



The role of identity in corporate governance: evidence from gender differences in the audit committee chair-chief financial officer dyad

Musaib Ashraf¹ · Aishwarrya Deore² · Ranjani Krishnan¹ 

Received: 1 January 2023 / Accepted: 22 September 2025 / Published online: 18 November 2025
© The Author(s) 2025

Abstract

We examine the role of identity in corporate governance, focusing on an important dyad: audit committee chair and chief financial officer. Drawing on identity theory, which argues that people have lower trust in those they perceive to be different from themselves, we posit that the audit committee chair’s trust in the chief financial officer is lower when the two are different genders. We find that a gender difference between the two is associated with greater monitoring by the chair, consistent with lower trust. This effect is attenuated when a firm has value-based controls that promote diversity tolerance or when a chief financial officer seems more trustworthy. We find no evidence that the increased monitoring improves financial reporting. However, we find evidence that the increased monitoring generates negative externalities by distracting the chief financial officer, as proxied by lower operational performance. Our findings underscore the importance of identity in corporate governance.

Keywords Monitoring · Corporate governance · Audit committee · Chief financial officer · Identity

JEL classification M14 · M40 · M41 · G34

All data used in the study is publicly available.

✉ Ranjani Krishnan
krishn15@msu.edu

¹ Michigan State University, Business Complex 632 Bogue St, East Lansing, MI 48824, USA

² Georgetown University, 37th and O Streets, NW, Washington, DC 20057, USA

1 Introduction

An individual's identity is central to their concept of self, and identity influences a person's choices and decisions. As a result, identity is an important construct in economics (e.g., Akerlof and Kranton 2000), and a deep literature in management, psychology, and sociology attests to the effect of identity on cognitive, affective, and behavioral outcomes (e.g., Akerlof and Kranton 2000; Hewstone et al. 2002; Horton et al. 2014). In particular, identity is a basis for an individual to classify others as being part of his or her ingroup (i.e., people "like me") or outgroup (i.e., people *not* "like me"), and ingroup members are often subconsciously viewed more positively and assumed to be more trustworthy than outgroup members (Smith 2010). We examine the monitoring implications of identity differences within the context of an important corporate governance dyad: the audit committee chair and the chief financial officer.

The audit committee oversees a firm's financial reporting (Beasley et al. 2009). Within the committee, the chair plays a major role in monitoring the chief financial officer (CFO) to ensure the integrity of the financial reporting process (Free et al. 2021). Audit committee chairs accomplish this monitoring through role-centered interactions with the CFO (e.g., McCracken et al. 2008; Beattie et al. 2015; Free et al. 2021). Theory posits that directors and top management teams react to observable characteristics or demographics, including identity differences (e.g., Hambrick and Mason 1984; Westphal and Zajac 2013; Joshi and Knight 2015; Garg and Eisenhardt 2017). We draw on a vast body of research that shows individuals derive their identity based on memberships in demographic groups (such as gender) and that identity-based assessments influence judgments about the reliability, dependability, and trustworthiness of others (e.g., Ashforth and Mael 1989; Tajfel 1981; Tajfel and Turner 1986; McAllister 1995; Smith 2010; Driver 2015).¹ Empirically focusing on a difference in gender as a proxy of an identity difference, we examine whether identity-based trust—or, *mistrust*—influences the audit committee chair's choice of how much to monitor the CFO.

Our empirical analyses use BoardEx panel data for a period of 19 years. Drawing from the governance literature (e.g., Carcello et al. 2002; Adams 2005; Linck et al. 2009; Vafeas 1999), we use the number of audit committee meetings during a firm-year as a proxy for the amount of monitoring by the committee's chair (Engel et al. 2010).² We find that a gender difference between the chair and the CFO (hereon referred to as a 'dyadic gender difference') is positively associated with an average of 7.7% more audit committee meetings. This result holds in both (i) a levels analysis

¹ Identity-based trust is believed to be one of the strongest forms of trust (Henderson and Gilding 2004; Maguire and Phillips 2008; Terrion and Ashforth 2002; Van der Zee et al. 2009; Zhang and Huxham 2009).

² A wealth of literature uses audit committee meetings as a proxy for monitoring (e.g., Abbott et al. 2004; Abbott et al. 2003; DeZoort et al. 2002; Farber 2005; Hoitash et al. 2009; Menon and Williams 1994; Raghunandan et al. 1998; Brick and Chidambaram 2010) and underscores the role of the audit committee chair in determining the number of committee meetings (e.g., Free et al. 2021; Parsons and Lamm 2020; Bromilow 2010; Chambers 2016; Heidrick and Struggles 2016; Couchoux 2024; Gendron and Bédard 2006; Beasley et al. 2009; PwC Governance Insights Center 2022; KPMG 2022).

with and without firm, year, CFO, and audit committee chair fixed effects and (ii) a changes analysis. We also conduct a propensity score matched difference-in-differences analysis as well as a two-stage least squares instrumental variable analysis. Inferences remain consistent.

A possible endogeneity threat to our inferences arises from the ‘glass cliff’ phenomenon, which is the greater likelihood of women being placed into leadership roles during times of crisis or downturn (Cook and Glass 2014a, 2014b). The concern is that poorly performing firms may be more likely to appoint a female audit committee chair or CFO, thereby possibly triggering a dyadic gender difference, and these firms may be more likely to have more audit committee meetings because the audit committee chair has to increase monitoring to rectify poor performance. Another construct-level threat to our inferences is that women may generally monitor more than men, and, in such a scenario, our observed finding would be a gender effect rather than an identity difference effect. We cannot completely eliminate these alternative explanations, and our findings should be taken within the context of this caveat. However, we attempt to mitigate these threats through our empirical design that controls for firm performance and includes CFO and audit committee chair fixed effects.

We next rerun our main analysis after explicitly partitioning our treatment variable into its four subgroups: (i) male chair-male CFO, (ii) female chair-female CFO, (iii) female chair-male CFO, and (iv) male chair-female CFO. Identity theory predicts that dyadic gender difference should be associated with greater monitoring in the latter two subgroups relative to the former two subgroups. We find evidence that monitoring is greater in the female chair-male CFO subgroup compared to the two subgroups in which there is no dyadic gender difference, but we do not find such evidence for the male chair-female CFO subgroup.

Identity theory posits that the tendency to subconsciously form conclusions about another person based on demographics (such as an identity difference) is common across genders (e.g., Hogg and Terry 2000). Thus, the puzzling absence of evidence for the male chair-female CFO subgroup suggests an alternative explanation, namely that mistrust may not be symmetric across genders. Using lab-based trust games, the experimental economics literature does provide some evidence that men are generally more trusting than women (e.g., Buchan et al. 2008). Our fixed effects structure controls for gender-level variations in trust, but it is possible that the literature’s finding of men being generally more trusting extends to cases in which there is an identity difference. The asymmetry in mistrust could also arise from social context. Male audit committee chairs are more used to corporate positions of power, as, for decades, the upper echelons have been male dominated. Therefore, male chairs could be cautious about the appearance of excessively monitoring female CFOs. Either of these two reasons could explain why we observe our effect for the female chair-male CFO subgroup but not for the male chair-female CFO subgroup.

Another explanation for the weaker evidence for the male chair-female CFO subgroup is that partitioning our treatment variable may inject unnecessary noise into our analysis. While identity theory predicts that an identity difference increases mistrust, it is less clear on whether the level of mistrust varies by the specific dyadic composition. Future research is required to conclusively examine these two

explanations. To seed the conversation for future research, we delve deeper into the data and run a subsample analysis based on the busyness of the audit committee chair. This analysis does not address the issue of whether the lack of findings in our main sample for the male chair-female CFO subgroup is due to asymmetric trust or noise in the data. However, partitioning on busyness allows us to highlight nuances that future research can explore. We find evidence of greater monitoring in *both* female chair-male CFO and male chair-female CFO subgroups when chairs are relatively less busy, consistent with our theory. We also find no evidence that monitoring differs between the male chair-male CFO and female chair-female CFO subgroups, which hints that our observed effect of greater monitoring is likely due to identity *difference* rather than the gender of the audit committee chair. However, the female chair-female CFO subgroup has a low incidence rate, so it is possible that this lack of statistical significance is due to low power. Nonetheless, consistent with our hypothesis, we further find that monitoring in the female chair-male CFO subgroup is statistically larger than the female chair-female CFO subgroup, despite the low incidence rate for the latter group.

We next examine factors that could moderate the effect of dyadic gender differences. Theory and research on value-based control systems (Malmi and Brown 2008; Simons 1994) note the powerful role of firm-level belief systems in challenging individual mindsets and providing a shared vision for collaborative actions that facilitate strategy achievement (Mundy 2010). An inclusive organizational culture can assuage the mistrust engendered by dyadic gender differences and mitigate the audit committee chair's desire for increased monitoring. Accordingly, we predict that dyadic gender differences are less likely to provoke mistrust in firms with a culture of diversity tolerance (Gebert et al. 2017). A culture of diversity tolerance encourages positive interactions among groups, addresses prejudice of outgroups (Bezrukova et al. 2012), and fosters trust among members of different groups (Ashforth and Schinoff 2016; Beugelsdijk and Klasing 2016). Consistent with this logic, we find that a stronger culture of diversity tolerance attenuates the association between dyadic gender differences and audit committee meetings.

We also examine whether duration of relationships can reduce mistrust from dyadic gender differences. Trust could build over the length of a dyadic relationship (e.g., Poppo et al. 2008). Further, a CFO with more seniority than the audit committee chair has the opportunity to develop more firm-specific knowledge, build coalitions, and forge social ties with the board (Forbes and Milliken 1999; Tuggle et al. 2010; Beck and Mauldin 2014)—which arguably should mitigate the audit committee chair's mistrust of the CFO. We find no evidence that relationship duration impacts our effect, but we do find that CFO seniority attenuates the effect of chair-CFO dyadic gender difference on audit committee meetings. Further, in robustness checks, we study the effect of dyadic gender differences on two other (indirect) proxies of audit committee chair monitoring: external audit fees and audit committee size. We find that inferences hold for these proxies.

Finally, we conduct two more analyses. First, we examine whether the identity-based increased monitoring of the CFO improves financial reporting quality, proxied by restatements (Ashraf et al. 2020). We find no significant association. Second, we study the effect of dyadic gender difference on CFO performance. On the one hand,

the CFO may be sensitive to the trust differentials in the presence of dyadic gender differences and invest in greater effort to offset any negative perceptions. This would manifest as an increase in CFO performance. On the other hand, the audit committee chair's increased monitoring could distract the CFO. Consistent with the former argument, we find that dyadic gender difference is associated with greater return on assets, return on equity, and unexpected earnings (but not cost efficiency). Consistent with the latter argument, when there is a dyadic gender difference, we find that return on assets and unexpected earnings (but not return on equity and cost efficiency) decrease as the number of audit committee meetings increases.

Our collective evidence makes several contributions to extant work. A rich literature examines governance mechanisms to minimize agency costs arising from managerial opportunism (Jensen and Meckling 1976; Larcker et al. 2007; Hermalin and Weisbach 2017). Despite this impressive corpus, Adams et al. (2010, p. 100) note a limitation that “the board is modeled as a single decision maker ... [and this] still leaves the actual workings of the board a black box.” Relatedly, Li and Wahid (2018, p. 1364) point out that “examining the average of a board characteristic does not capture the diversity of information sources and perspectives.” Our research addresses the call for using a behavioral perspective on corporate governance (e.g., Garg and Eisenhardt 2017) to compensate for “under-socialized governance theories such as agency theory” (Westphal and Zajac 2013, p. 605). Kenny, Kashy, and Cook (2006, p. 1) note that “the dyad is arguably the fundamental unit of interpersonal interaction and interpersonal relations.” Indeed, micro-social processes in dyads differ from those in larger groups (e.g., Gastil 2009), and our study adds a new perspective to the governance literature. Our focus on the audit committee chair-chief financial officer dyad adds to the accounting literature that stresses the need to study interpersonal relationships between the audit committee chair and CFO. For example, as Free et al. (2021, p. 166) note, CFOs are “key sources for information gathering and the [audit committee] chair needs to be confident that they can rely on” the information provided by CFOs. Accordingly, Free et al. (2021, p. 166) call on researchers to study “the interpersonal relationship” between the audit committee chair and CFO.

Our findings also have contemporary relevance, given the recent attention given to gender diversity in the board and top management teams (Hanlon et al. 2022). The costs and benefits of gender diversity in senior leadership remain an inconclusive topic.³ We add to the literature by documenting mistrust as one possible cost of identity differences, within the context of dyadic interactions.

We further add to the management control literature on the importance of instituting a culture of diversity tolerance in organizations. Diversity initiatives and quotas have been an extensive topic for debate, with mixed evidence about their consequences (Kogut et al. 2014; Wiersema and Mors 2016). Our findings suggest that value-based control systems that inculcate diversity tolerance are conducive to trust building and can soften adverse impacts caused by identity differences. In addition

³ Some studies find positive effects of gender diversity (e.g., Hambrick et al. 1996; Chen et al. 2018; Gul et al. 2011; Krishnan and Park 2005; Dezsö and Ross 2012; Bernile et al. 2018; Eagly 2013; Huang and Kisgen 2013). Others find no impact (e.g., Ge et al. 2011; Chapple and Humphrey 2014; Larkin et al. 2012; Ferrari et al. 2021), and still others find negative outcomes (e.g., Adams and Ferreira 2009; Dobbin and Jung 2010).

to the notion of trust as a rational expectation and a calculation (Williamson 1993), we point to a social aspect of trust in organizational settings. The core of identity theory posits that outcomes are influenced by ingroup and outgroup dynamics in which the classification is based on a gender difference between two people rather than inherent male or female characteristics (Tajfel and Turner 1979). However, we find robust results for only one dyad, female chair-male CFO. The mixed results for the male chair-female CFO dyad could either be due to statistical noise or because of gendered differences in trust in governance dyads, and this is a consideration that future research can unpack.

Finally, our study has implications for practitioners regarding the importance of management control systems that incorporate value-based controls, such as belief systems that emphasize core values and norms (Simons 1994; Widener 2007). While identity differences can pose challenges, “recognizing and coming to terms with these problems would lead to the possibility of a more rigorous economic practice” (Nelson 2016, p. 1375). Our research indicates the need for complementary organizational mechanisms to address trust issues arising from ingroup/outgroup categorizations.

2 Related literature and conceptual development

2.1 Role of the board and board committees

The board of directors is responsible for monitoring and advising top management. Board characteristics such as size (Boone et al. 2007; Coles et al. 2008), composition (Linck et al. 2009), and independence (Laux 2008) influence how the board executes its roles. Boards assign responsibility for specific governance issues to committees, such as audit, compensation, or nomination committees (Chen and Wu 2016). US public firms are required to have an audit committee with a minimum of three directors, one of whom serves as chair (Free et al. 2021).

2.2 Audit committee and audit committee chair’s role in monitoring

Research underscores the important role of audit committees in monitoring the financial reporting process (Ashraf et al. 2020; DeFond and Zhang 2014; Free et al. 2021; Kang et al. 2022; Ashraf et al. 2024), particularly emphasizing the oversight provided by the audit committee chair (Schmidt and Wilkins 2013; Tanyi and Smith 2015). Chairs organize and schedule the committee’s meetings, set the meeting agenda to prioritize high-risk financial reporting issues, set expectations for committee members, and lead the discussion during the meeting (Free et al. 2021; Bromilow 2010; Chambers 2016; Heidrick and Struggles 2016; Couchoux 2024). Likewise, practitioners emphasize the pivotal role of the chair in enhancing the committee’s effectiveness (KPMG 2017, 2022; Parsons and Lamm 2020; PwC Governance Insights Center 2022) and how the chair’s leadership significantly impacts financial reporting quality (Compernelle and Richard 2018; Gendron and Bédard 2006; Beasley et al.

2009).⁴ Despite the recognition of the audit committee chair's role in the functioning of the audit committee (Free et al. 2021), relatively fewer research examines the specific role of the chair separately from the committee (e.g., Khemakhem and Fontaine 2019).

The audit committee chair relies on dyadic, role-centered interactions with the CFO for information to effectively perform duty-specific monitoring (e.g., Reidenbach 2024). In their field study, Beattie et al. (2015, p. 23) document an audit committee chair stating: “as audit committee chair, I sit down with the finance director... and I say, ‘What problems do we have and what problems can you foresee?’ because they are the ones that we should tackle before we get there.” Free et al. (2021) interview two dozen audit committee chairs and find that chairs play an instrumental role in the functioning of the audit committee, particularly with regard to overseeing the CFO. Since trust influences directors' oversight of executives (Westphal 1999), the audit committee chair's perceptions of CFO trustworthiness likely affect the extent of monitoring.

2.3 Trust and identity theory

Trust is essential in corporate governance relations because the monitor cannot realistically observe all the actions of the monitored, and trust offers a substitute for other forms of control systems (Larcker and Tayan 2013). This premise is rooted in a deep literature on management (e.g., Langfred 2004), which posits that decisions regarding how much to monitor are based on the extent to which the monitor (e.g., the audit committee chair) trusts the monitored (e.g., the CFO). Robbins (2017, p. 412) defines trust as “a belief about another person's trustworthiness with respect to a particular matter at hand that emerges under conditions of unknown outcomes, where trustworthiness is the capability (i.e., competence and ability) and commitment (i.e., exertion and motivation) of a trustee.” Of the attributes that inspire (or detract from) trust in a trustor-trustee relationship, identity is prominent and affects the trustor's perception of the trustee's trustworthiness.

Economists, sociologists, and psychologists posit that individuals categorize themselves and others based on social, personal, and professional aspects (Ashforth and Mael 1989; Akerlof and Kranton 2000). As a result of such categorization, individuals develop an identity—that is, “a person's sense of self” (Akerlof and Kranton 2000, p. 715)—which influences perceptions, behaviors, and decisions (Carpenter et al. 2004). Identity can both enable and constrain work-related decisions and performance (Ramarajan 2014) because it drives the categorization of colleagues as ingroup or outgroup members. Such categorization influences judgments regarding trustworthiness of colleagues: outgroup members are trusted less than ingroup members (Tajfel et al. 1971; Brewer 1981; Turner 1999; Hewstone et al. 2002; Smith 2010). We study the monitoring implications of a gender-based identity difference in the audit committee chair-chief financial officer dyad.

⁴Lionel Nowell (who served as an audit committee chair at American Electric Power Company) notes that the audit committee chair acts as the “conductor” responsible for ensuring audit committee effectiveness (Gerut 2019).

2.4 Role of gender in audit committee chair's monitoring activities

Gender is a particularly salient identity that infuses meaning in all aspects of personal, social, and professional interactions (Akerlof and Kranton 2000). Gender-based identity definitions are a crucial part of the self-concept (Kroger 1997) and influence trust judgments (Brewer 1981, 1999; Turner 1999; Tajfel et al. 1971) that are biased against the outgroup (Smith 2010; Tanis and Postmes 2005; Fershtman and Gneezy 2001). We argue that a gender difference in the audit committee chair-chief financial officer dyad likely triggers the notion of *particularized trust*, which is the tendency to believe that people “like me” are trustworthy and that people *not* “like me” are less trustworthy (Smith 2010).

Gender is a salient identity in mixed-gender dyads (Hogg and Turner 1987), and, once activated, it influences subjective belief structures associated with the other person. Dyadic gender difference acts as “an important—if not fundamental—situational variable” (Bowles and Flynn 2010, p. 771) and negatively influences the trustworthiness judgment of the other dyad member. If trust is lower, then audit committee chair's monitoring should increase because CFOs are “key sources for information gathering and the AC Chair needs to be confident that they can rely on” the information provided by CFOs (Free et al. 2021, p. 166). Consequently, we formally state our hypothesis as follows:

Hypothesis: A gender difference between the audit committee chair and the chief financial officer is associated with greater monitoring of the chief financial officer by the audit committee chair.

3 Research design, data, and sample selection

3.1 Research design

Audit committee meetings are our main proxy to capture the extent of the audit committee chair's monitoring of the CFO. The literature has used audit committee meetings as an important empirical measure of the diligence with which the audit committee executes its duties as a monitor.⁵ For example, Engel et al. (2010) argue that the “number of times the audit committee of the board of directors met during the year ... reflect the effort and workload of audit committees.” Vera-Munoz (2005) notes that “the literature includes numerous studies on audit committee diligence ... and the most common proxy for diligence used by these studies is the number of audit committee meetings held per year.” Beasley et al. (2009) discuss audit committee meetings as a vital forum in which relevant information is reviewed and inquiries are posed to management, employees, or consultants regarding concerns related to the financial reporting process. Brick and Chidambaran (2010) contend that audit committee meetings are effective instruments for the audit committee to overcome the information asymmetry inherent in overseeing management.

⁵ See Abbott et al. (2003); Ashraf et al. (2024); DeZoort et al. (2002); Farber (2005); Hoitash et al. (2009); Menon and Williams (1994); Raghunandan et al. (1998); Vafeas (1999), and Adams (2005).

Practitioners also attest to the monitoring role of audit committee meetings. For example, PwC (2011, p. 50) notes that the “main venue” for the audit committee to oversee management is audit committee meetings. Likewise, KPMG (2022, p. 24) notes that “audit committee meetings provide a valuable opportunity to ... gain exposure to management.” Deloitte (2024, p. 1) highlights the importance of AC meetings by recommending that “audit committee meetings should be held at least quarterly, and more frequently, if necessary, to provide adequate time and attention to important matters” and including AC meetings as part of their AC effectiveness framework (Deloitte 2015).

To further support the number of audit committee meetings as a proxy for the extent of monitoring, we informally interviewed three practitioners regarding the appropriateness of audit committee meetings as a proxy for monitoring. One has 10 years of experience as CFO at multiple Fortune 500 companies. The second has over a decade of experience as a CFO at multiple public companies and currently serves as an audit committee chair at a public company. The last is a partner at a major audit firm and works extensively with both audit committee chairs and CFOs. All three were unanimous in their opinion that audit committee meetings are one of the main tools that audit committee chairs use to monitor CFOs. When asked about the actions an audit committee chair would take if he or she for any reason mistrusts the CFO, one of the practitioners said that “I would have special meetings or special series of meetings.” Another practitioner noted: “Different chairs do different things to increase monitoring of CFOs. Often, they start to have several [additional] audit committee meetings ... to better understand the business.” This person added that “if the audit committee chair mistrusts the CFO or if there are some accounting concerns, there would be more audit committee meetings for sure.” These meetings are likely organized by the audit committee chair, who has a primary information gathering role in the audit committee (e.g., Free et al. 2021). For example, KPMG (2017) notes: “It is for the audit committee chairman ... to decide the frequency and timing of its meetings.” Thus, overall, we expect audit committee meetings to appropriately measure the construct of audit committee chair monitoring intensity.

We use the following ordinary least squares model to test our hypothesis:

$$AC_MEETINGS_{it} = \alpha_i + \alpha_t + \alpha_j + \alpha_k + \beta_1 DYADIC_GENDER_DIFF_{it} + \sum \beta_n Financial\ Reporting\ Quality\ Control\ Variables_{it} + \sum \beta_m Other\ Control\ Variables_{it} + e_{it} \quad (1)$$

where i , t , j , and k index firm, year, chief financial officer, and audit committee chair, respectively. The dependent variable, $AC_MEETINGS$, equals the number of meetings held by firm i 's audit committee during year t . Our main independent variable is $DYADIC_GENDER_DIFF$, which equals 1 if firm i 's audit committee chair in year t is a different gender than firm i 's CFO in year t (0 otherwise). A positive coefficient on $DYADIC_GENDER_DIFF$ is consistent with our theory that a dyadic gender difference is associated with greater monitoring. Our model includes firm fixed effects (which help control for time-invariant unobservable firm characteristics), year fixed effects (which mitigate the effect of time-correlated factors, such as year-specific shocks or time trends), CFO fixed effects (which mitigate the effect of time-invariant

Table 1 Sample Selection

Main Sample	
Compustat firm-years observations for 2001–2019 with non-missing CIK and BoardEx coverage	103,956
Less: Observations with missing data on chief financial officer or audit committee chair gender or to calculate required control variables (Compustat; CRSP; BoardEx; Audit Analytics; Thomson Reuters)	(44,107)
Less: Observations with missing data on audit committee meetings (Proxy Statements)	(34,832)
Less: Singleton observations (Correia 2015)	(3,261)
Final main sample of firm-year observations	21,756

Table 1 presents the sample selection process for our main AC meetings sample

CFO characteristics), and audit committee chair fixed effects (which mitigate the effect of time-invariant audit committee chair characteristics). The CFO and audit committee chair fixed effects control for characteristics, such as innate ability and gender. We cluster robust standard errors at the firm level to account for heteroskedasticity and within-firm correlated standard errors.

Finally, there may be time-varying firm-specific characteristics related to financial reporting that may impact *AC_MEETINGS* while also being correlated with our test variable. Thus, we include two sets of control variables which could, conceptually, impact audit committee chair monitoring vis-à-vis audit committee meetings. The first set are variables that prior literature (e.g., Ashraf et al. 2025; Ashraf 2024; Badolato et al. 2014) commonly includes when studying financial reporting quality: *SIZE*, *ACCOUNTING_EXPERTISE*, *AC_SIZE*, *BOARD_SIZE*, *BOARD_INDEPENDENCE*, *CEO_CHAIR*, *INST_OWNERSHIP*, *MTB*, *LEVERAGE*, *ISSUANCE*, and *ROA*. The second set are variables that may not necessarily be included by prior literature when studying financial reporting quality but, in our setting, could impact the number of meetings the audit committee holds during the year: whether the firm has a Big Four auditor (*BIG4*), financial reporting complexity (*SEGMENTS*, *FOREIGN*, *ACQUISITION*, and *RESTRUCTURE*), financial reporting failures or financial stress (*RESTATE_ANNOUNCEMENT*, *GOING_CONCERN*, *SOX404_AUDIT*, *MATERIAL_WEAKNESS*, and *LOSS*), firm performance (*STOCK_RETURN*) (e.g., Ryan and Haslam 2007; Cook and Glass 2014a), the number of concurrent boards the audit committee chair sits on (*ACC_BUSY*), and management ownership of the firm (*MGMT_HOLDINGS*) (Sharma et al. 2009). See Appendix 1 for variable definitions.

3.2 Data and sample selection

As shown in Table 1, we begin with 103,956 Compustat firm-year observations from 2001 to 2019 that have non-missing CIKs and BoardEx coverage.⁶ We exclude 44,107 observations that have missing control variables or CFO and audit committee chair gender. Next, we programmatically extract data on audit committee meetings from a firm's annual proxy statement filings and drop 34,832 observations for

⁶ BoardEx coverage prior to 2001 is sparse (Cohen et al. 2014; Ashraf et al. 2020).

which we are unable to obtain audit committee meeting data.⁷ Finally, we drop 3261 singleton observations (Correia 2015), resulting in a main sample of 21,756 firm-year observations.

4 Results

4.1 Descriptive statistics and correlations

Table 2 Panel A provides descriptive statistics for our main sample. Table 2 Panel B provides descriptive statistics for subsamples where there is an identity difference. About 18% of firm-year observations in our sample have a chair-CFO dyadic gender difference, of which 8% are chair female-CFO male and 10% are chair male-CFO female. The average audit committee in our sample meets seven times during the year. About 11% of observations have a new CFO, and 8% have a new audit committee chair. Of the 11% that have a new CFO, 21% have a different CFO gender than previously (untabulated). Of the 8% that have a new audit committee chair, 20% have a different audit committee chair gender than previously (untabulated). Of the 3460 unique firms in our sample, 16% have at least one change in *DYADIC_GENDER_DIFF* in our sample, 8% have at least one change in *ACC_FEMALE&CFO_MALE*, and 9% have at least one change in *ACC_MALE&CFO_FEMALE*. Control variable values are generally consistent with the literature (e.g., Ashraf et al. 2020; Cohen et al. 2014).

We plot our test variable *DYADIC_GENDER_DIFF* by Fama-French 12 industries in Fig. 1. While *DYADIC_GENDER_DIFF* varies by industry, there do not appear to be significant outliers relative to the sample mean: industry averages range between a low of 12% for energy firms and a high of 27% in the utilities industry. Firm fixed effects in our analyses mitigate concerns about the potentially confounding effect of time-invariant industry characteristics. We also plot our test variable over time in Fig. 2. We observe an almost monotonic increase in *DYADIC_GENDER_DIFF* over our sample period, which is consistent with the calls for increased diversity in corporate boards (Conyon and He 2017). Pearson correlations for our main sample (Table 3) indicate that *DYADIC_GENDER_DIFF* is positively and significantly (p value ≤ 0.01) correlated with *AC_MEETINGS*.

4.2 Main analysis

The results in Table 4 Panel A summarize the effects of dyadic gender differences on monitoring. We present analyses using no controls or fixed effects in Column (1), with only fixed effects in Column (2), the full model in Column (3), and the full model without firm fixed effects in Column (4). In all columns, the coefficient on *DYADIC_GENDER_DIFF* is positive and significant (p values ≤ 0.05). Based on Column (3), a gender difference between the audit committee chair and the chief

⁷ Disclosures are unstructured and hence we are unable to programmatically extract data from some proxy statements. See Appendix 3 for details on our extraction procedure.

Table 2 Descriptive Statistics

Panel A: Main Sample					
Variable	Mean	Std. Dev.	25%	Median	75%
<i>Test Variable</i>					
<i>DYADIC_GENDER_DIFF (binary)</i>	0.18 (3,88)	0.38	0.00	0.00	0.00
<i>ACC_MALE&CFO_MALE (binary)</i>	0.81	0.39	1.00	1.00	1.00
<i>ACC_FEMALE&CFO_MALE (binary)</i>	0.08	0.27	0.00	0.00	0.00
<i>ACC_FEMALE&CFO_FEMALE (binary)</i>	0.01	0.11	0.00	0.00	0.00
<i>ACC_MALE&CFO_FEMALE (binary)</i>	0.10	0.30	0.00	0.00	0.00
N = 3,888 for <i>DYADIC_GENDER_DIFF</i> = 1					
N = 17,620 for <i>ACC_MALE&CFO_MALE</i> = 1					
N = 1,762 for <i>ACC_FEMALE&CFO_MALE</i> = 1					
N = 248 for <i>ACC_FEMALE&CFO_FEMALE</i> = 1					
N = 2,126 for <i>ACC_MALE&CFO_FEMALE</i> = 1					
<i>Dependent Variable</i>					
<i>AC_MEETINGS</i>	6.91	2.95	5.00	6.00	9.00
<i>Control Variables</i>					
<i>AC_SIZE</i>	3.75	1.02	3.00	3.00	4.00
<i>ACC_BUSY</i>	2.92	2.17	1.00	2.00	4.00
<i>ACCOUNTING_EXPERTISE (binary)</i>	0.73	0.44	0.00	1.00	1.00
<i>ACQUISITION (binary)</i>	0.10	0.30	0.00	0.00	0.00
<i>BIG4 (binary)</i>	0.70	0.46	0.00	1.00	1.00
<i>BOARD_INDEPENDENCE</i>	0.70	0.13	0.60	0.71	0.80
<i>BOARD_SIZE</i>	8.39	2.53	7.00	8.00	10.00
<i>CEO_CHAIR (binary)</i>	0.46	0.50	0.00	0.00	1.00
<i>FOREIGN (binary)</i>	0.38	0.48	0.00	0.00	1.00
<i>GOING_CONCERN (binary)</i>	0.02	0.15	0.00	0.00	0.00
<i>INST_OWNERSHIP</i>	0.57	0.32	0.28	0.61	0.84
<i>ISSUANCE (binary)</i>	0.37	0.48	0.00	0.00	1.00
<i>LEVERAGE</i>	0.18	0.22	0.00	0.10	0.28
<i>LOSS (binary)</i>	0.31	0.46	0.00	0.00	1.00
<i>MATERIAL_WEAKNESS (binary)</i>	0.04	0.19	0.00	0.00	0.00
<i>MGMT_HOLDINGS</i>	1.72	4.08	0.00	0.00	0.00
<i>MTB</i>	2.80	7.10	1.15	1.86	3.28
<i>NEW_ACC (binary)</i>	0.08	0.28	0.00	0.00	0.00
<i>NEW_CFO (binary)</i>	0.11	0.32	0.00	0.00	0.00
<i>RESTATE_ANNOUNCEMENT (binary)</i>	0.07	0.26	0.00	0.00	0.00
<i>RESTRUCTURE (binary)</i>	0.24	0.43	0.00	0.00	0.00
<i>ROA</i>	-0.04	0.30	-0.02	0.02	0.06
<i>SEGMENTS</i>	1.86	2.03	1.00	1.00	1.00
<i>SIZE</i>	6.45	1.98	5.08	6.50	7.79
<i>SOX404_AUDIT (binary)</i>	0.68	0.46	0.00	1.00	1.00
<i>STOCK_RETURN</i>	0.04	0.50	-0.25	-0.02	0.22

Table 2 (continued)

Variable	ACC_FEMALE&CFO_MALE= 1			ACC_MALE&CFO_FE-MALE= 1		
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median
<i>Dependent Variable</i>						
AC_MEETINGS	7.06	2.78	7.00	7.09	3.08	7.00
<i>Control Variables</i>						
AC_SIZE	4.06	1.25	4.00	3.82	1.09	4.00
ACC_BUSY	2.98	2.12	2.00	2.78	2.05	2.00
ACCOUNTING_EXPERTISE (binary)	0.84	0.37	1.00	0.71	0.45	1.00
ACQUISITION (binary)	0.10	0.30	0.00	0.09	0.28	0.00
BIG4 (binary)	0.80	0.40	1.00	0.63	0.48	1.00
BOARD_INDEPENDENCE	0.73	0.12	0.75	0.70	0.13	0.71
BOARD_SIZE	9.09	2.65	9.00	8.47	2.60	8.00
CEO_CHAIR (binary)	0.43	0.50	0.00	0.43	0.50	0.00
FOREIGN (binary)	0.42	0.49	0.00	0.35	0.48	0.00
GOING_CONCERN (binary)	0.02	0.13	0.00	0.02	0.15	0.00
INST_OWNERSHIP	0.63	0.32	0.70	0.53	0.33	0.56
ISSUANCE (binary)	0.40	0.49	0.00	0.34	0.47	0.00
LEVERAGE	0.20	0.22	0.14	0.16	0.20	0.08
LOSS (binary)	0.28	0.45	0.00	0.27	0.44	0.00
MATERIAL_WEAKNESS (binary)	0.03	0.17	0.00	0.04	0.19	0.00
MGMT_HOLDINGS	2.32	4.63	0.00	1.67	4.06	0.00
MTB	3.36	8.36	2.04	2.17	6.40	1.72
NEW_ACC (binary)	0.14	0.35	0.00	0.08	0.27	0.00
NEW_CFO (binary)	0.13	0.34	0.00	0.13	0.34	0.00
RESTATE_ANNOUNCEMENT (binary)	0.06	0.25	0.00	0.07	0.26	0.00
RESTRUCTURE (binary)	0.30	0.46	0.00	0.22	0.41	0.00
ROA	-0.04	0.25	0.02	-0.02	0.27	0.01
SEGMENTS	2.21	2.38	1.00	1.85	2.01	1.00
SIZE	6.92	1.91	7.03	6.50	2.10	6.44
SOX404_AUDIT (binary)	0.77	0.42	1.00	0.65	0.48	1.00
STOCK_RETURN	0.03	0.47	-0.02	0.03	0.48	-0.02

Table 2 presents descriptive statistics. Continuous variables are winsorized at the 1st and 99th percentiles. All variables are defined in Appendix 1

financial officer is associated with a 7.7% increase in audit committee meetings during the year (relative to the sample mean).⁸ Inferences persist (p value ≤ 0.10) in the changes analysis in Table 4 Panel B.

4.3 Sensitivity analyses

Firms with greater monitoring needs could have preferences for a specific gender for audit committee chairs or CFOs. For example, the glass cliff phenomenon suggests

⁸ Comparatively, Adams and Ferreira (2009) document that female board members have 30% fewer board meeting attendance problems.

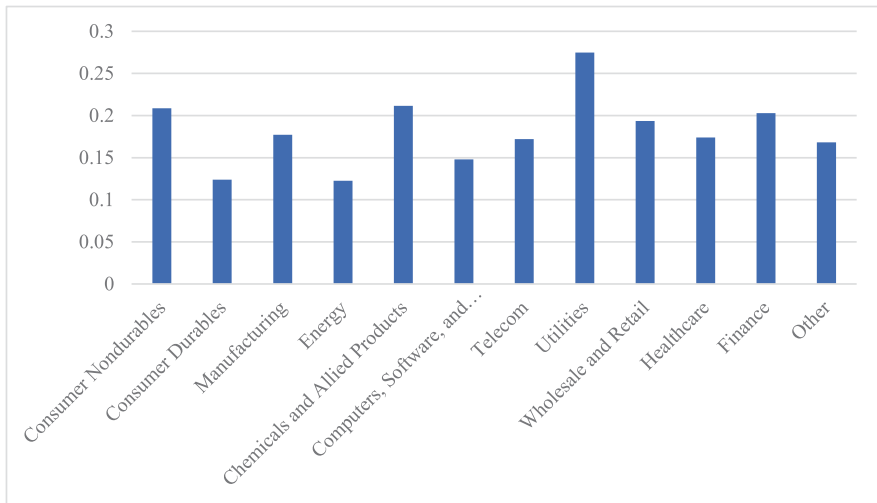


Fig. 1 *DYADIC_GENDER_DIFF* by Fama-French 12 Industries. Notes: Fig. 1 plots the average of *DYADIC_GENDER_DIFF* by Fama-French 12 industries

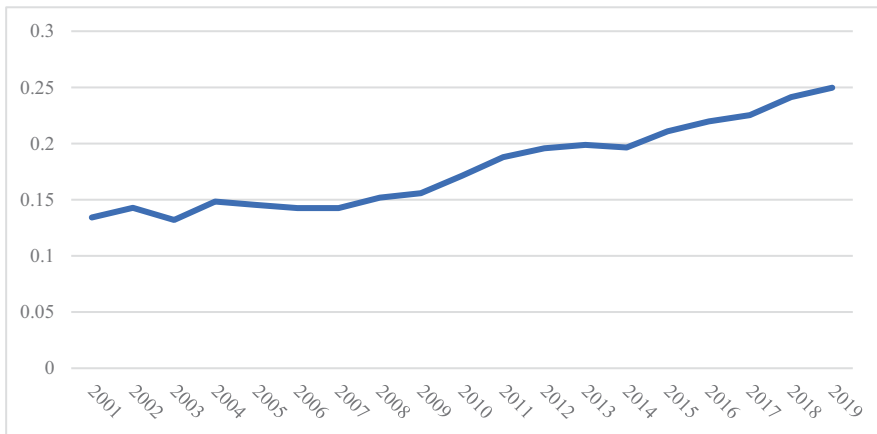


Fig. 2 Temporal Variation in *DYADIC_GENDER_DIFF*. Notes: Fig. 2 plots the yearly average of *DYADIC_GENDER_DIFF* over our sample period

that companies facing lower performance (which would necessitate greater monitoring) may hire female chairs or CFOs (e.g., Cook and Glass 2014a). We cannot conclusively rule out such alternative explanations. Nonetheless, we next conduct several sensitivity analyses to test whether such concerns pose a material threat to our inferences.

Table 3 Pearson Correlations for Main Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)			
(1) <i>DYADC_GENDER_DIFF</i>	1.00																													
(2) <i>AC_MEETINGS</i>	0.03	1.00																												
(3) <i>AC_SIZE</i>	0.08	0.13	1.00																											
(4) <i>ACC_BUSY</i>	-0.01	0.05	0.03	1.00																										
(5) <i>ACCOUNTING_EXPERTISE</i>	0.04	0.06	0.07	0.03	1.00																									
(6) <i>ACQUISITION</i>	-0.01	0.01	-0.03	0.01	0.02	1.00																								
(7) <i>BIG4</i>	0.01	0.17	0.10	0.15	0.08	0.06	1.00																							
(8) <i>BOARD_INDEPENDENCE</i>	0.05	0.14	0.28	0.04	0.12	0.00	0.17	1.00																						
(9) <i>BOARD_SIZE</i>	0.07	0.22	0.52	0.10	0.02	-0.02	0.20	0.20	1.00																					
(10) <i>CEO_CHAR</i>	-0.03	-0.01	0.03	-0.02	-0.04	0.02	0.09	0.26	-0.01	1.00																				
(11) <i>FOREIGN</i>	0.00	0.11	0.01	0.06	0.12	0.11	0.22	0.15	0.01	0.02	1.00																			
(12) <i>GOING_CONCERN</i>	-0.01	-0.06	-0.07	-0.01	0.00	-0.03	-0.10	-0.06	-0.10	-0.05	-0.06	1.00																		
(13) <i>INST_OWNERSHIP</i>	0.01	0.21	0.11	0.09	0.10	0.11	0.46	0.30	0.13	0.07	0.29	-0.19	1.00																	
(14) <i>ISSUANCE</i>	0.00	-0.04	-0.10	0.03	0.04	0.14	0.05	-0.04	-0.11	-0.03	-0.02	0.11	0.03	1.00																
(15) <i>LEVERAGE</i>	-0.01	0.04	0.02	0.07	0.05	0.07	0.17	0.02	0.04	0.03	0.01	0.00	0.16	0.34	1.00															
(16) <i>LOSS</i>	-0.04	-0.08	-0.19	0.02	0.05	-0.01	-0.08	-0.07	-0.22	-0.10	0.01	0.22	-0.20	0.17	0.04	1.00														
(17) <i>MATERIAL_WEAKNESS</i>	-0.01	0.10	-0.02	-0.01	0.00	0.02	0.00	-0.01	-0.02	0.00	0.03	0.00	0.02	0.02	0.01	0.04	1.00													
(18) <i>MGMT_HOLDINGS</i>	0.03	0.17	0.20	0.12	0.00	0.02	0.26	0.13	0.30	0.09	0.17	-0.06	0.24	-0.05	0.09	-0.17	-0.03	1.00												
(19) <i>MTB</i>	-0.01	-0.01	-0.03	0.03	0.02	0.02	0.05	0.03	-0.01	0.00	0.05	0.00	0.06	0.04	-0.05	0.03	0.01	0.03	1.00											
(20) <i>NEW_ACC</i>	0.04	0.04	0.09	-0.01	0.04	0.01	0.01	0.04	0.03	0.00	0.02	0.00	0.02	-0.01	0.00	0.00	0.01	0.03	0.00	1.00										
(21) <i>NEW_CFO</i>	0.03	0.09	0.01	0.02	0.03	0.01	0.03	0.02	0.01	-0.03	0.05	0.01	0.02	0.00	0.02	0.05	0.05	0.03	-0.01	0.06	1.00									
(22) <i>RESSTATE_ANNOUNCEMENT</i>	-0.01	0.10	-0.01	0.01	0.00	0.00	0.03	-0.01	-0.02	0.00	0.02	0.02	0.00	0.03	0.04	0.05	0.12	-0.02	0.00	-0.01	0.03	1.00								
(23) <i>RESTRICTURE</i>	0.01	0.12	0.05	0.06	0.08	0.08	0.18	0.13	0.06	-0.01	0.36	-0.04	0.22	-0.01	0.10	0.07	0.03	0.12	-0.01	0.03	0.08	0.03	1.00							
(24) <i>ROA</i>	0.02	0.09	0.12	-0.02	-0.02	0.05	0.10	0.05	0.14	0.07	0.08	-0.45	0.23	-0.17	-0.01	-0.49	0.00	0.12	0.00	0.00	-0.02	-0.01	0.02	1.00						
(25) <i>SEGMENTS</i>	0.04	-0.03	0.02	0.00	0.09	0.08	0.04	0.09	-0.01	-0.06	0.29	-0.02	0.13	0.05	0.11	0.02	0.03	0.03	0.02	0.00	0.02	0.01	0.17	0.03	1.00					
(26) <i>SIZE</i>	0.06	0.31	0.39	0.14	0.04	0.40	0.25	0.58	0.10	0.13	-0.23	0.46	-0.05	0.25	-0.37	-0.01	0.48	-0.04	0.03	0.03	0.00	0.14	0.35	0.11	1.00					
(27) <i>SOX404_AUDIT</i>	0.02	0.24	0.14	0.05	0.09	0.04	0.27	0.19	-0.01	0.17	-0.14	0.45	-0.02	0.12	-0.17	0.14	0.07	0.03	0.05	0.02	0.13	0.16	0.14	0.43	1.00					
(28) <i>STOCK_RETURN</i>	-0.01	-0.02	-0.01	0.00	-0.01	0.02	0.07	-0.02	-0.01	0.03	0.01	-0.14	0.08	0.02	-0.01	-0.16	-0.04	0.05	0.12	-0.01	-0.02	-0.01	-0.02	0.17	-0.05	0.02	-0.03			

Table 3 presents Pearson correlations for our main sample. Bold values indicate statistical significance at the 0.10 level or lower

Table 4 The Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on AC Meetings**Panel A: Levels Analysis**

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>			
		No Controls or Fixed Effects (1)	No Controls (2)	Full Model (3)	No Firm Fixed Effects (4)
<i>Test Variable:</i>					
<i>DYADIC_GENDER_DIFF</i>	+	0.2060 **	0.5290 **	0.5345 **	0.5296 **
[t-stat] (p-value)		[1.99] (0.047)	[2.47] (0.014)	[2.47] (0.013)	[2.45] (0.015)
<i>Control Variables:</i>					
<i>NEW_CFO</i>	+			0.2242 ***	0.2252 ***
<i>NEW_ACC</i>	+			0.0780	0.0796
<i>SIZE</i>	+			0.1441 *	0.1043
<i>ACCOUNTING_EXPERTISE</i>	+			-0.0636	-0.0773
<i>AC_SIZE</i>	+			0.0269	0.0298
<i>BOARD_SIZE</i>	+			-0.0014	0.0078
<i>BOARD_INDEPENDENCE</i>	+			0.4040	0.4802
<i>CEO_CHAIR</i>	-			-0.0624	-0.0502
<i>INST_OWNERSHIP</i>	+			0.2060	0.1689
<i>MTB</i>	-			-0.0044 *	-0.0044 *
<i>LEVERAGE</i>	+			0.4303 **	0.4067 **
<i>ISSUANCE</i>	+			-0.1055 **	-0.1064 **
<i>ROA</i>	-			-0.1435	-0.1288
<i>BIG4</i>	+			-0.1465	-0.1671
<i>SEGMENTS</i>	+			-0.0139	-0.0123
<i>FOREIGN</i>	+			-0.0089	-0.0175
<i>ACQUISITION</i>	+			0.0046	0.0009
<i>RESTRUCTURE</i>	+			0.0657	0.0686
<i>RESTATE</i>	+			0.7280 ***	0.7368 ***
<i>ANNOUNCEMENT</i>					
<i>GOING_CONCERN</i>	+			0.3710 **	0.3855 **
<i>SOX404_AUDIT</i>	+			0.6571 ***	0.6749 ***
<i>MATERIAL_WEAKNESS</i>	+			0.4632 ***	0.4595 ***
<i>LOSS</i>	+			0.1654 ***	0.1772 ***
<i>STOCK_RETURN</i>	-			-0.0682 **	-0.0692 **
<i>ACC_BUSY</i>	-			-0.0019	-0.0148
<i>MGMT_HOLDINGS</i>	?			0.0112	0.0283
Firm Fixed Effects		NO	YES	YES	NO
Year Fixed Effects		NO	YES	YES	YES
CFO Fixed Effects		NO	YES	YES	YES
AC Chair Fixed Effects		NO	YES	YES	YES
N		21,756	21,756	21,756	21,756
Adjusted R-squared		0.07%	61.76%	63.01%	71.20%
% Variation in <i>DYADIC_GENDER_DIFF</i> Absorbed by Fixed Effects			77.9%	81.2%	77.7%

Table 4 (continued)**Panel B: Changes Analysis**

Independent Variables	Pr.	Dependent Variable: $\Delta AC_MEETINGS$ (1)	
<i>Test Variable:</i>			
$\Delta DYADIC_GENDER_DIFF$	+	0.1329	*
[t-stat] (<i>p</i> -value)		[1.95]	(0.051)
<i>Control Variables:</i>			
ΔNEW_CFO	+	0.1333	***
ΔNEW_ACC	+	0.0912	**
$\Delta SIZE$	+	0.3608	***
$\Delta ACCOUNTING_EXPERTISE$	+	0.0156	
ΔAC_SIZE	+	0.0611	***
$\Delta BOARD_SIZE$	+	-0.0291	
$\Delta BOARD_INDEPENDENCE$	+	0.5467	**
ΔCEO_CHAIR	-	-0.0857	
$\Delta INST_OWNERSHIP$	+	0.2178	*
ΔMTB	-	-0.0036	
$\Delta LEVERAGE$	+	0.2610	
$\Delta ISSUANCE$	+	-0.0879	**
ΔROA	-	-0.3049	***
$\Delta BIG4$	+	-0.4976	***
$\Delta SEGMENTS$	+	0.0110	
$\Delta FOREIGN$	+	0.0319	
$\Delta ACQUISITION$	+	-0.0880	*
$\Delta RESTRUCTURE$	+	0.0192	
$\Delta RESTATE_ANNOUNCEMENT$	+	0.6801	***
$\Delta GOING_CONCERN$	+	0.4857	***
$\Delta SOX404_AUDIT$	+	0.8149	***
$\Delta MATERIAL_WEAKNESS$	+	0.1025	
$\Delta LOSS$	+	0.0836	*
$\Delta STOCK_RETURN$	-	-0.0637	***
ΔACC_BUSY	-	-0.0017	
$\Delta MGMT_HOLDINGS$?	0.0203	
Year Fixed Effects		YES	
N		19,381	
Adjusted R-squared		7.16%	

Table 4 Panel A presents the analysis of the effect of gender difference between audit committee chair and chief financial officer on the number of meetings held by the audit committee during the year. Column (1) includes neither controls nor fixed effects. Column (2) includes fixed effects but no control variables. Column (3) includes all fixed effects and all controls from Eq. (1). Column (4) includes all fixed effects and all controls from Eq. (1) except firm fixed effects. All variables are defined in Appendix 1. The model in all columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Table 4 Panel B presents the analysis of the effect of gender difference between audit committee chair and chief financial officer on the number of meetings held by the audit committee during the year in a changes model. All variables are defined in Appendix 1. The model is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

4.3.1 Propensity score matching

We first conduct a propensity score matched difference-in-differences analysis. This involves a one-to-one match within industry-year and caliper distance of 0.01 in the first year that a treated firm has $DYADIC_GENDER_DIFF=1$, and we restrict both the treatment and control firms to firms that hire a new CFO in the year. Therefore, both the treated and control firms hired a new CFO in year t . For treatment firms, the new CFO resulted in a dyadic gender difference, while, for control firms, it did *not* result in a dyadic gender difference. Table 13 in Appendix 2 shows that the matching procedure results in all but two covariates being balanced between treatment and control firms, which makes it less likely that only treated firms would suffer from the glass cliff phenomenon.⁹ Parallel trends also appear to hold for this analysis (see Fig. 3 in Appendix 2); while there is an increasing trend in audit committee meetings in the pre-period, the trend is for *both* the treatment and control firms. The results are in Table 5 Panel A, where the sample is restricted to years $t-3$ to $t+3$. We continue to observe a positive association (p value ≤ 0.10).

4.3.2 Two-stage least squares analysis

We next conduct a two-stage least squares analysis. Our instrument is $RELATIVE_SIZE$, calculated as firm i 's size in year t minus the average size for firm i 's 2-digit SIC industry in year t . The conceptual premise for our instrument is that industry peers compete with each other for talent and relatively larger firms should have greater success in hiring the potentially limited pool of diverse candidates (i.e., the ability to hire a woman as chair or CFO). $RELATIVE_SIZE$ has strategic meaning over and above firm size, as it contains the effects of market power, contracting efficiency, and collusive power (Mas-Ruiz and Ruiz-Moreno 2011). Thus, we expect $RELATIVE_SIZE$ to fulfill the relevance restriction. Further, conceptually there is no reason to expect $RELATIVE_SIZE$ to be directly associated with $AC_MEETINGS$ (aside from a firm size effect, which we control for). Thus, we expect $RELATIVE_SIZE$ to fulfill the exclusion restriction. We tabulate the results of this analysis in Table 5 Panel B. Our inferences hold (p values ≤ 0.10).

4.3.3 Individually examining the dyads

For additional insights, we perform a 2×2 split of $DYADIC_GENDER_DIFF$ into four mutually exclusive groups: $ACC_FEMALE\&CFO_MALE$, $ACC_FEMALE\&CFO_FEMALE$, $ACC_MALE\&CFO_FEMALE$, and $ACC_MALE\&CFO_MALE$. We then estimate our analysis of $AC_MEETINGS$ after replacing $DYADIC_GENDER_DIFF$ with these four new variables, with the $ACC_MALE\&CFO_MALE$ group as our baseline specification.

Results in Table 6 show that the coefficient on $ACC_FEMALE\&CFO_MALE$ is positive and significant (p value ≤ 0.05) implying that, relative to the $ACC_$

⁹ ROA is *higher* in the treatment group than the control group, which is contrary to the implications of the glass cliff phenomenon.

Table 5 Alternative Empirical Specifications

Panel A: Propensity Score Matched Difference-in-differences

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i> (1)	
<i>Test Variable:</i>			
<i>POST*TREAT</i>	+	0.4672	*
[t-stat] (<i>p</i> -value)		[1.93]	(0.054)
<i>Control Variables:</i>			
<i>POST</i>	?	-0.1422	
<i>TREAT</i>	?	-0.1998	
<i>NEW_ACC</i>	+	0.6247	***
<i>SIZE</i>	+	0.2540	***
<i>ACCOUNTING_EXPERTISE</i>	+	0.0840	
<i>AC_SIZE</i>	+	-0.0576	
<i>BOARD_SIZE</i>	+	0.0265	
<i>BOARD_INDEPENDENCE</i>	+	1.9089	**
<i>CEO_CHAIR</i>	-	-0.1208	
<i>INST_OWNERSHIP</i>	+	0.2229	
<i>MTB</i>	-	-0.0062	
<i>LEVERAGE</i>	+	-0.5304	
<i>ISSUANCE</i>	+	-0.1956	
<i>ROA</i>	-	0.5295	**
<i>BIG4</i>	+	0.0113	
<i>SEGMENTS</i>	+	-0.0979	**
<i>FOREIGN</i>	+	0.1640	
<i>ACQUISITION</i>	+	0.3233	
<i>RESTRUCTURE</i>	+	0.2804	*
<i>RESTATE_ANNOUNCEMENT</i>	+	1.0780	***
<i>GOING_CONCERN</i>	+	0.7232	*
<i>SOX404_AUDIT</i>	+	0.4094	**
<i>MATERIAL_WEAKNESS</i>	+	1.4960	***
<i>LOSS</i>	+	0.3540	**
<i>STOCK_RETURN</i>	-	-0.0184	
<i>ACC_BUSY</i>	-	-0.0032	
<i>MGMT_HOLDINGS</i>	?	0.0706	**
N		2,688	
Adjusted R-squared		11.83%	

Panel B: Two-stage Least Squares Analysis

Independent Variables	Pr.	Dependent Variable: <i>DYADIC_GENDER_DIFF</i>		Dependent Variable: <i>AC_MEETINGS</i>	
		First Stage (1)	Second Stage (2)	First Stage (1)	Second Stage (2)
<i>Test Variables:</i>					
<i>RELATIVE_SIZE</i>	+	0.0365	*		
[t-stat] (<i>p</i> -value)		[1.75]	(0.080)		
<i>DYADIC_GENDER_DIFF_HAT</i>	+			8.0389	*

Table 5 (continued)

[t-stat] (p-value)				[1.74]	(0.082)
<i>Control Variables:</i>					
<i>NEW_CFO</i>	?/+	0.0285	***	0.2333	
<i>NEW_ACC</i>	?/+	0.0359	***	-0.1129	
<i>SIZE</i>	?/+	-0.0397	*	0.3515	***
<i>ACCOUNTING_EXPERTISE</i>	?/+	0.0183	*	0.0893	
<i>AC_SIZE</i>	?/+	0.0141	**	-0.1693	**
<i>BOARD_SIZE</i>	?/+	0.0028		0.0304	
<i>BOARD_INDEPENDENCE</i>	?/+	0.0711		0.0284	
<i>CEO_CHAIR</i>	?/-	-0.0176	*	-0.0886	
<i>INST_OWNERSHIP</i>	?/+	-0.0075		0.5824	***
<i>MTB</i>	?/-	-0.0003		-0.0003	
<i>LEVERAGE</i>	?/+	-0.0330		0.3226	
<i>ISSUANCE</i>	?/+	0.0132	*	-0.0631	
<i>ROA</i>	?/-	0.0163		-0.2928	**
<i>BIG4</i>	?/+	0.0219		-0.0875	
<i>SEGMENTS</i>	?/+	-0.0024		-0.0087	
<i>FOREIGN</i>	?/+	0.0103		0.2298	*
<i>ACQUISITION</i>	?/+	-0.0003		-0.0642	
<i>RESTRUCTURE</i>	?/+	0.0086		0.2449	**
<i>RESTATE Announcement</i>	?/+	-0.0115		1.0133	***
<i>GOING_CONCERN</i>	?/+	0.0012		0.3598	
<i>SOX404_AUDIT</i>	?/+	-0.0167		0.6577	***
<i>MATERIAL_WEAKNESS</i>	?/+	-0.0056		1.1647	***
<i>LOSS</i>	?/+	-0.0140		0.3877	***
<i>STOCK_RETURN</i>	?/-	0.0021		-0.0923	*
<i>ACC_BUSY</i>	?/-	-0.0027		0.0177	
<i>MGMT_HOLDINGS</i>	?/?	0.0025		0.0061	
Industry Fixed Effects		YES		YES	
Year Fixed Effects		YES		YES	
N		21,756		21,756	

Table 5 Panel A presents the analysis of the effect of gender difference between audit committee chair and chief financial officer on the number of meetings held by the audit committee during the year in a propensity score matched difference-in-differences model. Treatment observations are ones that hired a new CFO in year *t* and that new CFO led to a gender difference between the audit committee chair and CFO. Control observations are ones that hired a new CFO in year *t* and that new CFO did not lead to a gender difference between the audit committee chair and CFO. All variables are defined in Appendix 1. The model is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Table 5 Panel B presents the analysis of the effect of gender difference between audit committee chair and chief financial officer on the number of meetings held by the audit committee during the year in a two-stage least squares model. *RELATIVE_SIZE* is the instrument and equals *SIZE* minus the 2-digit SIC average *SIZE* for that year. *DYADIC_GENDER_DIFF_HAT* is the predicted value of *DYADIC_GENDER_DIFF* from Column (1). All other variables are defined in Appendix 1. The model is a two-stage least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Table 6 Individually Measuring Each Gender Difference Group

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>			
		Full Model		No Firm Fixed Effects	
		(1)		(2)	
<i>Test Variables:</i>					
<i>ACC_FEMALE&CFO_MALE</i>	+	0.6730	**	0.6651	**
[t-stat] (p-value)		[2.40]	(0.016)	[2.36]	(0.018)
<i>ACC_FEMALE&CFO_FEMALE</i>	?	-0.6567		-0.6602	
[t-stat] (p-value)		[-1.26]	(0.209)	[-1.27]	(0.203)
<i>ACC_MALE&CFO_FEMALE</i>	+	-0.0496		-0.0476	
[t-stat] (p-value)		[-0.17]	(0.864)	[-0.16]	(0.869)
<i>Control Variables:</i>					
<i>NEW_CFO</i>	+	0.2245	***	0.2255	***
<i>NEW_ACC</i>	+	0.0762		0.0780	
<i>SIZE</i>	+	0.1441	*	0.1043	
<i>ACCOUNTING_EXPERTISE</i>	+	-0.0621		-0.0759	
<i>AC_SIZE</i>	+	0.0260		0.0289	
<i>BOARD_SIZE</i>	+	-0.0008		0.0084	
<i>BOARD_INDEPENDENCE</i>	+	0.4064		0.4826	
<i>CEO_CHAIR</i>	-	-0.0628		-0.0506	
<i>INST_OWNERSHIP</i>	+	0.2090		0.1718	
<i>MTB</i>	-	-0.0044	*	-0.0044	*
<i>LEVERAGE</i>	+	0.4282	**	0.4047	*
<i>ISSUANCE</i>	+	-0.1061	**	-0.1069	**
<i>ROA</i>	-	-0.1449		-0.1302	
<i>BIG4</i>	+	-0.1465		-0.1672	
<i>SEGMENTS</i>	+	-0.0139		-0.0123	
<i>FOREIGN</i>	+	-0.0097		-0.0183	
<i>ACQUISITION</i>	+	0.0049		0.0012	
<i>RESTRUCTURE</i>	+	0.0659		0.0688	
<i>RESTATE_ANNOUNCEMENT</i>	+	0.7286	***	0.7375	***
<i>GOING_CONCERN</i>	+	0.3705	**	0.3850	**
<i>SOX404_AUDIT</i>	+	0.6572	***	0.6751	***
<i>MATERIAL_WEAKNESS</i>	+	0.4626	***	0.4589	***
<i>LOSS</i>	+	0.1656	***	0.1774	***
<i>STOCK_RETURN</i>	-	-0.0682	**	-0.0692	**
<i>ACC_BUSY</i>	-	-0.0008		-0.0138	
<i>MGMT_HOLDINGS</i>	?	0.0113		0.0285	
Firm Fixed Effects		YES		NO	
Year Fixed Effects		YES		YES	
CFO Fixed Effects		YES		YES	
AC Chair Fixed Effects		YES		YES	
N		21,756		21,756	
Adjusted R-squared		63.01%		71.20%	

Table 6 presents the effect of audit committee chair-chief financial officer gender difference on the number of audit committee meetings during the year, but we measure the gender difference using separate variables to capture each chair-CFO gender pair, where the male chair-male CFO group is the baseline group. All variables are defined in Appendix 1. The model in all columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

MALE&CFO_MALE dyad, this dyad is associated with greater monitoring, consistent with our hypothesis. Further, the coefficient on *ACC_FEMALE&CFO_FEMALE* is statistically insignificant. Keeping in mind the caveat that low power may affect results, we cautiously conclude that the results are inconsistent with the glass cliff phenomenon, which would predict a significantly positive coefficient on *ACC_FEMALE&CFO_FEMALE*. The *ACC_FEMALE&CFO_FEMALE* is statistically smaller than *ACC_FEMALE&CFO_MALE* (p value ≤ 0.05 ; untabulated), which provides further support for our hypothesis based on identity difference. Finally, the coefficient on *ACC_MALE&CFO_FEMALE* is insignificant; this is not consistent with our hypothesis, which predicts a positive and significant effect for this dyad.

Two factors could drive the lack of significance for male chair-female CFO. First, partitioning our treatment variable into four groups could inject unnecessary noise in the analysis, as there are only two construct-level groups: no dyadic gender differences and dyadic gender differences. Second, despite identity theory's notion that outgroup distance is not gender specific (i.e., both genders are less likely to trust outgroups), mistrust may not be symmetric between genders in the presence of an identity difference. It could be fruitful for future research to systematically explore these two potential explanations. To provide preliminary insight, enrich the interpretation of our findings, and highlight opportunities for future research, we delve deeper into the data in Table 14 in Appendix 4 to examine the role of directors' time constraints. A limiting constraint on an audit committee chair's monitoring is time—only chairs with sufficient time will have the ability to organize more audit committee meetings to oversee the CFO. We proxy for a chair's time constraint using concurrent board positions (Fich and Shivdasani 2006), based on the argument that audit committee chairs on a greater number of concurrent boards will have less time to increase monitoring of the CFO. We then rerun our analysis using two separate subsamples: (i) audit committee chairs who sit on fewer than three boards and (ii) audit committee chairs who sit on three or more boards (Fich and Shivdasani 2006). As previously, we use *ACC_MALE&CFO_MALE* as the baseline group.

We observe positive and statistically significant coefficients for both *ACC_FEMALE&CFO_MALE* and *ACC_MALE&CFO_FEMALE* (p values ≤ 0.10 or lower) in Table 14 in Appendix 4 in the subsample for the less busy directors. While both are statistically larger than the *ACC_MALE&CFO_MALE* baseline group, the coefficients for these two variables are not statistically different from each other (p value = 0.29; untabulated). We also continue to find a statistically insignificant coefficient for *ACC_FEMALE&CFO_FEMALE*. We find no statistically significant effect for any of the dyads for the busy directors subsample in Table 14 in Appendix 4. The aggregate results in Table 14 in Appendix 4 provide nuance to our analyses, and we encourage future research to explore this further.¹⁰

¹⁰In the less busy subsample in Table 14 in Appendix 4, *ACC_FEMALE&CFO_MALE* = 1 for 836 observations and *ACC_MALE&CFO_FEMALE* = 1 for 1134 observations. In the busier subsample in Table 14 in Appendix 4, *ACC_FEMALE&CFO_MALE* = 1 for 791 observations and *ACC_MALE&CFO_FEMALE* = 1 for 884 observations.

4.3.4 Other sensitivity analyses

We study whether our effect diminishes over our sample period, given the growth in the number of females in executive and board positions over this time. To do so, we partition our treatment in half—before 2010 and after—and find that our effect persists in both periods (untabulated). Splitting our treatment into thirds and fourths reveals similar inferences (untabulated). In aggregate, these results suggest that our effect does not significantly vary over our sample period.

4.4 Additional analyses

4.4.1 Value-based controls as a moderator of identity-based monitoring

Our conceptual underpinnings for more audit committee meetings in our main analysis are based on the notion that gender identity influences the chair's trust of the CFO. However, research underscores the importance of context to a person's sense of identity (Elsbach 2003; Ashforth et al. 2001; Pratt et al. 2006). We explore whether one important contextual factor—firm culture, inculcated through value-based controls—can influence the level of the chair's mistrust in the CFO. We posit that identity is less likely to create perceptions of untrustworthiness of the outgroup in firms in which value-based controls encompass a culture of greater diversity tolerance. These value-based controls motivate employees to overcome personal identity pressures to conform to a shared vision and a common purpose (Mundy 2010).

Gebert et al. (2017, p. 416) define diversity tolerance as “acceptance of (a) everyone's right to sustain and express values even if these differ from others' values, and of (b) the obligation to a dialogue-oriented practice of communication in which both actor and receiver abstain from superiority claims regarding their own values.” Organizational systems that encourage positive intergroup interactions, take proactive steps to address biases, promptly address prejudice and discrimination, and enhance diversity-related skills can assuage conflicts that arise in the presence of outgroups (Bezrukova et al. 2012). Firms with diversity-tolerant values enable constructive handling of issues that arise with differing identities, which can in turn reduce mistrust toward outgroups (Ashforth and Schinoff 2016). A diversity-tolerant culture can reduce the salience of gender identity differences and reduce the audit committee chair's perceptions of the chief financial officer's *untrustworthiness*.

We proxy for a firm's culture of diversity tolerance using two variables. Our first proxy is *DIVERSITY_STRENGTHS* (equals 1 if firm *i*'s board of directors possesses strong gender diversity on their board of directors in year *t* per MSCI ESG KLD STATS [0 otherwise]). The MSCI ESG KLD STATS dataset captures indicators of environmental, social, and governance performance for public companies, and grades whether a firm has “strong gender diversity on their board of directors” (MSCI 2019). Although this measure does not explicitly capture firm culture, we posit that firms with strong gender diversity on the board are more likely to possess a culture of diversity tolerance.

Our second proxy for culture of diversity tolerance is *EFFECTIVE_DEI*, which is based on Fair360's *Top 50 Companies for Diversity* list. Since 2001, Fair360 has

compiled an annual list of firms based on “the performance of companies in six key areas of diversity and inclusion management.”¹¹ Fair360 claims that the rankings provide a robust measure of “the effectiveness of DEI strategy, policies and practices.” A limitation of this measure is that it only ranks 50 firms per year, and it is possible that firms outside the ranking also possess a strong culture of diversity tolerance. We use the Fair360 list as a proxy (albeit noisy) for firm culture of diversity tolerance relative to firms that are not on the list.

Results in Table 7 indicate that the coefficients on the interaction term in all columns are *negative* and significant (p values ≤ 0.10).^{12,13} Furthermore, the ‘total effect’ for *DYADIC_GENDER_DIFF* when *DIVERSITY_STRENGTHS*=1 or *EFFECTIVE_DEI*=1 is insignificant. These results suggest that inculcating a culture of diversity tolerance can help offset increased identity-based monitoring.

4.4.2 Trust building as a moderator of identity-based monitoring

Previous interactions or the “shadow of the past” can influence trustworthiness judgments of a dyadic partner (Poppo et al. 2008). Accumulated past experiences can shape expectations of future behavior and engender relatively greater trust. We explore this by studying whether the length of the audit committee chair-chief financial officer relationship reduces monitoring. We construct an interaction variable, *YEARS_TOGETHER*, which is a count variable for the number of years the dyad has worked together. Tabulated in Table 8 Column (1), we find no evidence that the effect of dyadic gender difference weakens as relationship time increases.

Identity theory views trust as relational and directed toward a particular target based on the target’s identity within the trustor’s group (Tajfel and Turner 1986). However, trust has a cognitive element, which refers to the audit committee chair’s assessment of the competence of the CFO. While gender identity can influence skepticism about competence with associated implications for mistrust, the audit committee chair is also likely to consider other signals of the CFO’s competence. One such attribute is CFO relative seniority. A CFO with more relative seniority has more firm-specific knowledge (Forbes and Milliken 1999; Tuggle et al. 2010; Beck and Mauldin 2014) and deeper social ties with the board, which can earn the audit committee chair’s trust, reducing the audit committee chair’s motivation to call more meetings. We test this using *CFO_SENIORITY*, which equals 1 if the CFO has more seniority than the audit committee chair at the firm (and 0 otherwise).¹⁴ Results in Table 8 Column (2) suggest that the effect of dyadic gender differences on CFO monitoring

¹¹Fair360 uses a proprietary algorithm based on a company’s performance in six areas: human capital, leadership accountability, talent programs, workplace practices, supplier fairness, and philanthropy (Fair360 2024).

¹²The sample in the first column is limited by MSCI ESG KLD STATS data coverage.

¹³The results from Table 7 onward are robust to the exclusion of firm fixed effects (untabulated).

¹⁴We define seniority at the role level, meaning the variable equals 1 if the CFO became the CFO at the firm before the audit committee chair became the audit committee chair at the firm.

Table 7 Do Value-based Controls Moderate the Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on Audit Committee Meetings?

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>			
		(1)		(2)	
<i>Test Variables:</i>					
<i>DYADIC_GENDER_DIFF</i>	+	0.6275	**	0.5615	***
[t-stat] (p-value)		[2.22]	(0.027)	[2.59]	(≤0.01)
<i>DYADIC_GENDER_DIFF*DIVERSITY_STRENGTHS</i>	-	-0.5955	*		
[t-stat] (p-value)		[-1.80]	(0.072)		
<i>DYADIC_GENDER_DIFF*EFFECTIVE_DEI</i>	-			-0.9726	*
[t-stat] (p-value)				[-1.68]	(0.092)
<i>Control Variables:</i>					
<i>DIVERSITY_STRENGTHS</i>	?	0.2966			
<i>EFFECTIVE_DEI</i>	?			0.3944	
<i>NEW_CFO</i>	+	0.1618		0.2240	***
<i>NEW_ACC</i>	+	0.0361		0.0776	
<i>SIZE</i>	+	0.2360	*	0.1437	*
<i>ACCOUNTING_EXPERTISE</i>	+	-0.1473		-0.0640	
<i>AC_SIZE</i>	+	0.0092		0.0265	
<i>BOARD_SIZE</i>	+	-0.0275		-0.0013	
<i>BOARD_INDEPENDENCE</i>	+	0.3705		0.3985	
<i>CEO_CHAIR</i>	-	-0.0347		-0.0624	
<i>INST_OWNERSHIP</i>	+	0.3680		0.2048	
<i>MTB</i>	-	-0.0044		-0.0044	*
<i>LEVERAGE</i>	+	0.0980		0.4303	**
<i>ISSUANCE</i>	+	-0.0441		-0.1055	**
<i>ROA</i>	-	-0.0086		-0.1433	
<i>BIG4</i>	+	-0.3552		-0.1458	
<i>SEGMENTS</i>	+	-0.0001		-0.0138	
<i>FOREIGN</i>	+	0.0080		-0.0100	
<i>ACQUISITION</i>	+	-0.0243		0.0044	
<i>RESTRUCTURE</i>	+	0.0363		0.0666	
<i>RESTATE_ANNOUNCEMENT</i>	+	0.9164	***	0.7270	***
<i>GOING_CONCERN</i>	+	1.0874		0.3710	**
<i>SOX404_AUDIT</i>	+	1.0773	***	0.6578	***
<i>MATERIAL_WEAKNESS</i>	+	0.3084	*	0.4622	***
<i>LOSS</i>	+	0.2344	**	0.1654	***
<i>STOCK_RETURN</i>	-	-0.0749		-0.0682	**
<i>ACC_BUSY</i>	-	-0.0184		-0.0017	
<i>MGMT_HOLDINGS</i>	?	0.0135		0.0108	
Firm Fixed Effects		YES		YES	
Year Fixed Effects		YES		YES	
CFO Fixed Effects		YES		YES	
AC Chair Fixed Effects		YES		YES	
N		9,945		21,756	
Adjusted R-squared		59.16%		63.01%	
<i>DYADIC_GENDER_DIFF</i> + <i>DYADIC_GENDER_DIFF*DIVERSITY_STRENGTHS</i>	?	0.0320			

Table 7 (continued)

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>	
		(1)	(2)
[t-stat] (<i>p</i> -value)		[0.10]	(0.933)
<i>DYADIC_GENDER_DIFF</i> +	?		-0.4111
<i>DYADIC_GENDER_DIFF</i> * <i>EFFECTIVE_DEI</i>			
[t-stat] (<i>p</i> -value)		[0.71]	(0.481)

Table 7 presents the analysis of cross-sectional variation in the effect of audit committee chair-chief financial officer gender difference on the number of audit committee meetings during the year. All variables are defined in Appendix 1. The model in all columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

is attenuated when the CFO has more seniority relative to the audit committee chair (*p* value ≤ 0.10).¹⁵

4.4.3 Alternate proxies for audit committee chair monitoring

We corroborate our inferences using two additional proxies for audit committee chair monitoring: external audit fees and audit committee size. Audit committee chairs who want to increase monitoring of the CFO likely will ask the external auditor to perform more audit work, leading to higher audit fees (e.g., Bruynseels and Cardinaels 2014). Further, audit committee chairs who mistrust the CFO can request more resources, such as a larger audit committee, to assist with monitoring (e.g., DeFond and Francis 2005). Tables 9 and 10 present the results for these additional proxies of audit committee chair monitoring and suggest that there is a statistically significant association between dyadic gender difference and higher external audit fees and larger audit committees (*p* values ≤ 0.10).¹⁶ These results are consistent with our theory that dyadic gender differences are associated with greater audit committee chair monitoring of the chief financial officer.

4.4.4 Effect on financial reporting quality

We next examine whether the increased monitoring induced by dyadic gender difference has implications for a firm's financial reporting quality. Following prior literature, we focus on reliability as an important aspect of financial reporting quality (Ashraf et al. 2020). We proxy for reliability using *RESTATE* (equals 1 if firm *i* restates the financial statements for year *t* [0 otherwise]).¹⁷ The results of our analysis in Table 11 show insignificant coefficients on *DYADIC_GENDER_DIFF* and *DYADIC_GENDER_DIFF***AC_MEETINGS*. This suggests that (i) firms with chair-

¹⁵An alternative interpretation of the negative coefficient on the interaction term is that the audit committee chair may have a greater deference for a more senior CFO, rather than greater trust per se.

¹⁶The control variables in our audit fees model follow DeFond and Zhang (2014).

¹⁷Our analysis examines whether year *t* is restated after the initial issuance of the financial statements, not whether a restatement is disclosed in year *t*.

Table 8 Does Trust Building Moderate the Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on Audit Committee Meetings?

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>			
		(1)		(2)	
<i>Test Variables:</i>					
<i>DYADIC_GENDER_DIFF</i>	+	0.4879	**	0.6447	***
[t-stat] (p-value)		[2.15]	(0.032)	[2.82]	(≤0.01)
<i>DYADIC_GENDER_DIFF*YEARS_TOGETHER</i>	-	0.0240			
[t-stat] (p-value)		[0.78]	(0.433)		
<i>DYADIC_GENDER_DIFF*CFO_SENIORITY</i>	-			-0.4995	*
[t-stat] (p-value)				[-1.85]	(0.064)
<i>Control Variables:</i>					
<i>YEARS_TOGETHER</i>	-	-0.1264			
<i>CFO_SENIORITY</i>	?			0.3560	
<i>NEW_CFO</i>	+	0.2153	***	0.2326	***
<i>NEW_ACC</i>	+	0.0687		0.0658	
<i>SIZE</i>	+	0.1452	*	0.1504	*
<i>ACCOUNTING_EXPERTISE</i>	+	-0.0706		-0.0688	
<i>AC_SIZE</i>	+	0.0263		0.0268	
<i>BOARD_SIZE</i>	+	-0.0005		-0.0021	
<i>BOARD_INDEPENDENCE</i>	+	0.4143		0.4379	
<i>CEO_CHAIR</i>	-	-0.0598		-0.0645	
<i>INST_OWNERSHIP</i>	+	0.2098		0.2112	
<i>MTB</i>	-	-0.0044	*	-0.0045	*
<i>LEVERAGE</i>	+	0.4422	**	0.4266	**
<i>ISSUANCE</i>	+	-0.1064	**	-0.1071	**
<i>ROA</i>	-	-0.1455		-0.1464	
<i>BIG4</i>	+	-0.1529		-0.1553	
<i>SEGMENTS</i>	+	-0.0120		-0.0129	
<i>FOREIGN</i>	+	-0.0042		-0.0074	
<i>ACQUISITION</i>	+	0.0037		0.0052	
<i>RESTRUCTURE</i>	+	0.0637		0.0655	
<i>RESTATE_ANNOUNCEMENT</i>	+	0.7290	***	0.7283	***
<i>GOING_CONCERN</i>	+	0.3742	**	0.3821	**
<i>SOX404_AUDIT</i>	+	0.6639	***	0.6615	***
<i>MATERIAL_WEAKNESS</i>	+	0.4641	***	0.4609	***
<i>LOSS</i>	+	0.1646	***	0.1652	***
<i>STOCK_RETURN</i>	-	-0.0682	**	-0.0687	**
<i>ACC_BUSY</i>	-	-0.0019		-0.0014	
<i>MGMT_HOLDINGS</i>	?	0.0121		0.0106	
Firm Fixed Effects		YES		YES	
Year Fixed Effects		YES		YES	
CFO Fixed Effects		YES		YES	
AC Chair Fixed Effects		YES		YES	
N		21,756		21,756	
Adjusted R-squared		63.02%		63.04%	
<i>DYADIC_GENDER_DIFF</i> + <i>DYADIC_GENDER_DIFF*YEARS_TOGETHER</i>	?	0.5119	**		
[t-stat] (p-value)		[2.32]	(0.020)		

Table 8 (continued)

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>	
		(1)	(2)
<i>DYADIC_GENDER_DIFF</i> +	?		0.1452
<i>DYADIC_GENDER_DIFF</i> * <i>CFO_SENIORITY</i>			
[t-stat] (<i>p</i> -value)		[0.50]	(0.620)

Table 8 presents the analysis of cross-sectional variation in the effect of audit committee chair-chief financial officer gender difference on the number of audit committee meetings during the year. All variables are defined in Appendix 1. The model in all columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Table 9 The Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on External Audit Fees

Independent Variables	Pr.	Dependent Variable: <i>AUDIT_FEES</i>	
		(1)	
<i>Test Variable:</i>			
<i>DYADIC_GENDER_DIFF</i> +		0.0350	*
[t-stat] (<i>p</i> -value)		[1.68]	(0.093)
<i>Control Variables:</i>			
<i>NEW_CFO</i>	+	0.0127	**
<i>NEW_ACC</i>	+	-0.0005	
<i>SIZE</i>	+	0.3157	***
<i>LEVERAGE</i>	+	0.0670	***
<i>LOSS</i>	+	0.0352	***
<i>ROA</i>	-	-0.1111	***
<i>CURRENT_ASSETS</i>	-	-0.1064	***
<i>QUICK_RATIO</i>	+	-0.0026	***
<i>FOREIGN</i>	+	0.0839	***
<i>SEGMENTS</i>	+	0.0052	**
<i>DECEMBER</i>	+	0.0857	
<i>REPORT_LAG</i>	+	0.3325	***
<i>GOING_CONCERN</i>	+	0.0562	***
<i>STOCK_RETURN</i>	-	-0.0052	
Firm Fixed Effects		YES	
Year Fixed Effects		YES	
CFO Fixed Effects		YES	
AC Chair Fixed Effects		YES	
N		46,415	
Adjusted R-squared		95.45%	

Table 9 presents the analysis of the association between audit committee chair-chief financial officer gender difference on audit fees. All variables are defined in Appendix 1. The model in both columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Table 10 The Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on Audit Committee Size

Independent Variables	Pr.	Dependent Variable: <i>AC_SIZE</i>	
		(1)	
<i>Test Variable:</i>			
<i>DYADIC_GENDER_DIFF</i>	+	0.1053	*
[t-stat] (<i>p</i> -value)		[1.88]	(0.060)
<i>Control Variables:</i>			
<i>NEW_CFO</i>	+	0.0216	*
<i>NEW_ACC</i>	+	0.1657	***
<i>SIZE</i>	+	-0.0319	*
<i>ACCOUNTING_EXPERTISE</i>	+	0.3256	***
<i>BOARD_SIZE</i>	+	0.2355	***
<i>BOARD_INDEPENDENCE</i>	+	1.4343	***
<i>CEO_CHAIR</i>	-	-0.0206	
<i>INST_OWNERSHIP</i>	+	-0.0317	
<i>MTB</i>	-	0.0003	
<i>LEVERAGE</i>	+	-0.0027	
<i>ISSUANCE</i>	+	-0.0166	*
<i>ROA</i>	-	0.0198	
<i>BIG4</i>	+	-0.0299	
<i>SEGMENTS</i>	+	0.0033	
<i>FOREIGN</i>	+	-0.0064	
<i>ACQUISITION</i>	+	0.0223	*
<i>RESTRUCTURE</i>	+	0.0075	
<i>RESTATE_ANNOUNCEMENT</i>	+	0.0042	
<i>GOING_CONCERN</i>	+	-0.0355	
<i>SOX404_AUDIT</i>	+	0.0038	
<i>MATERIAL_WEAKNESS</i>	+	0.0171	
<i>LOSS</i>	+	0.0022	
<i>STOCK_RETURN</i>	-	-0.0088	
<i>ACC_BUSY</i>	-	0.0049	
<i>MGMT_HOLDINGS</i>	?	-0.0055	
Firm Fixed Effects		YES	
Year Fixed Effects		YES	
CFO Fixed Effects		YES	
AC Chair Fixed Effects		YES	
N		55,055	
Adjusted R-squared		69.97%	

Table 10 presents the analysis of the association between audit committee chair-chief financial officer gender difference on size of the audit committee. All variables are defined in Appendix 1. The model in both columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

CFO dyadic gender differences are no different in terms of financial reporting quality than other firms and (ii) more audit committee meetings have no statistically significant incremental impact on improving financial reporting quality for *DYADIC_GENDER_DIFF* firms.

Table 11 The Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on Financial Reporting Quality

Independent Variables	Pr.	Dependent Variable: <i>RESTATE</i> (1)	
<i>Test Variables:</i>			
<i>DYADIC_GENDER_DIFF</i>	?	0.0084	
[t-stat] (<i>p</i> -value)		[0.19]	(0.853)
<i>DYADIC_GENDER_DIFF*AC_MEETINGS</i>	?	-0.0003	
[t-stat] (<i>p</i> -value)		[-0.09]	(0.930)
<i>Control Variables:</i>			
<i>AC_MEETINGS</i>	-	-0.0041	**
<i>NEW_CFO</i>	?	-0.0010	
<i>NEW_ACC</i>	?	0.0074	
<i>SIZE</i>	-	0.0315	**
<i>ACCOUNTING_EXPERTISE</i>	-	-0.0009	
<i>AC_SIZE</i>	-	-0.0039	
<i>BOARD_SIZE</i>	-	-0.0003	
<i>BOARD_INDEPENDENCE</i>	-	0.0340	
<i>CEO_CHAIR</i>	+	0.0056	
<i>INST_OWNERSHIP</i>	-	-0.0453	*
<i>MTB</i>	?	0.0001	
<i>LEVERAGE</i>	-	0.0274	
<i>ISSUANCE</i>	?	-0.0043	
<i>ROA</i>	?	0.0080	
<i>STOCK_RETURN</i>	?	-0.0007	
<i>CEO_FOUNDER</i>	+	0.0265	
<i>IND_DIRS_TENURE</i>	-	0.0006	
<i>LEGAL_EXPERTISE</i>	-	0.0017	
<i>ACQUISITION</i>	+	0.0100	
<i>FOREIGN</i>	+	0.0047	
<i>LOSS</i>	+	0.0024	
<i>RESTRUCTURE</i>	+	0.0078	
<i>SALES_GROWTH</i>	+	0.0017	
<i>SEGMENTS</i>	+	-0.0045	
<i>NEW_AUDITOR</i>	+	-0.0108	
<i>IMPORTANCE_TO_AUDITOR</i>	+	-0.0208	
<i>LOCAL_EXPERT_AUDITOR</i>	-	0.0114	
Firm Fixed Effects		YES	
Year Fixed Effects		YES	
CFO Fixed Effects		YES	
AC Chair Fixed Effects		YES	
N		21,667	
Adjusted R-squared		26.79%	

Table 11 presents the analysis of the association between audit committee chair-chief financial officer gender difference on restatements. All variables are defined in Appendix 1. The model in both columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

4.4.5 Impact on CFO performance

Finally, we examine the effect on CFO performance. Identity based on gender is salient. A CFO could perceive a psychological threat from their cognizance that a negative stereotype (Shapiro and Neuberg 2007) is being applied by the audit committee chair. Prior literature (e.g., Blau 1964; Shapiro and Neuberg 2007) posits that, when supervisors (in our case, the audit committee chair) implicitly or explicitly distrust their subordinates (in our case, the CFO), the monitored person can feel a need to prove his or her competence and overwork to compensate for the lack of trust. When individuals face mistrust from their managers, it triggers impostor-like tendencies, prompting them to work harder to prove their worth (e.g., Clance and Imes 1978; Vergauwe et al. 2015). This suggests that we should observe a positive association between *DYADIC_GENDER_DIFF* and CFO performance. More audit committee meetings can conversely have a ‘distraction’ effect. CFOs not only have extensive fiduciary responsibility to produce financial statements that accurately reflect the firm’s financial condition, but also, as members of the upper echelons, they collaborate with the board and top management team to design strategy and deliver value for organizational stakeholders (Shi et al. 2019). CFOs thus receive compensation tied to firm-level operating performance measures such as ROA (e.g., Indjejikian and Matějka 2009; Kroos et al. 2018), and audit committee meetings can negatively impact the advisory role of the CFO. Aside from requiring the CFO to divert time and resources away from firm performance and toward satisfying the audit committee chair, monitoring can reduce the CFO’s willingness to share strategic information (Adams 2012; Adams and Ferreira 2009), compromising both the CFO’s and the board’s ability to generate positive performance (Faleye et al. 2011).

We examine the effect of increased audit committee chair monitoring on CFO performance using four proxies: (i) *ROA* (firm *i*’s income before extraordinary items in year *t* scaled by the total assets in year *t*), (ii) *ROE* (firm *i*’s income before extraordinary items in year *t* scaled by market value of equity in year *t*), (iii) *UNEXPECTED_EARNINGS* (firm *i*’s actual earnings per share for year *t* minus firm *i*’s consensus analyst earnings per share forecast for year *t*, all scaled by firm *i*’s stock price at the end of year *t*), and (iv) *COST_EFFICIENCY* (difference between year-over-year change in total operating cost and year-over-year change in sales, all scaled by total assets and then multiplied by -1 so that higher values indicate better cost efficiency). All these proxies are calculated for firm *i*’s year *t* (e.g., Hoitash et al. 2016).

The results, tabulated in Table 12, generally indicate a positive main effect of *DYADIC_GENDER_DIFF* on CFO performance. However, we observe a statistically significant *negative* association between *DYADIC_GENDER_DIFF*AC_MEETINGS* and CFO performance (results vary depending on the CFO performance proxy).¹⁸ This suggests that CFO performance is *better* when there is an audit committee chair-chief financial officer gender difference, but this better CFO performance is impaired when the CFO is distracted by the chair’s greater monitoring.

¹⁸The control variables in Table 12 follow Larcker et al. (2013).

Table 12 The Effect of Gender Difference Between Audit Committee Chair and Chief Financial Officer on Chief Financial Officer Performance

Independent Variables	Pr:	Dependent Variable: ROA		Dependent Variable: UNEXPECTED_EARNINGS		Dependent Variable: UNEXPECTED_COST_EFFICIENCY	
		Full Model (1)	Full Model (3)	Full Model (5)	Full Model (7)		
<i>Test Variables:</i>							
DYADIC_GENDER_DIFF	+	0.0641 [2.22]	0.1496 [2.12]	0.0786 [2.51]	0.0229 [1.39]	**	(0.165)
[t-stat] (p-value)		** (0.026)	** (0.034)	** (0.012)	** (0.079)		
DYADIC_GENDER_DIFF*	-	-0.0044	-0.0113	-0.0054	-0.0026	*	
AC_MEETINGS		[-1.95]	[-1.56]	[-1.76]	[-1.63]		(0.104)
[t-stat] (p-value)		(0.051)	(0.118)	(0.079)	(0.104)		
<i>Control Variables:</i>							
AC_MEETINGS	-	-0.0025	-0.0070	-0.0010	-0.0006		
NEW_CFO	?	-0.0094	-0.0111	0.0055	-0.0076		
NEW_ACC	?	0.0027	-0.0037	-0.0098	0.0072		
SIZE	+	0.1871	0.1678	-0.0135	-0.0718		***
RETURN _{t-1}	+	0.0133	0.0160	0.0098	-0.0153		***
BTM _{t-1}	-	-0.0376	-0.1982	-0.0314	-0.0247		**
R&D	-	-0.0158	-0.0038	0.0085	-0.0085		
LEVERAGE	?	-0.3149	-0.7485	-0.1075	-0.0425		*
SALES	+	-0.0090	0.0306	0.0328	0.0931		***
FIRM_AGE	?	-0.0088	-0.0113	0.0037	-0.0034		*
Firm Fixed Effects		YES	YES	YES	YES		
Year Fixed Effects		YES	YES	YES	YES		
CFO Fixed Effects		YES	YES	YES	YES		
AC Chair Fixed Effects		YES	YES	YES	YES		
N		21,505	21,505	17,470	21,505		
Adjusted R-squared		53.34%	9.48%	4.51%	-24.98%		

Table 12 presents the analysis of the association between audit committee chair-chief financial officer gender difference on measures of CFO performance. All variables are defined in Appendix 1. The model in all columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

5 Conclusion

Corporate board members deal with expectations from a variety of stakeholders to effectively monitor and advise the companies whose boards they sit on (Gai et al. 2021). Although a wealth of research examines factors that facilitate or impede the board's monitoring effectiveness (Boivie et al. 2016), several gaps remain. Prominent among these is the relative inattention to dyadic interactions between directors and executives as well as the role of identity in directors' monitoring choices. Empirical studies typically treat the board as a single unit, despite the complex interface between individual directors and executives, such as the audit committee chair and chief financial officer. Dyadic relationships between directors and management are especially crucial to the effectiveness of corporate governance (Del Brio et al. 2013; Garg and Eisenhardt 2017; Firk et al. 2024), particularly because the bulk of the board's activity occurs in board committees in which the committee chair is expected to apply his or her specialized knowledge to monitor a manager's actions (Chen and Wu 2016). Theory points to variations in relationship dynamics when individuals operate in dyads (Joshi and Knight 2015), which is likely to influence the *trust* placed in the other member of the dyad.

Indeed, trust is crucial in governance settings (De Jong and Elfring 2010) and influences monitoring decisions (Westphal 1999), and yet the literature provides an undersocialized conception of firm behavior (Granovetter 1985). Based on the theory that individuals are likely to *mistrust* outgroup members (Smith 2010), we posit that identity differences within governance dyads influence monitoring decisions. We find evidence consistent with our hypothesis: audit committee meetings are more numerous (i.e., increased monitoring) when the audit committee chair and chief financial officer are of different genders (i.e., there is an identity difference). We also find this effect is attenuated in firms with a culture of greater diversity tolerance or when the CFO appears to be more trustworthy. Finally, we find that more audit committee chair monitoring in the presence of dyadic gender differences does not improve financial reporting quality, but it does have a negative externality on CFO operating performance.

Overall, our analyses suggest that identity plays an important role in corporate governance, and identity differences in dyads can lead to potential costs in the form of identity-based additional monitoring. However, our findings also suggest that this cost can be mitigated with the effective design of management control systems, such as training that encourages employees to embrace diverse perspectives. Finally, our research highlights the importance of examining important dyads (e.g., Garg and Eisenhardt 2017), particularly as they relate to corporate governance.

Our findings should be understood within the context of several caveats. Our use of audit committee meetings to proxy for audit committee chair monitoring holds construct validity (see discussion in Section 3). However, a limitation of our study is that we are not capturing monitoring that likely occurs outside of formal meetings. Further, our data collection procedure required us to drop observations for which we could not collect audit committee meetings data. Finally, our research design is driven by theory, and we have employed robust econometric techniques; nonetheless, confounding unobservable time-varying factors could potentially still exist. Thus,

our evidence may not be indicative of causality. We encourage future field-based and survey-based research to parse out subjective elements, such as cultural and social norms, and their influence on monitoring.

Appendix 1

Variable Definitions

Variable	Definition [Data Source]
<i>AC_MEETINGS</i>	= number of times firm <i>i</i> 's audit committee meets during year <i>t</i> [Proxy Statements]
<i>AC_SIZE</i>	= the number of directors on firm <i>i</i> 's audit committee in year <i>t</i> [BoardEx]
<i>ACC_BUSY</i>	= the number of boards firm <i>i</i> 's audit committee chair sits on during year <i>t</i> [BoardEx]
<i>ACC_FEMALE&CFO_FEMALE</i>	= 1 if the audit committee chair for firm <i>i</i> in year <i>t</i> is female and the chief financial officer for firm <i>i</i> in year <i>t</i> is female (0 otherwise) [BoardEx]
<i>ACC_FEMALE&CFO_MALE</i>	= 1 if the audit committee chair for firm <i>i</i> in year <i>t</i> is female and the chief financial officer for firm <i>i</i> in year <i>t</i> is male (0 otherwise) [BoardEx]
<i>ACC_MALE&CFO_FEMALE</i>	= 1 if the audit committee chair for firm <i>i</i> in year <i>t</i> is male and the chief financial officer for firm <i>i</i> in year <i>t</i> is female (0 otherwise) [BoardEx]
<i>ACC_MALE&CFO_MALE</i>	= 1 if the audit committee chair for firm <i>i</i> in year <i>t</i> is male and the chief financial officer for firm <i>i</i> in year <i>t</i> is male (0 otherwise) [BoardEx]
<i>ACCOUNTING_EXPERTISE</i>	= 1 if firm <i>i</i> 's audit committee in year <i>t</i> possesses an accounting expert, where an accounting expert is an audit committee director who has prior work experience as a(n) chief financial officer, accounting officer, chief accountant, controller, certified public accountant, chartered accountant, head of accounting, vice president of accounting, accounting director, vice president of finance, treasurer, or auditor (0 otherwise) (Ashraf et al. 2020) [BoardEx]
<i>ACQUISITION</i>	= 1 if firm <i>i</i> 's year <i>t</i> has an acquisition that contributes to sales or income (0 otherwise) [Compustat]
<i>AUDIT_FEES</i>	= natural log of firm <i>i</i> 's audit fees in year <i>t</i> [Audit Analytics]
<i>BIG4</i>	= 1 if firm <i>i</i> possesses a Big Four external auditor in year <i>t</i> (0 otherwise) [Audit Analytics]
<i>BOARD_INDEPENDENCE</i>	= number of independent directors on firm <i>i</i> 's board of directors in year <i>t</i> scaled by the total number of directors on firm <i>i</i> 's board of directors in year <i>t</i> [BoardEx]
<i>BOARD_SIZE</i>	= the number of directors on firm <i>i</i> 's board of directors in year <i>t</i> [BoardEx]
<i>BTM_{t-1}</i>	= firm <i>i</i> 's book value of equity in year <i>t-1</i> scaled by firm <i>i</i> 's market value of equity in year <i>t-1</i> [Compustat]
<i>CEO_CHAIR</i>	= 1 if the firm <i>i</i> 's CEO in year <i>t</i> is also the chairperson of firm <i>i</i> 's board of directors in year <i>t</i> (0 otherwise) [BoardEx]

Variable	Definition [Data Source]
<i>CEO_FOUNDER</i>	= 1 if the CEO in year t is also the founder of firm i (0 otherwise) [BoardEx]
<i>CFO_SENIORITY</i>	= 1 if the CFO has more seniority than the audit committee chair at firm i in year t (0 otherwise)
<i>COST_EFFICIENCY</i>	= difference between year-over-year change in total operating cost and year-over-year change in sales, all scaled by total assets and then multiplied by -1 so that higher values indicate better cost efficiency; all calculated for firm i 's year t and following Hoitash et al. (2016) [Compustat]
<i>CURRENT_ASSETS</i>	= firm i 's current assets in year t scaled by firm i 's total assets in year t [Compustat]
<i>DECEMBER</i>	= 1 if firm i 's fiscal year-end in year t ends in December (0 otherwise) [Compustat]
<i>DIVERSITY_STRENGTHS</i>	= 1 if firm i 's board of directors possesses strong gender diversity on their board of directors in year t per MSCI ESG KLD STATS (0 otherwise) [MSCI ESG KLD STATS]
<i>DYADIC_GENDER_DIFF</i>	= 1 if the audit committee chair and chief financial officer for firm i in year t are different genders (0 otherwise) [BoardEx]
<i>EFFECTIVE_DEI</i>	= 1 if firm i is featured in Fair360's <i>Top 50 Companies for Diversity</i> list in year t (0 otherwise) [Fair360]
<i>FIRM_AGE</i>	= firm i 's age in year t [Compustat]
<i>FOREIGN</i>	= 1 if firm i 's year t exhibits non-zero pre-tax foreign income (0 otherwise) [Compustat]
<i>GOING_CONCERN</i>	= 1 if firm i 's external auditor for year t issues a going concern opinion (0 otherwise) [Audit Analytics]
<i>IND_DIRS_TENURE</i>	= average number of years firm i 's independent directors have been members of the board in year t [BoardEx]
<i>INST_OWNERSHIP</i>	= percentage of firm i owned by institutional investors in year t [Thomson Reuters]
<i>ISSUANCE</i>	= 1 if firm i issues equity or debt in year t that is greater than or equal to 10 percent of firm i 's total assets in year t (0 otherwise) [Compustat]
<i>LEGAL_EXPERTISE</i>	= 1 if firm i 's audit committee has a legal expert in year t (0 otherwise); legal expert is defined as someone who has prior experience working as an attorney, lawyer, or general counsel or possesses a juris doctor or doctor of jurisprudence degree (Krishnan et al. 2011) [BoardEx]
<i>LEVERAGE</i>	= firm i 's long-term debt in year t scaled by firm i 's total assets in year t [Compustat]
<i>LOCAL_EXPERT_AUDITOR</i>	= 1 if audit office j for firm i in year t possesses the highest market share of audit fees in metropolitan statistical area y for industry x in year t (0 otherwise) [Audit Analytics]
<i>LOSS</i>	= 1 if firm i exhibits negative net income in year t (0 otherwise) [Compustat]
<i>MATERIAL_WEAKNESS</i>	= 1 if firm i 's external audit report for year t indicates a material weakness in internal control over financial reporting (0 otherwise) [Audit Analytics]
<i>MGMT_HOLDINGS</i>	= natural log of the value of total firm i linked wealth held by firm i 's executives who sit on the board in year t [BoardEx]
<i>MTB</i>	= firm i 's market value of equity in year t scaled by firm i 's book value of equity in year t [Compustat]

Variable	Definition [Data Source]
<i>NEW_ACC</i>	= 1 if the audit committee chair for firm <i>i</i> 's year <i>t</i> is different than the audit committee chair for firm <i>i</i> 's year <i>t</i> -1 (0 otherwise) [Audit Analytics]
<i>NEW_AUDITOR</i>	= 1 if the external auditor for firm <i>i</i> 's year <i>t</i> is different than the external auditor for firm <i>i</i> 's year <i>t</i> -1 (0 otherwise) [Audit Analytics]
<i>NEW_CFO</i>	= 1 if the CFO for firm <i>i</i> 's year <i>t</i> is different than the CFO for firm <i>i</i> 's year <i>t</i> -1 (0 otherwise) [BoardEx]
<i>POST</i>	= 1 if year <i>t</i> is after the year that firm <i>i</i> is treated (for treatment firms) or after firm <i>i</i> 's matched treated firm is treated (for control firms) (0 otherwise) [BoardEx]
<i>QUICK_RATIO</i>	= firm <i>i</i> 's current assets in year <i>t</i> minus firm <i>i</i> 's inventory in year <i>t</i> , all scaled by firm <i>i</i> 's current liabilities in year <i>t</i> [Compustat]
<i>R&D</i>	= firm <i>i</i> 's research and development expenditures in year <i>t</i> scaled by firm <i>i</i> 's sales in year <i>t</i> [Compustat]
<i>RELATIVE_SIZE</i>	= firm <i>i</i> 's size in year <i>t</i> minus the average size for firm <i>i</i> 's 2-digit SIC industry in year <i>t</i>
<i>REPORT_LAG</i>	= natural log of 1 plus the number of days between firm <i>i</i> 's year <i>t</i> 's fiscal year-end and firm <i>i</i> 's year <i>t</i> 's date of 10-K filing [Compustat, Audit Analytics]
<i>RESTATE</i>	= 1 if firm <i>i</i> 's 10-K filing for year <i>t</i> is restated after original issuance (0 otherwise) [Audit Analytics]
<i>RESTATE</i>	= 1 if firm <i>i</i> discloses a restatement in year <i>t</i> (0 otherwise) [Audit Analytics]
<i>RESTRUCTURE</i>	= 1 if firm <i>i</i> 's year <i>t</i> has non-zero restructuring costs (0 otherwise) [Compustat]
<i>RETURN_{t-1}</i>	= buy-and-hold abnormal return for firm <i>i</i> over year <i>t</i> -1 [CRSP]
<i>ROA</i>	= firm <i>i</i> 's income before extraordinary items in year <i>t</i> scaled by firm <i>i</i> 's total assets in year <i>t</i> [Compustat]
<i>ROE</i>	= firm <i>i</i> 's income before extraordinary items in year <i>t</i> scaled by market value of equity in the same firm-year [Compustat]
<i>SALES</i>	= natural log of 1 plus firm <i>i</i> 's sales in year <i>t</i> [Compustat]
<i>SALES_GROWTH</i>	= sales for firm <i>i</i> 's year <i>t</i> minus sales for firm <i>i</i> 's year <i>t</i> -1, all scaled by firm <i>i</i> 's year <i>t</i> sales [Compustat]
<i>SEGMENTS</i>	= total number of segments for firm <i>i</i> in year <i>t</i> [Compustat Segments]
<i>SIZE</i>	= natural log of firm <i>i</i> 's total assets in year <i>t</i> [Compustat]
<i>SOX404_AUDIT</i>	= 1 if firm <i>i</i> receives an audit of internal control over financial reporting in year <i>t</i> (0 otherwise) [Audit Analytics]
<i>STOCK_RETURN</i>	= buy-and-hold abnormal stock return for firm <i>i</i> over year <i>t</i> [CRSP]
<i>TREAT</i>	= 1 if firm <i>i</i> is a treated firm (0 otherwise) [BoardEx]
<i>UNEXPECTED_EARNINGS</i>	= firm <i>i</i> 's actual earnings per share for year <i>t</i> minus firm <i>i</i> 's consensus analyst earnings per share forecast for year <i>t</i> , all scaled by firm <i>i</i> 's stock price at the end of year <i>t</i> [IBES, Compustat]
<i>YEARS_TOGETHER</i>	= count variable for the number of years the audit committee chair-chief financial officer dyad have worked together [BoardEx]

Appendix 2

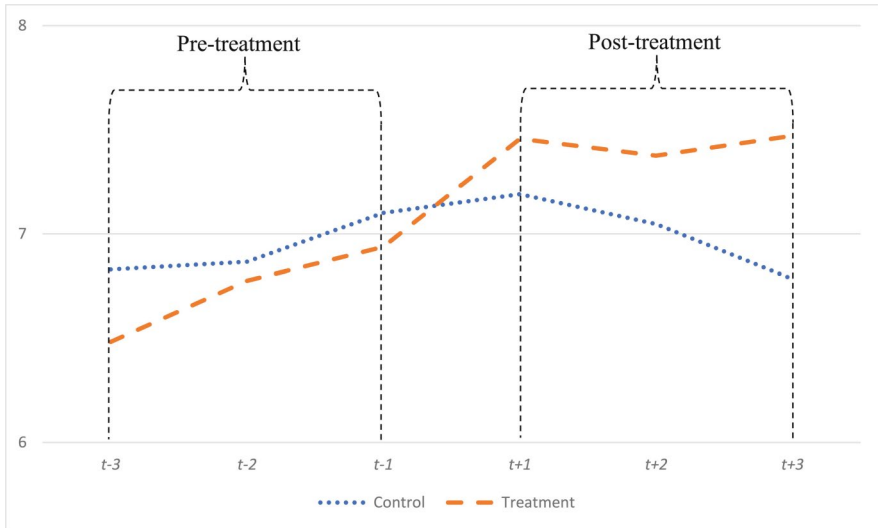


Fig. 3 Pre- and Post-treatment Trends in *AC_MEETINGS* for Difference-in-differences Analysis in Table 5 Panel A. Notes: Fig. 3 plots the yearly average of *AC_MEETINGS* for treatment and control groups, where year t is the year of treatment. Treatment firms are ones that hired a new CFO in year t and that new CFO led to a gender difference between the audit committee chair and CFO. Control firms are ones that hired a new CFO in year t and that new CFO did not lead to a gender difference between the audit committee chair and CFO

Table 13 Covariate Balance Between the Treatment and Control Firms for the Propensity Score Matching Procedure in Table 5 Panel A

Variable	Treat- ment Firms'	Con- trol Firms'	Covariate Balance		
	Mean	Mean	Diff. (1) - (2)	t-stat	p-value
	(1)	(2)			
<i>NEW_ACC</i>	0.13	0.11	0.02	-1.04	0.30
<i>SIZE</i>	6.43	6.36	0.07	-0.67	0.50
<i>ACCOUNTING_</i> <i>EXPERTISE</i>	0.80	0.77	0.02	-1.03	0.30
<i>AC_SIZE</i>	3.75	3.76	-0.01	0.15	0.88
<i>BOARD_SIZE</i>	8.27	8.28	-0.01	0.07	0.95
<i>BOARD_</i> <i>INDEPENDENCE</i>	0.70	0.70	0.00	-0.21	0.84
<i>CEO_CHAIR</i>	0.39	0.35	0.05	-1.76	0.08*
<i>INST_OWNERSHIP</i>	0.55	0.55	0.00	-0.28	0.78
<i>MTB</i>	2.88	2.66	0.22	-0.53	0.60
<i>LEVERAGE</i>	0.17	0.19	-0.02	1.57	0.12
<i>ISSUANCE</i>	0.40	0.39	0.01	-0.48	0.63
<i>ROA</i>	-0.09	-0.18	0.09	-2.08	0.04**
<i>BIG4</i>	0.73	0.69	0.04	-1.47	0.14
<i>SEGMENTS</i>	2.07	2.18	-0.11	0.92	0.36
<i>FOREIGN</i>	0.41	0.40	0.00	-0.17	0.87
<i>ACQUISITION</i>	0.11	0.10	0.01	-0.33	0.74
<i>RESTRUCTURE</i>	0.30	0.32	-0.01	0.60	0.55
<i>RESTATE_</i> <i>ANNOUNCEMENT</i>	0.08	0.09	0.00	0.25	0.80
<i>GOING_CONCERN</i>	0.05	0.06	-0.01	0.85	0.40
<i>SOX404_AUDIT</i>	0.74	0.72	0.02	-0.92	0.36
<i>MATERIAL_</i> <i>WEAKNESS</i>	0.06	0.07	-0.01	0.55	0.58
<i>LOSS</i>	0.43	0.44	-0.01	0.35	0.73
<i>STOCK_RETURN</i>	-0.03	-0.07	0.05	-1.78	0.08
<i>ACC_BUSY</i>	2.98	2.92	0.07	-0.56	0.58
<i>MGMT_HOLDINGS</i>	1.44	1.47	-0.03	0.16	0.88

This table presents the covariate balance between treatment and control firms for the propensity score matching procedure in Table 5 Panel A. All variables are defined in Appendix 1. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Appendix 3

Extraction Procedure for AC_MEETINGS Data from Proxy Filings

Firms are required to disclose audit committee meetings data in their annual proxy filing (see 17 CFR §229.407(b)). Consistent with prior literature (e.g., Folsom et al. 2017), we use regular expression to perform textual analysis on the proxy filings in order to programmatically extract the audit committee meetings data. We obtain the filings from EDGAR and search for (i) a number (in numerical or word form) within a five-word distance after the phrase “audit committee {up to five words} (met|meets|held|holds)” or (ii) a number (in numerical or word form) within a five-word distance between the phrases “(were|was)” and “meeting(s)” and also within a five-word distance before “audit committee.” For example, our methodology captures phrases such as “*audit committee held four meetings*,” “*audit committee, which met four times*,” and “*were four meetings of the audit committee*.” To verify the accuracy of our data collection procedure, we compared our programmatically collected audit committee meetings data to the hand collected audit committee meetings data from Jaggi (2023).¹⁹ Our data are 98% correlated with the Jaggi (2023) data (untabulated). While our data collection procedure appears to be reasonably accurate, there is a trade-off between accuracy and coverage when conducting textual analysis. To understand whether or not our data collection procedure has induced a bias in our sample which may threaten inferences, we add back the observations that we are missing audit committee meetings data for and study the association between *DYADIC_GENDER_DIFF* and *MISSING_AC_DATA* (equals 1 for the observations which we do not have audit committee meetings data and 0 for observations which we do have audit committee meetings data):

Independent Variables	Pr.	Dependent Variable: <i>MISSING_AC_DATA</i>	
(1)			
<i>Test Variable:</i>			
<i>DYADIC_GENDER_DIFF</i>	?	-0.0125	
[t-stat] (<i>p</i> -value)		[-0.79]	(0.429)
<i>Control Variables:</i>			
<i>NEW_CFO</i>	?	0.0151	***
<i>NEW_ACC</i>	?	0.0106	**
<i>SIZE</i>	?	0.0015	
<i>ACCOUNTING_EXPERTISE</i>	?	-0.0081	
<i>AC_SIZE</i>	?	0.0036	
<i>BOARD_SIZE</i>	?	-0.0008	
<i>BOARD_INDEPENDENCE</i>	?	-0.0387	
<i>CEO_CHAIR</i>	?	0.0009	
<i>INST_OWNERSHIP</i>	?	-0.0058	
<i>MTB</i>	?	0.0000	

¹⁹We do not use the Jaggi (2023) data for our analyses because those data are limited to the years 2000 to 2006 and are constrained by the Jaggi (2023) sample selection criteria.

Independent Variables	Pr.	Dependent Variable: <i>MISSING_AC_DATA</i>	
		(1)	
<i>LEVERAGE</i>	?	0.0186	
<i>ISSUANCE</i>	?	-0.0035	
<i>ROA</i>	?	0.0097	
<i>BIG4</i>	?	-0.0014	
<i>SEGMENTS</i>	?	0.0025	
<i>FOREIGN</i>	?	0.0045	
<i>ACQUISITION</i>	?	-0.0056	
<i>RESTRUCTURE</i>	?	-0.0029	
<i>RESTATE_ANNOUNCEMENT</i>	?	0.0059	
<i>GOING_CONCERN</i>	?	0.0131	
<i>SOX404_AUDIT</i>	?	-0.0236	***
<i>MATERIAL_WEAKNESS</i>	?	0.0161	*
<i>LOSS</i>	?	-0.0071	
<i>STOCK_RETURN</i>	?	-0.0027	
<i>ACC_BUSY</i>	?	-0.0006	
<i>MGMT_HOLDINGS</i>	?	0.0028	
Firm Fixed Effects		YES	
Year Fixed Effects		YES	
CFO Fixed Effects		YES	
AC Chair Fixed Effects		YES	
N		56,588	
Adjusted R-squared		78.41%	

Our variable of interest *DYADIC_GENDER_DIFF* is not statistically associated with *MISSING_AC_DATA*, which is reassuring because sample selection can only cause a bias to our inferences if the ‘missingness’ process has an association with our dependent variable *and* independent variable of interest (Howell 2008). In other words, missing observations would need to be systematically different for *AC_MEETINGS* and *DYADIC_GENDER_DIFF* to be a threat to our inferences (Mack et al. 2018), and they do not appear to be so

Appendix 4

Table 14 Analysis Split by Audit Committee Chair Busyness

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>					
		Subsample: Chair Sits On < 3 Boards		Subsample: Chair Sits On ≥ 3 Boards			
		Full Model	No Firm Fixed Effects	Full Model	No Firm Fixed Effects		
		(1)	(2)	(3)	(4)		
<i>Test Variables:</i>							
<i>ACC_FEMALE&CFO_MALE</i>	+	1.0944 [2.83]	*** (≤0.01)	1.0946 [2.83]	*** (≤0.01)	0.5397 [1.07]	(0.283)
<i>ACC_FEMALE&CFO_FEMALE</i>	?	-0.3740 [-0.56]	(0.578)	-0.3763 [-0.56]	(0.573)	-0.2507 [-0.40]	(0.690)
<i>ACC_MALE&CFO_FEMALE</i>	+	0.6042 [1.86]	* (0.064)	0.6036 [1.86]	* (0.062)	0.0031 [0.01]	(0.994)
<i>Control Variables:</i>							
<i>NEW_CFO</i>	+	0.1571	*	0.1556	*	0.2273	**
<i>NEW_ACC</i>	+	0.1557	*	0.1607	*	0.0047	-0.0003
<i>SIZE</i>	+	-0.0070		-0.0339		0.3418	***
<i>ACCOUNTING_EXPERTISE</i>	+	0.0139		0.0115		-0.2060	-0.2298
<i>AC_SIZE</i>	+	-0.0154		-0.0194		0.0882	*
<i>BOARD_SIZE</i>	+	0.0473		0.0504		-0.0550	-0.0364
<i>BOARD_INDEPENDENCE</i>	+	0.1791		0.2028		0.8290	0.9959
<i>CEO_CHAIR</i>	-	0.1083		0.1102		-0.2635	**
<i>INST_OWNERSHIP</i>	+	0.0829		0.0610		0.3165	0.2601
<i>MTB</i>	-	-0.0010		-0.0010		-0.0045	-0.0046
<i>LEVERAGE</i>	+	0.7538	***	0.7706	***	-0.0389	-0.1330
<i>ISSUANCE</i>	+	-0.0715		-0.0711		-0.1416	**
<i>ROA</i>	-	-0.0171		-0.0038		-0.3571	**
<i>BIG4</i>	+	-0.1585		-0.1567		-0.1052	-0.1947

Table 14 (continued)

Independent Variables	Pr.	Dependent Variable: <i>AC_MEETINGS</i>			
		Subsample: Chair Sits On < 3 Boards		Subsample: Chair Sits On >= 3 Boards	
		Full Model	No Firm Fixed Effects	Full Model	No Firm Fixed Effects
		(1)	(2)	(3)	(4)
<i>SEGMENTS</i>	+	-0.0139	-0.0148	-0.0133	-0.0082
<i>FOREIGN</i>	+	-0.1571	-0.1559	0.1953	0.1789
<i>ACQUISITION</i>	+	0.0021	0.0061	-0.0425	-0.0568
<i>RESTRUCTURE</i>	+	0.0557	0.0662	0.0585	0.0519
<i>RESTATE_ANNOUNCEMENT</i>	+	0.7959	0.7975	0.6017	0.6181
<i>GOING_CONCERN</i>	+	0.4214	0.3996	0.3501	0.4220
<i>SOX404_AUDIT</i>	+	0.7000	0.7038	0.6275	0.6635
<i>MATERIAL_WEAKNESS</i>	+	0.4127	0.4065	0.4592	0.4578
<i>LOSS</i>	+	0.2366	0.2414	0.0949	0.1211
<i>STOCK_RETURN</i>	-	-0.1130	-0.1114	-0.0166	-0.0217
<i>ACC_BUSY</i>	-	-0.0035	-0.0035	0.0293	0.0009
<i>MGMT_HOLDINGS</i>	?	0.0273	0.0278	-0.0126	0.0216
Firm Fixed Effects		YES	NO	YES	NO
Year Fixed Effects		YES	YES	YES	YES
CFO Fixed Effects		YES	YES	YES	YES
AC Chair Fixed Effects		YES	YES	YES	YES
N		11,248	11,248	9,458	9,458
Adjusted R-squared		60.81%	71.45%	59.81%	71.28%

This table presents the effect of audit committee chair-chief financial officer gender difference on the number of audit committee meetings during the year, but we measure the gender difference using separate variables to capture each chair-CFO gender pair, where the male chair-male CFO group is the baseline group. The subsamples are based on the number of boards the audit committee chair sits on during the year. All variables are defined in Appendix 1. The model in all columns is an ordinary least squares regression with robust standard errors clustered by firm. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively, using two-tailed tests

Acknowledgements We thank Yonca Ertimur (editor), two anonymous reviewers, and the participants of the 2023 Management Accounting Section Midyear Meeting and Virginia Tech workshop for their feedback. We also thank the Eli Broad College of Business at Michigan State University and the McDonough School of Business at Georgetown University for funding that enabled this study. Any errors are our own.

Data Availability All data in this study are publicly available from the sources mentioned in the text.

Declarations

Competing interests We have no material conflicts of interest to report.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Abbott, L. J., S. Parker, and G. F. Peters. 2004. Audit committee characteristics and restatements. *Auditing: A Journal of Practice and Theory* 23 (1): 69–87.
- Abbott, L. J., S. Parker, G. F. Peters, and K. Raghunandan. 2003. The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice and Theory* 22 (2): 17–32.
- Adams, R. 2005. *What do boards do? Evidence from board committee and director compensation data*. Working paper, Stockholm School of Economics. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=397401. Accessed 15 Sep 2023
- Adams, R. B. 2012. Governance and the financial crisis. *International Review of Finance* 12 (1): 7–38.
- Adams, R. B., and D. Ferreira. 2009. Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics* 94 (2): 291–309.
- Adams, R. B., B. E. Hermalin, and M. S. Weisbach. 2010. The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature* 48 (1): 58–107.
- Akerlof, G. A., and R. E. Kranton. 2000. Economics and identity. *The Quarterly Journal of Economics* 115 (3): 715–753.
- Ashforth, B. E., S. A. Johnson, M. Hogg, and D. Terry. 2001. Which hat to wear: Social identity processes in organizational contexts. In *Social identity processes in organizational contexts*, 32–48. Psychology Press.
- Ashforth, B. E., and F. Mael. 1989. Social identity theory and the organization. *Academy of Management Review* 14 (1): 20–39.
- Ashforth, B. E., and B. S. Schinoff. 2016. Identity under construction: How individuals come to define themselves in organizations. *Annual Review of Organizational Psychology and Organizational Behavior* 3 (1): 111–137.
- Ashraf, M. 2024. Does automation improve financial reporting? Evidence from internal controls. *Review of Accounting Studies* 30 (1): 436–479.
- Ashraf, M., D. Donelson, J. McInnis, and R. Mergenthaler. 2025. Fair value accounting standards and litigation risk. *Journal of Accounting and Economics* 79 (1): 1–21.
- Ashraf, M., P. N. Michas, and D. Russomanno. 2020. The impact of audit committee information technology expertise on the reliability and timeliness of financial reporting. *The Accounting Review* 95 (5): 23–56.

- Ashraf, M., P. Choudhary, and J. Jaggi. 2024. Are audit committees overloaded? Evidence from the effect of financial risk management oversight on financial reporting quality. *Management Science* 70 (12): 8414–8447.
- Badolato, P. G., D. C. Donelson, and M. Ege. 2014. Audit committee financial expertise and earnings management: The role of status. *Journal of Accounting and Economics* 58 (2–3): 208–230.
- Beasley, M. S., J. V. Carcello, D. R. Hermanson, and T. L. Neal. 2009. The audit committee oversight process. *Contemporary Accounting Research* 26 (1): 65–122.
- Beattie, V., S. Fearnley, and T. Hines. 2015. Auditor–client interactions in the changed UK regulatory environment – a revised grounded theory model. *International Journal of Auditing* 19 (1): 15–36.
- Beck, M. J., and E. G. Mauldin. 2014. Who’s really in charge? Audit committee versus CFO power and audit fees. *The Accounting Review* 89 (6): 2057–2085.
- Bernile, G., V. Bhagwat, and S. Yonker. 2018. Board diversity, firm risk, and corporate policies. *Journal of Financial Economics* 127 (3): 588–612.
- Beugelsdijk, S., and M. J. Klasing. 2016. Diversity and trust: The role of shared values. *Journal of Comparative Economics* 44 (3): 522–540.
- Bezrukova, K., K. A. Jehn, and C. S. Spell. 2012. Reviewing diversity training: Where we have been and where we should go. *Academy of Management Learning and Education* 11 (2): 207–227.
- Blau, P. 1964. *Exchange and power in social life*. 1st ed. Wiley.
- Boivie, S., M. K. Bednar, R. V. Aguilera, and J. L. Andrus. 2016. Are boards designed to fail? The implausibility of effective board monitoring. *Academy of Management Annals* 10 (1): 319–407.
- Boone, A. L., L. C. Field, J. M. Karpoff, and C. G. Raheja. 2007. The determinants of corporate board size and composition: An empirical analysis. *Journal of Financial Economics* 85 (1): 66–101.
- Bowles, H. R., and F. Flynn. 2010. Gender and persistence in negotiation: A dyadic perspective. *Academy of Management Journal* 53 (4): 769–787.
- Brewer, M. B. 1981. Ethnocentrism and its role in interpersonal trust. In *Scientific inquiry and the social sciences*, 214–231. Jossey-Bass.
- Brewer, M. B. 1999. The psychology of prejudice: Ingroup love and outgroup hate? *Journal of Social Issues* 55 (3): 429–444.
- Brick, I. E., and N. K. Chidambaran. 2010. Board meetings, committee structure, and firm value. *Journal of Corporate Finance* 16 (4): 533–553.
- Bromilow, C. 2010. Congratulations, you’re the audit committee chair. *Now what. NACD Directorship* 36 (2): 36–37.
- Bruynseels, L., and E. Cardinaels. 2014. The audit committee: Management watchdog or personal friend of the CEO? *The Accounting Review* 89 (1): 113–145.
- Buchan, N. R., R. T. Croson, and S. Solnick. 2008. Trust and gender: An examination of behavior and beliefs in the investment game. *Journal of Economic Behavior and Organization* 68 (3–4): 466–476.
- Carcello, J. V., D. R. Hermanson, T. L. Neal, and R. A. Riley Jr. 2002. Board characteristics and audit fees. *Contemporary Accounting Research* 19 (3): 365–384.
- Carpenter, M. A., M. A. Geletkanycz, and W. G. Sanders. 2004. Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management* 30 (6): 749–778.
- Chambers, R. 2016. *Five attributes of extraordinary audit committee chairs*. (Accessed on 15 Sep 2023) Internal Auditor Available at <https://www.richardchambers.com/five-attributes-of-extraordinary-audit-committee-chairs/>
- Chapple, L., and J. E. Humphrey. 2014. Does board gender diversity have a financial impact? Evidence using stock portfolio performance. *Journal of Business Ethics* 122 (4): 709–723.
- Chen, J., W. S. Leung, and K. P. Evans. 2018. Female board representation, corporate innovation and firm performance. *Journal of Empirical Finance* 48:236–254.
- Chen, K. D., and A. Wu. 2016. *The structure of board committees*. Vol. 1, 17–032. Harvard Business School Working Paper https://www.researchgate.net/profile/Andy-Wu-21/publication/320787550_The_Structure_of_Board_Committees/links/6000d44a299b140889748c5/The-Structure-of-Board-Committees.pdf. Accessed 15 Oct 2023.
- Clance, P. R., and S. A. Imes. 1978. The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research and Practice* 15 (3): 241–247.
- Cohen, J. R., U. Hoitash, G. Krishnamoorthy, and A. M. Wright. 2014. The effect of audit committee industry expertise on monitoring the financial reporting process. *The Accounting Review* 89 (1): 243–273.

- Coles, J. L., N. D. Daniel, and L. Naveen. 2008. Boards: Does one size fit all? *Journal of Financial Economics* 87 (2): 329–356.
- Compennolle, T., and C. Richard. 2018. The audit committee as an interactive process: Insights on the AC chairperson's power. *European Accounting Review* 27 (4): 623–647.
- Conyon, M. J., and L. He. 2017. Firm performance and boardroom gender diversity: A quantile regression approach. *Journal of Business Research* 79:198–211.
- Cook, A., and C. Glass. 2014a. Above the glass ceiling: When are women and racial/ethnic minorities promoted to CEO? *Strategic Management Journal* 35 (7): 1080–1089.
- Cook, A., and C. Glass. 2014b. Women and top leadership positions: Towards an institutional analysis. *Gender, Work and Organization* 21 (1): 91–103.
- Correia, S. 2015. *Singletons, cluster-robust standard errors and fixed effects: A bad mix*, 7. Technical Note, Duke University <https://scoreia.com/research/singletons.pdf>. Accessed 15 Oct 2024.
- Couchoux, O. 2024. Navigating knowledge and ignorance in the boardroom: A study of audit committee members' oversight styles. *Contemporary Accounting Research* 41 (1): 459–497.
- De Jong, B. A., and T. Elfring. 2010. How does trust affect the performance of ongoing teams? The mediating role of reflexivity, monitoring, and effort. *Academy of Management Journal* 53 (3): 535–549.
- DeFond, M. L., and J. R. Francis. 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice and Theory* 24 (s-1): 5–30.
- DeFond, M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58 (2–3): 275–326.
- Del Brio, E. B., T. Yoshikawa, C. E. Connelly, and W. L. Tan. 2013. The effects of CEO trustworthiness on directors' monitoring and resource provision. *Journal of Business Ethics* 118:155–169.
- Deloitte. 2015. Audit committee resource guide. Available at <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/center-forcorporate-governance/us-aers-audit-committee-resource-guide-2015-032615.pdf>. Accessed 17 Jun 2023.
- Deloitte. 2024. Audit committee insights. Available at <https://www2.deloitte.com/us/en/pages/center-for-board-effectiveness/articles/audit-committee-effectiveness.html>. Accessed 20 Feb 2025.
- DeZoort, F. T., D. R. Hermanson, D. S. Archambeault, and S. A. Reed. 2002. Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Audit Committee Effectiveness: A Synthesis of the Empirical Audit Committee Literature* 21:38–75.
- Dezsö, C. L., and D. G. Ross. 2012. Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal* 33 (9): 1072–1089.
- Dobbin, F., and J. Jung. 2010. Corporate board gender diversity and stock performance: The competence gap or institutional investor bias. *NCL Review* 89:809–838.
- Driver, M. 2015. How trust functions in the context of identity work. *Human Relations* 68 (6): 899–923.
- Eagly, A. H. 2013. *Sex differences in social behavior: A social-role interpretation*. 2nd ed. Psychology Press.
- Elsbach, K. D. 2003. Relating physical environment to self-categorizations: Identity threat and affirmation in a non-territorial office space. *Administrative Science Quarterly* 48 (4): 622–654.
- Engel, E., R. M. Hayes, and X. Wang. 2010. Audit committee compensation and the demand for monitoring of the financial reporting process. *Journal of Accounting and Economics* 49 (1–2): 136–154.
- Fair360. 2024. Available at <https://web.archive.org/web/20240419044807/https://www.fair360.com/overview-of-the-diversityinc-top-50-companies-for-diversity/>. Accessed 20 Feb 2025
- Faleye, O., R. Hoitash, and U. Hoitash. 2011. The costs of intense board monitoring. *Journal of Financial Economics* 101 (1): 160–181.
- Farber, D. B. 2005. Restoring trust after fraud: Does corporate governance matter? *The Accounting Review* 80 (2): 539–561.
- Ferrari, G., V. Ferraro, P. Profeta, and C. Pronzato. 2021. Do board gender quotas matter? Selection, performance, and stock market effects. *Management Science* 68 (8): 5618–5643.
- Fershtman, C., and U. Gneezy. 2001. Discrimination in a segmented society: An experimental approach. *The Quarterly Journal of Economics* 116 (1): 351–377.
- Fich, E. M., and A. Shivdasani. 2006. Are busy boards effective monitors? *The Journal of Finance* 61 (2): 689–724.
- Firk, S., N. Detzen, J. C. Hennig, and M. Wolff. 2024. Strengthening the CEO–CFO interplay: The role of regulatory focus and similar compensation plans. *Accounting, Organizations and Society* 113:101563.
- Folsom, D., P. Hribar, R. Mergenthaler, and K. Peterson. 2017. Principles-based standards and earnings attributes. *Management Science* 63 (8): 2592–2615.

- Forbes, D. P., and F. J. Milliken. 1999. Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review* 24 (3): 489–505.
- Free, C., A. J. Trotman, and K. T. Trotman. 2021. How audit committee chairs address information-processing barriers. *The Accounting Review* 96 (1): 147–169.
- Gai, S. L., J. Y. J. Cheng, and A. Wu. 2021. Board design and governance failures at peer firms. *Strategic Management Journal* 42 (10): 1909–1938.
- Garg, S., and K. M. Eisenhardt. 2017. Unpacking the CEO–board relationship: How strategy making happens in entrepreneurial firms. *Academy of Management Journal* 60 (5): 1828–1858.
- Gastil, J. 2009. *The group in society*. 1st ed. Sage.
- Ge, W., D. Matsumoto, and J. L. Zhang. 2011. Do CFOs have style? An empirical investigation of the effect of individual CFOs on accounting practices. *Contemporary Accounting Research* 28 (4): 1141–1179.
- Gebert, D., C. Buengeler, and K. Heinitz. 2017. Tolerance: A neglected dimension in diversity training? *Academy of Management Learning and Education* 16 (3): 415–438.
- Gendron, Y., and J. Bédard. 2006. On the constitution of audit committee effectiveness. *Accounting, Organizations and Society* 31 (3): 211–239.
- Gerut, A. 2019. *Boards struggle with director performance*. Agenda Available at <https://www.agendawee.com/>. Accessed 16 Sep 2023.
- Granovetter, M. 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology* 91 (3): 481–510.
- Gul, F. A., B. Srinidhi, and A. C. Ng. 2011. Does board gender diversity improve the informativeness of stock prices? *Journal of Accounting and Economics* 51 (3): 314–338.
- Hambrick, D. C., T. S. Cho, and M.-J. Chen. 1996. The influence of top management team heterogeneity on firms' competitive moves. *Administrative Science Quarterly* 41 (4): 659–684.
- Hambrick, D. C., and P. A. Mason. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review* 9 (2): 193–206.
- Hanlon, M., K. Yeung, and L. Zuo. 2022. Behavioral economics of accounting: A review of archival research on individual decision makers. *Contemporary Accounting Research* 39 (2): 1150–1214.
- Heidrick and Struggles. 2016. Life in the hot seat: Filling the role of audit committee chair. Available at <https://www.directorsandboards.com/articles/singlelife-hot-seat-filling-roleaudit-committee-chair>. Accessed 20 Feb 2025.
- Henderson, S., and M. Gilding. 2004. “I’ve never clicked this much with anyone in my life”: Trust and hyperpersonal communication in online friendships. *New Media and Society* 6 (4): 487–506.
- Hermalin, B. E., and M. S. Weisbach. 2017. Introduction: The study of corporate governance. In *The handbook of the economics of corporate governance*, vol. 1, 1–15. Elsevier.
- Hewstone, M., M. Rubin, and H. Willis. 2002. Intergroup bias. *Annual Review of Psychology* 53 (1): 575–604.
- Hogg, M. A., and D. J. Terry. 2000. The dynamic, diverse, and variable faces of organizational identity. *Academy of Management Review* 25 (1): 150–152.
- Hogg, M. A., and J. C. Turner. 1987. Intergroup behaviour, self-stereotyping and the salience of social categories. *British Journal of Social Psychology* 26 (4): 325–340.
- Hoitash, U., R. Hoytash, and J. C. Bedard. 2009. Corporate governance and internal control over financial reporting: A comparison of regulatory regimes. *The Accounting Review* 84 (3): 839–867.
- Hoitash, U., R. Hoytash, and A. C. Kurt. 2016. Do accountants make better chief financial officers? *Journal of Accounting and Economics* 61 (2–3): 414–432.
- Horton, K. E., P. S. Bayerl, and G. Jacobs. 2014. Identity conflicts at work: An integrative framework. *Journal of Organizational Behavior* 35 (S1): S6–S22.
- Howell, D. 2008. The analysis of missing data. In *Handbook of social science methodology*, ed. W. Outhwaite and S. Turner. Sage Publications.
- Huang, J., and D. J. Kisgen. 2013. Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics* 108 (3): 822–839.
- Indjejikian, R., and M. Matějka. 2009. CFO fiduciary responsibilities and annual bonus incentives. *Journal of Accounting Research* 47 (4): 1061–1093.
- Jaggi, J. 2023. When does the internal audit function enhance audit committee effectiveness? *The Accounting Review* 98 (2): 329–359.
- Jensen, M. C., and W. H. Meckling. 1976. Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3 (4): 305–360.
- Joshi, A., and A. P. Knight. 2015. Who defers to whom and why? Dual pathways linking demographic differences and dyadic deference to team effectiveness. *Academy of Management Journal* 58 (1): 59–84.

- Kang, J.-K., S. Kim, and S. Oh. 2022. Does board demographic diversity enhance cognitive diversity and monitoring? *The Accounting Review* 97 (6): 385–415.
- Kenny, D. A., D. A. Kashy, and W. L. Cook. 2006. *Dyadic data analysis*. Guilford Publications.
- Khemakhem, H., and R. Fontaine. 2019. The audit committee chair's abilities: Beyond financial expertise. *International Journal of Auditing* 23 (3): 457–471.
- Kogut, B., J. Colomer, and M. Belinky. 2014. Structural equality at the top of the corporation: Mandated quotas for women directors. *Strategic Management Journal* 35 (6): 891–902.
- KPMG. 2017. Audit committees: 150 best practices. https://assets.kpmg.com/content/dam/kpmg/be/pdf/2019/05/2017_UK_150_Audit_Committee_Best_Practices.pdf. Accessed 20 Feb 2025.
- KPMG. 2022. Audit committee guide. Available at <https://boardleadership.kpmg.us/relevanttopics/article/general/kpmg-audit-committee-guide.html>. Accessed 20 Feb 2025.
- Krishnan, H. A., and D. Park. 2005. A few good women—on top management teams. *Journal of Business Research* 58 (12): 1712–1720.
- Krishnan, J., Y. Wen, and W. Zhao. 2011. Legal expertise on corporate audit committees and financial reporting quality. *The Accounting Review* 86 (6): 2099–2130.
- Kroger, J. 1997. Gender and identity: The intersection of structure, content, and context. *Sex Roles* 36:747–770.
- Kroos, P., M. Schabus, and F. Verbeeten. 2018. Voluntary clawback adoption and the use of financial measures in CFO bonus plans. *The Accounting Review* 93 (3): 213–235.
- Langfred, C. W. 2004. Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal* 47 (3): 385–399.
- Larcker, D. F., and B. Tayan. 2013. Trust: The unwritten contract in corporate governance. Rock Center for Corporate Governance at Stanford University closer look series: Topics, issues and controversies in corporate governance and leadership no. CGRP-34. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2306150. Accessed 20 Oct 2024.
- Larcker, D. F., E. C. So, and C. C. Wang. 2013. Boardroom centrality and firm performance. *Journal of Accounting and Economics* 55 (2–3): 225–250.
- Larcker, D. F., S. A. Richardson, and I. R. Tuna. 2007. Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review* 82 (4): 963–1008.
- Larkin, M. B., R. A. Bernardi, and S. M. Bosco. 2012. Board gender diversity, corporate reputation and market performance. *International Journal of Banking and Finance* 9 (1): 1–26.
- Laux, V. 2008. Board independence and CEO turnover. *Journal of Accounting Research* 46 (1): 137–171.
- Li, N., and A. S. Wahid. 2018. Director tenure diversity and board monitoring effectiveness. *Contemporary Accounting Research* 35 (3): 1363–1394.
- Linck, J. S., J. M. Netter, and T. Yang. 2009. The effects and unintended consequences of the Sarbanes-Oxley act on the supply and demand for directors. *The Review of Financial Studies* 22 (8): 3287–3328.
- Mack, C., Z. Su, and D. Westreich. 2018. *Managing missing data in patient registries: Addendum to registries for evaluating patient outcomes: A user's guide*. Agency for Healthcare Research and Quality <https://pubmed.ncbi.nlm.nih.gov/29671990/>. Accessed 15 Aug 2023.
- Maguire, S., and N. Phillips. 2008. “Citibankers” at Citigroup: a study of the loss of institutional trust after a merger. *Journal of Management Studies* 45 (2): 372–401.
- Malmi, T., and D. A. Brown. 2008. Management control systems as a package—Opportunities, challenges and research directions. *Management Accounting Research* 19 (4): 287–300.
- Mas-Ruiz, F., and F. Ruiz-Moreno. 2011. Rivalry within strategic groups and consequences for performance: the firm-size effects. *Strategic Management Journal* 32 (12): 1286–1308.
- McAllister, D. J. 1995. Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal* 38 (1): 24–59.
- McCracken, S., S. E. Salterio, and M. Gibbins. 2008. Auditor–client management relationships and roles in negotiating financial reporting. *Accounting, Organizations and Society* 33 (4–5): 362–383.
- Menon, K., and J. D. Williams. 1994. The use of audit committees for monitoring. *Journal of Accounting and Public Policy* 13 (2): 121–139.
- MSCI. 2019. https://wrds-www.wharton.upenn.edu/documents/1454/MSCI_ESG_KLD_STATS_2018_Data_Set_Methodology_Final.pdf. Accessed 15 Feb 2023.
- Mundy, J. 2010. Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and Society* 35 (5): 499–523.
- Nelson, J. A. 2016. Male is a gender, too: A review of why gender matters in economics by Mukesh Eswaran. *Journal of Economic Literature* 54 (4): 1362–1376.

- Parsons, K., and R. Lamm. 2020. *The strategic audit committee: A 2020 preview*. Harvard Law School Forum on Corporate Governance Available at <https://corpgov.law.harvard.edu/2020/02/18/the-strategic-audit-committee-a-2020-preview/#more-126627>. Accessed 15 Oct 2024.
- Poppo, L., K. Z. Zhou, and S. Ryu. 2008. Alternative origins to interorganizational trust: An interdependence perspective on the shadow of the past and the shadow of the future. *Organization Science* 19 (1): 39–55.
- Pratt, M. G., K. W. Rockmann, and J. B. Kaufmann. 2006. Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal* 49 (2): 235–262.
- PwC. 2011. Audit committee effectiveness. What works best. Available at <https://www.pwc.com/jg/en/publications/audit-comm-effectiveness-what-works-best-2011.pdf>. Accessed 20 Feb 2025.
- PwC Governance Insights Center. 2022. Audit committee effectiveness: Practical tips for the chair. Available at: <https://www.pwc.com/us/en/services/governance-insights-center/library/practical-tips-for-chair.html>. Accessed 20 Feb 2025.
- Ragunandan, K., D. V. Rama, and D. P. Scarbrough. 1998. Accounting and auditing knowledge level of Canadian audit committees: Some empirical evidence. *Journal of International Accounting, Auditing and Taxation* 7 (2): 181–194.
- Ramarajan, L. 2014. Past, present and future research on multiple identities: Toward an intrapersonal network approach. *Academy of Management Annals* 8 (1): 589–659.
- Reidenbach, M. R. 2024. Audit committee chair monitoring incentives to use voluntary disclosure in the audit committee report under high agency conflicts. *Journal of Accounting, Auditing and Finance* 39 (4): 1008–1043.
- Robbins, B. G. 2017. Status, identity, and ability in the formation of trust. *Rationality and Society* 29 (4): 408–448.
- Ryan, M. K., and S. A. Haslam. 2007. The glass cliff: Exploring the dynamics surrounding the appointment of women to precarious leadership positions. *Academy of Management Review* 32 (2): 549–572.
- Schmidt, J., and M. S. Wilkins. 2013. Bringing darkness to light: The influence of auditor quality and audit committee expertise on the timeliness of financial statement restatement disclosures. *Auditing: A Journal of Practice and Theory* 32 (1): 221–244.
- Shapiro, J. R., and S. L. Neuberg. 2007. From stereotype threat to stereotype threats: Implications of a multi-threat framework for causes, moderators, mediators, consequences, and interventions. *Personality and Social Psychology Review* 11 (2): 107–130.
- Sharma, V., V. Naiker, and B. Lee. 2009. Determinants of audit committee meeting frequency: Evidence from a voluntary governance system. *Accounting Horizons* 23 (3): 245–263.
- Shi, W., Y. Zhang, and R. E. Hoskisson. 2019. Examination of CEO–CFO social interaction through language style matching: Outcomes for the CFO and the organization. *Academy of Management Journal* 62 (2): 383–414.
- Simons, R. 1994. *Levers of control: How managers use innovative control systems to drive strategic renewal*. 1st ed. Harvard Business Press.
- Smith, S. S. 2010. Race and trust. *Annual Review of Sociology* 36:453–475.
- Tajfel, H., M. G. Billig, R. P. Bundy, and C. Flament. 1971. Social categorization and intergroup behaviour. *European Journal of Social Psychology* 1 (2): 149–178.
- Tajfel, H., and J. C. Turner. 1979. An integrative theory of intergroup conflict. In *The social psychology of intergroup relations*, ed. W.G. Austin and S. Worchel, 33–37. Brooks/Cole.
- Tajfel, H., and J. C. Turner. 1986. The social identity theory of intergroup behavior. In *Psychology of intergroup relations*, ed. S. Worchel and W.G. Austin, 7–24. Hall Publishers.
- Tajfel, H. 1981. *Human groups and social categories: Studies in social psychology*. 1st ed. Cambridge University Press.
- Tanis, M., and T. Postmes. 2005. A social identity approach to trust: Interpersonal perception, group membership and trusting behaviour. *European Journal of Social Psychology* 35 (3): 413–424.
- Tanyi, P. N., and D. B. Smith. 2015. Busyness, expertise, and financial reporting quality of audit committee chairs and financial experts. *Auditing: A Journal of Practice and Theory* 34 (2): 59–89.
- Terrion, J. L., and B. E. Ashforth. 2002. From “I” to “we”: The role of putdown humor and identity in the development of a temporary group. *Human Relations* 55 (1): 55–88.
- Tuggle, C. S., K. Schnatterly, and R. A. Johnson. 2010. Attention patterns in the boardroom: How board composition and processes affect discussion of entrepreneurial issues. *Academy of Management Journal* 53 (3): 550–571.

- Turner, J. C. 1999. Some current issues in research on social identity and self-categorization theories. *Social Identity: Context, Commitment, Content* 3 (1): 6–34.
- Vafeas, N. 1999. Board meeting frequency and firm performance. *Journal of Financial Economics* 53 (1): 113–142.
- Vera-Munoz, S. C. 2005. Corporate governance reforms: Redefined expectations of audit committee responsibilities and effectiveness. *Journal of Business Ethics* 62:115–127.
- Vergauwe, J., B. Wille, M. Feys, F. De Fruyt, and F. Anseel. 2015. Fear of being exposed: The trait-relatedness of the impostor phenomenon and its relevance in the work context. *Journal of Business and Psychology* 30:565–581.
- Westphal, J. D. 1999. Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal* 42 (1): 7–24.
- Westphal, J. D., and E. J. Zajac. 2013. A behavioral theory of corporate governance: Explicating the mechanisms of socially situated and socially constituted agency. *Academy of Management Annals* 7 (1): 607–661.
- Widener, S. K. 2007. An empirical analysis of the levers of control framework. *Accounting, Organizations and Society* 32 (7–8): 757–788.
- Wiersema, M., and M. Mors. 2016. What board directors really think of gender quotas. *Harvard Business Review* 14:2–6.
- Williamson, O. E. 1993. Calculativeness, trust, and economic organization. *The Journal of Law and Economics* 36 (1, Part 2): 453–486.
- Van der Zee, K., M. Vos, and K. Luijters. 2009. Social identity patterns and trust in demographically diverse work teams. *Social Science Information* 48 (2): 175–198.
- Zhang, Y., and C. Huxham. 2009. Identity construction and trust building in developing international collaborations. *The Journal of Applied Behavioral Science* 45 (2): 186–211.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.