Top executive gender diversity and financial reporting quality

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Abstract: We examine whether gender diversity of chief executive and chief financial officers (CEOs and CFOs) is associated with financial reporting quality. The CEOs and CFOs of publicly traded companies are both required to certify the appropriateness of their financial statements and annual disclosures. We argue that gender diverse dyads (groups) of executives can bring different perspectives and professional skepticism to financial reporting. Using a sample of different CEO/CFO gender dyads during 2006-2019, we postulate and find evidence of higher accruals quality among firms led by gender-diverse dyads compared to accruals quality reported by firms led either all-male or all-female CEO/CFO pairs. Additional analyses reveal that the auditors of firms with gender-diverse executive dyads issue audit reports later, charge higher audit fees, and are more likely to be one of the Big 4 firms. In contrast, companies led by all-male executives obtain audit reports sooner, pay lower audit fees, and are less likely to appoint a Big 4 firm as auditor. These findings support the view that top executive gender diversity enhances financial reporting quality, which has important implications for corporate governance mechanisms.

Keywords: Executive diversity, Accruals quality, Audit report lag, audit fees, CEO, CFO

JEL Classification: J33; H21; H22; M41

1. Introduction

On December 2, 2001, Enron Corporation declared bankruptcy and became the first in a domino-like chain of major US corporate failures. Three months later, WorldCom followed suit. In both instances, it was women who alerted key personnel to the fraudulent activities taking place: Sherron Watkins at Enron and Cynthia Cooper at WorldCom. While both women were part of the senior management team at their respective firms, neither were influential enough to affect on-going activities. The 'C-suite' at that time was almost completely male-dominated. There were just two female Fortune 500 company CEOs in 2001; in 2020, more than 40 (90) women held a position of CEOs (CFOs) at S&P 500 and Fortune 500 companies (Green and Roeder 2020; Hinchliffe 2022).

In the 20 years since Enron collapsed, business and political leaders and social groups have focused on breaking the so-called glass ceiling and increasing gender diversity (e.g., Jeong and Harrison 2017; Devillard et al. 2018). The impetus for such action goes beyond just equity. Recent research on women in executive roles suggests that women are more conservative and risk averse (Peni and Vähämaa 2010; Hoang et al. 2019) and tend to be more ethical relative to their male counterparts (Ford and Richardson 1994; Ye et al. 2010). Similarly, recent research on board gender diversity suggests that firms with gender diverse boards of directors are less likely to engage in financial fraud (Cumming et al. 2015; Wahid 2019), have fewer internal control weaknesses (Chen et al. 2016), and have higher financial reporting quality (Zalata et al. 2022; Srinidhi et al. 2011; Dobija et al. 2021). While the impact of gender diversity on earnings quality has been examined in a board of directors setting, there is relatively little evidence as to whether the gender diversity of the key corporate decision makers affects financial reporting quality.

Accordingly, the objective of this study is to examine whether the gender diversity of CEOs and CFOs is associated with financial reporting quality. Note that CEOs and CFOs have, for a long time, provided assurances to auditors concerning the integrity of financial reporting in the management representation letter. As a response to highly publicized corporate financial scandals, the United States passed the Sarbanes-Oxley Act (SOX) in 2002. Section 302 (Corporate Responsibility for Financial Reports) of SOX requires that the CEO and the CFO of publicly traded companies certify the appropriateness of their financial statements and periodic reports filed with the Securities and Exchange Commission (SEC), and imposes criminal penalties for 'knowing' or 'willful' violations of the Act. These new strict rules and certifications impose more stringent recordkeeping requirements, where chief corporate officers can be held liable for their financial 'mis'-reporting. Accordingly, CEO and CFO perspectives and professional skepticism during the financial reporting process are crucial elements of financial reporting oversight.

A central tenet of the upper echelon theory of Hambrick and Mason (1984) is that the ways in which powerful actors' (i.e., of the 'upper echelons') in organizations interpret situations, challenges, or decisions they confront, are influenced by their experiences, values and personalities, which in turn, influence their strategic choices and organizational effectiveness (Hambrick 2007). Since the introduction of upper echelons theory, financial research provides ample evidence that top managers, particularly CEOs and CFOs, exert significant influence on financial reporting decisions (Plöckinger et al. (2016), and that their experiences, values and traits affect financial reporting quality (Krishnan and Parsons 2007; Ye et al. 2010; Hrazdil et al. 2022). The general representation of the differences between men's and women's experiences is related to their individual contexts, where women are considered to maintain more relational, connected, and interdependent relationships (Gabriel and Gardner 1999) and have empathetic behaviours and

priorities as leaders (Post 2015). This theory helps us assess whether gender-diversity of chief executives creates a unique cognitive framework that has a positive influence on financial reporting quality, relative to either all male-dominated or all female-dominated top management teams.

Using a sample of over 19,000 different CEO/CFO gender dyads during 2006-2019, we provide evidence consistent with the proposition that gender diverse dyads result in higher financial reporting quality.[1] We then examine how, if at all, the expectation of higher financial reporting quality impacts the performance of the audit. An audit opinion states in essence that the audited financial statements are free from material misstatements. To reach that conclusion, the auditor assesses the *a priori* risk of material misstatement, and performs an audit to reduce the residual risk of material misstatement to a low level. Given an expectation of higher earnings quality from gender diverse dyads, it would be reasonable for an auditor to assess a lower *a priori* risk of material misstatement. This could result in a reduction in the amount of audit work performed, a reduction in the audit fee, and the ability to complete the audit more quickly. Surprisingly, our results suggest that auditors of firms with dyads of gender-diverse executives issue their audit reports *later*, charge *higher* audit fees, and are more likely to belong to one of Big 4 firms, compared to firms led by all-male dyads. This result suggests that an auditor's *a priori* belief concerning the risk of material misstatement (an audit supply-side effect) is not the dominant force driving audit program design. Rather gender diverse executive dyads may expect the auditor to perform more audit tests (a demand-side effect) which facilitates higher financial reporting

[1] In this paper, we measure financial reporting quality by the quality of accruals, which Francis et al. (2005) define as the measure of information risk associated with earnings, a key accounting number. Accruals quality informs investors about the mapping of accounting earnings into cash flows, where relatively poor accruals quality weakens this mapping and, therefore, increases information risk.

quality. This explanation is also consistent with our finding that gender diverse dyads are more likely to use the services of a Big 4 firm.

Our results contribute to the literature in the following ways. We are the first to document that firms with gender diverse dyads of CEOs and CFOs not only report higher quality accruals but also significantly differ in terms of the quality of their audits. Whereas prior research that investigates gender diversity in connection with financial reporting quality mainly focuses on diversity of corporate board members (Chen et al. 2016; Zalata et al. 2022; Wahid 2019; Dobija et al. 2021), we analyze gender diverse dyads of executives in the U.S. after the implementation of SOX, which imposes criminal penalties on CEOs and CFOs for 'knowing' or 'willful' violations in the preparation of financial statements and periodic reports filed with the SEC. Previous studies that examine gender diversity of executive officers in connection with earnings quality further measure financial reporting quality indirectly (i.e., Zalata et al. (2019) analyze classification shifting, which is a less litigious form of earnings management), study women in all corporate officer roles (Krishnan and Parsons 2008), and analyze gender diversity outside the U.S. setting, where Ye at el. (2010) show no significant differences in earnings quality for firms with female and male top executives among Chinese firms. Our analysis of accrual quality and the mechanisms through which such quality is achieved, provides strong evidence supporting the efficacy of gender diverse dyads of corporate executives on financial reporting quality in the U.S. setting.

Our results thus have important implications for executive selection from a policy perspective, as well as top management team monitoring from a governance and investor perspectives, helping various stakeholders to better evaluate the dynamics of top management teams. The remainder of this paper proceeds as follows: Section 2 reviews the prior research and develops our hypotheses. Section 3 discusses the methodology we use and the research design.

Section 4 presents the main empirical findings and additional test results. Section 5 concludes the paper.

2. Related literature and hypotheses development

2.1 Literature on gender diversity and performance

Research in psychology provides vast evidence that men and women think differently (Kling et al. 1999; Johnson and Whisman 2013). Research in business-related topics builds on that perspective and explores the way gender diversity impacts decision making; for example, prior studies suggest that women are more risk averse (Zalata et al. 2019; Hoang et al. 2019), more conservative (Zeng and Wang 2015), exhibit greater ethical sensitivity to various situations (Cohen et al. 1998; Ford and Richardson 1994; Ye et al. 2010)[2], and foster more trust-building relationships (Jelinek and Adler 1988; Klenke 2003) than men. Men, on the other hand, exhibit a greater task orientation, a higher ambition to achieve demonstrable performance outcomes, and are more aggressive in the pursuit of such outcomes (Statham 1987; Burke and Collins 2001). Such differences can significantly affect various behaviors and outcomes.

For example, Krishnan and Parsons (2008) contribute to the debate on the association between ethics, gender diversity and attitudes towards money by studying all women in corporate officer roles, and document a positive relationship between earnings sensitivity to bad news and senior management diversity. Others, such as Srinidhi et al. (2011), extend the notion to boards of directors and argue that if senior management gender diversity affects earnings sensitivity, it would

[2] It should be noted that the notion of what constitutes ethical behaviour is not fixed. Previous research points out that ethical business conduct is predicated on 'Western philosophical principles', where Whitcomb et al. (1998) show that cultural and institutional differences would result in different outcomes as to whether something was ethical or not. Moreover, Krishnan and Parsons (2008), Srinidhi et al. (2011) and the other studies utilize data mainly from Western-oriented, economically developed, countries.

be reasonable to expect earnings quality to be improved if the board of directors of a firm was also gender diverse. The authors document a positive relationship between having at least one female on the board of directors and earnings quality, attributing the outcome to a number of factors: (a) females tend to be more diligent regarding reporting and monitoring (Adams and Ferreira 2009); (b) women are more social and open to alternate viewpoints (Rose 2007); (c) women are less opportunistic (Krishnan and Parsons 2008); and (d) women are more risk averse (Powell and Ansic 1997). Finally, Ye et al. (2010) question whether the association between gender diversity and financial reporting quality would also apply to developing countries. Specifically, the authors investigate whether the gender effect cited by other studies would be the same, given the differences in language, culture, legal system and personal values. Ye et al. examine a large sample of Chinese firms from 2001 to 2006 and find no significant association between gender of top executives and earnings quality, attributing their finding to the institutional environment, positing that the indoctrination of both males and females in China prevented what in Western cultures was "… different social role expectation[s] and values …" (p.53).

Despite the mixed outcomes, the common thread of all these studies is that none of them examined the gender diversity effect of the key executive (CEO/CFO) pairings. Typically, researchers examine the impact of gender diversity on earnings quality without considering the specific roles played by females. For example, Krishnan and Parsons (2008) do not study what role females played in senior management (only that there were females in senior management); Srinidhi et al. (2011) do not examine what role females played on a board (only that there were females on the board); and while Ye et al. (2010) examine the role played by females (CEO or CFO or board chair), they do not examine any interactions or gender diverse dyads of key executives.

Our paper extends the research in gender diversity by specifically examining different CEO/CFO gender dyads — male (M) / M, female (F) / F, M / F, and F / M — using U.S. data from 2006 to 2019 and by examining how, if at all, the outcome of gender diversity of corporate executives on financial reporting quality impacts the characteristics of the audit.

2.2 Hypothesis development

There is general consensus that gender diversity within teams of key decision makers is beneficial to firms in various forms (Peni and Vähämaa 2010; Wahid 2019; Chen at al. 2016; Srinidhi et al. 2011).[3] The upper echelon theory of Hambrick and Mason (1084) and Hambrick (2007) posits that the characteristics of senior leaders will determine organization decision-making. Shirindi et al. (2019) discuss several gender diverse channels within the upper echelons theory framework, that help explain the dynamics in male-female teams which we draw on to formulate our predictions.

First, the perspective broadening channel, based on the resource dependency theory of Pfeffer and Salancik (1978), attributes the benefits of gender-diverse partners stemming from their different resources such as expertise, experience, and channels of information flow. Their inherent differences in characteristics and socialized experiences make men and women evaluate the same evidence using different viewpoints, experiences and inherent traits (Eagly and Wood 1991). The effectiveness of gender diversity on corporate boards documented in prior literature (i.e., Wahid 2019; Cumming et al. 2015; Chen at al. 2016) can be extended to the dyads of corporate executives. For example, the tendency for females to be more diligent regarding reporting and monitoring in their roles, more social and open to alternate viewpoints on corporate boards would apply equally

[3] In addition to gender, diversity within teams can be reflected in other dimensions, such as ethnicity, nationality, functional background, and organizational membership; however, of these, gender diversity is the most widely studied dimension (Shirindi et al. 2019).

to being either a CEO or CFO (Adams and Ferreira 2009). Further, the view that women are more risk averse than males would probably be stronger if their roles were CEO or CFO (Shropshire et al. 2021). The difference in perspectives between the two chief executives results in the same corporate performance being interpreted and communicated differently by them. CEOs and CFOs assess the financial estimates differently and with different professional skepticism. We postulate that the differences in socialization experience and traits summarized in the previous section make it more likely that executive officers in a gender-diverse dyad bring more differentiated perspectives to financial reporting compared to either all-male or all-female dyads. This perspective broadening effect suggests a potential improvement in financial reporting quality when both male and female executives are present compared to when only male or only female executives are present.

Second, the communication channel argues that effective communication between two individuals could enhance the benefits of diversity by stimulating creativity, encouraging discussion, and enlarging the knowledge pool (Van Peteghem et al. 2018). Effective communication between the corporate leaders (CEOs and CFOs) and the audit team is necessary to ensure a high quality audit. If the personal chemistry between the two chief executives is not harmonious, their communication could get strained. When both male and female executives communicate well, they raise more questions and resolve more financial reporting issues. In a mixed-gender dyad, we expect stronger communication links between the two key executives and greater accommodation with respect to each other's views than would be possible in a larger working group (Weber et al. 2009).[4]

[4] We acknowledge that the faultline theory (i.e., how diversity structure may give rise to frictions and subgroup formation along so-called faultlines within a group of individuals) often applied to the board of directors may also apply to a dyad of CEO and CFO, provided that as there are other executive officers (i.e., chief information officers or chief operating officers) that may create sub-groups that overlap with diversity attributes. If subgroups are created

Third, Shirindi et al. (2019) point to the human capital channel that may explain the dynamics in male-female teams and resulting outcomes. Prior studies argue that gender-diverse boards could possess more expertise than all-male boards, as women face the 'glass ceiling' and need to cross a higher bar to enter corporate boards (Post and Byron 2015). The human capital argument also applies to the executive setting. To reach the top of the corporate ladder, all executives need to have adequate education background and a broad knowledge related to their industry.[5] We assume that the underlying skill distribution for both male and female executives is similar; however, the human capital perspective acknowledges the possibility that the skill distribution for the female executives who cross the threshold is more truncated from below compared to that of the male executives, as the female executives may face a higher threshold to be promoted to their CEO/CFO positions. According to this perspective, the average skill level of a female executive is higher than that of a male executive, which may result in higher financial reporting quality in dyads of executives where a female CEO/CFO is involved.

All three perspectives imply that gender-diverse dyads deliver better-quality decisions than all-male groups. Unlike the prospective broadening and communication channels arguments, the human capital channel also implies that all-female dyads of executives deliver higher audit financial reports than gender-diverse and all-male groups. The literature on board gender diversity is unable to disentangle the prospective broadening and human capital effects due to the lack of

within the corporate executive team, this may instigate negative group dynamics and hamper the effective communication between CEO/CFO and the auditors. However, this is unlikely, as it is the CEO/CFO pair that is ultimately responsible and accountable for the financial reports, and as any incompatible differences between the two executives would likely have been eliminated prior to the appointment of executives.

[5] Most CEOs hold bachelor's degrees in fields related to business, including business administration, management, or public administration. Most CEOs also have a master's degree in business administration, economics, management, or another related degree. CFOs generally require a graduate degree in business-related fields such as accounting, economics, and finance since they are in charge of the financial aspect of a business. Most CFOs also hold a professional accounting designation.

all-female boards. Our study focuses on both-male, both-female, and gender-diverse pairs of executives, which provides us with the opportunity to evaluate the relative importance of perspective broadening vs. higher human capital in explaining the positive effect of gender diversity on financial reporting quality.

Irrespective of these views, there is also a possibility that gender diversity plays no significant role in financial reporting quality, which could be driven by other differences in expertise, experience, ethnicity, nationality, functional background, and organizational membership (a null hypothesis). Ultimately, the effect of gender diversity of chief corporate executives on financial reporting quality is an empirical question, which leads to our first hypothesis (in null form):

H1. *Dyads of gender-diverse executives are no more likely to issue reports with higher earnings quality than dyads of same-gender executives, ceteris paribus.*

Next, we consider prior experience of working together in executive roles as a mediating effect of the aforementioned relationship. Huang and Hilary (2018) and Sun and Bhuiyan (2020) both examine the impact of tenure on firm performance in the context of 'independent' board directors and conclude that the benefits of new ideas, new thinking and outside monitoring decline over time. The results are consistent with the notion that 'familiarity breeds contempt', where long tenure increases familiarity between boards and executives and is detrimental to directors' independence. Similarly, Li and Wahid (2018) examine board diversity from the perspective of tenure and conclude that shorter tenure is desirable, as directors who have not been present long enough are less likely to exhibit a cohort mentality and to become a 'groupthink board'. In a dyad, however, effective communication can often be enhanced when mutual trust exists between two executives, which takes time and repeated collaboration to develop. This especially applies to gender diverse dyads; for example, Boone and Hendriks (2009) show that a top management's

team collaborative behavior and information exchange are necessary conditions to unleash the performance benefits of functional background diversity. Given that managers remain in their executive roles (once appointed) for few years, we postulate that they learn to communicate and collaborate more effectively over time. Therefore, we predict that the gender diversity effect on financial reporting quality is stronger where the two executives have had an earlier collaboration. This leads to our second hypothesis (in null form):

H2. *The effect of gender diversity on earnings quality is not affected when the CFO and CEO have experience working together as executives.*

The SEC in the US explains that the role of an auditor is to examine a firm's financial statements and provide a written report expressing an opinion as to whether the financial statements are fairly stated and comply in all material respects with generally accepted accounting principles [GAAP]. That is, the financial statements are free from material misstatements. Moreover, there is an extensive body of research that examines the relationship between the cost of providing an audit and the quality of that audit (Simunic 1980; Hoitash et al. 2007; Mitra et al. 2009; Choi et al. 2010). To reach a conclusion that the audited financial statements are free from material misstatements, the auditor needs to assess the *a priori* risk of material misstatements and perform the audit to reduce the residual risk of misstatements (audit risk) to a low level. If auditors expect higher financial reporting quality from gender diverse dyads, they will assess a lower *a priori* risk, and be motivated to reduce the amount of work performed, the concomitant fee, and be able to complete the audit in a timely manner. Note that these outcomes are audit supply-side effects, consistent with the performance of efficient audits. On the other hand, if H1 and H2 are true, gender diverse dyads of executives may expect the auditor to perform more tests. Note that auditors are themselves an element of a company's financial reporting system (similar to internal controls (Simunic 1980)), so a demand by executives for higher financial reporting quality may

also impact on auditors in terms of their audit effort, audit fees, and auditor choice. It is an empirical question whether supply-side effects or demand-side effects dominate in determining audit outcomes. This leads to our third hypothesis (in null form):

H3. *The choice of audit firms and the audits of companies are not affected by the gender diversity of the CEO/CFO dyad.*

3. Methodology

3.1 Sample and data definitions

Our initial sample includes all U.S. listed firms with available data from the Execucomp database during 2006 through 2019, for which we can identify gender of firms' CEOs and CFOs. We then merge Execucomp data with the Compustat fundamental annual files to obtain necessary financial data for our dependent, independent and control variables. We winsorize all non-categorical variables that fall in the top and bottom 1 percent of the distribution to mitigate potential problems of outliers. Our final sample consists of 3,840 U.S. publicly listed companies (representing 19,215 firm-year observations).

As our key variables of interest, we define three categorical variables to examine the differential effects of gender diverse dyads of executives on financial reporting and audits of financial statements. Specifically, we define *MIX* as the indicator variable that equals one for firms with either female CEO and male CFO or male CEO and female CFO (gender diverse dyads), and zero otherwise; *BOTH_M* as the indicator variable that equals to one for firms with male CEO and male CFO, and zero otherwise; and *BOTH_FM* as the indicator variable that equals to one for firms with female CEO and female CFO, and zero otherwise.

3.2 Regression models

To test our first hypothesis, we follow Shirindi et al. (2011) and estimate the following model (equation 1):

$$EQ\_MDD_{it} = \alpha + \beta_1 MIX_{it} + \beta_2 BOTH\_M_{it} + \beta_3 BOTH\_F_{it} + \beta_4 SIZE_{it} + \beta_5 BIG4_{it} + \beta_6 LEVERAGE_{it} + \beta_7 LOSS_{it} + \beta_8 MTB_{it} + \beta_9 HIGHLIT_{it} + \beta_{10} ALTMAN_{it} + Industry\ FE + Year\ FE + \varepsilon_{it}$$

where *EQ_MDD* represents earnings quality measured as the standard deviation of residuals based on the modified Dechow-Dichev model (Dechow and Dichev 2002; Francis et al. 2005), where a higher standard deviation denotes lower earnings quality. For ease of interpretation, we multiply the standard deviation of residuals based on the modified Dechow-Dichev model by negative one, so that higher values correspond to higher earnings quality.[6] The coefficients of interest are β_1-β_3 that test the effect of gender diverse dyads of executives (MIX, BOTH_M, and BOTH_F) on earnings quality. Following the existing literature on determinants of earnings quality (e.g., Shirindi et al. 2011), we control for several firm-specific characteristics in our models. We control for *SIZE* (firm's market value), *BIG4* (whether firm's auditor is a member of the Big 4 audit firms namely PwC, EY, KPMG and Deloitte), *LEVERAGE* (short-term and long-term debt, divided by total assets), and *ALTMAN* (Z-score, based on Altman 1968), all of which we expect to be negatively related to the standard deviation of residuals (or positively related to earnings quality). We further control for *LOSS* (whether income before extraordinary items is negative in the current period), *MTB* (market value of equity divided by its book value of equity), and *HIGHLIT* (whether a firm belongs to a high litigation risk industry as defined in Francis et al. 1994). Lastly, we include industry and year fixed effects (*FE*) to control for all time-invariant factors that might affect

[6] As a sensitivity analysis, we also estimate normal levels of accruals based on the modified Jones model (Dechow et al. 1995), which defines the accrual process as a function of growth in credit sales and investment in property, plant & equipment (*PPE*) and controls for firm performance (Kothari et al. 2005). We then decompose total accruals into non-discretionary and discretionary components, and multiply the values by negative one, where a lower magnitude of discretionary accruals indicates lower earnings quality. Our main results are similar to those based on EQ_MDD.

earnings quality across the industry and for time variation in earnings quality common to all firms in the sample. Our standard errors are further clustered by firm (Bertrand et al. 2004).[7] The appendix provides definitions of all variables used in our research design.

To test our third hypothesis, we investigate whether any differences in earnings quality across gender diverse dyads of executives affect auditor choice, and trigger auditor responses through changes in audit effort. We introduce the following three variables to investigate the effect of gender diverse dyads of executives on audit report timing, audit fees, and choice of auditor, respectively. Specifically, we measure *AUD_REPLAG* as the natural logarithm of the number of days from the fiscal year-end to the audit report date; *AUD_FEE* as the natural logarithm of audit fees; and *BIG4* as the indicator variable that equals to one if the firm's auditor is a member of the Big 4 audit firms (PwC, EY, KPMG and Deloitte), and zero otherwise. Following existing literature, we estimate equation 2 (the audit report lag), equation 3 (the audit fee model), and equation 4 (the auditor choice model) with the inclusion of control variables based on prior audit fee studies (e.g., Hay 2013; Hay et al. 2006; Simunic 1980), audit report lag studies (e.g., Amin et al. 2018; Knechel and Payne 2001), and auditor choice studies (e.g., Hrazdil et al. 2020; 2022), respectively. The appendix summarizes all variable definitions.

$$\begin{aligned} AUD\_REPLAG_{it} &= \alpha + \beta_1 MIX_{it} + \beta_2 BOTH\_M_{it} + \beta_3 BOTH\_F_{it} + \beta_4 SIZE_{it} + \beta_5 LRG\_ACCEL_{it} \\ &+ \beta_6 BIG4_{it} + \beta_7 BUSY_{it} + \beta_8 INTL_{it} + \beta_9 LOSS_{it} + \beta_{10} GC_{it} + \beta_{11} SPI\_DM_{it} \\ &+ \beta_{12} ALTMAN_{it} + Industry\ FE + Year\ FE + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} AUD\_FEE_{it} = \alpha &+ \beta_1 MIX_{it} + \beta_2 BOTH\_M_{it} + \beta_3 BOTH\_F_{it} + \beta_4 LNASSET_{it} + \beta_5 CURRENT_{it} \\ &+ \beta_6 INVREC_{it} + \beta_7 LEVERAGE_{it} + \beta_8 ROA_{it} + \beta_9 MTB_{it} + \beta_{10} ATENURE_{it} \\ &+ \beta_{11} LNBUSSEG_{it} + \beta_{12} LNGEOSEG_{it} + \beta_{13} SPI\_DM_{it} + \beta_{14} LOSS_{it} \\ &+ \beta_{15} M\&A_{it} + \beta_{16} IPO_{it} + \beta_{17} BUSY_{it} + \beta_{18} HIGHLIT_{it} + \beta_{19} OPINION_{it} \\ &+ \beta_{20} ICWEAK_{it} + \beta_{21} BIG4_{it} + Industry\ FE + Year\ FE + \varepsilon_{it} \end{aligned}$$

[7] The inclusion of firm fixed effects along with clustering on firm may affect the estimation of the standard errors because of the additional degrees of freedom that occur (i.e., the matrix dimension increases whereas the does not). We therefore utilize industry and firm FE and cluster the standard errors by firm.

$$BIG4_{it} = \alpha + \beta_1 MIX_{it} + \beta_2 BOTH\_M_{it} + \beta_3 BOTH\_F_{it} + \beta_4 LnASSET_{it} + \beta_5 ATURN_{it} + \beta_6 CURRENT_{it} + \beta_7 LEVERAGE_{it} + \beta_8 ROA_{it} + Industry\ FE + Year\ FE + \varepsilon_{it}$$

In the audit report lag, audit fee, and auditor choice models, we exclude all observations related to firms in the financial (between SIC 6000 and 6999) and utility (between SIC 4900 and 4949) industries because the audit fee model for these firms is different from other industries (Fields et al. 2004; Hay et al. 2006).

4. Results

4.1 Summary statistics

Table 1 presents the descriptive statistics of variables (defined in the Appendix) used to test our hypotheses. With the exception of categorical variables, all continuous variables are winsorized at the top and bottom percentiles and all follow normal distributions. As evident from Table 1, about 13% of firm-years in our sample are led by gender diverse dyads of executives (either male CEOs and female CFOs, or female CEOs and male CFOs), about 86% are led by male CEOs and CFOs, and about 1% are led by female CEOs and CFOs. In our sample, CEOs and CFOs worked together for at least one year about 70% of the time.

Insert [TABLE 1] about here

Table 2 presents Pearson and Spearman correlations among variables related to gender dyads of executives and variables related to earnings quality and audit effort, where the correlations indicate significant associations between our key variables of interest and all four dependent variables.

Insert [TABLE 2] about here

4.2 Earnings quality results

Table 3 presents the results of equation 1 for earnings quality (EQ_MDD) as the dependent variable and gender diverse dyads of executives (MIX) as the key independent variable in column (1). As a cross-sectional test, we add an interaction coefficient *MIX*PRIOR* to equation (1) in column (2) to investigate whether the main association is affected by the prior work experience (*PRIOR*) of the two chief executives. Column (3) shows the effect of either all-male CEO-CFO pairs and all-female CEO-CFO pairs on earnings quality relative to gender diverse dyads and column (4) further incorporates the effect of prior or repeated collaboration.

The results in the first column indicate that after controlling for previously documented determinants of earnings quality, including industry and year fixed effects, firms led by gender diverse executives report significantly higher earnings quality relative to firms lead by either all-male or all-female CEO-CFO pairs. The results in the second column further reveal that this effect appears to be short-lived, as prior experience of working together alleviates (albeit insignificantly) the main effect; the combined effect (EST: [1] + [2]) is insignificant, indicating that earnings quality is significantly higher only during the years when the gender-diverse pairs of executives work together for the first time in their executive roles. Turning the attention to either all-male or all-female executives, results in the third column indicate that earnings quality is significantly reduced for firms led by all-male CEO-CFO pairs. Although working together in the past improves earnings quality (and significantly alleviates the main effect), the combined effect of all-male CEOs/CFOs on earnings quality (regardless of prior experience working together) in the last column remains significant.

The values are also economically significant. For example, the positive and significant *MIX* coefficient of 0.003 in column (1) indicates that the average earnings quality increases by about 7 percent when firms are led by gender diverse dyads of executives for the first time. With regards to the control variables, the coefficients on *SIZE*, *BIG4*, *LEVERAGE*, and *ALTMAN* are all significantly positive, indicating that earnings quality is higher for firms that are larger, audited by one of the Big 4 audit firms, more leveraged, and firms that have lower bankruptcy risk. Earnings quality is significantly lower for growth firms (negative *MTB* coefficient) and firms that have experienced losses (negative *LOSS* coefficient). Overall, these findings are consistent with our first two hypotheses that gender diverse dyads of executives improve financial reporting, at least in the short run.

Insert [TABLE 3] about here

4.3 Audit effort and auditor choice results

In this section, we present results related to our third hypothesis. Tables 4, 5, and 6 present the results of equations 2, 3, and 4 for audit report lag (AUD_REPLAG), audit fee (AUD_FEE), and Big 4 audit firm (BIG4), as the dependent variables, respectively. The effect of gender diverse dyads of executives (MIX) on audit effort and auditor choice is presented in columns (1), the interaction effect of their prior work experience (MIX*PRIOR) in columns (2), the effect of either all-male and all-female CEO-CFO pairs relative to gender diverse dyads in columns (3), and columns (4) further incorporate the effect of their prior work collaboration.

Results in Table 4 indicate that auditors of firms with gender-diverse dyads issue audit reports later (columns 1) and that this effect appears to be short-lived (column 2), as prior experience of working together eliminates the main effect; the combined effect (EST: [1] + [2]) is

insignificant, indicating that audit report lag is significantly higher only during the years when the gender-diverse pairs of executives work together for the first time in their executive roles. Turning attention to either all-male or all-female executives, firms led by all-male dyads of executives have shorter audit report lags (column 3), mainly driven by their prior work experience (column 4); the combined effect (EST: [3] + [4]) is significant, indicating that audit report lag is significantly higher when all male CEO-CFO pairs have prior work collaboration in their executive roles.

Insert [TABLE 4] about here

Results in Table 5 portray similar results with regards to audit fees. Specifically, the results indicate that after controlling for previously documented determinants of audit fees, including industry and year fixed effects, auditors of firms with gender-diverse dyads charge higher audit fees. This relationship is not significantly moderated by the prior work collaboration of executives. However, when we examine either all-male or all-female executives (relative to gender diverse pairs), firms lead by all-male dyads of executives are charged lower audit fees, which is mainly driven by executives' prior collaboration.

Insert [TABLE 5] about here

Finally, results in Table 5 reveal that gender diverse dyads of executives are more likely to utilize Big 4 audit firms, whereas firms lead by all-male dyads are less likely to appoint a Big 4 firm as auditor. The latter result is more pronounced for all-male executives with prior work experience.

Insert [TABLE 6] about here

Overall, our results support the premise that gender-diverse dyads of executives not only affect earnings quality but also influence the work and choice of auditors.

5. Conclusion

We examine the relationship between gender diversity of chief executive and chief financial officers and the firm's earnings quality. Using a sample of over 19,000 CEO/CFO gender dyads during 2006 to 2019, we find that firms led by gender-diverse dyads report higher earnings quality, compared to firms led by either all-male or all-female CEO/CFO pairs. We also find that the effects of gender diversity are associated with higher audit fees and longer audit report lags, thus indicating that gender-diverse dyads trigger auditor responses through additional audit effort.

Our findings clarify how gender diversity affects earnings quality, and the effects of gender diversity on auditor choice, and on the audit process. From a policy perspective, our findings are consistent with the notion that gender diversity among a company's top executives has a beneficial impact on the quality of financial reporting which should be of value to shareholders, investors, creditors, and other financial statement users.

APPENDIX
Variable definitions

Variable name	Definition
MIX	Indicator variable that equals to one for firms with either female CEO and male CFO *or* male CEO and female CFO, and zero otherwise.
BOTH_M	Indicator variable that equals to one for firms with male CEO and male CFO, and zero otherwise.
BOTH_FM	Indicator variable that equals to one for firms with female CEO and female CFO, and zero otherwise.
PRIOR	Indicator variable that equals to one when CEO and CFO worked together for at least one year, and zero otherwise.
EQ_MDD	Earnings quality, measured by the standard deviation of residuals based on modified Dechow-Dichev model (Dechow and Dichev 2002; Francis et al. 2005), multiplied by negative one.
SIZE	Natural logarithm of the firm's market value (price times the number of shares outstanding) at the end of fiscal year.
BIG4	Indicator variable that equals to one if the firm's auditor is a member of the Big 4 audit firms (PwC, EY, KPMG and Deloitte), and zero otherwise.
ATURN	Ratio of sales to lagged total assets,
LEVERAGE	Sum of short-term and long-term debt, divided by total assets.
LOSS	Indicator variable that equals to one if income before extraordinary items is negative in the current period, and zero otherwise.
MTB	Firm's market value of equity divided by its book value of equity.
HIGHLIT	Indicator variable that equals to one for high litigation risk industries as defined in Francis et al. (1994), and zero otherwise.
ALTMAN	Modified Altman (1968) Z-score = (1.2 x working capital + 1.4 x retained earnings + 3.3 x income before extraordinary items + 0.999 x sales) / total assets.
ACCR_LAG	Firm's lagged total accruals (net income less cash flow from operations), scaled by total assets.
AUD_REPLAG	Natural logarithm of the number of days from the fiscal year-end to the audit report date.
LRG_ACCEL	Indicator variable that equals to one if an audit's client is a large-accelerated filer, and zero otherwise.
BUSY	Indicator variable that equals to one if an audit's client has a year-end fall on December 31, and zero otherwise.
GC	Indicator variable that equals to one if a firm receives a going-concern report in a fiscal period, and zero otherwise.
SPI_DM	Indicator variable that equals to one if an audit's client has a special item during the year, and zero otherwise.
AUD_FEE	Natural logarithm of audit fees.
LNASSET	Natural logarithm of total assets (in millions).
CURRENT	Ratio of current assets to current liabilities.
INVREC	Ratio of total inventory and receivables to total assets.
ROA	Income before extraordinary items, scaled by total assets.

ATENURE	Number of years the company has been audited by the same audit firm,
LNBUSSEG	Natural logarithm of one plus the number of business segments.
LNGEOSEG	Natural logarithm of one plus the number of geographical segments.
M&A	Indicator variable that equals to one if an audit's client is engaged in a merger or acquisition during the year, and zero otherwise.
IPO	Indicator variable that equals to one if an audit's client is engaged in an initial public offering during the year.
OPINION	Indicator variable that equals to one if an audit's client receives a modified audit opinion and zero otherwise. A modified opinion is defined as anything except a standard unqualified audit opinion coded as one by COMPUSTAT.
ICWEAK	Indicator variable that equals to one if the auditor's opinion of the effectiveness of the company's internal control is either adverse or disclaimer, and zero otherwise.

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TABLE 1
Summary statistics

Variables	N	Mean	S. D.	Q1	Median	Q3
MIX	19,215	0.129	0.336	0.000	0.000	0.000
BOTH_M	19,215	0.865	0.342	1.000	1.000	1.000
BOTH_FM	19,215	0.006	0.074	0.000	0.000	0.000
PRIOR	19,215	0.702	0.457	0.000	1.000	1.000
Variables used in the earnings quality model						
EQ_MDD	19,215	–0.042	0.034	–0.051	–0.032	–0.020
SIZE	19,215	7.697	1.685	6.563	7.639	8.858
BIG4	19,215	0.896	0.305	1.000	1.000	1.000
LEVERAGE	19,215	0.247	0.207	0.068	0.227	0.368
LOSS	19,215	0.195	0.396	0.000	0.000	0.000
MTB	19,215	1.959	1.250	1.179	1.559	2.263
HIGHLIT	19,215	0.312	0.463	0.000	0.000	1.000
ALTMAN	19,215	3.952	4.199	1.725	3.114	4.957
ACCR_LAG	19,215	–0.011	0.068	–0.043	–0.007	0.025
Variables used in the audit report lag model						
AUD_REPLAG	13,988	4.051	0.206	4.043	3.951	4.127
SIZE	13,988	7.544	1.796	7.467	6.354	8.720
LRG_ACCEL	13,988	0.668	0.471	1.000	0.000	1.000
BIG4	13,988	0.877	0.328	1.000	1.000	1.000
BUSY	13,988	0.729	0.445	1.000	0.000	1.000
INTL	13,988	0.198	0.398	0.000	0.000	0.000
LOSS	13,988	0.216	0.412	0.000	0.000	0.000
GC	13,988	0.006	0.079	0.000	0.000	0.000
SPI_DM	13,988	0.786	0.410	1.000	1.000	1.000
ALTMAN	13,988	4.270	4.522	3.310	1.975	5.252

TABLE 1 (Continued)

Variables	N	Mean	S. D.	Q1	Median	Q3
Audit fee and auditor choice models						
AUD_FEE	14,707	14.486	1.104	13.661	14.397	15.253
LNASSET	14,707	7.499	1.788	6.225	7.427	8.689
CURRENT	14,707	2.549	2.080	1.329	1.940	2.943
INVREC	14,707	0.245	0.165	0.116	0.221	0.337
LEVERAGE	14,707	0.239	0.214	0.047	0.212	0.361
ROA	14,707	0.037	0.122	0.010	0.052	0.092
MTB	14,707	2.061	1.374	1.204	1.637	2.392
ATENURE	14,707	18.445	20.257	6.000	11.000	22.000
LNBUSSEG	14,707	1.061	0.609	0.693	0.693	1.609
LNGEOSEG	14,707	1.076	0.741	0.693	1.099	1.609
SPI_DM	14,707	0.786	0.410	1.000	1.000	1.000
LOSS	14,707	0.217	0.412	0.000	0.000	0.000
M&A	14,707	0.145	0.352	0.000	0.000	0.000
IPO	14,707	0.011	0.104	0.000	0.000	0.000
BUSY	14,707	0.696	0.460	0.000	1.000	1.000
HIGHLIT	14,707	0.354	0.478	0.000	0.000	1.000
OPINION	14,707	0.353	0.478	0.000	0.000	1.000
ICWEAK	14,707	0.028	0.166	0.000	0.000	0.000
BIG4	14,707	0.877	0.329	1.000	1.000	1.000
ATURN	14,707	1.168	0.798	0.621	0.972	1.513

Notes: All variables are as defined in the Appendix.

TABLE 2
Correlations

		(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
MIX	*(1)*	1.000	**–0.976**	**–0.029**	**–0.022**	**0.040**	0.005	**0.025**	0.013
BOTH_M	*(2)*	**–0.976**	1.000	**–0.189**	**0.024**	**–0.042**	–0.005	**–0.023**	**–0.015**
BOTH_FM	*(3)*	**–0.029**	**–0.189**	1.000	–0.014	0.010	–0.002	–0.006	0.009
PRIOR	*(4)*	**–0.022**	**0.024**	–0.014	1.000	**0.044**	**–0.111**	–0.006	–0.002
EQ_MDD	*(5)*	**0.036**	**–0.038**	0.013	**0.047**	1.000	**–0.214**	**0.253**	**0.204**
AUD_REPLAG	*(6)*	0.005	–0.005	–0.001	**–0.093**	**–0.219**	1.000	**–0.375**	**–0.251**
AUD_FEE	*(7)*	**0.021**	**–0.019**	–0.009	–0.011	**0.248**	**–0.407**	1.000	**0.406**
BIG4	*(8)*	0.013	**–0.015**	0.009	–0.002	**0.163**	**–0.263**	**0.405**	1.000

Notes: All continuous variables are winsorized at the 1% and 99% levels to mitigate the effect of outliers. All variables are as defined in the Appendix. Pearson (Spearman) correlation values are above (below) the diagonal; bold values denote significance at 5%.

TABLE 3
Earnings quality model

Variables	(1) EQ_MDD		(2) EQ_MDD		(3) EQ_MDD		(4) EQ_MDD	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Intercept	–0.091***	–14.16	–0.091***	–14.16	–0.088***	–13.47	–0.088***	–13.42
[1] MIX	0.003**	2.36	0.004***	3.26				
[2] MIX*PRIOR			–0.002	–1.19				
[3] BOTH_M					–0.003**	–2.36	–0.004***	–3.39
[4] BOTH_M*PRIOR							0.002***	2.85
[5] BOTH_FM					–0.002	–0.55	–0.005	–0.73
[6] BOTH_FM*PRIOR							0.004	0.68
SIZE	0.005***	14.82	0.005***	14.82	0.005***	14.82	0.005***	14.83
BIG4	0.009***	3.77	0.009***	3.77	0.009***	3.76	0.009***	3.77
LEVERAGE	0.012***	3.84	0.012***	3.83	0.012***	3.84	0.012***	3.85
LOSS	–0.007***	–6.79	–0.007***	–6.80	–0.007***	–6.79	–0.007***	–6.69
MTB	–0.006***	–9.26	–0.006***	–9.26	–0.006***	–9.26	–0.006***	–9.28
HIGHLIT	0.003	1.22	0.003	1.22	0.003	1.22	0.003	1.23
ALTMAN	0.001***	5.69	0.001***	5.70	0.001***	5.69	0.001***	5.68
FE: IND & YR		Yes		Yes		Yes		Yes
N		19,215		19,215		19,215		19,215
Adjusted R^2		0.231		0.231		0.231		0.231
EST: [1] + [2]			0.002	1.59				
EST: [3] + [4]							–0.002*	–1.84
EST: [5] + [6]							–0.001	–0.10

Notes: This table presents regression results of the earnings quality model. Industry FE are based on Fama and French (1997) 48 industry groups. *, **, *** denote significance at the 0.10, 0.05, and 0.01 levels, respectively, using two-tailed tests. T-statistic is determined by clustered standard errors at firm level.

TABLE 4
Audit report lag model

Variables	(1) AUD_REPLAG		(2) AUD_REPLAG		(3) AUD_REPLAG		(4) AUD_REPLAG	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Intercept	4.400***	108.98	4.400***	108.92	4.414***	107.78	4.414***	107.70
[1] MIX	0.013**	2.02	0.024***	2.76				
[2] MIX*PRIOR			–0.015*	–1.72				
[3] BOTH_M					–0.014**	–2.04	–0.005	–0.72
[4] BOTH_M*PRIOR							–0.012***	–3.37
[5] BOTH_FM					0.008	0.40	0.030	1.09
[6] BOTH_FM*PRIOR							–0.036	–1.23
SIZE	–0.033***	–12.47	–0.033***	–12.46	–0.033***	–12.47	–0.033***	–12.46
LRG_ACCEL	–0.120***	–16.64	–0.120***	–16.64	–0.120***	–16.64	–0.119***	–16.54
BIG4	–0.029***	–2.79	–0.029***	–2.80	–0.029***	–2.80	–0.029***	–2.83
BUSY	0.017**	2.28	0.017**	2.29	0.017**	2.28	0.017**	2.31
INTL	–0.008	–0.87	–0.008	–0.87	–0.008	–0.88	–0.008	–0.92
LOSS	0.024***	4.45	0.024***	4.43	0.024***	4.44	0.024***	4.30
GC	0.124***	4.53	0.123***	4.52	0.124***	4.54	0.124***	4.54
SPI_DM	0.004	0.74	0.004	0.74	0.004	0.77	0.004	0.68
ALTMAN	–0.002**	–2.20	–0.002**	–2.19	–0.002**	–2.21	–0.001**	–2.18
FE: IND & YR		Yes		Yes		Yes		Yes
N		13,988		13,988		13,988		13,988
Adjusted R^2		0.383		0.383		0.383		0.383
EST: [1] + [2]			0.009	1.13				
EST: [3] + [4]							–0.017**	–2.53
EST: [5] + [6]							–0.006	–0.28

Notes: This table presents regression results of the audit report lag model. Industry FE are based on Fama and French (1997) 48 industry groups. *, **, *** denote significance at the 0.10, 0.05, and 0.01 levels, respectively, using two-tailed tests. T-statistic is determined by clustered standard errors at firm level.

TABLE 5
Audit fee model

Variables	(1) AUD_FEE		(2) AUD_FEE		(3) AUD_FEE		(4) AUD_FEE	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Intercept	10.219***	100.63	10.219***	100.62	10.273***	100.36	10.272***	100.51
[1] MIX	0.054**	2.21	0.048**	2.10				
[2] MIX*PRIOR			0.008	0.38				
[3] BOTH_M					–0.054**	–2.20	–0.025	–1.02
[4] BOTH_M*PRIOR							–0.041***	–3.99
[5] BOTH_FM					–0.048	–0.82	–0.043	–0.55
[6] BOTH_FM*PRIOR							–0.008	–0.12
LNASSET	0.522***	64.67	0.522***	64.68	0.522***	64.66	0.522***	64.73
CURRENT	–0.034***	–6.52	–0.034***	–6.52	–0.034***	–6.52	–0.034***	–6.51
INVREC	0.838***	10.06	0.838***	10.06	0.838***	10.06	0.839***	10.07
LEVERAGE	–0.096**	–1.96	–0.096**	–1.96	–0.096**	–1.96	–0.098**	–2.01
ROA	–0.469***	–5.90	–0.469***	–5.91	–0.469***	–5.90	–0.469***	–5.91
MTB	0.023***	3.08	0.023***	3.08	0.023***	3.08	0.024***	3.14
ATENURE	0.001**	2.10	0.001**	2.10	0.001**	2.11	0.001**	2.12
LNBUSSEG	0.002	0.10	0.002	0.10	0.002	0.10	0.002	0.12
LNGEOSEG	0.106***	6.12	0.106***	6.12	0.106***	6.12	0.106***	6.10
SPI_DM	0.153***	8.83	0.153***	8.83	0.153***	8.82	0.152***	8.77
LOSS	0.082***	4.29	0.082***	4.29	0.082***	4.29	0.079***	4.16
M&A	0.053***	3.19	0.053***	3.19	0.053***	3.19	0.052***	3.20
IPO	0.229***	5.19	0.229***	5.19	0.229***	5.19	0.224***	5.07
BUSY	0.031	1.25	0.031	1.25	0.031	1.25	0.031	1.28
HIGHLIT	–0.089*	–1.88	–0.089*	–1.88	–0.089*	–1.88	–0.089*	–1.89
OPINION	0.066***	5.32	0.066***	5.33	0.066***	5.32	0.066***	5.31
ICWEAK	0.414***	11.03	0.414***	11.03	0.414***	11.03	0.412***	11.00
BIG4	0.252***	7.92	0.252***	7.92	0.252***	7.91	0.252***	7.90
FE: IND & YR		Yes		Yes		Yes		Yes
N		14,707		14,707		14,707		14,707
Adjusted R^2		0.823		0.823		0.823		0.823
EST: [1] + [2]			0.056**	2.02				
EST: [3] + [4]							–0.066***	–2.64
EST: [5] + [6]							–0.051	–0.83

Notes: This table presents regression results of the audit fee model. Industry FE are based on Fama and French (1997) 48 industry groups. *, **, *** denote significance at the 0.10, 0.05, and 0.01 levels, respectively, using two-tailed tests. T-statistic is determined by clustered standard errors at firm level.

TABLE 6
Auditor choice model

Variables	(1) BIG4		(2) BIG4		(3) BIG4		(4) BIG4	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Intercept	–4.783	–0.14	–4.787	–0.14	–4.424	–0.13	–4.448	–0.13
[1] MIX	0.341***	3.59	0.445***	2.80				
[2] MIX*PRIOR			–0.157	–0.83				
[3] BOTH_M					–0.348***	–3.66	–0.241**	–2.18
[4] BOTH_M*PRIOR							–0.149*	–1.92
[5] BOTH_FM					0.937	1.50	–0.434	–0.33
[6] BOTH_FM*PRIOR							1.222	1.12
LNASSET	1.276***	37.65	1.277***	37.67	1.274***	37.58	1.278***	37.58
ATURN	0.340***	6.42	0.339***	6.40	0.336***	6.35	0.335***	6.33
CURRENT	–0.002	–0.11	–0.001	–0.10	–0.002	–0.12	–0.001	–0.07
LEVERAGE	0.266	1.59	0.265	1.59	0.279*	1.67	0.258	1.54
ROA	–1.701***	–7.45	–1.694***	–7.41	–1.686***	–7.38	–1.667***	–7.28
FE: IND & YR		Yes		Yes		Yes		Yes
N		14,707		14,707		14,707		14,707
Adjusted R^2		0.414		0.414		0.415		0.415

Notes: This table presents regression results of the earnings quality model. Industry FE are based on Fama and French (1997) 48 industry groups. *, **, *** denote significance at the 0.10, 0.05, and 0.01 levels, respectively, using two-tailed tests. T-statistic is determined by clustered standard errors at firm level.