study period covers financial years from 2000 to 2019. And from all companies listed in the Exchange stock market, and after excluding 11 banks and 17 financial companies, 36 companies were selected and meet the above criteria. This leads to a final first sample of 36 restated firms with 684 firm-year observations over fiscal years from 2000 to 2019. The 36 sample firms are distributed across 13 different sectors. The researcher takes another sample of 10 non-restated firms with 40 firm-year observation, to compare between the two samples. This sample is distributed across different sectors.

**Table (1): A list of Companies Used in the Empirical Study**

No.	Company Name	Sector
1	Alexandria flour mills	Food, Beverages & Tobacco
2	Middle and west delta flour mills	Food, Beverages & Tobacco
3	Upper Egypt flour mills	Food, Beverages & Tobacco
4	North Cairo flour mills	Food, Beverages & Tobacco
5	General company for silos & storage	Food, Beverages & Tobacco
6	Eastern Company	Food, Beverages & Tobacco
7	Misr oils and soaps	Food, Beverages & Tobacco
8	Suez cement	Building Materials
9	Lecico	Building Materials
10	GEMMA	Building Materials
11	Arabian Cement	Building Materials
12	South valley cement	Building Materials
13	Misr Beni suef cement	Building Materials
14	Pachin	Basic Resources
15	Ezz steel	Basic Resources
16	Egyptian financial & industrial	Basic Resources
17	Misr chemical industries	Basic Resources
18	Abu Qir fertilizers	Basic Resources
19	Egypt Aluminum	Basic Resources
20	Touristic Enterprises Company	Travel & Leisure
21	Egyptian Resorts	Travel & Leisure
22	Trans Oceans tours	Travel & Leisure
23	Wadi Kom ombo	Contracting & Construction Engineering
24	Giza General contracting	Contracting & Construction Engineering
25	Nasr co. for civil works	Contracting & Construction Engineering
26	Delta construction & rebuilding	Real Estate
27	Madinet Nasr housing	Real Estate
28	Mena touristic investement	Real Estate
29	Arab cotton ginning	Textile & Durables
30	Dice	Textile & Durables
31	Media production city	IT, Media & Communications services
32	We	IT, Media & Communications services
33	GB auto	Industrial Goods, Services & Automobiles
34	Egypt gas	Utilities
35	Nile pharmaceuticals	Healthcare & Pharmaceuticals
36	Egytrans	Shipping & Transportation Services

#### **4.4. Statistical Analysis of Data**

Data analysis aims to analyze the data of the selected firm-year observations in order to test the hypotheses. To test study hypotheses three statistical procedures have been used; Descriptive statistical analysis, T-test and regression analysis. The descriptive analysis summarizes main features of data set. Finally, regression analysis aims to explore the relationship between a dependent variable and an independent variable. Since there are three statistical procedures that are employed throughout the study, this section is divided into three parts; each part includes a brief explanation of each technique in addition to the empirical results of using the technique. Statistical Package for the Social Sciences has been employed to analyze the sample data. Before testing the research hypotheses through inferential statistics, descriptive statistics of the data set is presented.

##### **4.4.1. Descriptive statistics of total sample study:**

This section provides descriptive statistics for the variables that will be used to test the hypotheses. In the next table, descriptive statistics for variables are displayed. Descriptive statistics make it possible to summarize the central tendency of the data of the variables

**Table (2) Descriptive Statistics**

	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Restatement	0	1	.84	.369
Reclassification	0	1	.60	.491
Errors	0	1	.39	.489
Standard application	0	1	.12	.328
Stock price change	-67.6%	448%	55%	324%
Firm size	12.5	23.39	20.39	1.89
Firm leverage	0.34%	164.80%	53.93%	27.9%
Time lag	7	262	81.51	29.659
Audit firm size	0	1	.24	.427
Audit committee	0	1	.99	.113
Board independence	0.00%	42.80%	17.56%	16.28%
Institutional ownership	5.00%	97.00%	66.88%	22.75%
Free float	3.00%	79.30%	22.45%	14.10%

**4.4.2. Regression analysis:**

Regression analysis examines the relationship between a dependent variable and an independent variable. Further, this analysis is used to discover the significance and the predictive power of a regression model and to assess the extent of variation in the dependent variable that is explained by the independent variable variation.

**First: Regression Analysis to Determine the Effect of Determinants of Restatement on the Reclassification**

Variable	Coefficient (B)	t	Significance
(Constant)	-.223	-.532	.596
Audit firm size	.314	1.682	.096
Board independence	-.004	-1.291	.200
Institutional ownership	.008	2.219	.029
Free float	.005	.787	.433
Firm size	6.0E-11	2.850	.005
Firm leverage	.008	4.371	.000
Time lag	-.006	-2.674	.009
F-statistic	7.726	-	.000
R-square	.373		
Adjusted R-square	.325		

The entire model is significant with  $F=7.726$  (0.00 level of significance) and  $R^2$  equals 0.373, and there are three determinants having significant relationships with this type of restatement.

**Second: Regression Analysis to Determine the Effect of Determinants of Restatement of Correcting Error**

Variable	Coefficient (B)	t	Significance
(Constant)	.814	2.018	.046
Audit firm size	-.462	-2.576	.012
Board independence	.003	.948	.346
Institutional ownership	-.003	-.940	.350
Free float	-.008	-1.328	.187
Firm size	-7.5E-11	-3.726	.000
Firm leverage	-.009	-5.184	.000
Time lag	.008	3.789	.000
F-statistic	9.360	-	.000
R-square	.419		
Adjusted R-square	.374		

The entire model is significant with  $F=9.36$  (0.00 level of significance) and  $R^2$  equals 0.419, and there are four determinants having significant relationships with this type of restatement.

**Third: Regression Analysis to determine the effect of determinants of restatement of standard application**

Variable	Coefficient (B)	t	Significance
(Constant)	.082	.303	.762
Audit firm size	.186	1.556	.123
Board independence	.002	.827	.410
Institutional ownership	-.001	-.479	.633
Free float	.005	1.242	.217
Firm size	2.3E-11	1.727	.087
Firm leverage	-.001	-.623	.535
Time lag	-.001	-.475	.636
F-statistic	1.988	-	.065
R-square	.133		
Adjusted R-square	.066		

The entire model is relatively significant with  $F=1.988$  (0.065 level of significance) and  $R^2$  equals 0.133.

**Fourth: Regression Analysis to determine the effect of restatement on the stock price change**

Variable	Coefficient (B)	t	Significance
(Constant)	40.869	1.962	.037
Reclassification	-10.941	-	.018
Errors	39.361	2.791	.004
Standard application	6.300	2.089	.009
F-statistic	2.365	-	.037
R-square	.080		
Adjusted R-square	.051		

The model provided unexpected results regarding the consequences of accounting restatements; the table provides very desirable results regarding the market reaction toward the different types of restatements. It reveals that

reclassification has negative impact on share prices where the B coefficient is  $-10.941$  with t value =  $-2.23$  which is significant at level of  $\alpha = 0.018$ . On the other hand, restatement due to correcting error has positive impact on share prices where beta equals  $39.361$  with t value equals  $2.791$  which is significant at  $0.004$  level of significance. Finally, applying standard restatements has positive impact on share prices where beta equals  $6.3$  with t value equals  $2.089$  which is significant at  $0.009$  level of significance. The R square =  $.080$ .

#### **4.4.3. Discussion of Empirical Results:**

The first hypothesis proposed in the study is supported by the results of regression analysis which reflect the relationship between the independent variable (determinants of restatement) and the dependent variable (restatement that reclassifies items in the financial statements). Concerning the second hypothesis proposed by the study is supported by the results of regression analysis which reflect the relationship between the independent variable (determinants of restatement) and the dependent variable (restatement that corrects errors in the financial statements). But, the regression analysis results not support the third hypothesis proposed by the study very well. It was found that a weak significant relationship between independent variable (determinants of restatement) and dependent variable (restatement that account for items in the financial statements according to new accounting standards). Finally, fourth hypothesis that proposed by the study is supported by the results of T-test and the regression analysis results which means that restatement in Egyptian companies leads to negative stock price reactions compared to non-restated companies.

### **5. Conclusion, Recommendations and Suggestions for future research**

### **5.1. Conclusion:**

The purpose of this research is to identify the determinants of restatement in the Egyptian companies and its market reactions. Section one provides the general framework of the study. This section begins with introduction then research problem, research objectives, importance, methodology. Section two, the researcher displays literature review which is associated with the study including relevant studies, which have been selected to review, that have been organized from the oldest to the newest in two groups. Section three exhibits a general understanding of financial restatement through discussing different definitions and different classifications. Afterwards, discusses various causes of restatement. The final part displays restatement likelihood, and the determinants of restatement; the second part explains the restatement and the market reactions.

Section four provides the empirical study and aims to empirically examine the study hypotheses. The empirical study begins with sample selection, sample features, data collection, type of data used in the study and study variables. In order to analyze the data and test the study hypotheses, the study has employed two statistical techniques. First, descriptive statistical analysis is used to provide the mean, the minimum, the maximum and the standard deviation of study variables. Second, regression analysis has been used to discover whether there is a significant correlation between the dependent variable and the independent variable. Finally, Section five is ended by discussions and conclusions of data analysis.

### **5.2. Recommendations**

According to this study, it can be concluded that restatement of financial statements affects negatively on the market and company's reputation. In general, the following recommendations may contribute to controlling the restatement occurrence:

- The corporations should concentrate on strengthen of the internal control and the internal governance to avoid the fraud and the irregularities opportunities and improve the quality of financial reports.
- Auditing process should be subject to one of the Big-Four auditing offices and corporations should acquire qualified auditors to facilitate the detection of fraud and irregularities opportunities.

### **5.3. Suggestions for Future Research**

The benefit of extensive research on this specified issue at hand is that it would on to diminish the number of restatements; Many possible approaches for future research are:

- Exploring and clarifying if the market fully and immediately assimilates the content of a financial restatement disclosure. Alternatively, the market may underreact to this bad news as in the case of other extreme accounting events such as going-concern opinions.
- Covering the financial restatements important consequences on the event-firm besides the loss in their market value. The literature shows that, following a financial restatement disclosure, the cost of capital increases, the cost of debt increases, the reputation of the company decreases and the firm operations in the same industry are negatively affected by this bad news event.
- Looking at the very specific reasons behind restatements and identify which specific items or issues are most critical. Also, looking at how trends of restatement vary with regards to auditor or audit fees.

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