

El-Dyasty, M.A., & Elamer, A.A., (2022) 'Female leadership and financial reporting quality in Egypt', *Journal of Applied Accounting Research, Forthcoming*, (Accepted 30 October 2022). DOI (10.1108/JAAR-11-2021-0315)

## **Female leadership and financial reporting quality in Egypt**

**Running head:** Female leadership and financial reporting quality

**Mohamed M. El-Dyasty**

Professor of Accounting

Department of Accounting, Faculty of Commerce, Mansoura University, Mansoura, Egypt

**Email:** [mdyasty@mans.edu.eg](mailto:mdyasty@mans.edu.eg)

**ORCID:** 0000-0002-7695-1457

**Ahmed A. Elamer\***

Brunel Business School, Brunel University London, Kingston Lane, Uxbridge, London, UB8 3PH UK; and

Department of Accounting, Faculty of Commerce, Mansoura University, Mansoura, Egypt

**Email:** [ahmed.elamer@brunel.ac.uk](mailto:ahmed.elamer@brunel.ac.uk)

**ORCID:** 0000-0002-9241-9081

**Tel:** +44 (0)1895 265754

\*Corresponding author

# **Female leadership and financial reporting quality in Egypt**

## **Abstract**

**Purpose:** Many countries are enacting regulations or/and recommendations to promote gender equality in the workplace, especially in the top leadership and management positions. However, despite current research on gender diversity and firm outcomes, we know comparatively little about how different female leadership roles drive such outcomes. This study explores this notion in an emerging market by examining the effect of female leadership on financial reporting quality in Egypt.

**Design/methodology/approach:** This study uses multiple regression analyses for a sample of 1686 firm-year observations listed on the Egyptian Stock Exchange over the period 2011-2020.

**Findings:** Our results show that female directors, female executives and females on audit committees are positively associated with financial reporting quality. Further, our results suggest that executive female directors are less involved in income decreasing earnings management practices. Our findings are robust to possible omitted variables bias, alternative measurements and endogeneity issues. Taken together, our results are in line with the view that gender diversity is an effective monitoring instrument, which attenuates agency conflict and thus upholds financial reporting quality.

**Research limitations:** Future research may expand the analysis performed in this study by using other proxies of financial reporting quality (e.g., earnings persistence, earnings predictability, conservatism, and restatements). Also, we did not investigate the characteristics related to female directors (e.g., education, experience, and age) due to data availability. Future research may examine the effect of these characteristics on female directors regarding financial reporting quality.

**Practical implications:** Our evidence about the importance of female leadership in shaping financial reporting quality may inform future policy and regulatory initiatives.

**Originality/value:** This study contributes to the growing literature related to gender diversity. Firstly, this study extensively investigates the leadership aspects related to female directors in both mentoring and executive positions. Secondly, the evidence reached is based on three different proxies of financial reporting quality. Thus, unlike previous studies, conclusions were reached based on a solid basis to support the reliability of the results. These findings should be of great interest to policymakers, academics and stakeholders.

**Keywords:** Female directors; diversity; financial reporting quality; audit quality; Egypt

**JEL Classification:** M42

## 1. Introduction

The lack of females in top leadership and management positions is a chronically debated and researched issue in business society and academic research (Elmagrhi et al., 2019; Manita et al., 2018; Zarei et al., 2021). Several countries are currently enacting or considering adopting regulations to endorse gender diversity on corporate boards and their sub-committees (Adams, 2016; Arioglu, 2020; Labelle et al., 2015). The objective is to enhance equality and improve economic outcomes (Choudhury, 2014). For many decades, women faced social and labour issues that prevented them from accessing top managerial positions (Haynes, 2017). Additionally, prior research reported several economic benefits of promoting women to higher executive and monitoring posts (Adams and Ferreira, 2009; Aksoy et al., 2021; Alnabsha et al., 2018; Damak, 2018; Post and Byron, 2015; Peni and Vähämaa, 2010). For example, female directors are less involved in aggressive investment policies, make better acquisition decisions, and improve financial performance (Chen et al., 2019). Furthermore, the presence of female directors is associated with mitigating earning management and reducing financial statement restatement (Capezio and Mavisakalyan, 2016; García-Sánchez et al., 2017; Lara et al., 2017; Lenard et al., 2017; Zalata et al., 2019). This study contributes to this strand of literature by investigating the role of gender diversity at the top leadership and executive levels in improving financial reporting quality.

In this case and on the one hand, many countries mandate a quota of female directors on the board or require a specified number to represent women to break a glass ceiling<sup>[1]</sup>. In 2003, Norway was the first country to require a quota of female directors on the board by enforcing Norwegian firms to appoint 40% women on the board (García Lara et al., 2022; Shin et al., 2020). Later, many developed and developing countries around the world followed Norway to obligate a quota of female directors (Belaounia et al. 2020). Quota rates range between 33% and 40% in different countries. Quota may take hard or soft forms (Nekhili et al., 2020). The hard quota is enacted in Norway and France to mandate legal sanctions ranging from delisting from the stock exchange or imposing dissolution in case of not fulfilment. In contrast, the soft quota did not

---

<sup>[1]</sup> A glass ceiling is a concept to express invisible or artificial barriers that prevent women from reaching top managerial positions (Thiruvadi and Huang, 2011).

require any sanctions in case of not complying. Spain and the Netherlands are an example of countries adopted this form of quota. Other countries did not necessitate a fixed percentage of women on the board of listed companies. For example, India passed a law in 2013 to include one female director at least on the board (Belaounia et al., 2020). Also, the UK and Australia only recommended that listed companies appoint women on the board (Sultana et al., 2020; Poletti-Hughes et al., 2019).

On the other hand, literature shows mixed results regarding women leadership representation (García-Sánchez et al., 2017). Besides, it seems that enforcing a female quota did not provide an irrefutable conclusion. The expected combined effect of both equality and positive economic consequences may not always lead to satisfactory outcomes. Proponents of the increasing number of females in top leadership and management positions rely on their distinguishing characteristics. Prior research asserts that women have higher moral reasoning and are unbiased, socially responsible, more conservative, less overconfident, and risk-averse (Teodósio et al., 2021; Sudarman and Hidayat, 2019; Luo et al., 2017; Thiruvadi and Huang, 2011). In contrast, other studies indicate that female directors are not different from their counterparts when performing executive functions or carrying out monitoring tasks in developed and emerging markets (García Lara et al., 2022; Waweru, and Prot, 2018; Arun et al., 2015; Ye et al., 2010). It, thus, remains mostly doubtful how female leadership relates to financial reporting quality.

We focus on Egypt due to a number of reasons. Egypt has recently altered the requirements of the board formation for listed companies. The aim is to empower women to ensure equalities and benefit from their unique abilities to improve corporate performance and enhance financial reporting quality.<sup>[1]</sup>

The Financial Regulatory Authority (FRA) is the responsible body to issue regulations related to listing rules on the Egyptian Stock Exchange (EGX). In 2019, FRA issued Decree

---

<sup>[1]</sup> In 2014, Egypt declared a new constitution to preserve the values of justice and equality. In regards to that, granting women rights is a crucial aspect. Following, In 2017, the National Strategy for Empowerment of Egyptian Women 2030 was issued and adopted by the Egyptian president. The strategy was formulated in line with the United Nations' 2030 Sustainable Development Goals. Accordingly, a proper representation of women on companies' boards of directors is required. The aim is to increase the percentage of females in leading positions to enhance financial reporting quality.

123/2019 to require appointing one female at least on the board. Two years later, FRA issued decree 109/2021 to amend decree 123/2019. The new decree requires appointing 25% or at least two women on the board of directors within one year.

Earlier, in 2016 the Egyptian Code of Governance only recommended not discriminating against women. Of course, this recommendation is consistent with the new Egyptian constitution. Generally, compared to men, women in Egypt may not get equal opportunities (Khedr, 2017). Specifically, women in Egypt are suffering from many social and institutional barriers to holding top managerial positions (Abdelzaher and Abdelzaher, 2019; Elsaid and Elsaid, 2012). International finance Cooperation (IFC) ranked Egypt 134<sup>th</sup> out of 153 countries on the Global Gender Gap Index. Unfortunately, both decrees had been issued by FRA only to reflect the will to empower female directors. To the best of our knowledge, no research investigates the effect of any of these decrees on financial reporting quality. In addition, to replace decree 123/209 within only two years without supporting empirical evidence is only consistent with the idea of ensuring equality. Accordingly, empirical research is needed to justify the economic impact. This study thus is the first to fill such a gap to investigate the effect of independent female directors, female directors on the audit committee, and female executive directors on financial reporting quality in Egypt. Moreover, since few regulators around the world recommended appointing female directors within audit committees, the current study may increase our understanding of the association between women's special traits and the performance of audit committee members who possess financial expertise in developing countries and Egypt.

Based on a sample of 1686 firm-year observations listed on the EGX over the period 2011-2020, the results show that female directors participation in the top leadership and management positions in the Egyptian context is positively associated with financial reporting quality. Specifically, the presence of female directors on the board, the independence of female directors, the proportion of female directors on the audit committee, and the number of executive female directors demonstrate less involvement in earnings management practices and thus are positively associated with financial reporting quality.

This study contributes to the growing literature related to gender diversity by investigating the association between female leadership and financial reporting quality in emerging countries. Little attention has been paid to this vital issue in developing countries, like Egypt. Firstly, this study extensively investigates the leadership aspects related to female directors in both mentoring

and executive positions. Secondly, the evidence reached is based on three different proxies of financial reporting quality. Thus, unlike previous studies, conclusions were reached based on a solid basis to support the reliability of the results. Thirdly, the results provide evidence in the line supporting the reform passed by FRA to amend listing rules in EGX. The inclusion of women on the board of listed Egyptian companies is a big step in the right direction. The conclusion reached in this study complement the vision of breaking the glass ceiling in management and Egyptian society as a whole. Fourthly, our results depart from role inconsistency assertions that females lag behind males in the abilities and experience required for successful leadership. Instead, it supports the research on the bottom-line effect of females in leadership (Huang and Kisgen, 2013, Palvia et al., 2015), and indicates that feminine attributes and transformational leadership patterns seem to be more effective in modern leadership environments than mostly imagined. Finally, the conclusions reached in this study may be beneficial to other emerging countries to break the glass ceiling and advance women into top managerial positions.

The rest of this study will be presented as follows. Section 2 provides a literature review and presents hypotheses development. Section 3 discusses the research design and the sample. Empirical results and discussion are reported in Section 4. Section 5 presents the summary and conclusion.

## **2. Literature Review and Hypotheses Development**

Consistent with prior research (Ain et al., 2021; Mnif and Cherif, 2021; Pucheta-Marínez et al., 2016; Lakhal et al., 2015; Thiruvadi, and Huang, 2011; ) this study relies on agency theory to investigate directors' diversity as one of the corporate governance mechanisms and their relation to financial reporting quality.

Corporate governance mechanisms are adopted to overcome agency problems to ensure financial reporting quality (Jensen and Meckling, 1976; Nicolò et al., 2021; Younas et al., 2019). In this context, the role of external auditing is evident to reduce the asymmetry of information (Arens et al., 2017). Likewise, the board of directors and its committees are an essential tool of corporate governance to monitor executive management and oversight level of quality that an external auditor delivers (Li and Li, 2020; Post and Byron, 2015). Prior research investigated the impact of specific board and audit committee characteristics on financial reporting quality. The effect of independence, expertise, and size are the most used characteristics. (e.g., Inaam and

Khamoussi, 2016). In response to calls for equality between men and women, a stream of research emerged. The purpose is to explore the effectiveness of female directors as a monitor tool to reduce information asymmetry. The justification of such an assumption is based on the special abilities that women possess and their capabilities to reduce information asymmetries and conflicts of interest between the board of directors and different internal and external stakeholder groups (Hamrouni et al.,2021; Usman et al., 2019; Velte, 2017).

Gaynor et al. (2016) define higher quality financial reports as those that are more complete, neutral, and free from error and provide more useful predictive or confirmatory information about the company's underlying economic position and performance. Accordingly, Financial reporting quality is closely related to the effective corporate governance structure and is appraised by the firms' propensity to more or less manage earnings (Labelle et al., 2010). Consequently, Prior research around the world examined the relationship between female directors as an essential mechanism of corporate governance on the board and financial reporting quality.<sup>[1]</sup>

Prior research investigated the association between female directors and financial reporting quality in different contexts. Since Egypt is one of the developing countries, it will be useful for hypotheses to review the related literature within both developed and developing markets as follows.

## **2.1 The context of developed markets**

Much of prior studies in the context of developed markets reported a significant and positive effect of female directors on financial reporting quality. For example, Srinidhi et al. (2011) found a positive relationship between firms with female directors and earning quality in the USA. Similarly, Lenard et al. (2017) showed that a company is less likely to commit financial reporting

---

<sup>[1]</sup> Prior research (e.g. Jonas and Blanchot, 2000) refers to financial reporting quality as a broad concept that expresses the qualitative characteristics of financial information. Accordingly, it is hard to use a direct and generally accepted measure of financial reporting quality (Hasan et al., 2022). Instead, many proxies were employed to conclude the quality of financial reporting, such as earnings management, financial restatements, and fraud (Cohen et al., 2004). The presence of any factors could negatively affect the financial reporting quality. Consequently, consistent with prior research, this paper will use accruals models as proxies of financial reporting quality (Berrill et al., 2021; García Lara et al., 2022; Reid et al., 2019; Zhang, 2019).

fraud when at least one female director is appointed to the board. Likewise, boards with female directors have fewer cases of restatement (Abbott et al., 2012). Capezio and Mavisakalyan (2016) reported that an increase in women's representation on company boards is associated with a decreased likelihood of fraud in Australia.

Other studies were conducted in the European context. Results in countries that obligate a quota of female directors, such as France, the UK and Spain, show that female directors could mitigate earnings management (Damak, 2018, Harakeh et al., 2019; Lakhali et al., 2015). However, Lara et al. (2017) reported that such a result hinges crucially on the independence of female directors. Cross-countries studies in Europe confirmed the effectiveness of female directors to reduce earnings management (Kyaw et al., 2015). Similar results showed via multi-culture studies. For example, Belaounia et al. (2020) concluded that companies with higher female board representation exhibit fewer earnings management in 24 countries in North America, Europe, Asia, and Africa.

In contrast, other studies revealed that female directors are not increasing financial reporting quality. Arun et al. (2015) concluded that firms with a higher number of female directors and independent female directors in the UK engage in income-decreasing earnings management. Likewise, Gonçalves et al. (2019) performed a cross-countries study in Europe and indicated that the increasing number of women on the board is not reducing earnings management.

The audit committee is playing a crucial role as a monitoring device. In this context, the two factors that could be examined are the effect of female directors presence and female directors who possess financial expertise on earnings management. Little research investigates the effect of the audit committee with female directors on financial reporting quality. Literature provides mixed results. A positive association is found between female directors and financial reporting quality in the USA. For example, both Zalata et al. (2019) and Thiruvadi and Huang (2011) suggested that female directors on the audit committee mitigate managerial opportunism. Likewise, Abbasi et al. (2021) found that female accounting experts on audit committees are positively associated with audit quality in the UK. In France, Amar and Sayadia (2022) found that the proportion of female independent financial experts on the audit committee is significantly associated with fewer earnings management. Lai et al. (2017) found that audit committees with female directors demand more audit effort and higher-quality audit assurance. Besides, Parker et al. (2015) indicated that companies with a higher proportion of female directors on audit committees are associated with a



higher likelihood of reporting material weaknesses in internal controls. Furthermore, García-Sánchez et al. (2017) conducted a multi-culture study in North America and Europe and found that female directors on audit committees can enhance earnings quality.

On the other hand, limited studies suggested an insignificant or negative association between female directors on the audit committee and financial reporting quality. For example, Sun et al. (2011) showed that female directors on the audit committee are not associated with earnings management in the USA. Furthermore, Sultana et al. (2020) reported that the lack of qualified women in Australia weakened the positive association between audit committee gender diversity and financial reporting quality after introducing a recommendation to appoint women.

## 2.2 The context of developing markets

Most Studies in Asia revealed that women enhance financial reporting quality. Luo et al. (2017) reported that higher female participation on the board the level of real activities manipulation in China. Similarly, Orazalin (2020) showed that variables related to women on the board, such as the presence of female directors and independent female directors can restrict earnings management in Kazakhstan. Chee and Tham (2021) reported a significant negative relationship between the proportion of female directors on the board with the level of earnings management in Singapore. Other studies revealed that female directors are not increasing financial reporting quality. In Malaysia, Buniamin et al. (2012) examined the relationship between board diversity and earnings management and reported a positive association between female directors and earnings management proxies.

Other studies conducted outside Asian markets reported similar results. For example, Waweru and Prot (2018) indicated a positive and significant association between female directors and abnormal accruals as a measure of financial reporting quality in Kenya and Tanzania. In addition, results reported an insignificant relationship between female directors and earnings management in Turkey (Arioglu, 2020).

Abdou et al. (2020) is the only study in Egypt, to the best of our knowledge, to investigate the association between female directors and financial reporting quality. The adopted methodology may preclude reaching conclusive results and generalization. Only data from the most 50 active companies were employed. Furthermore, the adopted proxy to measure audit quality requires at least ten observations from each industry to compute the dependent variable. Finally, the data upon

which that study is based had been collected long enough before the issuance of the recommendation of not discriminating against women when forming boards in Egyptian companies. Accordingly, more research is needed to examine the association between female directors and financial reporting quality based on a larger sample. In addition, it will be useful to understand the motivation of the recent decrees issued by FRA to obligate listed companies to appoint women in leading positions. It is crucial to explore whether the assumptions provided by prior research could justify enforcing Egyptian corporations to apply specific quotas to benefit from woman abilities to mitigate earnings management and enhance financial reporting quality. Consequently, the following hypotheses will be tested:

H1: the proportion of female directors on the board of listed Egyptian companies is associated with financial reporting quality.

H2: the number of independent female directors on the board of listed Egyptian companies is associated with financial reporting quality.

Some studies investigated the association between female directors in audit committees and financial reporting quality in the context of developing markets. Ud Din et al. (2021) show that the accounting expertise of audit committees' female chairs enhances financial reporting quality better than their male counterparts in Pakistan. Li and Li (2020) used a sample of listed Chinese firms and showed that female chairpersons on the audit committee are more inclined to reduce financial irregularities. In Indonesia, Sudarman and Hidayat (2019) concluded that women tend to mitigate corporate earnings management.

In contrast, Abdullah and Ismail (2016) found that women on the audit committee are involved with some practices of earnings management based on Malaysian data.

Literature in Egypt lacks studies that examined the association between female directors on the audit committee and financial reporting quality. Moreover, in 2020, FRA amended the requirement of audit committee formation on the listed Egyptian companies. Decree 91/2020 only requires including at least one director with financial expertise on the audit committee. However, this decree did not necessitate appointing females to the audit committees. Consequently, examining the association between the presence of female directors who possess financial expertise in audit committees and financial reporting quality may guide policymakers in Egypt to respond positively to the requirement of the National Strategy for Empowerment of Egyptian Women 2030. Hence, the following hypotheses will be tested:

H3: the proportion of female directors on the audit committee of listed Egyptian companies is associated with financial reporting quality.

H4: the number of female directors with financial expertise on the audit committee of listed Egyptian companies is associated with financial reporting quality.

### 3. Research Design

#### 3.1 Measurement of Variables and Models Specification

To achieve the research aim and objectives, data has been collected from non-financial companies listed on the Egyptian Stock Exchange (EGX) as explained in the following subsection. Based on prior research (García Lara et al., 2022; Berrill et al., 2021; Reid et al., 2019; Zhang, 2019), we consider *accruals models* (abnormal accruals and abnormal working capital accruals) to measure financial reporting quality. Consequently, an ordinary least squares regression model is used to test the four hypotheses with industry and year fixed effect employed, and White's t-statistic adjustments are used to mitigate heteroscedasticity problems that frequently exist in cross-sectional level-based designs<sup>1</sup>. The following model is employed to test the first H1 and H2:

$$FRQ_{it} = \beta_0 + \beta_1 FemaleDirectors_{it} + \beta_2 BiG4_{it} + \beta_3 Leverage_{it} + \beta_4 Loss_{it} + \beta_5 BSize_{it} + \beta_6 Duality_{it} + \beta_7 BIndepend_{it} + \beta_8 ZIM_{it} + \beta_9 Inherent_{it} + \beta_{10} OCFlowe_{it} + \beta_{11} Complex_{it} + \beta_{12} LnAge_{it} + \beta_{13} LnTAssets_{it} + \beta_{14} Return_{it} + Year\_FE + Industry\_FE + \varepsilon_{it} \quad [1]$$

Consistent with prior research three accruals proxies are used to measure the financial reporting quality (FRQ) (Gull et al., 2018; Liu et al., 2016; Arun et al., 2015; Buniamin et al. 2012; Barua et al., 2010). The first proxy is Abnormal Working Capital Accruals (AWCA). According to Defond and Park (2001), this proxy is computed as follows:

$$AWCA_t = WC_t - \left[ \left( \frac{WC_{t-1}}{S_{t-1}} \right) \times S_t \right] \quad [2]$$

where

$AWCA_t$  = Abnormal working capital accruals in year t;

$WC_t$  = Non-Cash working capital in year t;

$WC_{(t-1)}$  = Non-Cash working capital in the year preceding year t;

$S_t$  = Sales in the year t;

<sup>1</sup> Breusch-Pagan Lagrange multiplier test results suggest that Pooled OLS regression model is more suitable to our study compared to fixed effects and random effects models.

$S_{(t-1)}$  = Sales in the year preceding year t.

The second proxy is the absolute value of abnormal accruals (Ab\_Jones) computed by the cross-sectional modified jones model as follows (Dechow, 1995; Jones, 1991):

$$\frac{\text{TOT\_ACC}_{it}}{\text{Tassets}_{it-1}} = \alpha_0 + \beta_1 \frac{1}{\text{Tassets}_{it-1}} + \beta_2 \frac{(\Delta\text{Sales}_{it} - \Delta\text{AR}_{it})}{\text{Tassets}_{it-1}} + \beta_3 \frac{\text{PPE}_{it}}{\text{Tassets}_{it-1}} + \varepsilon_{it} \quad [3]$$

Where:

TOT\_ACC<sub>i,t</sub> = Total accruals  
Tassets<sub>i,t-1</sub> = Lagged Total Assets  
ΔSales<sub>i,t</sub> = Change in Sales Between year t-1 and year t  
ΔAR<sub>i,t</sub> = Change in Accounts receivable year t-1 and year t  
PPE<sub>i,t</sub> = Gross Property, Plant, and Equipment  
ε<sub>it</sub> = Residual Term of Equation (3) = Abnormal accruals

The third proxy (Ab\_Kothari) is computed based on the model suggested by Kothari et al. (2005):

$$\frac{\text{TOT\_ACC}_{it}}{\text{Tassets}_{t-1}} = \alpha_0 + \beta_1 \frac{1}{\text{Tassets}_{t-1}} + \beta_2 \frac{(\Delta\text{Sales}_t - \Delta\text{AR}_t)}{\text{Tassets}_{t-1}} + \beta_3 \frac{\text{PPE}_t}{\text{Tassets}_{t-1}} + \beta_4 \text{ROA}_t + \varepsilon_{it} \quad [4]$$

where:

TOT\_ACC<sub>i,t</sub> = Total accruals  
Tassets<sub>i,t-1</sub> = Lagged Total Assets  
ΔSales<sub>i,t</sub> = Change in Sales Between year t-1 and year t  
ΔAR<sub>i,t</sub> = Change in Accounts receivable year t-1 and year t  
PPE<sub>i,t</sub> = Gross Property, Plant, and Equipment  
ROA<sub>i,t</sub> = Return on Assets  
ε<sub>it</sub> = Residual Term of Equation (4) = Abnormal accruals

The test variable FemaleDirectors will be represented by two sub-variables. The first Variable is BFemale, which is computed as the percentage of female directors on the board. The second variable is BIndFemale, which is expressing the number of independent female directors on the board.

To test H3 and H4, variables related to the female presence on boards are replaced by variables related to the audit committee as follows:

$$\text{FRQ}_{it} = \beta_0 + \beta_1 \text{FemaleCommittee}_{it} + \beta_2 \text{BiG4}_{it} + \beta_3 \text{Leverage}_{it} + \beta_4 \text{Loss}_{it} + \beta_5 \text{CSize}_{it} + \beta_6 \text{CExpertise}_{it} + \beta_7 \text{ZIM}_{it} + \beta_8 \text{Inherent}_{it} + \beta_9 \text{OCFlowe}_{it} + \beta_{10} \text{Complex}_{it} + \beta_{11} \text{LnAge}_{it} + \beta_{12} \text{LnTAssets}_{it} + \beta_{13} \text{Return}_{it} + \text{Year\_FE} + \text{Industry\_FE} + \varepsilon_{it} \quad [5]$$

Consistent with the literature (Arun et al., 2015; Barua et al., 2010; Damak, 2018; Gull, 2018; Orazalin, 2020; Kyaw et al., 2015; Thiruvadi and Huang, 2011), the current study controls for possible omitted variables bias by including a number of control variables that may have an influence on financial reporting quality. Our control variables include auditor size (Big4), firm loss (Loss), Board size (BSize), CEO Duality (Duality), board independence (BIndepend), size of the audit committee (CSize), financial expertise on audit committee (CExpertise), financial stress score (ZIM), inherent risk (Inherent), operating cash flow to total assets (OCashFlow), Firm complexity (Complex), Company age (LnAge), Firm size (LnTAssets), return on assets (Return), year fixed effects (Year\_FE), and industry fixed effects (Industry\_FE). Table 1 shows the definition of variables.

**Insert Table 1 here**

### **3.2 Sample Selection and Data Sources**

Consistent with prior research (Harakeh et al., 2019; Damak, 2018; Arun et al., 2015), a sample of non-financial listed Egyptian companies is used. Disclosure requirements and accounting rules differ significantly between financial institutions and non-financial firms. Accordingly, it is inappropriate to include financial institutions in the sample (Orazalin, 2020; DeFond. and Subramanyam, 1998; Dechow et al., 1995). Data are collected manually from the Egyptian Stock Exchange website, company websites, and a financial website called Mubasher (<https://www.mubasher.info>). Only official PDF versions of unconsolidated annual financial statements, auditor reports, and forms required by the Egyptian Stock Exchange were considered. The available sample includes 1686 company-Year observations for 217 listed companies. The sample spanning the period 2011-2020 as presented in Table 2. Beginning of 2011, the Egyptian Stock Exchange requires listed companies to submit two separate forms related to the characteristics of the board and audit committee [FRA, Decree 31/2011]. Besides, according to article 37 of the listing rule of the EGX, mid-sized companies are exempt from composing an audit committee. Also, some companies did not fully provide the required data. Accordingly, only 1666 company-year observations are available for the board. Furthermore, 1413 only company-year observations for the audit committee are available.

**Insert Table 2 here**

On the other hand, the limitations of the three proxies of financial reporting quality preclude utilizing the full sample. Francis et al. (2009) argue that scaling the absolute abnormal working capital accruals by lagged total assets and excluding the observations with extreme values above 0.90. Consequently, 1677 company-year observations were available to use. Both versions of the modified Jones model require at least 10 observations in each industry to compute the abnormal accruals. Besides, some sectors of the listed Egyptian companies are composed of heterogeneous industries. Thus, such sectors were excluded from the analysis. Therefore, the available observations after excluding heterogeneous industries and applying the threshold of 10 observations are 1052.

## **4. Empirical Results and Discussion**

### **4.1 Descriptive Statistics and Bivariate Analyzes**

Table 3 displays the descriptive statistics for all variables. The absolute value of AWCA has a mean value of 0.21. The mean values of Ab\_Jones and Ab\_Kothari are 0.08 and 0.07 respectively. Big 4 controls 27% of the Egyptian market according to our sample. Female directors only hold 10% of the boards. Only 11% of females occupy executive positions. Female directors represent 10% of the audit committees. The percentage of female directors with financial expertise on audit committees equals only 4%. Thus, the phenomenon of the glass ceiling may exist in listed companies in Egyptian companies. Regarding corporate governance variables, 68% of the companies included in the sample have one person holding CEO and chairperson of the board positions at the same time. Remarkably, the percentage of independence inside the board is 70%. Finally, only 38% of directors on the audit committees have financial expertise. Recently, FRA issued two decrees to fix some deficiencies related to corporate governance and ensure financial reporting quality. Decree 47/2020 declared to prohibit duality. Likewise, Decree 91/2020 is issued to require including at least one member with financial expertise on the audit committee.

**Insert Table 3 here**

### **4.2 Multivariate Regression Results**

Table 4 exhibits the results of regression analysis related to H<sub>1</sub> and H<sub>2</sub>. The results are displayed for each of the two tested variables, the proportion of female directors on board and the proportion of independent female directors on board. Table 4 indicates that the proportion of female directors on board has a negative (positive) relationship with all proxies of earnings management (financial reporting quality) at the 5% level. Thus, H<sub>1</sub> is supported. This implies that female directors on the board enhance financial reporting quality. This result is consistent with prior research conducted in different contexts (Belaounia et al., 2020; Gull et al., 2018; Luo et al., 2017; Lenard et al., 2017; Capezio and Mavisakalyan, 2016; Abbott et al., 2012). Table 4 suggests that the proportion of independent female directors on board has an insignificant association with all measures of financial reporting quality. Consequently, H<sub>2</sub> is not supported.

**Insert Table 4 here**

Pertaining to the audit committee structure, Table 5 presents the results of regression analysis related to H<sub>3</sub> and H<sub>4</sub>. The results are displayed for each of the two test variables, CFemale and CFemaleExpert. Table 5 shows that CFemale is associated negatively with all three measures of financial reporting quality. Nevertheless, the Kothari model is not significant. Accordingly, H<sub>3</sub> is supported. This result is consistent with a strand of prior research (Abdullah and Ismail, 2012; Sun et al., 2011). Unexpectedly, financial reporting proxies are not associated with female directors with financial expertise. Thus, H<sub>4</sub> is not supported.

**Insert Table 5 here**

Remarkably, Big4 did not associate with measures of the financial reporting quality under any model. This result is consistent with previous research in Egypt (El-Dyasty and Elamer, 2020). Only board size has a significant association with the Jones model from all variables related to board characteristics. However, the association is positive. Thus, the greater the board size, the lower the financial reporting quality. Both board independence and duality have an insignificant relationship with financial reporting quality. Concerning the audit committee, both size and financial expertise have only a significant association with abnormal working capital accruals. The size is positively associated with AWCA. Therefore, a larger size of the audit committee is not improving financial reporting quality. Financial expertise on the audit committee is negatively

associated with AWAC. Consequently, an audit committee with financial expertise may enhance financial reporting quality.

### 4.3 Additional Analyses

Prior research in Egypt ignored the relationship between female executive directors and financial reporting quality. So, this study is seeking to investigate whether executive female directors affect financial reporting quality. A strand of research also examined the relationship between executive female directors and financial reporting quality. The motivation of such studies is to investigate whether the distinguished characteristics of women enhance financial reporting quality. Mixed results were found. Krishnan and Parsons (2008) showed that the inclusion of women in top managerial positions improves earnings quality. Barua et al. (2010) suggested that firms with female CFO have higher earnings quality in the USA. The same results were reported in China (Liu et al., 2016). Ho et al. (2015) found a positive association between CEO gender and accounting conservatism. Finally, top female managers were found to decrease earnings management in France and Korea (Gull et al., 2018; Kim et al., 2017). On the other hand, some researchers found an insignificant association between executive female directors and financial reporting quality. Peni and Vähämaa (2010) concluded that earnings management is not related to the gender of the CEO in the USA. The same result was reported in China (Ye et al., 2010). Likewise, Lakhali et al. (2015) showed that women standing in CEO and CFO positions are not affecting earnings management practices in France.

Accordingly, this study firstly examines whether the number of executive female directors on board is associated with financial reporting quality. To accomplish this objective, Model 1 will be used after inserting the BFemaleExe variable as a sub-variable of FemaleDirectors. BFemaleExe is defined as the number of executive female directors on the board. Thus, Model 6 is used as follows:

$$FRQ_{it} = \beta_0 + \beta_1 BFemaleExe_{it} + \beta_2 BiG4_{it} + \beta_3 Leverage_{it} + \beta_4 Loss_{it} + \beta_5 BSize_{it} + \beta_6 Duality_{it} + \beta_7 BIndepend_{it} + \beta_8 ZIM_{it} + \beta_9 Inherent_{it} + \beta_{10} OCFlowe_{it} + \beta_{11} Complex_{it} + \beta_{12} LnAge_{it} + \beta_{13} LnTAssets_{it} + \beta_{14} Return_{it} + Year\_FE + Industry\_FE + \epsilon_{it} \quad [6]$$



Table 6 presents the results of regression analysis using BFemaleExe as a test variable. The results indicate that BFemaleExe has a significant and negative association with all proxies of financial reporting quality. Thus, these results indicate that women who have executive posts can improve financial reporting quality. These results offer support for our hypothesis and indicate that female leadership may have important implications for corporate financial reporting quality.

**Insert Table 6 here**

Secondly, a strand of the literature suggested that executive female directors adopt more conservative practices regarding financial reporting via involvement in income-decreasing earnings management (Arun et al., 2015; Peni, E., and Vähämaa, 2010). To investigate this notion, an in-depth analysis is performed by dividing the full sample into income-increasing and income-decreasing sub-samples<sup>2</sup>. Table 7 exhibits the results. For all sub-sample under the three accruals models, BFemaleExe is negatively associated with proxies of financial reporting quality. Nevertheless, two results only yield significant results. Consequently, executive female directors can reduce income-decreasing practices of earnings management in Egypt. This result is not consistent with prior research (Arun et al., 2015; Peni and Vähämaa, 2010). On the other hand, this outcome indicates executive female directors in Egypt are not involved in earnings management practices in general.

**Insert Table 7 here**

Lastly, the findings so far show that female leadership might improve financial reporting quality. However, our main variable in this study may be experiencing endogeneity. To deal with this issue and self-selection bias (Abdelfattah et al., 2021), we employ the two-stage Heckman model (Heckman, 1979). We employ a multiple regression model in the first stage of the two-stage Heckman model, where we use governmental ownership and all control variables as instruments to estimate the impact of self-selection bias on the choice of females following Abdelfattah et al. (2021) and Lee et al. (2019). The dependent variable, the female directors on the board, female directors in audit committees and executive female directors on the board, are presented in Models 1, 2 and 3 of Table 8, respectively. We then calculated the inverse Mills ratio ( $\lambda$ ) from the first stage that will measure the consequences of the self-selection bias. In the second stage, we use the

---

<sup>2</sup> We consider a company has Income-decreasing practice if the abnormal accruals are less than 0. If the abnormal accruals are bigger than 0, we consider a company has Income-increasing practice.

fitted value of the female directors on the board, female directors in audit committees and executive female directors from the first stage. We examine governmental ownership (instrumental variable) validity by estimating regressions of governmental ownership against female directors on the board, female directors in audit committees and executive female directors, respectively, and generate the residuals. Next, residuals are included in our main models and their coefficient was insignificant. Thus, our governmental ownership as an instrumental variable meets the exclusion criteria.

### **Insert Table 8 here**

Models 1, 2 and 3 of Table 8 present the results of the two-stage Heckman model. The results are similar to those considered above after including the Inverse-Mills ratio,  $\lambda$ , as an explanatory variable to uncover self-selection bias. After considering potential endogeneity, female leadership still improve financial reporting quality. These results show that our main results are robust.

## **5. Summary and Conclusion**

Many countries enacted laws and regulations or issued recommendations to appoint women to the board of listed companies. The aim is to attain equality and accomplish positive economic outcomes. According to prior research, women possess special abilities. Therefore, this study examines the impact of female leadership on financial reporting quality. To accomplish this objective, a sample of 217 non-financial listed companies in Egypt is used. The sample is spanning the period 2011-2019. The findings show that female directors in most monitoring and executive position can enhance financial reporting quality. Such a conclusion strongly enhances the notion that female directors, as a vital part of corporate governance, are an effective tool to mitigate agency problems. The proportion of female directors on the board of directors and audit committee is positively associated with financial reporting quality. Our results also indicate that executive female directors are less engaged in earnings management practices, thus, improving financial reporting quality. Contrary to prior research, these results confirmed earnings management practices associated with decreasing income. Unexpectedly and in contrast to the assumptions related to prior literature on female directors and audit committees, our results suggest that female directors with financial expertise on audit committees are not curbing practices of earnings management.

This study contributes to the growing literature related to gender diversity by investigating the association between female leadership and financial reporting quality in emerging countries. Little attention has been paid to this vital issue in developing environments, like Egypt. Firstly, this study extensively investigates the leadership aspects related to female directors in both mentoring and executive positions. Secondly, the evidence reached is based on three different proxies of financial reporting quality. Thus, unlike previous studies, conclusions were reached based on a solid basis to support the reliability of the results. Thirdly, the results provide evidence in the line supporting the reform passed by FRA to amend listing rules in EGX. The inclusion of women on the board of listed Egyptian companies is a big step in the right direction. The conclusion reached in this study complement the vision of breaking the glass ceiling in management and Egyptian society as a whole. Fourthly, our results depart from role inconsistency assertions that females lag behind males in the abilities and experience required for successful leadership. Instead, it supports the research on the bottom-line effect of females in leadership (Huang and Kisgen, 2013, Palvia et al., 2015), and indicates that feminine attributes and transformational leadership patterns seem to be more effective in modern leadership environments than mostly imagined. Finally, the conclusions reached in this study may be beneficial to other emerging countries to break the glass ceiling and advance women into top managerial positions.

There are several important implications of this study. Firstly, this study shows that existence of the female directors with financial expertise on the audit committee may increase the practices of earnings management. An in-depth investigation is needed. A stricter requirement regarding the formation of audit committees may be necessary. Regardless of the general conditions required by FRA, the mechanism of appointing members of the audit committees is not observable. FRA did not explicitly identify the term financial expertise. Holding a university degree in accounting is not enough to consider a person expert in financial aspects. Detailed specifications may be needed. The number of years of experience may be appropriate in this regard. Further, working in some jobs requiring expertise in financial aspects may be essential to appoint qualified persons on the audit committee. Secondly, FRA requires appointing one female director at least on the board of a company as a condition to continue listing on EGX. Since a strand of prior research reported that the blind application of quotas might cause negative economic consequences, there is a need to consider a specific percentage of women to be appointed to the board. Accordingly, equality could be reserved without sacrificing economic benefit.

Finally and although our findings are relevant and robust, this study is subject to some limitations. Although proxies of financial reporting quality used in this study are strongly used in prior research, such proxies may not provide conclusive evidence due to potential measurement errors. Future research may expand the analysis performed in this study by using other proxies of financial reporting quality (e.g., earnings persistence, earnings predictability, conservatism, and restatements). Secondly, this study did not investigate the characteristics related to female directors (e.g., education, experience, and age) due to data availability. Future research may examine the effect of these characteristics on female directors regarding financial reporting quality. Thirdly, decree 123/2019 is just passed. Furthermore, FRA quickly Amended this decree in 2021 to fully respond to National Strategy for Empowerment of Egyptian Women 2030. The new decree aimed to increase the proportion of women in leading posts. The target is to appoint 25% of females on boards or at least elect two women on boards. Accordingly, more research is needed to examine the effect of the new decree that will be effective within one year. A mandatory quota may enhance financial reporting quality. Future research in Egypt could provide a good example to generalize conclusions within the MENA region.

## References

- Abbasi, K., Alama, A., and Bhuiyanb, M. (2020). "Audit committees, female directors and the types of female and male financial experts: Further evidence". *Journal of Business Research* 114: 186–197. <https://doi.org/10.1016/j.jbusres.2020.04.013>
- Abbott, L., Parker, S. and Presley, T. (2012). "Female Board Presence and the Likelihood of Financial Restatement". *Accounting Horizons*. Vol. 36 No.4, pp.607-629.
- Abdelfattah, T., Elmahgoub, M., & Elamer, A. A. (2021). Female Audit Partners and Extended Audit Reporting: UK evidence. *Journal of Business Ethics*, 174, pp.177–197.
- Abdelzaher, A., and Abdelzaher, D. (2019). "Women on Boards and Firm Performance in Egypt: Post the Arab Spring". *The Journal of Developing Areas*. Vol.35 No. 1, pp. 225-241.
- Abdou, H., Ellelly, N., Elamer, A., Hussainey, K., and Yazdifar, H. (2020). Corporate Governance and Earnings Management Nexus: Evidence from the UK and Egypt using Neural Networks. *International Journal of Finance & Economics*. 1-31. <https://doi.org/10.1002/ijfe.2120>
- Abdullah, S., and Ismail, K. (2016). "Women Directors, Family Ownership and Earnings Management in Malaysia". *Asian Review of Accounting*. Vol. 24 No.4, pp. 525-550.
- Adams, R. (2016). "Women on boards: The Superheroes of Tomorrow?". *The Leadership Quarterly*. Vol. 27 No. 3, pp. 371–386.
- Adams, R., and Ferreira, D. (2009). "Women in the Boardroom and Their Impact on Governance and Performance". *Journal of Financial Economics*. Vol. 94 No., pp. 291–309.
- Ain, U., Yuan, X., Javaid, H., Usman, N, and Haris, M. (2021). "Female Directors and Agency Costs: Evidence from Chinese Listed Firms". *International Journal of Emerging Markets*. 16(8): 1604-1633. DOI 10.1108/IJOEM-10-2019-0818
- Aksoy, M., Yilmaz, M.K., Topcu, N. and Uysal, Ö. (2021), "The Impact of Ownership Structure, Board Attributes and XBRL Mandate on Timeliness of Financial Reporting: Evidence from Turkey", *Journal of Applied Accounting Research*, Vol. 22 No. 4, pp. 706–731.
- Alnabsha, A., Abdou, H.A., Ntim, C.G. and Elamer, A.A. (2018), "Corporate Boards, Ownership Structures and Corporate Disclosures: Evidence From A Developing country", *Journal of Applied Accounting Research*, Vol. 19 No. 1, pp. 20–41.
- Amar, A., and N. Sayadia. (2022). Independent financial expert members on audit committees, earnings management and the role of female directors. *Accounting and Management Information Systems*. 21(1): 5-24. DOI: <http://dx.doi.org/10.24818/jamis.2022.01001>
- Arens, A., Elder, R., Beasley, M., and Hogan, C. (2017). "Auditing and Assurance Services: An Integrated Approach". Sixteenth Edition. Pearson Education, Inc.
- Arioglu, E. (2020), "The Affiliations and Characteristics of Female Directors and Earnings Management: Evidence from Turkey", *Managerial Auditing Journal*, Vol. 35 No. 7, pp. 927–953.

- Arun, T., Almahrog, Y., and Aribi, Z. (2015). "Female Directors and Earnings Management: Evidence from UK Companies". *International Review of Financial Analysis*. Vol. 39 (May), pp. 137–146.
- Barua, A., Davidson, V. Rama, D., and Thiruvadi, S. (2010). "CFO Gender and Accruals Quality". *Accounting Horizons*. Vol. 24 No. 1, pp. 25-39.
- Belaounia, S., Tao, R. Zhao, H. (2020). "Gender Equality's Impact on Female Directors' Efficacy: A Multi-Country Study". *International Business Review*. Vol. 29 No.5, pp. 1-13.
- Berrill, J., Campa, D., and O'Hagan-Luff, M. (2021). " Firm Diversification and Earnings Management Strategies: European Evidence. *International Review of Financial Analysis*.78. <https://doi.org/10.1016/j.irfa.2021.101955>
- Buniamin, S. Johari, N., Rahman, N., Abdul Rauf, F. (2012). "Board Diversity and Discretionary Accruals of the Top 100 Malaysia Corporate Governance (MCG) Index Company". *African Journal of Business Management*. Vol. 6 No. 29, pp. 8496-8503.
- Capezio, A., and Mavisakalyan, A. (2016). "Women in the Boardroom and Fraud: Evidence from Australia". *Australian Journal of Management*. Vol. 41 No.4, pp. 719–734
- Chee, K., and Tham, Y. (2021). The role of directors with multiple board seats and earnings quality: A Singapore context. *The Journal of Corporate Accounting & Finance*. **32**:31–47. DOI: 10.1002/jcaf.22474
- Chen, J., Leung, W., Song, W., and Goergen, M. (2019). "Why Female Board Representation Matters: The Role of Female Directors in Reducing Male CEO Overconfidence". *Journal of Empirical Finance*. Vol. 53 (September), pp. 70–90.
- Choudhury, B (2014) "New Rationales for Women on Boards". *Oxford Journal of Legal Studies*. Vol. 34 No. 3, pp. 511–542.
- Cohen, J., Krishnamoorthy, G., and Wright, R. (2004). The Corporate Governance Mosaic and Financial reporting Quality. *Journal of Accounting Literature*. 23: 87-152.
- Damak, S. (2018). "Gender Diverse Board and Earnings Management: Evidence from French Listed Companies". *Sustainability Accounting, Management and Policy Journal*. Vol.9 No. 3, pp. 289-312.
- Dechow, P., R. Sloan, A. Sweeney. (1995). "Detecting Earnings Management. *The Accounting Review*. Vol. 70 No.2, pp. 193-225.
- DeFond , M. and K. Subramanyam. (1998). Auditor changes and discretionary accruals. *Journal of Accounting and Economics*. 25(1): 35-67. [https://doi.org/10.1016/S0165-4101\(98\)00018-4](https://doi.org/10.1016/S0165-4101(98)00018-4)
- Defond, M., and C. Park. (2001). "The Reversal of Abnormal Accruals and the Market Valuation of Earnings Surprises". *The Accounting Review*. Vol.76 No. 3, pp. 375-404.
- El-Dyasty, M.M. and Elamer, A.A. (2020), "The Effect of Auditor Type on Audit Quality in Emerging Markets: Evidence from Egypt", *International Journal of Accounting & Information Management*, Vol. ahead-of-print No. ahead-of-print.
- Elmagrhi, M. H., Ntim, C. G., Elamer, A. A., & Zhang, Q. (2019). A Study of Environmental Policies and Regulations, Governance Structures, and Environmental Performance: The Role of Female Directors. *Business Strategy and the Environment*, 28(1), 206-220.

- Elsaid, A., and Elsaid, E. (2012). "Sex Stereotyping Managerial Positions: A Cross-Cultural Comparison between Egypt and the USA. *Gender in Management: An International Journal*. Vol. 27 No. 2, pp. 81-99.
- Financial Regulatory Authority (FRA). (2021). "Amendment of Listing Rules in the Egyptian Stock Exchange". Decree No. 109/2021.
- Financial Regulatory Authority (FRA). (2019). "Amendment of Listing Rules in the Egyptian Stock Exchange". Decree No. 123/2019.
- Financial Regulatory Authority (FRA). (2020). "Amendment of Listing Rules in the Egyptian Stock Exchange". Decree No. 91/2020
- Financial Regulatory Authority (FRA). (2020). "Amendment of Listing Rules in the Egyptian Stock Exchange". Decree No. 47/2020
- Financial Regulatory Authority (FRA). (2011). "Amendment of Listing Rules in the Egyptian Stock Exchange". Decree No. 31/2011
- Francis J., C. Richard and Vanstraelen .2009. Assessing Franc's Joint Audit Requirement: Are Two Heads Better than One? *Auditing: A Journal of Practice & Theory*. Vol. 28 No. 5, pp. 35-36.
- García Lara, J., Penalva, J, and Scapin, M. (2022). Financial reporting quality effects of imposing (gender) quotas on boards of directors. *Journal of Accounting and Public Policy*. <https://doi.org/10.1016/j.jaccpubpol.2021.106921>
- García-Sánchez, I., Martínez-Ferrero, J., and García-Meca. E. (2017). Gender Diversity, Financial Expertise and Its Effects on Accounting Quality. *Management Decision*. Vol. 55 No.2, pp. 347-382.
- Gaynor, L., Kelton, L., Mercer, M., and Yohn, T. (2016). " Understanding the Relation between Financial Reporting Quality and Audit Quality". *Auditing: A Journal of Practice & Theory*. 35(4): 1-22. DOI: 10.2308/ajpt-51453
- Gonçalves, T., Gaio, C., and Santos, T. (2019). "Women on the Board: Do They Manage Earnings? Empirical Evidence from European Listed Firms". *Review of Business Management*. Vol. 3 No .2, pp. 582-597.
- Gull, A., Nekhili, M., Nagati, H. and Chtioui, T. (2018). "Beyond Gender Diversity: How Specific Attributes of Female Directors Affect Earnings Management. *The British Accounting Review*. Vol. 50, pp. 255-274.
- Hamrouni, A., Bouattour, M., Toumi, N., Rim Boussaada, R. (2021). "Corporate social responsibility disclosure and information asymmetry: does boardroom attributes matter?". *Journal of Applied Accounting Research*. <https://doi.org/10.1108/JAAR-03-2021-0056>
- Harakeh, M., El-Gammal, W., and Matar, M. (2019). "Female Directors, Earnings Management, and CEO Incentive Compensation: UK Evidence" *Research in International Business and Finance*. Vol. 50, pp. 153–170.
- Hasan, A., D. Aly, and K. Hussainey. (2022). Corporate Governance and Financial Reporting Quality: A Comparative Study. *Corporate Governance*. 22(6): 1308-1326. <https://doi.org/10.1108/CG-08-2021-0298>
- Haynes, K. (2017). "Accounting as Gendering and Gendered: A Review of 25 Years of Critical Accounting Research on Gender". *Critical Perspectives on Accounting*. Vol. 43 (March), pp. 110–124.
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the Econometric society*, 153-161.

- Ho, S., Li, A., Kinsun, K., and Zhang, F. (2015). "CEO Gender, Ethical Leadership, and Accounting Conservatism". *Journal of Business Ethics*. Vol. 127, pp. 351–370.
- Huang, J., & Kisgen, D. J. (2013). Gender and Corporate Finance: Are Male Executives Overconfident Relative to Female Executives?. *Journal of Financial Economics*, 108(3), 822-839.
- Inaam, Z., and Khamoussi, H. (2016). Audit Committee Effectiveness, Audit Quality and Earnings Management: A Meta-Analysis. *International Journal of Law and Management*. Vol. 58 No. 2, pp. 179-196.
- International Finance Corporation (IFC). (2019). "Women on Board in Egypt: How Gender-Diverse Boards Bring Value to Egyptian Companies". Available at: [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/ifc+cg/resources/guidelines\\_reviews+and+case+studies/women+on+boards+-+research+study+in+egypt](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+cg/resources/guidelines_reviews+and+case+studies/women+on+boards+-+research+study+in+egypt)
- Jensen, M. and Meckling, W. (1976). "Theory of the Firm: Managerial Behavioral, Agency Costs and Ownership structure". *Journal of Financial Economics*. Vol. 3 No. 4, pp.305-360.
- Jonas, G. J, and Blanchot, J. (2000). Assessing quality of financial reporting. *Accounting Horizons*. 14 (3): 353-363.
- Jones, J.J. (1991), "Earnings Management during Import Relief Investigations", *Journal of Accounting Research*, Vol. 29 No. 2, pp. 193-228.
- Khedr, W. (2017). "Gendered beliefs about glass ceiling in Egypt". *Gender in Management: An International Journal*. Vol. 32 No. 6, pp. 404-419.
- Kim, H., Jeong,S., Kang, T., and Lee, D. (2017). "Does the Presence of Female Executives Curb Earnings Management? Evidence from Korea". *Australian Accounting Review*. Vol. 27 No. 4. Pp. 494-506.
- Kothari, S., Leone, A. and Wesley, C. (2005), "Performance Matched Discretionary Accruals", *Journal of Accounting and Economics*, Vol. 39 No. 1, pp. 163-197.
- Krishnan, G., and Parsons, L. (2008). "Getting to the Bottom Line: An Exploration of Gender and Earnings Quality". *Journal of Business Ethics*. Vol. 78, pp. 65-76.
- Kyaw, K., Olugbode, M., and Petracci, B. (2015). "Does Gender Diverse Board Mean Less Earnings Management?" *Finance Research Letters*. Vol. 14 (August), pp.135–141.
- Labelle, R., Francoeur, C., and Lakhali, F. (2015) "To Regulate or Not To Regulate? Early Evidence on the Means Used Around the World to Promote Gender Diversity in the Boardroom". *Gender, Work and Organization*. Vol. 22 No. 4., pp.339-363.
- Lai, K, Srinidhi, B., Gul, F., and Tsui, J. (2017), "Board Gender Diversity, Auditor Fees, and Auditor Choice". *Contemporary Accounting Research*. Vol. 34 No. 3, pp. 1681–1714. doi:10.1111/1911-3846.12313
- Labelle, R., Gargouri, R., Francoeur, C. (2010). " Ethics, Diversity Management, and Financial Reporting Quality ". *Journal of Business Ethics*. 93:335–353. DOI 10.1007/s10551-009-0225-7
- Lakhali, F., Aguir, A., Lakhali, N., Malek, A. (2015). "Do Women on Boards and In Top Management Reduce Earnings Management? Evidence in France. *The Journal of Applied Business Research*. Vol. 31 No.3, pp. 1107-1118.
- Lara, J., Osma, o., Mora, A., and Scapin, M. (2017). "The Monitoring Role of Female Directors over Accounting Quality". *Journal of Corporate Finance*. Vol. 45 (August), pp. 651–668.



- Lee, H. S., Nagy, A. L., & Zimmerman, A. B. (2019). "Audit partner assignments and audit quality in the United States". *The Accounting Review*, Vol. 94 No2, 297-323.
- Lenard, M., Yu, B., York, E., and Wu, S. (2017). "Female Business Leaders and the Incidence of Fraud Litigation". *Managerial Finance*. Vol. 43 No.1, pp. 59 – 75.
- Li, X., and Li, Y. (2020). "Female Independent Directors and Financial Irregularities in Chinese Listed Firms: From the Perspective of Audit Committee Chairpersons". *Finance Research Letters*. Vol.32 (January), pp. 1-16.
- Liu, Y., and Wei, Z., and Xie, F. (2016). "CFO Gender and Earnings Management: Evidence from China". *Review of Quantitative Finance and Accounting*. Vol. 46, pp. 881–905.
- Luo, J., Xiang, Y., and Huang, Z. (2017). "Female Directors and Real Activities Manipulation: Evidence from China". *China Journal of Accounting Research*. Vol. 10, No. 2. pp.141–166.
- Manita, R., Bruna, M.G., Dang, R. and Houanti, L. (2018), "Board Gender Diversity and ESG Disclosure: Evidence From the USA", *Journal of Applied Accounting Research*, Vol. 19 No. 2, pp. 206–224.
- Mnif, Y., and Cherif, I. (2021). Female Board Directorship and Earnings Management. *Pacific Accounting Review*. 33(1): 114-141. DOI 10.1108/PAR-04-2020-0049
- ekhili, M., Gull, A., Chtioui, T., and Radhouane, I. (2020) "Gender-Diverse Boards and Audit Fees: What Difference Does Gender Quota Legislation Make? *Journal of Business, Finance and Accounting*. Vol. 47, pp.52-99.
- Nicolò, G., Zampone, G., Sannino, G. and de Iorio, S. (2021), "Sustainable Corporate Governance and Non-Financial Disclosure In Europe: Does the Gender Diversity Matter?", *Journal of Applied Accounting Research*, available at:<https://doi.org/10.1108/JAAR-04-2021-0100/FULL/XML>.
- Orazalin, N. (2020). "Board Gender diversity, Corporate Governance, and Earnings Management Evidence from an Emerging Market". *Gender in Management: An International Journal*. Vol. 35 No. 1: pp. 37-60.
- Palvia, A., Vähämaa, E., & Vähämaa, S. (2015). Are Female CEOs and Chairwomen More Conservative and Risk Averse? Evidence from the Banking Industry During the Financial Crisis. *Journal of Business Ethics*, 131(3), 577-594.
- Parker, R., Dao, M., Huang, H. and Yan, Y. (2015). "Disclosing Material Weakness in Internal Controls: Does the Gender of Audit Committee Members Matter?" *Asia-Pacific Journal of Accounting & Economics*, DOI: 10.1080/16081625.2015.1057190
- Peni, E., and Vähämaa, S. (2010). "Female Executives and Earnings Management". *Managerial Finance*. Vol. 36 No. 7, pp. 629-645.
- Poletti-Hughes, J., and Briano-Turrent, G. (2019). "Gender Diversity on the Board of Directors and Corporate Risk: A Behavioural Agency Theory Perspective". *International Review of Financial Analysis*. Vol. 62, pp.80–90.
- Post, C., and Byron, K. (2015). "Women on Boards and Firm Financial Performance: A Meta-Analysis". *Academy of Management Journal*. Vol. 58 No. 5, pp. 1546–1571.
- Pucheta-Marínez, M., Bel-Oms, I., Olcina-Sempere, J. (2016). Corporate Governance, Female Directors and Quality of Financial Information". *Business Ethics: A European Review*. 25(4): 363-385. doi: 10.1111/beer.12123

- Reid, L., Carcello, J., Li, C. and Neal, T. (2021). "Impact of Auditor Report Changes on Financial Reporting Quality and Audit Costs: Evidence from the United Kingdom". *Contemporary Accounting Research*. 36(3): 1501–1539. doi:10.1111/1911-3846.12486
- Shin, Y., Chang, J., Jeon, K., and Kim, H. (2020). "Female Directors on the Board and Investment Efficiency: Evidence from Korea". *Asian Business & Management*. Vol. 19, pp. 438–479.
- Srinidhi, B., Gul, F., and Tsui, G. (2011). "Female Directors and Earnings Quality". *Contemporary Accounting Research*. Vol. 28 No.5, pp. 1610–1644.
- Sudarman, W. and Hidayat, W. (2019). "Audit Committee and Earnings Management: The Role of Gender". *Jurnal Akuntansi*. Vol.23 No. 3, pp. 379-392.
- Sultana, N., Cahan, S., and Rahman, A. (2020). "Do Gender Diversity Recommendations in Corporate Governance Codes Matter? Evidence from Audit Committees". *Auditing: A Journal of Practice & Theory*. Vol. 39 No. 1, pp. 173–197.
- Sun, J., Liu, G., and Lan, G. (2011). "Does Female Directorship on Independent Audit Committees Constrain Earnings Management?" *Journal of Business Ethics*. Vol. 99, pp. 369-382.
- Teodósio, J., Vieira, E., and Madaleno, M. (2021). "Gender Diversity and Corporate Risk-taking: A Literature Review". *Managerial Finance*. 47(7): 1038-1073. DOI 10.1108/MF-11-2019-0555
- Thiruvadi, S., and Huang, H. (2011). "Audit Committee Gender Differences and Earnings Management". *Gender in Management: An International Journal*. Vol. 26 No.7, pp. 483-498.
- Ud Din, N., Cheng, X., Ahmad, B., Sheikh, M., Adedigba, O., Zhao, Y. and Nazneen, S. (2021). Gender diversity in the audit committee and the efficiency of internal control and financial reporting quality. *Economic Research-Ekonomska Istraživanja*. 34(1): 1170–1189. <https://doi.org/10.1080/1331677X.2020.1820357>
- Usman, M., Farooq, M., Zhang, J., Makki, M., and Khan, M. (2019). Female Directors and the Cost of Debt: Does Gender Diversity in the Boardroom Matter to Lenders. *Managerial Auditing Journal*. 34(4): 374-392. DOI 10.1108/MAJ-04-2018-1863
- Velte, P. (2017). "Do Women on Board of Directors Have an Impact on Corporate Governance Quality and Firm Performance? A Literature Review". *International Journal of Sustainable Strategic Management*. Vol.5 No.4, 302-346.
- Waweru, N., and Prot, N. (2018). Corporate Governance Compliance and Accrual Earnings Management in Eastern Africa: Evidence from Kenya and Tanzania. *Managerial Auditing Journal*. Vol. 33 No. 2, 171-191.
- Ye, K., Zhang, R., Rezaee, Z. (2010). "Does top Executive Gender Diversity Affect Earnings Quality? A large Sample Analysis of Chinese Listed Firms". *Advances in Accounting, incorporating Advances in International Accounting*. Vol. 26, pp. 47–54.
- Younas, Z.I., Klein, C., Trabert, T. and Zwergel, B. (2019), "Board Composition and Corporate Risk-Taking: A Review of Listed Firms from Germany and the USA", *Journal of Applied Accounting Research*, Vol. 20 No. 4, pp. 526–542. <https://doi.org/10.1108/JAAR-01-2018-0014>

- Zhang, D. (2019). Top Management Team Characteristics and Financial Reporting Quality. *The Accounting Review*. 94(5): 349–375. DOI: 10.2308/accr-52360
- Zalata, A., Ntim, C. Choudhry, T., Hassanein, A., and Elzahar, H. (2019). “Female Directors and Managerial Opportunism: Monitoring Versus Advisory Female Directors”. *Leadership Quarterly*. Vol. 30 No. 5, pp. 1-16.
- Zarei, H., Yazdifar, H. and Soofi, F. (2021), “The Perceived Impact of Working Agreements Toward Employed Female in The Accounting Profession: Evidence from Iran”, *Journal of Applied Accounting Research*, Vol. 22 No. 2, pp. 197–222.
- Zmijewski, M.E. (1984), “Methodological Issues Related to the Estimation of Financial Distress Prediction Models”, *Journal of Accounting Research*, Vol. 22, pp. 59-82.

## Tables

**Table 1:** Variable Definitions

Variables	Definitions
FRQ	Financial reporting quality measured by abnormal working capital accruals (AWCA) computed from Defond and Park (2001) and abnormal accruals computed from the modified-Jones model (Dechow et al., 1995; Kothari et al., 2005)
Big4	A dummy variable equal to 1 if a Big 4 audit firm exists and 0 otherwise
BSize	Number of board of directors
BMeet	Number of board's meetings
Duality	A dummy variable equal 1 when the CEO also holds the position of the chairman of the board of directors, 0 otherwise
BIndepend	Percentage of Non-Executives members on board of directors
BExecFemale	Number of executive female directors on the board
BIndFemale	Number of independent female directors on the board
BFemale	Proportion of female directors on the board
Leverage	Total liabilities divided by total assets
CSize	Number of directors on audit committee
CExpertise	Dummy variable equal 1 when the one director on audit committee has expertise in accounting, 0 otherwise
CFemale	Proportion of female directors on the audit committee
CFemaleExpert	Dummy variable equal 1 when the one female director on audit committee has expertise in accounting, 0 otherwise
Loss	Dummy variable equal to 1 if earnings are negative and 0 otherwise
Current	Current assets divided by current liabilities
Zim	Financial stress score, calculated from Zmijewski's (1984) model
Inherent	(Accounts receivable + Inventory) / total assets
OCFlow	Operating cash flows/total assets in the prior year
LnAge	Natural logarithm of company age
Complex	Sales/total assets in the prior year
LnAssets	Natural logarithm of total assets
Return	Net income / total assets

**Table 2: Sample selection**

Year	Population	Financial companies	Non-financial companies	Full Sample
2020	236	45	191	171
2019	247	46	201	182
2018	252	48	204	168
2017	254	46	208	161
2016	254	44	210	175
2015	252	43	209	181
2014	247	41	206	173
2013	236	42	194	172
2012	235	42	193	161
2011	232	42	190	142
Sum	2445	439	2006	1686

**Table 3: Descriptive Statistics**

Variables	n	Mean	Std. Dev.	Min	Max
AWCA	1677	0.21	1.66	0.00	63.83
Ab_Jones	1052	0.08	0.10	0.00	1.11
Ab_Kothari	1052	0.07	0.09	0.00	0.94
Big4	1686	0.27	0.44	0.00	1.00
Leverage	1686	0.47	0.52	0.00	9.39
Loss	1686	0.22	0.41	0.00	1.00
BSize	1666	7.42	2.80	3.00	17.00
Duality	1666	0.68	0.47	0.00	1.00
BIndepend	1666	0.70	0.21	0.00	1.00
BFemaleExe	1666	0.11	0.35	0.00	3.00
BFemaleIndend	1666	0.62	0.96	0.00	8.00
BFemale	1666	0.10	0.14	0.00	0.66
CSize	1413	3.11	1.38	0.00	8.00
CExpertise	1413	0.38	0.49	0.00	1.00
CFemale	1413	0.10	0.18	0.00	1.00
CFemaleExpert	1413	0.04	0.21	0.00	1.00
Zim	1686	0.14	0.26	0.00	1.00
Inherent	1686	0.42	0.29	0.00	3.48
OCFlow	1686	0.06	0.17	-1.11	1.74
LnAge	1686	3.28	0.66	0.69	4.88
LnTAssets	1686	19.85	1.87	13.23	25.04
Complex	1686	0.70	0.82	-0.03	6.83
Return	1686	0.04	0.15	-1.44	3.41

**Table 4:** The impact of female on boards leadership on financial reporting quality

Variables	(1)	(2)	(3)
	AbsAWCA	ABSJones	ABSKothari
BFemale	-0.302** (-2.12)	-0.084** (-2.29)	-0.071** (-2.26)
BIndFemale	0.035 (0.91)	0.008 (1.34)	0.007 (1.36)
BSize	0.001 (0.12)	0.003* (1.79)	0.002 (1.27)
Duality	-0.111 (-1.09)	0.009 (1.51)	0.007 (1.29)
BIndepend	0.148 (1.62)	-0.024 (-1.28)	-0.024 (-1.57)
Big4	0.142 (0.91)	-0.007 (-0.88)	-0.010 (-1.36)
Leverage	0.005 (0.21)	-0.008 (-0.72)	-0.007 (-0.74)
LossSign	-0.010 (-0.16)	0.016 (1.06)	0.001 (0.08)
Zim1	0.205 (0.96)	0.103*** (3.49)	0.052*** (2.72)
Inherent	-0.047 (-0.38)	-0.033*** (-2.74)	-0.016* (-1.71)
OCFlow	0.039 (0.30)	0.088 (0.94)	0.081 (0.97)
LnAge	0.045 (0.79)	-0.012** (-2.00)	-0.010* (-1.95)
LnAssets	-0.067** (-2.30)	-0.001 (-0.24)	0.002 (1.19)
Complex	0.076 (0.98)	-0.005 (-0.90)	0.001 (0.22)
Return	-0.016 (-0.06)	0.133 (0.97)	0.050 (1.20)
Cons	1.102*** (2.63)	0.102** (2.21)	0.045 (1.18)
Λ			
Year	Included	Included	Included
Sector	Included	Included	Included
N	1657	1041	1041
R-sq	0.02	0.13	0.11
adj. R-sq	-0.00	0.11	0.09

This table reports regression coefficients and t-statistics in parentheses; \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01.

**Table 5:** The impact of female in audit committees on financial reporting quality

Variables	(1) AbsAWCA	(2) ABSJones	(3) ABSKothari
CFemale	-0.360** (-2.03)	-0.028* (-1.85)	-0.022 (-1.52)
CFemaleExpert	-0.018 (-0.20)	0.040 (1.40)	0.041 (1.54)
CSize	0.050* (1.68)	-0.003 (-0.91)	-0.005 (-1.63)
CExpertise	-0.104 (-0.93)	-0.004 (-0.60)	-0.002 (-0.39)
Big4	0.197 (1.00)	-0.010 (-1.21)	-0.015* (-1.84)
Leverage	-0.015 (-0.43)	-0.003 (-0.22)	-0.005 (-0.43)
LossSign	-0.040 (-0.49)	0.015 (0.98)	-0.003 (-0.36)
Zim1	0.262 (1.00)	0.122*** (3.75)	0.068*** (2.87)
Inherent	-0.051 (-0.35)	-0.024** (-2.08)	-0.009 (-0.91)
OCFlow	0.069 (0.48)	0.036 (0.42)	0.043 (0.53)
LnAge	0.060 (0.88)	-0.011* (-1.86)	-0.009* (-1.84)
LnAssets	-0.072** (-2.04)	0.003 (0.87)	0.006** (2.43)
Complex	0.070 (0.82)	-0.006 (-1.14)	-0.000 (-0.01)
Return	-0.050 (-0.17)	0.195 (1.35)	0.074 (1.63)
_cons	1.070** (2.17)	0.029 (0.57)	-0.031 (-0.72)
Λ			
Year	Included	Included	Included
Sector	Included	Included	Included
N	1408	863	863
R-sq	0.02	0.16	0.13
adj. R-sq	-0.00	0.13	0.10

This table reports regression coefficients and t-statistics in parentheses; \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01.



**Table 6:** The impact of female executive directors.

Variables	(1) AbsAWCA	(2) ABSJones	(3) ABSKothari
BFemaleExe	-0.057** (-2.33)	-0.027*** (-3.78)	-0.023*** (-3.51)
BSize	0.007 (1.37)	0.003** (2.30)	0.002* (1.79)
Duality	-0.083 (-0.91)	0.008 (1.43)	0.007 (1.42)
BIndepend	0.166 (1.45)	-0.023 (-1.20)	-0.023 (-1.47)
Big4	0.126 (0.88)	-0.005 (-0.74)	-0.009 (-1.37)
Leverage	0.004 (0.13)	-0.008 (-0.72)	-0.007 (-0.68)
LossSign	-0.042 (-0.46)	0.013 (0.84)	-0.002 (-0.27)
Zim1	0.213 (1.10)	0.115*** (3.91)	0.063*** (3.21)
Inherent	0.061 (0.73)	-0.018 (-1.55)	-0.002 (-0.24)
OCFlow	0.052 (0.45)	0.093 (0.99)	0.084 (1.00)
LnAge	-0.000 (-0.00)	-0.009* (-1.66)	-0.008* (-1.66)
LnAssets	-0.062** (-2.19)	-0.002 (-0.88)	0.001 (0.38)
Complex	0.001 (0.01)	-0.002 (-0.49)	0.003 (0.64)
Return	-0.045 (-0.19)	0.154 (1.14)	0.073* (1.80)
Λ			
Cons	1.163** (2.50)	0.108** (2.38)	0.053 (1.41)
Year	Included	Included	Included
Sector	Included	Included	Included
N	1657	1041	1041
R-sq	0.01	0.11	0.09
adj. R-sq	-0.00	0.09	0.07

This table reports regression coefficients and t-statistics in parentheses; \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01.

**Table 7:** Results of regression analysis for the two sub-samples

Variables	AbsAWCA		ABSJones		ABSKothari	
	(1)	(2)	(3)	(4)	(5)	(6)
	Income-decreasing	Income-increasing	Income-decreasing	Income-increasing	Income-decreasing	Income-increasing
BFemaleExe	-0.072 (-0.31)	-0.043 (-0.57)	-0.032*** (-3.64)	-0.005 (-0.73)	-0.029*** (-3.61)	0.002 (0.23)
Big4	0.241 (1.23)	-0.064 (-0.99)	-0.003 (-0.44)	0.003 (0.42)	-0.001 (-0.14)	-0.004 (-0.56)
Leverage	0.045 (0.14)	0.061 (1.23)	-0.014 (-1.13)	0.019 (1.40)	-0.014 (-1.14)	-0.004 (-0.28)
LossSign	-0.210 (-1.01)	0.301*** (3.89)	0.002 (0.30)	0.003 (0.42)	-0.005 (-0.66)	-0.012* (-1.73)
BSize	0.004 (0.13)	0.008 (0.64)	0.001 (0.53)	-0.000 (-0.06)	0.001 (1.03)	0.001 (1.02)
Duality	-0.191 (-1.07)	0.038 (0.69)	0.013** (2.16)	-0.002 (-0.45)	0.015** (2.46)	-0.002 (-0.46)
BIndepend	0.122 (0.27)	0.215 (1.57)	0.015 (0.99)	0.017 (1.22)	0.004 (0.25)	0.002 (0.17)
Zim1	-0.111 (-0.25)	0.612*** (4.83)	0.046*** (2.86)	0.031* (1.86)	0.022 (1.34)	0.023 (1.51)
Inherent	0.188 (0.59)	-0.010 (-0.11)	0.011 (1.06)	-0.031*** (-3.52)	0.011 (1.12)	0.001 (0.15)
OCFlow	0.130 (0.27)	0.009 (0.06)	0.625*** (29.35)	-0.576*** (-25.06)	0.533*** (25.86)	-0.471*** (-20.94)
LnAge	0.030 (0.22)	-0.041 (-0.98)	-0.007 (-1.58)	0.007 (1.54)	-0.000 (-0.06)	0.007* (1.69)
LnAssets	-0.079 (-1.40)	-0.058*** (-3.17)	0.003 (1.22)	-0.004* (-1.93)	0.001 (0.29)	-0.001 (-0.42)
Complex	-0.103 (-0.98)	0.079** (2.42)	-0.008** (-2.45)	0.005 (1.55)	-0.011*** (-3.36)	0.007** (2.29)
Return	-0.440 (-0.79)	1.293*** (4.13)	-0.508*** (-12.33)	0.687*** (21.32)	-0.275*** (-5.96)	0.237*** (8.42)
_cons	1.573 (1.50)	0.901*** (2.64)	-0.031 (-0.78)	0.059* (1.67)	-0.018 (-0.47)	0.030 (0.85)
Year	Included	Included	Included	Included	Included	Included
Sector	Included	Included	Included	Included	Included	Included
N	845	812	520	521	517	524
R-sq	0.02	0.11	0.68	0.65	0.61	0.52
adj. R-sq	-0.01	0.08	0.66	0.63	0.60	0.50

This table reports regression coefficients and t-statistics in parentheses; \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01.

Table 8: 2SLS estimation results for the impact of female leadership on financial reporting quality

Variables	(1)	(2)	(3)
BFemale	-0.442* (-1.84)		
BIndFemale	-1.150 (-1.19)		
CFemale		-0.370** (-2.14)	
CFemaleExpert		-9.324 (-1.46)	
BFemaleExe			-0.060* (-1.93)
Control variables	Included	Included	Included
$\lambda$	-16.931 (-1.21)	-61.528 (-1.45)	4.777 (0.77)
Year	Included	Included	Included
Sector	Included	Included	Included
N	1657	1408	1657
R-sq	0.02	0.02	0.02
adj. R-sq	-0.00	-0.00	-0.00

This table reports regression coefficients and t-statistics in parentheses; \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01.