

# The Risk of Fraud in Family Firms: Assessments of External Auditors

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**Abstract** There is a dearth of business ethics research on family firms, despite the importance of such firms to the US economy (Vazquez in J Bus Ethics, 2016. doi:10.1007/s10551-016-3171-1). We answer Vazquez's (2016) call to examine the intersection of family-firm research and business ethics, by investigating whether external auditors assess higher risk of fraud in family firms. We test the contradictory predictions of two dominant theoretical perspectives in family-firm research—entrenchment theory and alignment theory. We conduct an experiment with highly experienced external audit professionals, who assess the risk of fraud and make client acceptance decisions for family firms versus non-family firms with different strength of corporate governance: strong versus weak audit committees (ACs). We find that auditors assess the risk of fraud as higher for family firms than for non-family firms, consistent with the predictions of entrenchment theory. Auditors are also less likely to make client acceptance recommendations for family firms. The strength of the AC moderates the family-firm effect, whereby auditors assess family firms with weak ACs to have the highest fraud risk and to be the least desirable audit clients. Our findings suggest that auditors perceive more severe agency conflicts

to be present in family firms than in non-family firms, consistent with entrenchment theory, according to which family members may behave opportunistically to extract rents and potentially expropriate the firm's resources at the expense of minority shareholders.

**Keywords** Family firms · Fraud risk · External auditors · Client acceptance · Corporate governance

## Introduction

We investigate whether external auditors assess higher risk of fraud in family firms than in non-family firms and whether this assessment depends on the strength of the firm's audit committee (AC). The last decade has observed intensified interest in research on family firms and in understanding the effect of their structure on firm performance. However, there is a need for more research on the intersection of business ethics and family firms (Vazquez 2016). There are considerable differences regarding business ethics between family firms and non-family firms, with the plurality of studies finding that family firms have higher ethical focus compared to non-family firms (Vazquez 2016).

However, it is not clear whether important information intermediaries, such as the company's external auditors, adopt this view in their assessments of financial statements. Despite the substantial amount of archival research on family firms' performance, there is scarce research on the *ex ante* judgment and decision making of external auditors' assessments of family firms (Trotman and Trotman 2010). Specifically, it is not clear whether the risk-minded external auditors believe, *ex ante*, that family firms uphold higher ethical standards than non-family firms or

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experience unique ethical threats resulting in higher risk of fraud. If auditors expect that family firms have increased fraud risk, they are likely to impose higher fees that incorporate a risk premium (e.g., Simunic and Stein 1996) or even decline to accept engagements for firms perceived as too risky (Bell et al. 2001; Johnstone and Bedard 2004). Family firms can then suffer not only economic costs, but reputational costs as well. Our study investigates this important issue.

Family firms are defined in the literature as companies in which members of the founding family are key blockholders, executives, and directors (Anderson and Reeb 2003, 2004; Chen et al. 2010; Vazquez 2016).<sup>1</sup> Such firms have tremendous importance to the US and global economies and are ubiquitous around the world (The Economist 2014; Faccio and Lang 2002; La Porta et al. 1999). Moreover, a large proportion of these firms are publicly traded companies. Firms in which the founding family has a large or controlling interest constitute over one-third of the *Fortune 500* and *S&P 500* (Anderson and Reeb 2003, 2004; Chen et al. 2010; Shleifer and Vishny 1986).

Much of the research on financial reporting by family firms is guided by two competing theoretical perspectives: entrenchment theory and alignment theory (Wang 2006). These competing perspectives emphasize different types of agency problems. Alignment theory focuses on the agency conflict between owners and managers and predicts that this conflict will be reduced in family firms, because there is less separation between ownership and control (Anderson and Reeb 2003; Demsetz and Lehn 1985; Shleifer and Vishny 1997; Wang 2006). Thus, alignment theory predicts lower likelihood of fraud or earnings manipulation in family firms relative to non-family firms. In contrast, entrenchment theory emphasizes the conflict between the family and other shareholders (Ho and Kang 2013). It predicts that family firms will have greater likelihood of fraud or earnings manipulation, as concentrated ownership creates incentives and opportunities for family members to expropriate wealth from minority shareholders. Some prior studies find more consistent support for the predictions of alignment theory (e.g., Ali et al. 2007; Chen et al. 2010; Ghosh and Tang 2015; Srinidhi et al. 2014; Srinidhi and Liao 2014; Wang 2006; Warfield et al. 1995). However, other findings (e.g., Anderson et al. 2015; Bardhan et al. 2015; Kohlbeck, Lee, Mayhew, and Salas 2017; Liew et al. 2015) are more consistent with entrenchment theory.

<sup>1</sup> In such firms, the founding family not only owns a controlling interest, but is also usually involved in the board of directors and the executive management of the firm (Anderson and Reeb 2003). Seventy-five percent of the family firms in the *S&P 500* have a family member in a top executive position (Bardhan, Lin, and Wu 2015). Srinidhi, He, and Firth (2014) report that family members participate in senior management in 82% of family firms in their study.

On the other hand, research in the business ethics domain has shown important differences between family and non-family firms. A critical goal of family firms is to preserve their socioemotional wealth (SEW), which encompasses non-financial and affective attributes (Gómez-Mejía et al. 2007). Family firms are found to have better ethical climate than non-family firms (Duh et al. 2010) and to express greater focus on integrity and honesty than non-family firms (Blodgett et al. 2011; He et al. 2012; Payne et al. 2011). The ethical behavior of family and non-family firms can differ because the family aims to protect the firm's long-term reputation and enforce its core values (e.g., Duh et al. 2010; Sharma and Sharma 2011; Long and Mathews 2011). If auditors recognize this, they should assess family firms' fraud risk to be lower and should be more likely to accept them as audit clients.

However, there are reasons to expect that auditors would assess a higher risk of fraud in family firms, since auditors tend to focus on risk assessments in their audits.<sup>2</sup> Auditing standards specifically require auditors to consider the risk of fraud present in companies (PCAOB 2010a, b). Auditors must specifically assess the presence of both inherent risks and opportunities for fraud, as well as the presence of a culture that could enable management to rationalize committing fraud (PCAOB 2010b). Thus, auditors can be particularly sensitive to the risk associated with the less hierarchical operational structures likely to be present in family firms (Duh et al. 2010). Further, family firms tend to have more "informal practices for ethical formulation, communication, and enforcement" than family firms (Adams et al. 1996; Vazquez 2016). For those reasons, auditors can perceive that family firms have weaker controls and greater opportunity for committing fraud (PCAOB 2010b). Family firms may also have more related party transactions that can increase auditors' assessments of their risk of fraud (Anderson and Reeb 2003, 2004; PCAOB 2016). Auditors can be concerned that the family's SEW goal to preserve the family dynasty can overshadow other goals (Berrone et al. 2012), dominate financial reporting decisions, and thus increase the risk of fraud. Auditors could therefore assess the risk of fraud to be higher in family firms, and be less likely to accept such firms as audit clients. This means that family firms could either incur higher audit costs than non-family firms, or incur reputation costs if brand name auditors are less likely to accept them as clients (Hackenbrack et al. 2014; Burke

<sup>2</sup> The audit risk model (ARM) helps auditors assess audit risk (AICPA 1983; Cushing et al. 1995). It decomposes audit risk into three components: control risk and inherent risk (which together constitute the risk of material misstatement, or RMM), and detection risk. Given a certain RMM, indicated by the client's control risk and inherent risk, the auditor sets detection risk to achieve the desired audit risk.

et al. 2016). Although some recent archival studies examine, *ex post*, the fees charged by external auditors for family firms accepted as audit clients (e.g., Ghosh and Tang 2015; Srinidhi et al. 2014), their results are mixed.<sup>3</sup> More importantly, these studies do not provide evidence of auditors' *ex ante* judgments about family firms' risks and their desirability as audit clients.

We examine external auditors' *ex ante* judgments of fraud risk in family firms and their client acceptance decisions, by conducting an experiment with highly experienced audit professionals. One important contribution of our study is that, in contrast to prior archival studies, it is conducted after the PCAOB proposed the new *Auditing Standard 18: Related Parties* which specifically directs auditors to focus their attention toward the risks posed by related parties within firms (PCAOB 2014).<sup>4</sup> Our study is thus especially relevant to the auditor judgment and decision making in the new regulatory environment.

Our participants are 60 partners and managers from all of the Big 4 audit firms and another large international audit firm.<sup>5</sup> Participants examine a case describing a hypothetical company and evaluate the company as a potential new audit client. The independent variables, manipulated between participants, are *family firm* (family firm versus non-family firm) and *AC strength* (strong versus weak). The dependent variables are auditors' assessments of the firm's fraud risk and their client acceptance recommendations. We base our hypotheses on the competing predictions of entrenchment theory and alignment theory. Entrenchment (alignment) theory predicts that auditors would assess the risk of fraud as higher (lower) in family firms and will be less (more) likely to accept such firms as audit clients. We examine the strength of the AC as a moderator of the family-firm effect on auditors' fraud risk assessments and client acceptance decisions in family firms. A strong AC can potentially mitigate the agency conflict assessed by auditors in a family-controlled firm, while a weak AC can amplify auditors' concerns about increased fraud risk.

We find that auditors assess fraud risk to be higher for family firms, and are less likely to accept them as clients, than for non-family firms. We find that AC strength

interacts with the family-firm structure, so that auditors assess fraud risk to be highest for family firms with weak ACs and are least likely to accept as clients family firms with weak ACs. These findings contribute to the literature on business ethics and family firms, by providing initial evidence about the important fraud risk assessments of external auditors. It addresses a gap in the literature intersecting business ethics and family firms, by examining the perspective of external auditors—the public “watch-dogs” on financial reporting integrity and important information intermediaries (Morrissey 2000). While business ethics research shows that family firms have better ethical climate, and research in accounting and finance provides evidence that family firms have higher earnings quality than non-family firms, this is the first study to provide evidence on a missing piece of the puzzle: the judgments of independent auditors, an important part of the corporate governance “mosaic” (Cohen et al. 2002, 2010). Results from our study show that auditors assess a higher likelihood of fraud in family firms, which suggests that they do not perceive family firms to have a stronger ethical climate. This suggests the presence of a mismatch between the efforts of family businesses to foster strong ethical climate and auditors' assessments of that climate. Understanding the causes and implications of this incongruity is an important task of research on family business ethics.

## Background and Hypothesis Development

### Family Business Ethics

As discussed in Vazquez (2016), despite the clear need for more research on the intersection of business ethics and family firms, studies have investigated differences in ethical culture between family and non-family firms. Duh et al. (2010) explore the relationship between family involvement in the business and the firm's ethical culture, values, and climate. They find that, while both family and non-family firms display positive attitudes toward ethical core values, family firms have a culture of higher commitment to employees, participation and teamwork, and lower levels of hierarchical culture than non-family firms. Family firms are also found to have higher levels of caring and independent ethical climate than non-family firms (Duh et al. 2010). Blodgett et al. (2011) examine firms' mission statements and find that the mission statements of family firms have greater frequency of expressed ethical values and greater focus on integrity and honesty than those of non-family firms. Payne et al. (2011) use content analysis of S&P 500 companies' shareholder to examine differences between family and non-family firms with respect to organizational virtue orientation and find that

<sup>3</sup> Ghosh and Tang (2015) find that family firms pay lower audit fees than non-family firms, and interpret this as evidence of higher financial reporting quality of family firms. In contrast, Srinidhi et al. (2014) find that strongly governed family firms pay the same audit fees as non-family firms, while *weakly* governed family firms pay lower audit fees than non-family firms. Further discussion is provided in section “Auditors' Ex Ante Assessments of the Risk of Fraud in Family Firms”.

<sup>4</sup> Ghosh and Tang (2015) and Srinidhi et al. (2014) examine 2003–2010, the period before regulators proposed this new standard in 2012.

<sup>5</sup> The Big 4 accounting firms are Deloitte, EY, KPMG, and PwC.

family firms display generally higher virtue orientation than non-family firms, in particular in dimensions such as empathy, warmth, and zeal.

Studies have also explored family firms' corporate social responsibility (CSR) behavior. He et al. (2012) study the dividend behavior of family-controlled versus state-controlled firms in Hong Kong and find that investors are more willing to grant flexibility to family firms, likely based on family firm's long-term involvement with CSR and ethical behavior as well as their tendency of local community involvement. Dyer and Whetten (2006) examine S&P 500 firms in the period 1991–2000 and find that family firms tend to be more socially responsible than non-family firms and are less prone to engaging in activities perceived as socially irresponsible, probably because of family firms' greater concern with their public reputation. In a sample of European firms, Cruz et al. (2014) find that family firms tend to be more socially responsible on social dimensions related to external stakeholders than to internal ones. In general, family firms are more likely to engage in positive social initiatives, community initiatives, and employee relations initiatives than non-family firms, due to their higher relational links with external stakeholders (Albert and Whetten 1985; Bingham et al. 2011).

Researchers in business ethics have also examined potential reasons for the ethical culture differences between family and non-family firms. One proposed reason is that the founding family exerts control and emphasizes commitment to its core values, aiming to protect the firm's long-term reputation (e.g., Duh et al. 2010; Sharma and Sharma 2011; Long and Mathews 2011). Research suggests that family firms act in ways consistent with protecting SEW and preserving the moral principles of the founding family (e.g., Berrone et al. 2010; Bingham et al. 2011; Gómez-Mejía et al. 2007). Due to the family's influence in the firm, there is a greater likelihood of acceptance of shared moral values throughout the firm, and this influence extends through generations (Duh et al. 2010; Sharma and Sharma 2011). Family firms exhibit a strong focus on moral reciprocity and social exchange through several generations (Long and Mathews 2011; Hernandez 2008; Wade-Benzoni 2002).

However, the findings that family firms tend to have less hierarchical structures (Duh et al. 2010) and "less formal modes of operating" (Wu 2006, 166) could be interpreted by outsiders to increase opportunities for wrongdoing. For example, while family firms show higher CSR in areas such as environmental protection (Berrone et al. 2010) and employee stability (Stavrou et al. 2007; Block 2010) and produce a greater variety of CSR reports, they also show less adherence to external CSR norms and outside CSR standards (Campopiano and De Massis 2014). This could be attributed to family firms' emphasis on internal norms

and possible aversion to formalization and bureaucracy. Family firms tend to have "fewer formal policies, rules and codes which govern employee behavior" (Adams et al. 1996) and more "informal ways of formulating, communicating, and enforcing ethical" than non-family firms (Vazquez 2016, 11). They also tend to have more related party transactions (Anderson and Reeb 2003, 2004; Liew et al. 2015). From the external auditors' perspective, this could signal increased risk of fraudulent behavior and poor internal controls, leading auditors to view family firms as undesirable audit clients.

### Theoretical Perspectives on Family-Firm Financial Reporting

Two dominant theoretical perspectives guiding research on family firms' financial reporting—alignment versus entrenchment—provide conflicting predictions about the reporting behavior of family firms (Anderson and Reeb 2003; Wang 2006). Alignment theory suggests that increased family ownership and the involvement of the family in the management of the firm decrease the important agency conflict between owners and managers (Wang 2006). Because the family-firm structure reduces this agency problem, incentives for opportunism and earnings management are lower in family firms. Members of the founding family have incentives to report higher-quality earnings in order to preserve the long-run reputation of the firm. Further, concentrated family-firm ownership allows for better monitoring and control by the family, which should increase the quality of earnings (Demsetz and Lehn 1985; Shleifer and Vishny 1997).

In contrast, entrenchment theory suggests that members of the family have both incentives and opportunities to expropriate wealth from the minority shareholders (Fama and Jensen 1983; Shleifer and Vishny 1997). According to this theory, family-firm members can become entrenched in important leadership positions and use these positions to extract private rents from non-family shareholders (Gompers et al. 2010). They can influence firm policies to benefit their own interests (Anderson and Reeb 2004; Demsetz and Lehn 1985). The family-firm structure may also limit the flow of accounting information to other investors (Fan and Wong 2002). Entrenchment theory predicts that family firms should have higher fraud risk, higher risk of earnings management, and lower earnings quality compared to non-family firms.

Another perspective is given by the more recently developed SEW model, which extends behavioral agency theory to incorporate unique features of family businesses (Gómez-Mejía et al. 2007). The SEW model suggests that the main goal of the founding family is to preserve its SEW, and fulfillment of this goal can come at the expense

of other conflicting goals (Berrone et al. 2010; Gómez-Mejía et al. 2010, 2011). Families can choose to preserve SEW even when this yields suboptimal economic and financial decisions (Berrone et al. 2012; Minichilli et al. 2015). It is therefore possible that SEW preservation could pose risks in financial reporting and specifically increase the risk of fraud.

A handful of archival studies have examined the differences in financial reporting quality between family and non-family firms. Wang (2006) examines the relation between founding family ownership and earnings quality for a sample of *S&P 500* firms from 1994 to 2002, finding that family firms have higher earnings quality (proxied by lower abnormal accruals, greater earnings informativeness, and less persistence of transitory loss components in earnings) than non-family firms, consistent with the predictions of alignment theory. Similar conclusions are reached by Warfield et al. (1995) for a sample of *S&P 1500* firms, and by Tong (2008) for a sample of *S&P 500* firms. In another study, also focusing on *S&P 500* firms, Ali et al. (2007) find that family firms report better quality earnings and are more likely to warn shareholders of bad news, but make fewer disclosures about their corporate governance practices. However, in a recent paper, Anderson et al. (2015) find that over 70% of all financial misrepresentations-related enforcement actions relate to founder-led family firms and that founder-led firms are more likely to engage in financial misconduct than non-family firms.<sup>6</sup>

Chen et al. (2010) examine tax aggressiveness of family firms and find that family firms are less tax aggressive than their non-family counterparts. These results suggest that family owners forgo tax benefits to avoid a penalty as well as possible harm to family reputation caused by tax aggressiveness. Srinidhi and Liao (2014) find that family firms exhibit lower stock price crash risk than non-family firms. Prior research has also examined whether family firms outperform non-family businesses, and the results are mixed. For example, Lee (2006) finds that family firms tend to experience higher employment and revenue growth over time and are more profitable and firm performance improves when founding family members are involved in management. On the other hand, Miller et al. (2007) find that family firms do not exhibit superior valuations relative to a randomly drawn sample of firms. Prior research shows that firms having two classes of equity (voting versus non-voting) have lower valuation than single-class firms (e.g., Gompers et al. 2010; Masulis et al. 2009; Anderson et al.

2017). Recent research by Anderson et al. (2017) shows that approximately 90% of the dual-class firms in the USA are family firms, and finds that, once family ownership is controlled for, the lower market valuation of dual-class firms disappears. This suggests that investors may not view family firms as more valuable than non-family firms.

### Auditors' Ex Ante Assessments of the Risk of Fraud in Family Firms

Taken together, the studies discussed above provide somewhat consistent evidence in support of the alignment perspective of family firms' performance rather than the entrenchment perspective.<sup>7</sup> These findings have several implications for auditors' assessments of fraud risks in these firms. The findings of Wang (2006) and Ali et al. (2007) suggest that fraud risk could be lower for family firms relative to non-family firms, because these firms tend to have higher-quality earnings and less earnings management. However, prior research has not specifically examined the risk of fraud in family firms and there is no evidence on auditors' ex ante judgments about this risk in family firms.

Some recent archival audit studies examine auditor type, audit fees, and auditor resignations in family versus non-family firms. Overall, results are mixed. Khalil et al. (2011) find that the likelihood of auditor resignations in family firms is significantly lower than that in non-family firms. Ho and Kang (2013) examine a sample of *S&P 1500* firms and find that relative to non-family firms, family firms are less likely to hire brand name auditors. This could be explained with family firms having a less severe agency conflict than non-family firms, consistent with the alignment perspective. Conversely, it could be due to brand name auditors' lower willingness to accept family firms as audit clients, consistent with the entrenchment perspective.

Two archival studies that are perhaps more directly related to ours, Ghosh and Tang (2015) and Srinidhi et al. (2014), also provide somewhat inconsistent results. Ghosh and Tang (2015) examine companies who are accepted as audit clients of the Big 4 audit firms, and find that among those, family firms pay lower audit fees than non-family firms. Ghosh and Tang argue that lower audit fees suggest family firms have higher financial reporting quality than non-family firms. In contrast, Srinidhi et al. (2014) find that the audit fees of strongly governed family firms are no different than the audit fees of non-family firms, but it is *weakly* governed family firms who pay lower audit fees. This finding suggests that lower audit fees may not signal higher financial reporting quality. Both of these studies use

<sup>6</sup> Anderson et al.'s (2015) results relate to founder-led firms and not descendant-led firms, suggesting that founders may engage in financial misconduct due to hubris or empire-building ambitions. However, research also finds that family firms in general—founder-led and descendant-led—are more likely to engage in related party transactions than non-family firms (e.g., Kohlbeck et al. 2017).

<sup>7</sup> None of these studies discusses the SEW perspective (Gómez-Mejía et al. 2007).

archival methodology, so they do not examine firms who have been rejected, as opposed to accepted, as clients of Big 4 auditors. As pointed out by Johnstone and Bedard (2003), archival data on what firms Big 4 auditors reject as clients is not available, and “without such information, estimating a client acceptance model is impossible” (p. 1005).<sup>8</sup> Experimental methodology, in contrast, enables us to examine such ex ante judgments.

Another important contribution of our study is that it examines auditors’ assessments after the PCAOB proposal, in 2012, of its new Auditing Standard No. 18, *Related Parties* (PCAOB 2014). Related party transactions increase inherent risk: the risk that material misstatements can occur in a firm’s financial statements (without considering the effect of internal control). With the proposal of this new standard, the PCAOB specifically emphasized auditors’ responsibilities for evaluating the risks associated with related party transactions. It is thus likely that our study is representative of auditors’ judgments about family firms in the new regulatory environment. In contrast, both Ghosh and Tang (2015) and Srinidhi et al. (2014) use the period before the proposal of the new standard in their samples (i.e., 2003–2010). It is especially important to provide current evidence on auditors’ assessments of family firms, since now regulators explicitly require auditors to focus on “identifying and assessing the risks of material misstatement associated with related parties and relationships and transactions with related parties” (PCAOB 2014).

Family firms’ potential involvement in related party transactions is one of the reasons why auditors may assess their risk of fraud to be higher than non-family firms. Research predicts that family firms will likely have more related party transactions relative to non-family firms and may use these to expropriate wealth from minority shareholders (Anderson and Reeb 2003, 2004; Ali et al. 2007; DeAngelo and DeAngelo 2000; Munir and Gul 2010). Liew et al. (2015) find that family firms in Malaysia engage in more related party transactions than non-family firms, and this results in greater expropriation of firm value by the family. Kohlbeck et al. (2017) find that US family firms are more prone to related party transactions, and such transactions decrease their valuation. Related party transactions can increase fraud risk and have been associated with earnings management and accounting restatements (AICPA 2001; GAO 2003; Gordon and Henry 2005; Sherman and Young

2001; PCAOB 2014). In their evaluation of fraud risk, auditors are specifically expected to consider the nature of related party transactions, both disclosed and potentially present but undisclosed (PCAOB 2016).

Another reason why auditors may assess higher risk of fraud in family firms is the potential for increased control risk: the risk that the firm’s internal control will not prevent a material misstatement. Auditing standards emphasize the importance of internal control over financial reporting in assessing the risk of material misstatement due to error or fraud, and auditors are expected to be sensitive to such risks (PCAOB 2010a, b, 2016). The literature on SEW can provide insight into control risk in family firms. It suggests that, to preserve their SEW, families tend to retain control over centralized decision making (Berrone et al. 2012; Gómez-Mejía et al. 2010). Families could aim to “perpetuate owners’ direct or indirect control and influence over the firm’s affairs regardless of financial considerations” (Berrone et al. 2012, 262, see also Gómez-Mejía et al. 2007; Mustakallio et al. 2002). The boundary between the firm and the family can thus become “rather blurred” (Berrone et al. 2010, 90), which could call into question the separate economic entity assumption inherent in financial reporting. Auditors are therefore likely to be sensitive to the risk that internal controls could be weakened or bypassed due to executive override by the family. Auditors are mandated to “specifically address the fraud risks arising from management override of internal controls” (PCAOB 2016). Family firms have been found to have more internal control material weaknesses than non-family firms, especially when the family exerts greater control over the firm (Bardhan et al. 2015).

In sum, the factors discussed above could exacerbate auditors’ assessment of fraud risk. It is not a priori clear which theoretical framework will ultimately dominate the judgments of external auditors with respect to family firms. On the one hand, auditors can recognize the reduced principal–agent conflict in such firms and assess lower fraud risk, consistent with alignment theory. On the other hand, they can be particularly sensitive to the potential that the family behaves opportunistically to extract rents from other shareholders, consistent with entrenchment theory. Given this, we present below a non-directional hypothesis for the effect of the family-firm structure on auditors’ assessments of the risk of fraud.

**H1** Auditors will assess the same level of risk of fraud in family firms and non-family firms.

### Joint Effects of Family Firm and Audit Committee Strength

We next examine the moderating effects of AC strength on auditors’ assessments of the risk of fraud in the firm. ACs

<sup>8</sup> Archival research also does not distinguish the initial year in which the auditor accepts the firm as an audit client from subsequent years, when the audit fee can be adjusted for various reasons. For example, Ghosh and Tang (2015) examine 9191 firm-year observations from 1782 unique firms (i.e., a firm appears, on average, five times in their sample) and allow firms to drop in and out of their sample through the years. In contrast, we examine the initial client acceptance decision for new audit clients.

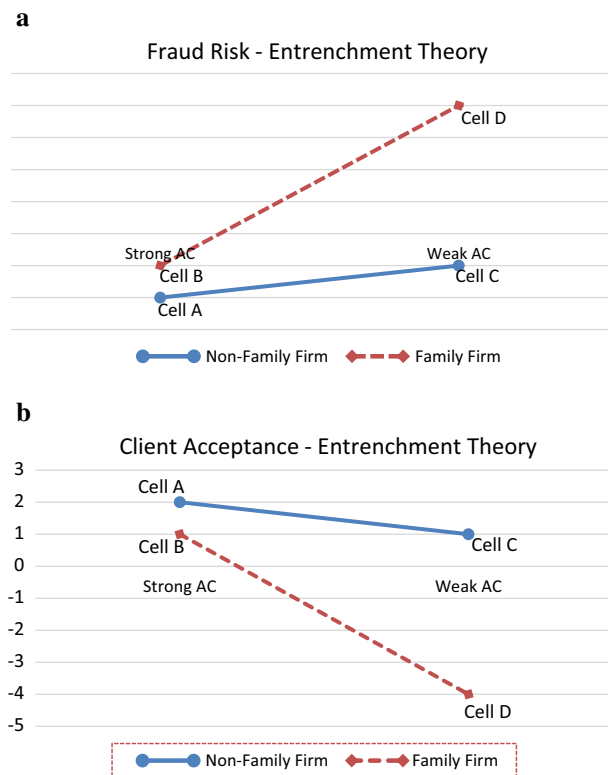
play an important role in overseeing financial reporting and resolving disputes between the auditor and management (Sarbanes–Oxley Act 2002, SOX hereafter). Prior research has documented a relationship between AC strength and the quality of financial reporting (Abbott et al. 2004; Agoglia et al. 2011; Bédard et al. 2004; Krishnan and Visvanathan 2008). Strong ACs are more likely to constrain management’s aggressive reporting, cooperate with the independent auditors, and support their decisions (Agoglia et al. 2011; Lennox and Park 2007; Chen and Zhou 2007; Carcello and Neal 2003).

Extant research emphasizes the importance of potential differences in the structure of ACs between family firms and non-family firms and suggest that they can interact with the family-firm structure to influence the firm’s ethical behavior (Trotman and Trotman 2010; Anderson and Reeb 2003). Weak AC governance can amplify the impact of existing risks (Agoglia et al. 2011; Cohen et al. 2011; Ng and Tan 2003; Turley and Zaman 2007). The interaction of AC strength with family-firm ownership would depend on whether entrenchment theory or alignment theory dominates the judgments of auditors. If auditors’ judgments are consistent with alignment theory, the greater perceived agency risk in non-family firms would be amplified by a weak AC and attenuated by a strong AC. In that case, auditors would perceive the greatest fraud risk for non-family firms with weak ACs.

Alternatively, consistent with entrenchment theory, auditors may find more salient the risk that family members can exploit opportunities to expropriate the firm’s resources and benefit themselves while diminishing firm value (Ali et al. 2007; Ho and Kang 2013). Family-firm members can use their power to influence the AC in its interaction with the auditor (Ho and Kang 2013). Anderson and Reeb (2003, 1314) emphasize that “if families seek to entrench themselves and extract private benefits from the firm, the lack of strong external monitors and discipline agents potentially permits them to pursue this path.” Potential risks in family firms can therefore be especially salient when the family-firm structure is coupled with a weak AC. If auditors’ judgments are consistent with entrenchment theory, they should perceive a weak AC as posing a greater risk in family firms than in non-family firms and assess fraud risk to be the highest in family firms with weak ACs. We propose the following hypothesis for the joint effect of AC strength and family-firm structure.

**H2** AC strength acts as a moderating variable in auditors’ assessment of risk of fraud in family and non-family firms.

Figure 1 shows the predictions under entrenchment theory, and Fig. 2 shows the competing predictions of alignment theory.



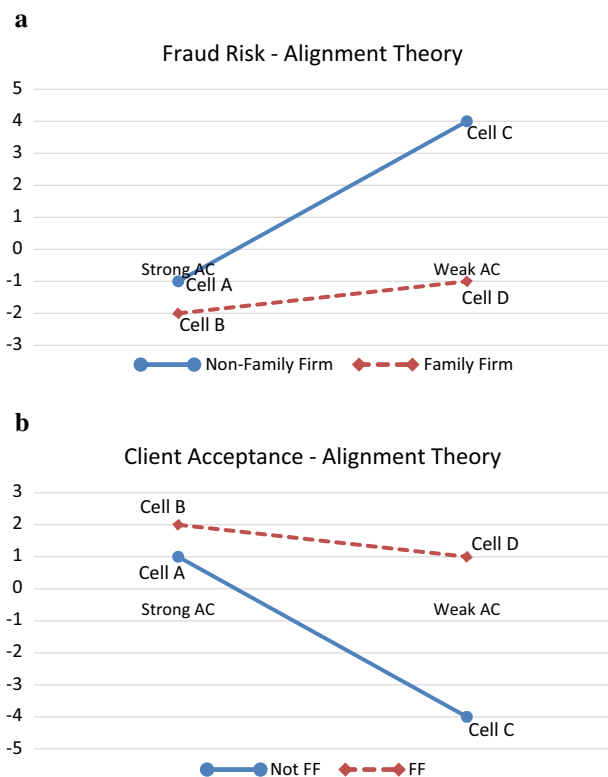
**Fig. 1** Predicted fraud risk assessments and client acceptance decisions under entrenchment theory. **a** Predictions for fraud risk assessments, **b** predictions for client acceptance decisions. See Tables 2 and 3 for variable descriptions

## Method

### Participants and Administration

Sixty audit partners and managers from all of the Big 4 audit firms and another large international audit firm participated in the experiment. Firm contacts in the northeastern USA distributed the experimental materials to a total of 72 participants, and sixty completed and usable responses were returned directly to the researchers. This sample consists of 40 audit partners and 20 audit managers (14 senior managers and 6 managers). The Big 4 audit firms provided 58 of the 60 participants. Participants had a mean (and median) of 19 years of experience in public accounting and a mean (median) age of 42 (41) years; 78% of the 45 participants who reported their gender were male.<sup>9</sup> None of the demographic variables were significant when included as covariates in the

<sup>9</sup> Some participants noted in the instruments that they do not disclose their gender, as per their firms’ policy.



**Fig. 2** Predicted fraud risk assessments and client acceptance decisions under alignment theory. **a** Predictions for fraud risk assessments, **b** predictions for client acceptance decisions. See Tables 2 and 3 for variable descriptions

analyses (all  $p > 0.276$ ). Table 1 contains participants' demographic data.

### Experimental Case

The experimental case used in Houston et al. (1999) was obtained with permission. The case was modified for use in this study, including updates for SOX and other regulatory requirements, and modifications for our experimental manipulations. Participants examined a case describing a hypothetical company and evaluated that company as a potential new audit client. The case contained information about the company's operations, management, directors, audit committee, ownership structure, predecessor auditor, and financial condition, as well as relevant industry and other information. Participants made initial risk and pre-planning evaluations; these involved assessing elements of the audit risk model and making recommendations about whether or not to accept the company as an audit client. At the end of the study, participants responded to manipulation checks and provided demographic information.

### Manipulation of Family Firm

The variables *family firm* (family firm versus non-family firm) and *AC strength* (strong versus weak) were manipulated between participants. The precise wording of the manipulations is shown in Appendix. In the non-family-firm condition, the corporation was described as a publicly traded<sup>10</sup> company with no dominant controlling interests in its ownership structure, whereas in the family-firm condition, the corporation was described as a family-controlled public company where the CEO is a direct descendant of the founding CEO, and in which the family controls 60% of the voting shares. In both the family-firm and the non-family-firm conditions, the board of directors included the CEO and two officers of the company (executive VP and CFO). In the family-firm condition, these three company officers were family members.<sup>11</sup>

This manipulation is consistent with prevailing practices in family firms, where family members usually hold key management and board of directors positions (e.g., Anderson and Reeb 2003, 2004; Anderson et al. 2003; Chen et al. 2010). In a recent study of family and non-family firms of the *S&P 500*, Bardhan et al. (2015) show that a total 75% of the family firms in the *S&P 500* have a family-firm member in a top executive position [either as a CEO (43%) or another top executive (32%)]. Srinidhi et al. (2014) find that family members participate in senior management in 82% of the family firms in their study, and the CEO is a family member in 68% of the cases. As such, our manipulation of the family-firm structure follows the literature on family firms, and we believe it accurately represents the real-life phenomenon of interest: the family involvement and control of both ownership and key management positions that is characteristic of the family-firm structure.

<sup>10</sup> Due to the high amounts of investor capital held by publicly traded family firms and their importance to the US and global economy, the family firm in our experimental case is a publicly traded firm. This also increases the internal validity of our experiment, since we compare auditors' views of two public companies and avoid potential confounds associated with additional features of privately held firms.

<sup>11</sup> The narrative stated that the board of directors "include the CEO and two close relatives, who are also officers of the company." Although we did not include the specific family relationships of the officers, auditors would normally document in detail the relationships of family members. This is consistent with auditing standards documentation requirements, according to which "the auditor should include in the audit documentation the names of the identified related parties and the nature of the related party relationships" (AICPA AU-C Section 550).



**Table 1** Participants' demographic profile

| <i>Panel A. categorical variables</i>                 |             |           |
|---|-------------|-----------|
| Demographic variable                                  | Percent (%) | <i>N</i>  |
| Current position                                      |             |           |
| Partner   | 67          | 60        |
| Senior manager  | 23          |           |
| Manager   | 10          |           |
| Education   |             |           |
| Bachelor's degree                                     | 77          | 60        |
| Graduate degree                                       | 22          |           |
| Postgraduate study                                    | 1           |           |
| Audit experience in                                   |             |           |
| Manufacturing/retail firms with over \$100M in sales  | 73          | 60        |
| Manufacturing/retail firms with up to \$100M in sales | 30          |           |
| Financial institutions                                | 17          |           |
| Non-financial service entities                        | 40          |           |
| Nonprofit entities                                    | 23          |           |
| CPA   | 98          | 60        |
| Male <sup>a</sup>                                     | 78          | 45        |
| <i>Panel B. continuous and scale variables</i>        |             |           |
| Demographic variable                                  | Mean        | Std. dev. |
| Age   | 42          | 8.37      |
| Years of experience in public accounting              | 19          | 8.57      |
| Years with the firm                                   | 17          | 8.65      |
| Years in current position                             | 8           | 8.19      |

<sup>a</sup>Some participants noted in the instruments that they do not disclose their gender, per their firms' policy

## Manipulation of Audit Committee Strength

The manipulation of AC strength followed the manipulation in Agoglia et al. (2011). Participants in the strong AC condition were told that all AC members are independent and qualify as financial experts, that no AC member had any disclosed prior relationship with the company, and that the AC meets twelve times per year. As in Agoglia et al. (2011), participants in the weak AC condition were told that, while all committee members qualify as independent, two AC members are former employees of the company, only one of the AC members qualifies as a financial expert, and the AC meets twice per year.<sup>12</sup>

<sup>12</sup> Similar to Agoglia et al. (2011), we describe the "weak" AC as still meeting (instead of failing) the minimal SEC requirements: In the weak AC condition, all AC members still meet the SEC threshold for independence, and the weak AC meets the SEC recommendation to have at least one member that qualifies as a financial expert. We make an experimental choice to have a weak AC that does not violate the minimum SEC conditions for public companies, in order to maintain strong external validity in the post-Sarbanes–Oxley environment.

## Dependent Variables

Auditors' assessments of the firm's *fraud risk* were measured following Houston et al. (1999), with the question "What is the risk that the Corporation's financial statements contain an *intentional* material misstatement or omission?" (1 = much lower than normal, 11 = much higher than normal). *Recommendation to accept the firm as an audit client* was measured with the question "How strongly would you agree or disagree with a decision to pursue the Corporation as an audit client?" (1 = disagree strongly, 11 = agree strongly) (Houston et al. 1999).

## Results

### Manipulation Checks

The effectiveness of the family-firm manipulation was tested with participants' responses to the following statements, agreement to which was measured on 11-point scales: (1) The corporation examined in this case was a

family-controlled public company; (2) the corporation examined in this case was a public company with no dominant controlling interests in its structure. Participants in the family-firm condition expressed greater agreement with statement (1) ( $M = 9.93$ ,  $SD = 1.23$ ) and less agreement with statement (2) ( $M = 2.67$ ,  $SD = 1.56$ ) than participants in the non-family-firm condition ( $M = 4.03$ ,  $SD = 2.81$ ;  $M = 8.13$ ,  $SD = 2.46$ );  $t_{58} = 10.54$  and  $t_{58} = 10.28$ , respectively; both  $p < .001$ . This provides evidence that the manipulation of family firm was successful. The effectiveness of the manipulation of AC strength was tested with participants' responses to the statement "The company's Audit Committee is strong in its monitoring efforts," measured on an 11-point scale. Participants in the strong AC condition expressed greater agreement with the statement relative to participants in the weak AC condition ( $M = 5.73$ ,  $SD = 1.55$  versus  $M = 4.17$ ,  $SD = 1.74$ );  $t_{58} = 3.67$ ,  $p < .001$ . This provides evidence that the manipulation of AC strength was successful.<sup>13</sup>

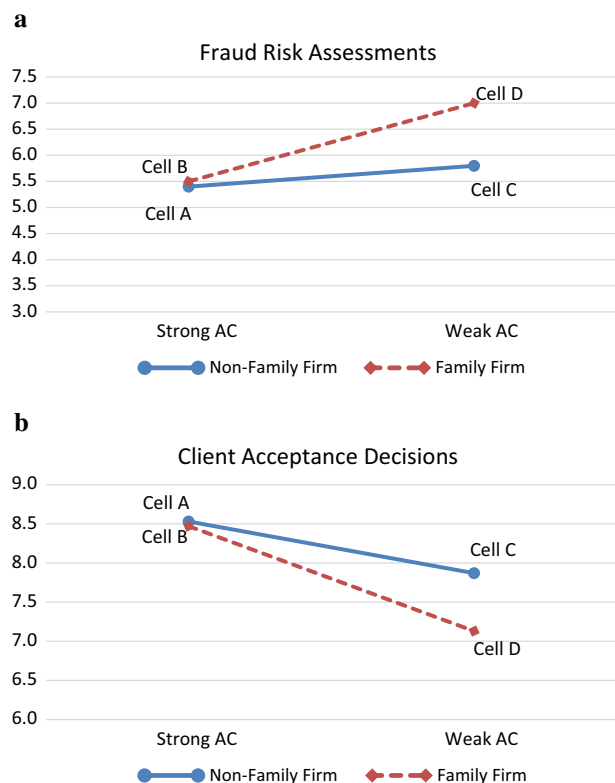
### Hypothesis 1: Effect of Family Firm

Entrenchment theory proposes auditors will assess the risk of fraud as higher in family firms, while alignment theory proposes that auditors will assess the risk of fraud as lower in family firms. Figure 3 depicts auditors' assessments of fraud risk as well as their client acceptance recommendations.

Descriptive statistics for fraud risk are shown in Panel A of Table 2; the ANOVA model is shown in Panel B, and the results from the planned contrasts are shown in Panel C. Auditors assess fraud risk to be higher for family firms ( $M = 6.40$ ,  $SD = 1.92$ ) than for non-family firms ( $M = 5.45$ ,  $SD = 1.59$ ). ANOVA results show that the main effect of family firm on auditors' assessment of fraud risk is significant ( $F_{1,56} = 4.47$ ,  $p = .039$ ).

Panel A of Table 3 presents descriptive statistics for auditors' client acceptance decisions; Panel B presents the ANOVA model, and Panel C shows the planned contrast

<sup>13</sup> The following variables were also significantly different between the strong AC and the weak AC condition, in the expected direction: (1) Some members of the Corporation's Audit Committee are former officers of the company ( $M = 3.27$ ,  $SD = 2.70$  vs.  $M = 10.10$ ,  $SD = 1.52$ ;  $t_{58} = 12.76$ ,  $p < .001$ ); (2) none of the Corporation's Audit Committee members have disclosed any prior relationship with the company ( $M = 9.20$ ,  $SD = 2.37$  vs.  $M = 2.63$ ,  $SD = 1.96$ ;  $t_{58} = 11.71$ ,  $p < .001$ ); (3) the Corporation's Audit Committee has some members who do not qualify as financial experts ( $M = 2.97$ ,  $SD = 2.61$  vs.  $M = 8.60$ ,  $SD = 2.57$ ;  $t_{58} = 8.43$ ,  $p < .001$ ); (4) the Corporation's Audit Committee meets 2 times per year ( $M = 2.59$ ,  $SD = 2.40$  vs.  $M = 9.17$ ,  $SD = 2.67$ ;  $t_{58} = 9.96$ ,  $p < .001$ ); and (5) the Corporation's Audit Committee meets 12 times per year ( $M = 9.20$ ,  $SD = 2.93$  vs.  $M = 1.70$ ,  $SD = 2.29$ ;  $t_{58} = 12.83$ ,  $p < .001$ ).



**Fig. 3** Observed fraud risk assessments and client acceptance decisions. **a** Fraud risk assessments, **b** client acceptance decisions. See Tables 2 and 3 for variable descriptions

tests. Auditors are less likely to recommend client acceptance for family firms ( $M = 7.50$ ,  $SD = 1.87$ ) than for non-family firms ( $M = 8.50$ ,  $SD = 1.74$ ). ANOVA results show that the main effect of family firm on auditors' recommendation to accept the firm as an audit client is significant ( $F_{1,56} = 4.54$ ,  $p = .037$ ).

Taken together, the main effects of family firm on auditors' assessments of fraud risk and their client acceptance decisions provide consistent support for entrenchment theory, but not alignment theory. Auditors assess family firms as having a higher risk of fraud and being less desirable audit clients than non-family firms.

### Hypothesis 2: Interactive Effect of Family Firm and AC Strength

We propose that the family-firm structure will interact with AC strength to influence auditors' risk assessments, so that the family-firm effect will be greater when the AC is weaker than when the AC is stronger. Based on the predictions of entrenchment theory, auditors would assess the highest risk of fraud in family firms with weak ACs and would make the lowest client acceptance decisions for such firms. In contrast, based on the predictions of alignment theory, auditors would assess the highest risk of

**Table 2** Fraud risk<sup>a</sup>: descriptive statistics, ANOVA, and planned contrasts

| <i>Panel A. descriptive statistics</i>   |  |   |   |   |
|--|--|---|---|---|
|  | Mean (std. dev.)<br>Family firm <sup>b</sup> |   |   |   |
|  | Non-family firm                              | Family firm                               | Collapsed across family firm                                |   |
| <i>AC strength<sup>c</sup></i>   |  |   |   |   |
| Strong AC  | Cell A<br>5.40<br>(1.35)<br><i>n</i> = 15    | Cell B<br>5.80<br>(2.27)<br><i>n</i> = 15 | 5.60<br>(1.85)<br><i>n</i> = 30                             |   |
| Weak AC  | Cell C<br>5.50<br>(1.84)<br><i>n</i> = 15    | Cell D<br>7.00<br>(1.31)<br><i>n</i> = 15 | 6.25<br>(1.75)<br><i>n</i> = 30                             |   |
| Collapsed across AC strength   | 5.45<br>(1.59)<br><i>n</i> = 30              | 6.40<br>(1.92)<br><i>n</i> = 30           |   |   |
| <i>Panel B. ANOVA</i>  |  |   |   |   |
| Source   | df   | MS  | <i>F</i>  | <i>p</i> value <sup>d</sup>                                 |
| Family firm  | 1  | 13.54                                     | 4.47  | 0.039   |
| AC strength  | 1  | 6.34                                      | 2.09  | 0.153   |
| Family firm × AC strength  | 1  | 4.54                                      | 1.50  | 0.226   |
| Error  | 56   | 3.03                                      |   |   |
| <i>Panel C. planned contrasts</i>  |  |   |   |   |
|  | Contrast<br><i>F</i> <sub>1,56</sub>         | Contrast<br><i>p</i> <sup>d</sup>         | Residual between-cells<br>variance <i>F</i> <sub>2,56</sub> | Residual between-cells<br>variance<br><i>p</i> <sup>d</sup> |
| Contrast test based on entrenchment theory<br>(cell A = -2, cell B = -1, cell C = -1, cell D = +4) | 7.84   | 0.007                                     | 0.09  | 0.917   |
| Contrast test based on alignment theory<br>(cell A = -1, cell B = -2, cell C = +4, cell D = -1)    | 0.01   | 0.925                                     | 3.91  | 0.026   |

<sup>a</sup>*Fraud risk* is measured with the question “What is the risk that the Corporation’s financial statements contain an intentional material misstatement or omission?” (1 = much lower than normal, 11 = much higher than normal)

<sup>b</sup>*Family firm* is manipulated at two levels: family firm versus non-family firm. In the family-firm condition, the firm is a family-controlled public company where the family controls 60% of the voting shares, and the CEO (a direct descendant of the founding CEO) and two other company officers are family members. The non-family firm is a public company with no dominant controlling interests

<sup>c</sup>*AC strength* is manipulated at two levels: strong versus weak. In the strong AC condition, the AC meets twelve times per year, and all AC members qualify as independent financial experts; no AC members disclose a prior relationship with the company. In the weak AC condition, the AC meets twice per year, all AC members qualify as independent, but only one is a financial expert; two AC members are former employees of the company

<sup>d</sup>All *p* values are two-tailed

fraud in non-family firms with weak ACs and would make the lowest client acceptance decisions for those firms. Since the interaction term of the traditional ANOVA

model is designed to test a disordinal interaction, it does not have sufficient power to detect ordinal interactions, and in such cases planned contrast testing is preferable

**Table 3** Client acceptance decisions<sup>a</sup>: descriptive statistics, ANOVA, and planned contrasts*Panel A. descriptive statistics*

|                              | Mean (std. dev.)<br>Family firm <sup>b</sup> |   |                                 |
|------------------------------|--|---|---------------------------------|
|                              | Non-family firm                              | Family firm                               | Collapsed across family firm    |
| AC strength <sup>c</sup>     |  |   |                                 |
| Strong AC                    | Cell A<br>8.53<br>(1.77)<br><i>n</i> = 15    | Cell B<br>7.87<br>(1.85)<br><i>n</i> = 15 | 8.20<br>(1.81)<br><i>n</i> = 30 |
| Weak AC                      | Cell C<br>8.47<br>(1.77)<br><i>n</i> = 15    | Cell D<br>7.13<br>(1.89)<br><i>n</i> = 15 | 7.80<br>(1.92)<br><i>n</i> = 30 |
| Collapsed across AC strength | 8.50<br>(1.74)<br><i>n</i> = 30              | 7.50<br>(1.87)<br><i>n</i> = 30           |                                 |

*Panel B. ANOVA*

| Source                    | df | MS    | <i>F</i> | <i>p</i> value <sup>d</sup> |
|---------------------------|----|-------|----------|-----------------------------|
| Family firm               | 1  | 15.00 | 4.54     | 0.037                       |
| AC strength               | 1  | 2.40  | 0.73     | 0.398                       |
| Family firm x AC strength | 1  | 1.67  | 0.51     | 0.480                       |
| Error                     | 56 | 3.30  |          |                             |

*Panel C. planned contrasts*

|   | Contrast<br><i>F</i> <sub>1,56</sub> | Contrast<br><i>p</i> <sup>d</sup> | Residual between-cells<br>variance <i>F</i> <sub>2,56</sub> | Residual between-cells<br>variance<br><i>p</i> <sup>d</sup> |
|---|--------------------------------------|-----------------------------------|---|---|
| Contrast test based on entrenchment theory<br>(cell A = + 2, cell B = +1, cell C = +1, cell D = -4) | 4.89                                 | 0.031                             | 0.44  | 0.645   |
| Contrast test based on alignment theory<br>(cell A = +1, cell B = + 2, cell C = -4, cell D = +1)    | 0.27                                 | 0.609                             | 2.75  | 0.072   |

<sup>a</sup>Client acceptance decisions are measured with the question “How strongly would you agree or disagree with a decision to pursue the Corporation as an audit client?” (1 = disagree strongly, 11 = agree strongly)

<sup>b</sup>Family firm is manipulated at two levels: family firm versus non-family firm. In the family-firm condition, the firm is a family-controlled public company where the family controls 60% of the voting shares, and the CEO (a direct descendant of the founding CEO) and two other company officers are family members. The non-family firm is a public company with no dominant controlling interests

<sup>c</sup>AC strength is manipulated at two levels: strong versus weak. In the strong AC condition, the AC meets twelve times per year, and all AC members qualify as independent financial experts; no AC members disclose a prior relationship with the company. In the weak AC condition, the AC meets twice per year, all AC members qualify as independent, but only one is a financial expert; two AC members are former employees of the company

<sup>d</sup>All *p* values are two-tailed

(Brown and Solomon 1990, 1991; Buckless and Ravenscroft 1990; Guggenmos et al. 2016; Keppel 1991; Kirk 1982). We use planned contrasts to test our predicted ordinal interaction, following Hirst et al. (2007), Kadous et al. (2003), and Lambert and Agoglia (2011). The contrast weights used to test the competing predictions of alignment theory and entrenchment theory take into

account the nature of the proposed interaction in the presence of a predicted main effect for family firm (Guggenmos et al. 2016; Kadous et al. 2003; Lambert and Agoglia 2011). As shown in Panel A of Table 2, we label the non-family firm and strong AC condition “cell A,” the family firm and strong AC condition “cell B,” the non-

family firm and weak AC condition “cell C,” and the family firm and weak AC condition “cell D.”

Entrenchment theory proposes the following cell pattern for auditors’ assessments of fraud risk. First, the main effect for family firms predicts: cell B > cell A and cell D > cell C. Second, the ordinal interaction predicts that the family-firm effect will be greater under a weak AC than under a strong AC, so that family firms with weak ACs will be assessed to have the highest fraud risk, i.e., [cell D–cell C] > [cell B–cell A]. Rearranging, we also obtain [cell D–cell B] > [cell C–cell A]. This suggests the following order for the four cells with respect to fraud risk: Cell D will be the highest, cells B and C will be lower, and cell A will be the lowest. We assign the following contrast weights to each cell to capture this pattern, while ensuring contrast weights add up to zero: cell A = –2, cell B = –1, cell C = –1, cell D = +4. With respect to client acceptance decisions, the predicted pattern is that cell D will be the lowest, cells B and C will be higher, and cell A will be the highest. To capture this pattern, we assign the following contrast weights for client acceptance decisions: cell A = +2, cell B = +1, cell C = +1, cell D = –4.

Alignment theory’s competing prediction is that fraud risk will be higher for non-family firms than for family firms, and this effect will be greater when the AC is weak. This suggests that auditors will assess the highest fraud risk in the non-family firm and weak AC condition (cell C), lower risk in the non-family firm and strong AC condition (cell A) and the family firm and weak AC condition (cell D), and the lowest fraud risk in the family firm and strong AC condition (cell B).<sup>14</sup> To capture this cell pattern, we assign the following contrast weights for fraud risk assessments: cell A = –1, cell B = –2, cell C = +4, cell D = –1. For client acceptance decisions, alignment theory predicts that they will be the lowest in the non-family firm and weak AC condition (cell C), higher in the non-family firm and strong AC condition (cell A) and the family firm and weak AC (cell D) condition, and highest in the family firm and strong AC condition (cell B). This pattern is reflected in the following contrast weights: cell A = +1, cell B = +2, cell C = –4, cell D = +1.<sup>15</sup>

<sup>14</sup> Alignment theory’s predicted main effect for fraud risk is: cell A > cell B and cell C > cell D; the interaction suggests [cell C–cell D] > [cell A–cell B]; rearranging, we also obtain [cell C–cell A] > [cell D–cell B]. This suggests that cell C is the highest, cells D and A are lower, and cell B is the lowest.

<sup>15</sup> Alignment theory’s predicted main effect for client acceptance decisions is: cell B > cell A and cell D > cell C; the interaction suggests [cell D–cell C] > [cell B–cell A]; rearranging, we also obtain [cell D–cell B] > [cell C–cell A]. This suggests that cell C is the lowest, cells A and D are higher, and cell B is the highest.

As discussed by Abelson and Prentice (1997), Buckless and Ravenscroft (1990), and Guggenmos et al. (2016), in using planned contrasts to test ordinal interaction hypotheses, a twofold test must be performed, in which the test for the significance of the contrast itself must be accompanied by a test for the (non)significance of the residual between-cells variance. Taken by itself a significant contrast this does not necessarily mean that the data fit the ordinal interaction pattern predicted by the researcher; the residual between-cells variance must also be shown to be insignificant (Abelson and Prentice 1997; Buckless and Ravenscroft 1990; Guggenmos et al. 2016).

First, we test the predictions of entrenchment theory, according to which the family-firm effect will be greater when the AC is weaker than when the AC is stronger, so that auditors will assess the highest risk of fraud in family firms with weak ACs. As shown in Panel A of Table 2, participants assess fraud risk to be the highest ( $M = 7.00$ ,  $SD = 1.31$ ) in cell D, lower in cells B ( $M = 5.80$ ,  $SD = 2.27$ ) and C ( $M = 5.50$ ,  $SD = 1.84$ ), and lowest in cell A ( $M = 5.40$ ,  $SD = 1.35$ ). The cell means fit the pattern predicted by entrenchment theory. The planned contrast for fraud risk, shown in Panel C of Table 2, is significant ( $F_{1,56} = 7.84$ , two-tailed  $p = .007$ ), while at the same time the residual between-cells variance is not significant ( $F_{2,56} = 0.09$ , two-tailed  $p = .917$ ). Further, as shown in Panel A of Table 3, participants’ client acceptance decisions are the lowest ( $M = 7.13$ ,  $SD = 1.89$ ) in cell D, higher in cells B ( $M = 7.87$ ,  $SD = 1.85$ ) and C ( $M = 8.47$ ,  $SD = 1.77$ ), and highest in cell A ( $M = 8.53$ ,  $SD = 1.77$ ). The cell means fit the pattern predicted by entrenchment theory. The planned contrast for intention to accept the firm as an audit client, shown in Panel C of Table 3, is significant ( $F_{1,56} = 4.89$ , two-tailed  $p = .031$ ), while the residual between-cells variance is not significant ( $F_{2,56} = 0.44$ , two-tailed  $p = .645$ ). Taken together, these results provide support for the ordinal interaction as predicted by entrenchment theory.<sup>16</sup>

Alignment theory predicts that family-firm effect will be greater when the AC is weaker than when the AC is stronger, so that auditors will assess the highest risk of fraud in non-family firms with weak ACs. We find that this competing prediction for the shape of the interaction is not

<sup>16</sup> Our contrast weights best capture the pattern predicted by H1 and H2. For robustness, we also conduct tests with the orthogonal contrast weights of (–1, –1, –1, +3) for fraud risk and (1, 1, 1, –3) for client acceptance decisions, which yield similar results. The contrast for fraud risk is significant ( $F_{1,56} = 7.64$ , two-tailed  $p = 0.008$ ), while the residual between-cells variance is not ( $F_{2,56} = 0.20$ , two-tailed  $p = 0.817$ ). The contrast for client acceptance decisions is also significant ( $F_{1,56} = 4.55$ , two-tailed  $p = 0.037$ ), while the residual between-cells variance is not ( $F_{2,56} = 0.62$ , two-tailed  $p = 0.546$ ). Another choice of weights for fraud risk (–2, –1, 1, 2) and client acceptance (2, 1, –1, –2) yields similarly significant results.

supported. Specifically, the planned contrast for fraud risk is not significant ( $F_{1,56} = 0.01$ , two-tailed  $p = 0.925$ ), while the residual between-cells variance is significant ( $F_{2,56} = 3.91$ , two-tailed  $p = 0.026$ ). Also, the planned contrast for intention to accept the firm as an audit client is not significant ( $F_{1,56} = 0.27$ , two-tailed  $p = 0.609$ ), and the residual between-cells variance is not significant either ( $F_{2,56} = 2.75$ , two-tailed  $p = 0.072$ ). In sum, the results do not provide support for the shape of the interaction as predicted by alignment theory.

### Additional Analysis: Inherent Risk and Control Risk

Inherent risk and control risk together make up the risk of material misstatement (RMM) in financial reporting. We conduct additional analysis to examine the relationship between control risk, inherent risk, and the assessed risk of fraud. We measure auditors' assessments of the firm's *inherent risk* with the question "What is the risk that the Corporation's financial statements contain a material misstatement before considering the effectiveness of the internal control system?" (1 = much lower than normal, 11 = much higher than normal). We measure *control risk*, with participants' response to the question "What is the risk that a material error or omission is not prevented or detected on a timely basis by the Corporation's internal control system?" (1 = much lower than normal, 11 = much higher than normal).<sup>17</sup> In additional analysis (not tabulated), we find that participants assess significantly higher control risk for family firms ( $M = 6.07$ ,  $SD = 1.17$ ) than for non-family firms ( $M = 5.10$ ,  $SD = 1.40$ ;  $F_{1,56} = 8.45$ , one-tailed  $p = 0.003$ ). Regression analysis shows that participants' assessments of control risk are a significant predictor of their fraud risk assessments ( $b = 0.39$ , one-tailed  $p = 0.011$ ). Participants also assess higher inherent risk for family firms ( $M = 6.30$ ,  $SD = 1.32$ ) than for non-family firms ( $M = 5.47$ ,  $SD = 1.94$ ;  $F_{1,56} = 3.73$ , one-tailed  $p = 0.030$ ), and their assessments of inherent risk are a significant predictor of their fraud risk assessments ( $b = 0.44$ , one-tailed  $p < 0.001$ ).

### Conclusion

Although research over the past two decades has increasingly focused on the characteristics of family businesses, this research is still in its early stages (Schulze and Gedajlovic 2010). The importance of, and need for,

research examining the intersection of business ethics and family firms has recently been emphasized (Vazquez 2016). Especially scant is research on the integrity and ethics of financial reporting in family firms, and there is virtually nonexistent research on auditor judgment and decision making in this area (Gnan et al. 2011; Prencipe et al. 2011; Trotman and Trotman 2010). While some recent archival studies examine auditor choice and audit fees in family firms (e.g., Ho and Kang 2013; Kang 2014), there is very limited direct empirical evidence on the auditor's assessment of the risks associated with such firms. As emphasized by Trotman and Trotman (2010), it is especially important to understand the potential differences in auditor judgment with respect to the risk of material fraud.

Extant research on family firms examines the two types of relevant agency problems—the owner–manager agency problem, which should be attenuated by family-firm ownership, and the majority–minority shareholders agency problem, which is prominent in family firms. The latter problem may lead to family member entrenchment and the potential for earnings manipulations due to related party transaction (Ali et al. 2007). Auditors' assessment of the risk of fraud in family firms depends on which type of agency problem would dominate auditors' judgments (Ali et al. 2007; Ho and Kang 2013). Our study provides evidence on this important issue. We further examine how the strength of a family firm's corporate governance, in particular, the AC, moderates auditors' judgments about the risk of fraud in the firm.

In our experiment, audit partners and managers from large international audit firms assess fraud risk for family firms and non-family firms with varying ACs strength and make client acceptance recommendations. Our results show that auditors assess fraud risk to be higher for family firms than for non-family firms, and they are less likely to make client acceptance recommendations for family firms. Moreover, AC strength moderates the family-firm effect, and auditors assess fraud risk to be greatest and audit client desirability to be the lowest, for family firms with weak ACs. Our findings suggest that auditors assess more severe agency conflicts to be present in family firms than in non-family firms. These results are consistent with the entrenchment theory perspective of family-firm research, according to which family members may become entrenched and behave opportunistically to extract rents and expropriate the resources of the firm, thereby diminishing firm value. The SEW model (e.g., Gómez-Mejía et al. 2007), which extends agency theory to incorporate unique features of family firms, provides another valuable perspective for interpreting our results. If the family owners' primary goal is to preserve their SEW, striving to achieve this goal could jeopardize alternative goals such as the

<sup>17</sup> Eighty-three percent (85%) of participants indicate that, in the course of conducting audits, they normally assess control risk (inherent risk) on a word scale rather than a numeric or other scale.

integrity of financial reporting and increase the risk of fraud (Berrone et al. 2012; Minichilli et al. 2015).

By using a controlled experiment, we are able to provide a unique perspective of the auditors' concerns about fraud risk in family firms and offer direct evidence about their pre-planning judgments. Nevertheless, this initial evidence about auditors' assessments of the risks associated with audits of family firms should be interpreted with some caution. Our study focuses on the client acceptance and pre-planning stage of the audit, and it examines auditors' preliminary judgments about the potential client firm's risk of fraud. Auditors' judgments about this risk may change in later stages of the audit planning. Another limitation of our study is that we did not collect data on participants' specific experience with family firms. Given the ubiquity of family firms in the US economy, the size of the audit firms in our sample and the extensive audit experience of our participants probably alleviate somewhat this limitation.<sup>18</sup> Future research should examine in greater detail the implications of the mismatch between the ethical efforts of family firms and the assessments of external auditors, identified in this study. It is important to investigate why, and under what circumstances, auditors prejudge family firms to have higher fraud risk, especially given extant empirical evidence to the contrary (e.g., Vazquez 2016) and salient recent cases of fraud related to non-family businesses with acting auditing committees. Specific fruitful lines of future research include examining whether the presence of dual-class voting shares (i.e., the existence of "second-class citizens"), indicators of strong internal control (e.g., absence of material weaknesses/significant deficiencies in predecessor auditor's report), specific presence or absence of related party transactions, and characteristics such as strong corporate social responsibility efforts would moderate auditors' assessments.

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### Compliance with Ethical Standards

**Conflict of interest** The first author declares that he has no conflict of interest. The second author declares that she has no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of

<sup>18</sup> The Big 4 audit firms audit over 99% of firms on the S&P 500 list (Pakaluk 2017), and the largest ten audit firms audit over 60% of all publicly traded firms (Fritz 2016).

the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

**Ethical Approval** This article does not contain any studies with animals performed by any of the authors.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

## Appendix: Experimental Manipulations

### Family Firm Condition

The Corporation is a family-controlled public company. The Corporation's CEO is a direct descendant of the founding CEO. The CEO's family controls 60% of the voting shares of the Corporation. The Corporation's shares are traded on the NYSE, and it is an accelerated filer.

[...]

The Corporation has an eight-member board of directors, which meets quarterly to declare dividends, set executive compensation, and deliberate on major issues facing the Corporation. Three members (J. Ranch, H. Ranch, and G. Ranch) include the CEO and two close relatives, who are also officers of the company. The remaining five members (J. Smith, F. Jones, W. Johnson, S. Sanders, and B. Murcer) qualify as independent directors.

[...]

Information about the Corporation's management is provided in the following table

| Name                  | Title          | Salary (\$) |
|-----------------------|----------------|-------------|
| J. Ranch <sup>a</sup> | Chairman, CEO  | 550,000     |
| H. Ranch <sup>a</sup> | Executive VP   | 450,000     |
| G. Ranch <sup>a</sup> | CFO            | 400,000     |
| H. Clarke             | VP, Marketing  | 350,000     |
| S. Bahnsen            | VP, Operations | 350,000     |
| B. Resnick            | VP, Purchasing | 350,000     |

<sup>a</sup>Also serves on board of directors

### Non-family Firm Condition

The Corporation is a publicly traded company. There are no dominant controlling interests in the Corporation's ownership structure. The Corporation's shares are traded on the NYSE, and it is an accelerated filer.

[...]

The Corporation has an eight-member board of directors, which meets quarterly to declare dividends, set

executive compensation, and deliberate on major issues facing the Corporation. Three members (J. Ranch, H. Asbury, and G. Rotz) include the CEO and two officers of the company. The remaining five members (J. Smith, F. Jones, W. Johnson, S. Sanders, and B. Murcer) qualify as independent directors.

[...]

Information about the Corporation's management is provided in the following table

| Name                   | Title          | Salary (\$) |
|------------------------|----------------|-------------|
| J. Ranch <sup>a</sup>  | Chairman, CEO  | 550,000     |
| H. Asbury <sup>a</sup> | Executive VP   | 450,000     |
| G. Rotz <sup>a</sup>   | CFO            | 400,000     |
| H. Clarke              | VP, Marketing  | 350,000     |
| S. Bahnsen             | VP, Operations | 350,000     |
| B. Resnick             | VP, Purchasing | 350,000     |

<sup>a</sup>Also serves on board of directors

### Strong AC Condition

All three members of the Corporation's Audit Committee qualify as independent directors. None of these members has any disclosed prior relationship with the company. All Audit Committee members qualify as financial experts as defined by the SEC. The Audit Committee meets 12 times per year.

### Weak AC Condition

All three members of the Corporation's Audit Committee qualify as independent directors. One of these members has no disclosed prior relationship with the company. However, the other two members are former officers of the company. One of the three members of the Audit Committee qualifies as a financial expert as defined by the SEC. The Audit Committee meets 2 times per year.

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