

Founding Family and Auditor Choice: Evidence from Taiwan

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ABSTRACT

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Research Question/Issue: From an agency perspective, we investigate whether family ownership and control configurations are systematically associated with a firm's choice of auditor. Our analysis focuses on three different characteristics of family ownership and control: family ownership (cash flow rights), disparity between cash flow and voting rights held by family owners (cash–vote divergence), and the family identities of CEOs.

Research Findings/Insights: Our findings suggest that different family ownership and control configurations lead to different agency effects. The alignment effect prevails in family firms with greater family ownership, founder CEOs, and professional CEOs, whereas the entrenchment effect prevails when there is greater cash–vote divergence. Despite the presence of two distinct types of agency effects, regardless of differences in family ownership and control configurations, none of these firms are inclined to appoint higher-quality auditors.

Theoretical/Academic Implications: This study advances our understanding of the varied agency effects arising from family ownership, cash–vote divergence, and the family identities of CEOs, as well as the impact of family ownership and control features on auditor choice. Our empirical evidence provides a unique insight, showing that higher-quality auditors do not tend to be appointed in firms where family alignment with outside investors is relatively strong, as this lowers demand for such auditors. In addition, although family entrenchment may create greater outside investor demand for higher-quality auditors, such demand is difficult to realize.

Practitioner/Policy Implications: Auditors are an important external governance mechanism. This study offers insights for policy makers, family owners, auditors, and other capital market participants, with regard to the varied effects of different family ownership and control features on auditor choice.

Key words: Corporate Governance, Family Firm Governance, Auditor Choice, Ownership Structure, CEO Family Identity

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INTRODUCTION

Family firms are a distinct type of organizational structure. Unlike non-family firms, they are often characterized by concentrated family ownership and greater involvement by family members in the management. However, it should be noted that family firms are not a homogenous group. Differences in family ownership and control features create varied incentives for family owners and consequently influence the agency environment within the firm (e.g., Anderson & Reeb, 2003; Chen, Cheng, & Dai, 2013; Wang, 2006). This in turn may influence auditor choice, which is an important company decision relating to financial reporting. It has been suggested that monitoring by higher-quality auditors can reduce insiders' incentives and ability to render financial statements less informative, thereby alleviating the problem of agency conflict between insiders and outsiders by mitigating information asymmetry (e.g., Becker, Defond, & Jiambalvo, 1998). However, to date, few studies have examined auditing issues in family firms (Ho & Kang, 2013; Trotman, & Trotman, 2010). This study adds to the existing literature by investigating whether family ownership and control configurations are systematically associated with a firm's choice of auditor. Our analysis focuses on three different features of family ownership and control: founding family ownership (cash flow rights), disparity between cash flow and voting rights held by family owners (cash-vote divergence), and the family identities of CEOs.

From an agency perspective, appointing higher-quality auditors may be a double-edged sword when aimed at controlling family owners. A family firm's propensity to hire a higher-quality auditor will depend on how family owners view the importance of credible financial reporting in relation to their own interests. The presence of a founding family significantly influences agency conflicts within a firm in two opposing ways, referred to in the literature as the alignment effect and the entrenchment effect. The alignment effect predicts that when there are stronger economic and/or emotional bonds between family owners and their firms, the controlling family owners may introduce monitoring mechanisms that restrict managers' ability to expropriate firms' resources at the expense of shareholders. In this way, the controlling owners can enhance or preserve long-term monetary and non-monetary gain for the founding family, and in the process, mitigate agency conflicts between managers and shareholders (Type I agency problem) (Jensen & Meckling, 1976). If such an alignment effect prevails, the controlling family owners are more willing to hire higher-quality auditors for better monitoring. On the other hand, the entrenchment effect prevails when family owners are empowered by their concentrated ownership. Tight family control as a result of the concentrated shareholdings may allow opportunistic family owners greater power and opportunity to divert corporate resources for personal use. This can lead to severe conflicts of interest between the controlling (family) shareholders and other

shareholders (Type II agency problem). To ensure that their private interests can be realized, the controlling owners may be reluctant to hire higher-quality auditors, as such auditors would conduct strict monitoring.

The alignment or entrenchment effect arising from the different family ownership and control configurations is reflected in a family firm's financial reporting practices (Ali, Chen, & Radhakrishnan, 2007; Wang, 2006), which will influence outside investors' perceptions regarding the importance of higher-quality auditors to their own interests. When outside investors perceive their interests to be closely aligned with the controlling family owners (i.e., less severe Type I agency problem), demand for higher-quality auditors is lower because the monitoring benefits of hiring these auditors become less important. In contrast, when outside investors perceive that the family owners are entrenched (i.e., more severe Type II agency problem), demand for credible accounting information for management oversight will be greater, and thus demand for higher-quality auditors will also be greater.

Both family owners and outside investors operationally have a voice in relation to auditing matters (Dao, Raghunandan, & Rama, 2012; Trotman & Trotman, 2010). We argue that a family firm's auditor choice is a consequence of a tradeoff between the family owners' intrinsic alignment or entrenchment incentive for supplying credible accounting information, and the outside investors' corresponding demand for such information. Therefore, in this study we test the net effect of this tradeoff in different family ownership and control scenarios.

Taiwan is an ideal setting in which to study auditor choice in family firms, because of the predominance of family-controlled firms with highly concentrated family member ownership (Claessens, Djankov, & Lang, 2000; Fan, Wei, & Xu, 2011). Family owners often possess excessive control rights beyond cash flow rights (Yeh, 2005) and dominate the top executive positions in the firms (Claessens, Djankov, Fan, & Lang, 2002). In addition, Taiwan is also characterized by weaker protection for shareholders and inferior corporate governance mechanisms (Chen, Gray, & Nowland, 2013; Claessens et al., 2000; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000).¹ In such an environment, with weaker shareholder protection mechanisms, the natural effects of family ownership and control configurations are more easily observable.

Two legal features underpin the governance role of auditors in Taiwan. One is that audit firms are required to operate within unlimited liability partnerships or proprietorships (Chen, Lin, & Lin, 2008).² The other is that governmental regulations require that the audit reports for public companies be certified by two audit partners from the same audit firm, and that these partners' names be disclosed in the audit reports (Chen, Lin, & Zhou, 2005; Chi & Chin, 2011). These requirements mean that auditors face higher legal and reputational liability in Taiwan, which strengthens the incentive to fulfill their professional duties. The importance of the monitoring

function played by auditors is also heightened by the absence of other effective governance mechanisms for investor protection in Taiwan.

This study uses the Big N auditors³ as a proxy for auditor quality. Research to date reveals that the Big N auditors provide better audit quality than non-Big N auditors because of their scale, technical expertise, and reputational incentives to identify and expose accounting irregularities (e.g., Barton, 2005; Choi & Wong, 2007; Fan & Wong, 2005; Francis, 2004). Our findings suggest that different family ownership and control configurations lead to different agency effects in the firms. The alignment effect prevails in family firms with greater family ownership, founder CEOs, and professional CEOs, whereas the entrenchment effect prevails when there is greater cash–vote divergence. Despite the occurrence of two distinct types of agency effects in firms with different family ownership and control configurations, all the firms have a disinclination to appoint Big N auditors. The implication of such a unanimous outcome relating to auditor choice is that when family alignment prevails, firms are less likely to appoint higher-quality auditors because of lower demand by outside investors for such auditors. Although family entrenchment may create greater outside investor demand for higher-quality auditors, such demand is difficult to realize. Neither the alignment nor entrenchment effect is apparent in family firms with descendant CEOs; moreover, the presence of a descendant CEO is not significantly associated with auditor choice.

This study seeks to contribute to the existing literature in three ways. First, as noted above, we systematically examine the impact of family ownership and control on auditor choice decisions. Second, this study advances our understanding of the various agency costs and benefits arising from family ownership, cash–vote divergence, and family identities of CEOs, and also the effects of these family ownership and control features on auditor choice. Third, we address the opposing perceptions of family owners and outside investors regarding the need for credible financial reporting as a means of furthering their own interests in different agency environments (Wang, 2006). Existing research has provided no clear conclusions regarding the net effect of these opposing perceptions on family firms' financial reporting decisions. Our empirical evidence provides a unique insight, showing that family firms are more likely to echo the demand of outside investors for high-quality auditing when the alignment effect arising from family ownership and control is present, whereas firms are more likely to cater to the desires of family owners when the entrenchment effect is present.

The remainder of this study is structured as follows. In the next section, we outline the extant literature and develop our hypotheses. The sample selection procedure and research design are described in the third section. The results are then presented and discussed, and in the final section we draw some conclusions.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Family Firms and Corporate Governance in Taiwan

Family firms are prevalent in Taiwan. Around 60% of listed firms in the country are family controlled (Claessens et al., 2000; Yeh, 2005), compared with about 40% and 48% among Fortune 500 firms and the largest 2,000 industrial firms, respectively, in the United States (e.g., Anderson, Duru, & Reeb, 2009; Villalonga & Amit, 2009). Ownership of Taiwanese family firms is highly concentrated in the controlling families (Claessens et al., 2002; Fan & Wong, 2002). In contrast to family firms in the United States, where ownership diffuses quickly after the firms are publicly listed, ownership in Taiwanese family firms remains closely held by family owners long after the firms go public (Fan et al., 2011). Furthermore, the disparity between cash flow rights (ownership) and voting rights (cash–vote divergence) is very common in Taiwanese family firms (Yeh & Woidtke, 2005), because family owners often make extensive use of cross-holding and pyramidal ownership structures to enhance their control beyond their ownership stake (Yeh, 2005). On average, the control rights of family owners exceed their cash flow rights by around 25% (Claessens et al., 2000). This dominance of ownership and/or control rights also enables family owners to secure top executive positions and thus maintain influence over management decisions (Claessens et al., 2002; Fan & Wong, 2002). Prior literature has documented that more than 50% of CEO positions in Taiwanese family firms are held by the controlling families (E. Chen et al., 2013).

However, although family owners are predominant in the Taiwanese capital market, investor protection and corporate governance mechanisms are relatively weak (E. Chen et al., 2013; Claessens et al., 2000; La Porta et al., 2000). Internally, controlling shareholders, such as family owners, possess dominant influence over the appointment of board members in a firm, and board independence is generally low (E. Chen et al., 2013; Yeh & Woidtke, 2005). On average, 51.54% of board members are family directors (E. Chen et al., 2013). Externally, 70% of shares on the Taiwanese Stock Exchange are traded by individual investors (Sue, Chin, & Chan, 2013). Ownership held by institutional investors is relatively low, which may reduce investor incentive and effectiveness of management oversight (Yeh, Lee, & Woidtke, 2001). In addition, there is a lack of external markets for corporate control in Taiwan with mergers and acquisition activities being rare (Claessens et al., 2002). The controlling shareholders therefore face a lower risk of losing control as a consequence of takeovers (La Porta, Lopez-de-Silanes, & Shleifer, 1999).

In addition to the specific structural characteristics of Taiwan's capital market, Taiwanese firms are affected by the strong traditional Chinese culture, which places an emphasis on family values (E. Chen et al., 2013). Collectivism, rather than individualism, is the focus in this cultural context (Zapalska & Edwards, 2001). Tsai, Hung, Kuo, and Kuo (2006) argue that the

managerial philosophy in Taiwanese family firms is based on trust, which is rooted in the culture of collectivism. In contrast to professional managers in non-family firms in Taiwan, controlling family owners are more concerned about the reputation of the firm, because such firms are typically viewed as an integral extension of their own families (Zapalska & Edwards, 2001). This gives family owners the incentive to place greater value on the social legitimacy of the family firm for their own sake, and to place more emphasis on the protection of long-term family wealth. Although family ownership in Taiwan may be dominant, the psychological commitment to the family firm may motivate family owners to pursue organizational interests and reduce their incentive to be individually opportunistic at the expense of other shareholders.

Auditing is an important external governance mechanism. Audit firms are responsible for monitoring the quality of financial reporting, and consequently mitigate the problem of information asymmetry between insiders and outside investors by enhancing transparency. As noted above, the legal requirements for dual auditor signatures and the organizational structure of unlimited liability partnerships or proprietorships heightens auditors' legal and reputational liability in Taiwan, and thus motivates them to fulfill their auditing duties more effectively. The importance of auditing is especially prominent in the Taiwanese capital market, in which the other governance mechanisms are relatively weak (Chen et al., 2008; Chen et al., 2005).

Collectively, Taiwanese family firms share unique characteristics in contrast to their non-family counterparts. These characteristics may affect the nature and extent of the agency problems that occur in family firms, thus influencing the selection of external auditors.

Theoretical Framework for Family Firms and Auditor Choice

The appointment of auditors is an important financial reporting decision for a firm. The choice of auditor is a manifestation of a firm's financial reporting quality, which is a significant factor in reducing information asymmetry between insiders and outside shareholders, and also enhances management monitoring (Barton, 2005; Choi & Wong, 2007; Fan & Wong, 2005; Guedhami, Pittman, & Saffar, 2014). Prior studies have suggested that the Big N auditors provide better oversight of financial reporting quality than their non-Big N counterparts. Large audit firms typically have better resources and superior expertise to ensure the provision of high-quality auditing (e.g., Fan & Wong, 2005; Francis, 2004). However, large auditors face greater litigation risk (e.g., Choi & Wong, 2007; Kuhurana & Raman, 2004). In addition, they are more concerned about their reputation (e.g., Barton, 2005; Mansi, Maxwell, & Miller, 2004). The Big N auditors' worldwide service networks typically provide uniformly high-quality audit services, in order to avoid damage to their international reputation (e.g., Humphrey, Loft, & Woods, 2009). In particular, in countries with weaker shareholder protection, the Big N auditors are even more sensitive regarding their reputation, because it is more difficult for investors to recover from

losses incurred as a consequence of audit failure (e.g., DeAngelo, 1981; Guedhami et al., 2014).

Family firms represent a unique organizational structure. There are two competing agency perspectives explaining the behavior of family owners. First, the alignment effect predicts that the interests of managers and shareholders are better aligned in family firms than in non-family firms, because family owners hold a large block of shares and will consequently be more strongly motivated to monitor managers. In addition, controlling family owners usually enjoy the sense of family identity attached to the firm, which gives them an incentive to maintain the long-term presence of their families in the firms. Such owners are concerned with the perpetuation of non-economic utilities gained from their family firms (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007); they therefore have a stronger desire to preserve the family reputation in order to ensure the sustainability of the family dynasty (Miller, Le Breton-Miller, & Lester, 2013). Because family owners have both economic and non-economic ties to their firms, they are willing to introduce effective monitoring mechanisms to oversee the firm in good faith. Consequently, according to the alignment effect, the controlling family owners are motivated to monitor management intensively, and/or avoid value-destroying accounting practices, through hiring higher-quality auditors, as this will protect their interests in the firm.

In contrast, the entrenchment effect predicts that conflicts of interest between controlling family owners and other shareholders will be high in family firms, because the more concentrated ownership and domination of top executive positions creates an incentive for family owners to expropriate firm assets for their private benefit (e.g., Claessens et al., 2002; Claessens, Djankov, Fan, & Lang, 1999; Shlefer & Vishny, 1997). From this perspective, controlling family owners would act to discourage information flow related to firm activities, in order to conceal their own opportunistic behaviors. Consequently, the controlling family owners may be reluctant to appoint higher-quality auditors, because stricter monitoring imposed by the auditors will reduce their discretion in fostering opacity regarding transactions that benefit themselves.

Although the above arguments suggest that the intrinsic agency incentives of controlling family owners have an impact on their preference for employing higher-quality auditors, external demand for audit quality may also be a driving force behind a firm's auditor choice (Fan & Wong, 2005). Prior studies argue that external demand for high-quality auditors is dependent on the degree of conflict of interest between insiders and outside investors (e.g., Healy & Palepu, 2001; Watts & Zimmerman, 1983). When the alignment effect is present, controlling family owners, acting as committed monitors, can provide control and oversight as a substitute for the disciplinary role of transparent accounting information. The presence of such aligned family owners may mitigate the need for higher-quality auditors because the perceived monitoring benefit from those auditors is relatively modest. In contrast, when controlling family owners are perceived to be entrenched, the potential agency conflicts between these owners and minority

shareholders will amplify external demand for higher-quality auditors; this is because such auditors are more likely to provide credible audit services, thus ensuring that better-quality accounting information is available for management oversight.

The prevalence of the alignment effect or the entrenchment effect in family firms may depend on the features of family ownership and control (Chrisman & Patel, 2012). Variations in these features may consequently affect a family firm's auditor choice. We therefore address this issue by analyzing how differences in family ownership, disparity between family cash flow and voting rights, and family identity of CEO, affect auditor choice.

Family Ownership Configurations and Auditor Choice

Family ownership reflects the closeness between a family and the associated firm(s). The extent of shareholdings held by the family owners usually reflects both the financial and affective aspects of these owners' ownership in the firms. As noted previously, on the one hand, concentrated family ownership may give owners the incentive to exercise effective monitoring to protect their wealth that is embedded in the family firm(s). The alignment of interests between family owners and other shareholders is therefore argued to be higher in the presence of greater family ownership. Prior studies have investigated the agency effect of family ownership by testing its relationship with firm performance (e.g., Maury, 2006; Villalonga & Amit, 2006). Findings show that firms with greater family ownership are more likely to have a higher Tobin's Q, suggesting the alignment effect of family ownership. In addition, prior literature further argues that information asymmetry is likely to be lower in family firms with greater family ownership, because more highly concentrated shareholdings may motivate these owners to supply better-quality financial reporting in order to enhance monitoring (Wang, 2006).

On the other hand, greater family shareholdings may enable family members to be more dominant in the firm (Fan & Wong, 2002). More highly concentrated family ownership would give family owners the incentive and power to divert wealth from the other shareholders to themselves, and thus heighten Type II agency problems (Morck, Shleifer, & Vishny, 1988; Shleifer & Vishny, 1997). To serve their private interests, controlling shareholders with greater shareholdings may tend to withhold internal information and avoid reporting high-quality accounting information, because greater transparency may place them under more rigorous scrutiny in the capital market (Fan & Wong, 2002; Wang, 2006).

Although the existing theoretical perspectives offer divergent predictions regarding the effects of family ownership, the alignment effect of such ownership structures is argued to be the factor that will prevail in markets with weaker investor protections, such as Taiwan (La Porta et al., 1999; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002; Shleifer & Vishny, 1997; Yeh & Woidtke, 2005). In particular, as discussed earlier, family owners in Taiwan traditionally

emphasize long-term family values (E. Chen et al., 2013). Higher levels of family ownership often foster a sense of collectivism and stewardship, thus resulting in stronger alignment between family owners and other shareholders (Tsai et al., 2006; Zapalska & Edwards, 2001). The resulting positive alignment incentive of greater family ownership may mitigate the need for outside investors to rely on credible accounting information for monitoring, and thus lower their demand for higher-quality auditors. Since there are higher costs associated with appointing higher-quality auditors (e.g., Francis, 1984), family firms with more concentrated family ownership would have a lower incentive to hire such auditors. This leads to the following hypothesis:

Hypothesis 1. The appointment of Big N auditors is negatively associated with family ownership.

The divergence between cash flow and voting rights held by family owners may induce agency conflicts between controlling and other shareholders (Claessens et al., 2002). Family owners often use cross-shareholding and pyramidal ownership structures to leverage their control over the firm (Fan & Wong, 2002; Yeh, 2005). The resulting excessive control rights over cash flow (ownership) rights result in the financial interests of controlling family owners becoming detached from direct ownership. This gives the family owners greater ability and a stronger incentive to extract rents from the firms that they dominate. Such owners are more likely to earn more from enhancing private interests than they would lose from damage to the firm's wealth (Morck et al., 1988; Villalonga & Amit, 2006).

In addition, the increased complexity of ownership configurations as a result of cross-shareholding and pyramidal share structures typically makes it difficult for minority shareholders to detect and understand the relationship between ownership and control (Yeh & Woitke, 2005). Under these ownership arrangements, the association between the family owners and the firm appears to be relatively remote, and thus the identity and reputation of the family are less likely to be closely entangled with the firm. Consequently, family owners with a greater degree of voting rights relative to ownership are likely to be more entrenched, which leads to more severe Type II agency problems (Fan & Wong, 2002). Villalonga and Amit (2006) report that family firms with a higher divergence between cash flow rights and voting rights held by family members are inclined to have a lower Tobin's Q. This empirical finding suggests that a larger disparity between these two rights leads to greater family entrenchment.

Prior studies reveal that increasing information transparency may bring the controlling family owners under closer scrutiny and threaten their power to control. Hence, controlling family owners who have excessive control rights may tend to avoid informed challenges posed by outside investors; they can do so by providing lower-quality accounting information, in order

to preserve their control benefits (Gómez-Mejía, Cruz, & Imperatore, 2014). Yeh and Woidtke (2005) argue that controlling owners in Taiwan will tend to wield their influence to accrue private benefits when the entrenchment effect of excessive control outweighs the positive incentive effect of cash flow ownership. Evidence from Taiwan also suggests that family firms with greater enhanced family control rights are more likely to provide lower-quality financial reporting (Fan & Wong, 2002; Sue et al., 2013). Moreover, holding excessive control rights beyond cash flow rights provides controlling family owners with additional means to further magnify their influence relative to outside investors (Anderson et al., 2009). Thus, the outside investors would have greater demand for higher-quality auditors, in order to prevent potential wealth expropriation as a result of the disparity between cash flow rights and voting rights held by family members; however, the weak shareholder protection environment of Taiwan's capital market makes it difficult for them to go against the dominant family owners and realize such demands. We therefore argue that family firms with greater cash–vote divergence are more likely to hire lower-quality auditors. Consequently, we hypothesize that:

Hypothesis 2. The appointment of Big N auditors is negatively associated with divergence between cash flow and voting rights held by family owners.

Family CEOs and Auditor Choice

Auditor choice may be influenced in different ways, depending on who runs the family firm (X. Chen et al., 2013). Founder, descendant and professional CEOs have different senses of identity within family firms. Prior findings suggest that the sense of family identity affects managerial incentives and leads to differences in behavior in terms of decision making (e.g., Chang & Shim, 2015; Lin & Hu, 2007; Mullins & Schoar, 2016; Villalonga & Amit, 2006).

For example, founders have a unique psychological attachment to the firms they found. They were responsible for establishing the firm(s) and are usually representative of the entrepreneurship brand (Amit, Glosten, & Muller, 1990; Gómez-Mejía et al., 2007). Founders hold long-term investment horizons and a stronger intention to pass the business on to their descendants (Anderson & Reeb, 2003). They possess a sense of responsibility for perpetuating the family affiliation with the firm, and take particular care in developing a positive family reputation in order to ensure the sustainability of the family wealth and firm identity (Gómez-Mejía et al., 2007). Founders who assume the CEO position in the family firms have a greater propensity to behave as a good steward and monitor decisions more intensively for other stakeholders (Chen, Liu, Yang, & Chen, 2016; Mullins & Schoar, 2016; Tsai et al., 2006). Conflicts of interest between controlling and other shareholders are thus lower in firms led by founders, as founders are motivated to place the long-term interests of the firm ahead of their

individual private interests (Amit et al., 1990). Such an alignment effect for founder CEOs is evident in the greater corporate value measured by Tobin's Q (Villalonga & Amit, 2006).

Prior studies further argue that the positive alignment incentive motivates founder CEOs to provide better, more informative accounting information (Wang, 2006). This is beneficial for enhancing information transparency between insiders and outside investors. Therefore, the benefits associated with appointing higher-quality auditors for the monitoring of firms managed by founder CEOs would be relatively marginal, because the outside investors' reliance on these auditors for wealth protection would be lower. Given the higher costs associated with employing higher-quality auditors (e.g., Francis, 1984), family firms with founder CEOs may be less likely to appoint such auditors. Consequently, we hypothesize that:

Hypothesis 3.1. The appointment of Big N auditors is negatively associated with the presence of founder CEOs.

As family firms evolve, the CEO positions are likely to be passed from the founders to either family descendants or professional managers. Concentration of family ownership is likely to become more dispersed after founders pass the firm(s) on to later generations (Mullins & Schoar, 2016). Unlike founders, it is difficult for descendants to share controlling power with other family members based on a shared vision, because each branch of the family tends to emphasize the best interests of its own nuclear household (e.g., Lubatkin, Schulze, Ling, & Dino, 2007; Stockmans, Lybaert, & Voordeckers, 2010). Such conflicts of interest in subsequent generations increase the reliance on formal bureaucratic control in managing the firm's operations. In other words, the psychological tie between family and firm becomes more distant (Ensley & Pearson, 2005; Mullins & Schoar, 2016). Therefore, descendant CEOs are more likely to be interested in greater entrenchment and maximizing their private interests at the expense of other shareholders (Gómez-Mejía et al., 2007). Villalonga and Amit (2006) report a negative association between the presence of descendant CEOs and Tobin's Q, suggesting the entrenchment effect of these CEOs. Because greater opaqueness can help descendant CEOs accrue private benefits from control, this may give them a stronger incentive to exploit their power, for example by appointing lower-quality auditors in order to avoid strict scrutiny of accounting reporting quality. Although outside investors in family firms managed by such CEOs would demand higher-quality auditors in order to ensure the availability of credible accounting information for effective monitoring, it would be difficult for them to realize such demands in a market with weak investor protection, such as Taiwan's. Consequently, we hypothesize that:

Hypothesis 3.2. The appointment of Big N auditors is negatively associated with the presence of

descendant CEOs.

Professional CEOs can also be selected to fill CEO positions in family firms. Similar to CEOs in non-family firms, the presence of a professional CEO is more likely to induce the classic manager–shareholder conflict in family firms, because of the separation of ownership from control and a lower degree of non-pecuniary ties between manager and firm. However, professional CEOs of family firms possess fewer explicit or implicit control rights than other types of CEOs (Mullins & Schoar, 2016). Thus, their decisions will be subject to monitoring by the controlling family owners (Shleifer & Vishny, 1986). Additionally, the founding family may emphasize nurturing the stewardship of professional managers in order to reduce the managers’ short-term opportunistic behaviors and ensure that family interests are protected (Chen et al., 2016). Barontini and Caprio (2006) provide evidence that firms managed by professional managers have a higher Tobin’s Q when they are subject to monitoring by family owners. Wang (2006) reports that financial reporting quality in family firms led by professional CEOs is higher, suggesting that monitoring by the controlling family owners may mitigate the owner–manager agency problem in this context. We therefore argue that the lower agency conflict and greater reporting quality in such firms, which results from the monitoring effect of family owners, may reduce the demand for higher-quality auditors by other investors. This leads to the following hypothesis:

Hypothesis 3.3. The appointment of Big N auditors is negatively associated with the presence of professional CEOs of family firms.

RESEARCH METHODOLOGY

Sample

The data used in the empirical testing are based on a sample of firms publicly listed on the Taiwan Stock Exchange between 1996 and 2015. Firms in the financial and utility sectors are not included in our sample on the grounds that they have a number of significant differences in terms of industrial characteristics and accounting systems. Data were also collected in relation to family cash flow, voting rights, auditors, and financial information, from the Taiwan Economic Journal (TEJ) database. Information about the CEO, board structure, and block shareholders was also obtained from each company’s prospectus. Family member relationships within the firm were identified based on information provided in *Business Groups in Taiwan*.⁴ Observations without complete financial and corporate governance information were omitted. The final sample consists of 16,225 firm-years observations. Table 1 presents the distribution of the sample firms for each year from 1996 to 2015 (Panel A), and the distribution of the industrial classification of

the observations (Panel B). Family firms in Taiwan accounted for 64.17% of total observations.

Insert Table 1 about here

Dependent Variables

Following the strategy employed in prior studies (e.g., Anderson & Reeb, 2003; McConaughy, Walker, Henderson, & Mishra, 1998), firm performance in relation to various types of family ownership and control configurations was assessed in order to generate results reflecting the relative importance of the alignment and entrenchment effects associated with family firms and with each type of family ownership and control feature. In the relevant regressions, Tobin's Q (*Tobin's Q*) is used as the dependent variable to measure firm performance (e.g., Anderson & Reeb, 2003; Dow & McGuire, 2016; Villalonga & Amit, 2006). *Tobin's Q* is the sum of the market value of common stock, the book value of preferred stock, and the book value of long-term debt, divided by the book value of total assets.

In the auditor choice model, auditor quality (*AUDITOR*) is the dependent variable, gauged as a dummy variable that takes a value of one for firms with Big N auditors, and zero otherwise (e.g., Barton, 2005; Choi & Wong, 2007; Fan & Wong, 2005; Francis, 2004).⁵

Independent Variables

The presence of family firms (*FAM*) compared to non-family firms is used to test the effect of family firms on auditor choice. *FAM* is a dichotomous variable that takes a value of one if the firm is classified as a family firm, and zero otherwise. Following prior studies (Anderson, Duru, & Reeb, 2012; Anderson & Reeb, 2003; Anderson, Reeb, & Zhao, 2012; X. Chen et al., 2013), we define a company as a family firm if (1) the founders or their descendants continue to hold positions in top management or on the board, or (2) their family members collectively hold more than 5% of shares in the firm. Family ownership (*FOWN*) and cash-vote divergence (*FDIV*) are two measures of the family ownership configuration: *FOWN* is the percentage of common shares (cash flow rights) held by the family members, and *FDIV* is measured as the difference between the percentage of voting rights (*FVR*) and cash flow rights (*FOWN*) held by the family members (Shyu & Lee, 2009).⁶ The CEO's position in a family firm is identified according to whether that individual is a founder, descendant or professional manager. *FF_CEO* is a dummy variable with a value of one if the position of CEO is held by the family founder, and zero otherwise. *FD_CEO* is a dichotomous variable that takes the value of one if the position of CEO is held by a descendant, and zero otherwise. *FH_CEO* is a dummy variable that equals one if the family firm

has a professional CEO, and zero otherwise.

Control Variables

The control variables are drawn from the literature. First, the natural logarithm of total assets (*SIZE*) is used to control for firm size. Firm size is associated with a firm's ability to access financing and economies of scale, which has beneficial effects on firm performance. In addition, given the complexity of their operations, as suggested in past studies, larger firms typically hire higher-quality auditors (e.g., Fan & Wong, 2005; Guedhami et al., 2014). Firm age (*AGE*) is considered. Older firms are normally less innovative, and thus are likely to have lower earnings prospects. However, they also have greater accumulated business reputation, and consequently are motivated to preserve such reputations through appointing higher-quality auditors (Lee, Stokes, Taylor, & Walter, 2003). We also control for leverage (*LEV*), which is measured by the ratio of long-term debt to total assets. Firms with higher leverage are more likely to have greater agency conflicts between creditors and shareholders and face higher firm risk. These firms are therefore more likely to perform poorly and to have greater demand for higher-quality auditors (Fan & Wong, 2005; Jensen & Meckling, 1976).

The ratio of capital expenditures to total property, plants, and equipment (*CAPITAL*), and the ratio of research and development expenses to total sales (*R&D*), are used as indicators for investment policies. Past studies suggest that a firm's performance is associated with its capital expenditure and R&D activities (e.g., Villalonga & Amit, 2006). Prior studies have also indicated that the growth of a firm is associated with its performance (Chen, Hou, Li, Wilson, & Wu, 2014). Thus, we use the percentage change in sales over the last three years (*GROWTH*) to capture firm growth. The standard deviation of monthly stock returns for the prior 36 months (*FIRM_RISK*) is used to control for the firm's level of financial risk in the capital market. Such risk is considered a threat to firm performance (e.g., Anderson & Reeb, 2003). It is suggested that loss and profitability may affect the firm's demand for higher-quality auditors (e.g., Fan & Wong, 2005; Ho & Kang, 2013). Loss (*LOSS*) is used to control for the potential distress risk of a firm: it is measured by a dummy variable that is equal to one if the firm has reported a net loss in the previous fiscal year, and zero otherwise. We control for profitability, measured as the ratio of earnings before interest and taxes to total assets (*ROA*).

Finally, we also control for various corporate governance characteristics, including board size (*BOARD_SIZE*), board independence (*IND_BOARD*), the presence of an audit committee (*AUDIT_COMMIT*), CEO duality (*DUALITY*), and total external block ownership (*BLOCK_OWN*). It has been suggested that these corporate governance characteristics are associated with the effectiveness of monitoring functions and the financial reporting quality of a firm, and consequently have an impact on the firm's demand for high-quality auditors (e.g.,

Beasley & Petroni, 2001; Cohen, Krishnamoorthy, & Wright, 2002; Grove, Patelli, Victoravich, & Xu, 2011; Ho & Kang, 2013; Klein, 2002; Minichilli, Brogi, & Calabrò, 2016).

Regression Models and Specifications

Two regression models are employed in this study. First, in Model (1), we model a Tobin's Q with family ownership, cash–vote divergence, and the family identities of CEOs, in order to identify the associated alignment or entrenchment effects of these family ownership and control features (e.g., Anderson & Reeb, 2003; McConaughy et al., 1998). Then, we test our hypotheses related to auditor choice by using logistic analysis in Model (2).

$$\text{Tobin's } Q_{i,t} = f(\text{Family}_{i,t}, \text{Control}_{i,t}) + \varepsilon_{i,t}, \quad (1)$$

$$\text{AUDITOR}_{i,t} = f(\text{Family}_{i,t}, \text{Control}_{i,t}) + \varepsilon_{i,t}, \quad (2)$$

where the dependent variables used in Model (1) and Model (2) are *Tobin's Q* and *AUDITOR*, respectively. *Family* indicates family ownership and control features, consisting of *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, and *FH_CEO*, for firm i at time t . *Control* represents a set of control variables for the models. The control variables in Model (1) comprise *SIZE*, *AGE*, *LEV*, *CAPITAL*, *R&D*, *GROWTH*, *FIRM_RISK*, *BOARD_SIZE*, *IND_BOARD*, *AUDIT_COMMIT*, *DUALITY*, and *BLOCK_OWN*. The control variables in Model (2) are *SIZE*, *AGE*, *LEV*, *LOSS*, *ROA*, *BOARD_SIZE*, *IND_BOARD*, *AUDIT_COMMIT*, *DUALITY*, and *BLOCK_OWN*. All the variables employed in the models are as defined above.

EMPIRICAL RESULTS

Descriptive Statistics

Table 2 reports descriptive statistics for the variables. To avoid the influence of extreme values, all continuous variables are winsorized at the top and bottom 1% of their distribution. Panel A shows the characteristics of family ownership, control, and management within family firms. The mean value for the common shares (i.e., cash flow rights) held by founding family members (*FOWN*) is 34%, which is significantly higher than the 13% reported by Ho and Kang (2013) for ownership in the United States. The results further demonstrate that the mean value for the voting rights held by the family owners (*FVR*) is 42%, which is also significantly higher than the 18% documented in the United States by Ali et al. (2007). There are 44% of family firms with cash–vote divergence in Taiwan. The mean value for the difference between the voting and cash flow rights held by family owners (*FDIV*) is 8%, suggesting that in Taiwanese family firms, the voting rights of the family owners are apparently greater than their cash flow rights. Overall, ownership does appear to be concentrated among family owners, rather than widely held or

controlled.

In addition, family members often hold the most important executive position in the firms. For instance, 23% and 31% of family firms in the sample had a founder CEO (*FF_CEO*) or a descendent CEO (*FD_CEO*), respectively, while 46% hired a professional CEO (*FH_CEO*). Overall, a total of 54% of the family firms nominated a family CEO, which is higher than the 33% found in the United States, as reported by Ho and Kang (2013). Collectively, these statistics suggest that family owners play a very dominant role in Taiwanese family firms.

Panel B of Table 2 presents summary statistics for the financial and corporate governance variables for all samples. These variables are further categorized for family and non-family firms, as presented in Panel C of Table 2. It is documented that the *Tobin's Q* of the family firms is significantly higher than that of the non-family firms ($p < 0.01$). In addition, 80.3% of listed firms in Taiwan hired Big N auditors (*AUDITOR*), which is less than the 95.2% reported in the United States by Ho and Kang (2013). However, family firms in Taiwan appointed these auditors to a lesser degree than non-family firms ($p < 0.01$); this finding is consistent with that in the United States, as documented by Ho and Kang (2013).

With regard to the control variables, family firms in Taiwan, compared with non-family firms, are bigger in size (*SIZE*) and older (*AGE*) ($p < 0.01$; $p < 0.01$). Moreover, in relation to their non-family counterparts, family firms are less likely to experience a loss (*LOSS*) ($p < 0.1$) and more likely to demonstrate better accounting performance (*ROA*) ($p < 0.05$). Both leverage ratio (*LEV*) and risk (*FIRM_RISK*) are lower in the family firms than in the non-family firms ($p < 0.05$; $p < 0.05$). Additionally, family firms in Taiwan have higher growth opportunities (*GROWTH*) than non-family firms ($p < 0.05$).

In terms of corporate governance characteristics, it is documented that family firms in Taiwan have a larger board size (*BOARD_SIZE*) than non-family firms ($p < 0.01$). Only 14.2% of board members are non-executive directors in Taiwanese listed firms (*IND_BOARD*) (Table 2: Panel B), which is much lower than the 55.1% reported in the United States (Ho & Kang, 2013). However, there is no significant difference in *IND_BOARD* between family and non-family firms. Only 7.7% of listed firms in Taiwan have an audit committee (*AUDIT_COMMIT*), but family firms are more likely to set up such committees than the non-family firms ($p < 0.05$). On average, only 31.9% of firms have CEO duality (*DUALITY*), which is smaller than the 55.1% that is characteristic of the United States (Ho & Kang, 2013). However, CEO duality is more common in family firms ($p < 0.01$). The average external block shareholdings (*BLOCK_OWNS*) is 35.8% in Taiwan. On average, external block investors hold more shares in family firms than in non-family firms ($p < 0.01$).

Insert Table 2 about here

Because multicollinearity is considered problematic in regression analysis, the Pearson correlations between the variables are provided in Table 3, and the variance inflation factors (VIFs) are computed for each independent variable, in order to examine whether multicollinearity is present. Multicollinearity in regression analysis is regarded as harmful only when correlations exceed 0.7 (Tabachnick & Fidell, 2007). Here, the correlations between the independent variables included in the regression analysis are all less than 0.232. In addition, the VIFs for all independent variables employed in the regressions shown in Tables 4 and 5 are far lower than the critical value of 10 (Tabachnick & Fidell, 2007), suggesting that multicollinearity is not a major issue in the regression analyses.

Insert Table 3 about here

Results of Regression Analysis

Table 4 shows the regression models used to test the relationship of firm performance with family ownership and control features. The analysis is based on a fixed-effects panel regression, with year and industry dummy variables. The results show that family firms (*FAM*) are more likely to perform better, implying that the alignment effect is more apparent in family firms than in non-family firms ($\beta = 0.090, p < 0.01$). Further, we examine the effects of family ownership configurations on firm performance. It is documented that family ownership (*FOWN*) is positively related to Tobin's Q (*Tobin's Q*) ($\beta = 0.201, p < 0.01$), whereas the divergence between cash flow and voting rights held by family owners (*FDIV*) is negatively related to Tobin's Q ($\beta = -0.242, p < 0.05$). These findings are consistent with suggestions in prior studies that greater family ownership has an alignment effect, but that family owners with excessive control power arising from greater cash–vote divergence are more likely to be entrenched (e.g., Fan & Wong, 2005; Shlefer & Vishny, 1997; Yeh & Woitdke, 2005).

In addition, we investigate the association between the family identity of the CEO and firm performance. We find that the presences of both founder CEOs (*FF_CEO*) and professional family firm CEOs (*FH_CEO*) are positively related to Tobin's Q ($\beta = 0.153, p < 0.01; \beta = 0.108, p < 0.01$). This suggests that the alignment effect prevails in family firms managed by founder CEOs and professional CEOs. However, there is no significant relationship between the presence of descendant CEOs (*FD_CEO*) and *Tobin's Q*, indicating that neither the alignment effect nor the entrenchment effect prevails in a firm run by a descendant CEO.

Insert Table 4 about here

Next, the agency effects of family firms and the associated characteristics of family ownership, cash–vote divergence, and family identities of CEOs are analyzed. Table 5 presents the results of the logistic regression models used to examine the relationship of auditor choices with these family ownership and control features. The fixed effects of year and industry are controlled in the models. The results show that family firms (*FAM*) are less likely to appoint Big N auditors than non-family firms ($\beta = -0.199, p < 0.01$). We further examine the effects of two different family ownership features, and find that both family ownership (*FOWN*) and the disparity between cash flow and voting rights (*FDIV*) are negatively related to the presence of Big N auditors, which is consistent with Hypotheses 1 and 2 ($\beta = -0.634, p < 0.01; \beta = -1.407, p < 0.01$). With regard to the family identity of the CEO, our findings reveal that the presence of both founder CEOs (*FF_CEO*) and professional CEOs (*FH_CEO*) is inversely associated with the appointment of Big N auditors, in line with Hypotheses 3.1 and 3.3 ($\beta = -0.303, p < 0.01; \beta = -0.214, p < 0.01$). However, there is no significant relationship between the presence of descendant CEOs (*FD_CEO*) and auditor choice: this result does not support Hypothesis 3.2.

Taken altogether, firms with family ownership (*FOWN*), founder CEOs (*FF_CEO*), professional CEOs (*FH_CEO*), and cash–vote divergence (*FDIV*) are unanimously disinclined to appoint higher-quality auditors, despite the fact that these family ownership and control mechanisms feature two distinct agency effects (i.e., the alignment effect and the entrenchment effect). As argued earlier, family owners and outside investors have opposing demands for auditor quality (Dao et al., 2012; Trotman & Trotman, 2010). Our findings reflect the net effects of these two sources of demands for auditor quality based on different agency scenarios, and imply that the outcome of auditor choice within family firms is determined in different ways. Family firms do not tend to appoint higher-quality auditors when family alignment is present, due to lower outside investor demand for such auditors. Although family entrenchment may create greater outside investor demand for higher-quality auditors, the dominant family owners are less likely to allow such demand to be realized. Additionally, descendant CEOs do not apparently coincide with the alignment effect or the entrenchment effect, nor do firms with descendant CEOs show a clear propensity relating to auditor choice.

Insert Table 5 about here

Additional Analysis

We perform two additional analyses in relation to the effects of family ownership and control

features on auditor choice. First, we examine whether the aforementioned effects of family ownership and control characteristics on auditor choice are dependent on the frequency of equity offerings, operational risk, organizational complexity, and corporate opacity. Prior studies have argued that external demand for monitoring from higher-quality auditors is likely to be more intensive when firms have greater conflicts of interest and information asymmetry problems between insiders and outside investors (Healy & Palepu, 2001; Watts & Zimmerman, 1983). Because such agency problems are usually more severe in firms with more frequent equity offerings, operational risk, organizational complexity, and corporate opacity, such firms consequently face higher external demand for higher-quality auditors (e.g., Anderson et al., 2009; Datar, Feltham, & Hughes, 1991; Fan & Wong, 2005; Wootton & Tone, 1993).

We measure frequent equity issuers using a dummy variable, *ISSUE*. We count the number of years in which the firm issues equity and scale the number by the total number of available annual observations for the firms. A value of one is given if the frequency of that firm's equity offerings is greater than or equal to the sample median, and zero otherwise. A firm's operational risk (*ORISK*) is measured by the five-year rolling standard deviation of return on assets (Datar et al., 1991), and organizational complexity (*COMPLE*) is measured according to industry diversification (Liu & Lai, 2012).⁷ An organization is expected to be more complex if its industry diversification is greater. Following Anderson, Duru, and Reeb (2009), we develop an index to measure the opacity of a firm (*OPACITY*).⁸ Lower values denote greater transparency, and higher values denote a more opaque firm. Table 6 shows that Taiwanese firms with a higher frequency of equity offerings (*ISSUE*), operational risk (*ORISK*), organizational complexity (*COMPLE*), and opacity (*OPACITY*) are more likely to appoint Big N auditors. These results reflect that, in general, higher-quality auditors tend to be appointed in response to higher external demand for such auditors, in situations with greater potential for agency conflicts and/or information asymmetry.

The interaction terms between *ISSUE*, *ORISK*, *COMPLE*, and *OPACITY*, and each of the family ownership and control features, are used to capture the effects of *ISSUE*, *ORISK*, *COMPLE*, and *OPACITY* on the relationship between family ownership and control and auditor choice. As can be seen in Table 6, Panel A, the interaction terms between *ISSUE* and *FAM* (*FAM*ISSUE*), *FOWN* (*FOWN*ISSUE*), *FDIV* (*FDIV*ISSUE*), *FF_CEO* (*FF_CEO*ISSUE*), and *FH_CEO* (*FH_CEO*ISSUE*) are negatively associated with the appointment of Big N auditors ($\beta = -0.628, p < 0.01$; $\beta = -1.802, p < 0.05$; $\beta = -2.399, p < 0.1$; $\beta = -0.913, p < 0.1$; $\beta = -0.703, p < 0.05$). The interaction term between *ISSUE* and *FD_CEO* (*FD_CEO*ISSUE*) is not significantly associated with auditor choice. Similar results appear for the interactive effects between the six family ownership and control features and *ORISK* (Panel B), *COMPLE* (Panel C), and *OPACITY* (Panel D). Taken altogether, the findings imply that the perceived alignment

benefits of *FAM*, *FOWN*, *FF_CEO*, and *FH_CEO* remain effective in keeping the demand of outside investors for higher-quality auditors low, even though firms are in situations with greater potential agency conflicts and/or information asymmetry. However, entrenched family control in firms with greater *FDIV* still drives firms to appoint lower-quality auditors, even if the firms face a stronger demand for monitoring by top-tier auditors in such situations.

Insert Table 6 about here

Second, different types of outside investors may have different levels of influence on their investees. We examine the effects of shareholdings held by foreign investors (*FOREIGN*), pressure resistant investors (*RESIST*), pressure sensitive investors (*SENSIT*), and individual blockholders (*IND_OWN*) on auditor choice, and test whether such effects are dependent on family ownership and control features. The results are presented in Table 7.

Foreign investors, pressure-resistant investors, and pressure-sensitive investors are institutional shareholders. *FOREIGN* is measured by taking the percentage of common shares held by foreign investors. It has been argued that Taiwan's capital market is very sensitive to the trading behaviors of foreign investors (Huang & Shiu, 2009). Institutional investors are very concerned with the level of information asymmetry in their investees, and have a significant influence on a firm's financial reporting behaviors (Liang, Lin, & Chin, 2012).

Pressure-resistant investors include foundations, mutual and pension funds, hedge funds, and venture capitalists/private equity (Muniandy, Tanewski, & Johl, 2016). *RESIST* is measured by the percentage of common shares held by these institutional investors. Pressure-sensitive investors include banks, and finance and insurance investors (Muniandy et al., 2016). *SENSIT* is defined as the percentage of common shares held by these investors. Prior studies argue that pressure-resistant investors, compared with pressure-sensitive investors, are more active and effective monitors (Chen, Harford, & Li, 2007; Hutchinson, Seamer, & Chapple, 2015). They have access to greater resources and expertise in exercising direct oversight of their investees. Therefore, pressure-resistant investors would have a stronger monitoring influence than pressure-sensitive investors on a firm's auditor choice. *IND_OWN* is measured by the percentage of common shares held by outside individual blockholders. Compared with institutional investors, individual investors have less ability and resources to impose pressure on corporate management (Holderness, 2003; Villalonga & Amit, 2006); they are therefore less likely to have an effect on a firm's auditor choice.

Table 7 shows that Taiwanese firms with greater ownership held by foreign investors (*FOREIGN*) and pressure-resistant investors (*RESIST*) are more likely to appoint Big N auditors.

However, auditor choice has no significant relationship with pressure-sensitive investors (*SENSIT*) and individual blockholders (*IND_OWN*). Consistent with the suggestions of prior research (Huang & Shiu, 2009; Hutchinson et al., 2015), these findings indicate that foreign investors and pressure-resistant investors have a stronger monitoring effect on their investees than pressure-sensitive investors and individual investors.

Furthermore, we use the interaction terms between *FOREIGN*, *RESIST*, *SENSIT*, and *IND_OWN*, and each type of family ownership and control features discussed previously, to test whether the relationships between *FOREIGN*, *RESIST*, *SENSIT*, *IND_OWN*, and auditor choice are conditional on family ownership and control. As reported in Table 7, Panel A, the interaction terms between *FOREIGN* and *FAM* (*FAM*FOREIGN*), *FOWN* (*FOWN*FOREIGN*), *FDIV* (*FDIV*FOREIGN*), *FF_CEO* (*FF_CEO*FOREIGN*), and *FH_CEO* (*FH_CEO*FOREIGN*) are negatively associated with the appointment of Big N auditors ($\beta = -1.026, p < 0.01$; $\beta = -2.228, p < 0.01$; $\beta = -3.006, p < 0.05$; $\beta = -1.513, p < 0.05$; $\beta = -0.878, p < 0.05$). The interaction term between *FOREIGN* and *FD_CEO* (*FD_CEO*FOREIGN*) is not significantly associated with auditor choice. Similar results appear in the interactive effects between *RESIST* and the six family ownership and control features (Panel B). Collectively, these findings imply that the alignment effect of *FAM*, *FOWN*, *FF_CEO* and *FH_CEO* may mitigate the demands of influential outside investors for monitoring by higher-quality auditors. The demand of influential outside investors for higher-quality auditors cannot counterbalance the lower demand of entrenched family owners empowered by greater *FDIV* for such auditors. In addition, as shown in Panel C and Panel D of Table 7, the interactive effects between *SENSIT*, *IND_OWN*, and all six family ownership and control features on auditor choice are not significant, suggesting that *SENSIT* and *IND_OWN* have an insignificant impact on auditor choice, and this effect does not vary among firms with different family ownership and control features.

Insert Table 7 about here

Robustness Analysis

Additional robustness analysis is performed in order to understand the effects of family ownership and control features on auditor choice. First, we measure the quality of audit services by using two alternative proxies: auditor industry specialization (*INSPEC*) and audit fees (*AUDIT_FEE*). We measure *INSPEC* as the proportion of firms in an industry that are clients of the auditor, and *AUDIT_FEE* by taking the natural logarithms of audit fees paid by the firms. Auditors with greater industry specialization or receiving higher audit fees are more likely to provide better-quality services (e.g., Fan & Wong, 2005; Ho & Kang, 2013). In addition, audit

fees may also be viewed as a reflection of a firm's audit risk. It is suggested that the magnitude of the audit fee is also a consequence of the auditors' evaluation of their clients' audit risk. In other words, auditors usually charge their clients a rate that appropriately reflects the cost of the auditing effort associated with the perceived audit risk (e.g., Bédard & Johnstone, 2004). Table 8 reports the effects of the family ownership and control features on both auditor industry specialization and audit fees. It can be seen that the findings are generally consistent with the main findings presented in Table 5. The only exception is that *FDIV* shows a significantly positive relationship with *AUDIT_FEE* ($\beta = 1.426, p < 0.01$), implying that auditors perceive higher audit risk when they provide services to family firms with greater cash–vote divergence: such firms may therefore be charged higher audit fees.

Insert Table 8 about here

It has been argued that the controlling power of family owners is further enhanced when the families dominate more board seats than their ownership warrants (Anderson et al., 2009). We therefore examine how the degree of disproportionate board control held by family owners (*FDIV_BOARD*) affects Tobin's *Q* and auditor choice. We measure *FDIV_BOARD* as the difference between the percentage of board members dominated by the founding families and the percentage of voting rights controlled by them. Table 9 shows that *FDIV_BOARD* is negatively related to both *Tobin's Q* and *AUDITOR*, which is in line with the findings for cash–vote divergence (*FDIV*) obtained in our primary tests (see Tables 4 and 5). In addition, we use the ratio of voting rights divided by cash flow rights held by family owners (*FDIV_Ratio*) as an alternative measurement of the degree of disparity between these two rights (Shyu & Lee, 2009). The results are also consistent with the main findings generated based on *FDIV*, as shown in Tables 4 and 5.

Insert Table 9 about here

Panel B of Table 1 shows that family presence is dominant in certain industries (i.e., Automobile, Rubber, and Cement). We therefore conduct robustness tests based on a sample which does not include firms in these three industries, in order to rule out the possibility that the results are driven by those firms. The findings in relation to the effects of *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, and *FH_CEO* on *Tobin's Q* and *AUDITOR* are largely the same as the main tests; see Table 10.

Insert Table 10 about here

A potential endogeneity problem may exist between family ownership configurations (i.e., *FOWN* and *FDIV*), firm performance, and auditor choice (Anderson & Reeb, 2003; Villalonga & Amit, 2006). This potential issue is addressed by employing a two-stage model in which the instrumental variables in the first stage are the presence of corporate social responsibility (CSR) disclosure (*CSR_DIS*) (Dyre & Whetten, 2006; Eulaiwi, Al-Hadi, Taylor, Al-Yahyaee, & Evansa, 2016) and lagged diversification (*LAG_DIV*) (Gómez-Mejía, Makri, & Kintana, 2010; Villalonga & Amit, 2006). *CSR_DIS* is a dummy variable that has a value of one if the firm discloses CSR activities, and zero otherwise. *LAG_DIV* is the ratio of foreign sales to total sales in the previous year.

Table 11 reports that, in the first stage, *CSR_DIS* has a significantly positive relationship with *FOWN* (Models (2) and (5)), whereas there is a significantly negative association between *CSR_DIS* and *FDIV* (Models (3) and (6)). *LAG_DIV* has significantly positive relationships with both *FOWN* (Models (2) and (5)) and *FDIV* (Models (3) and (6)). In the second stage, we find that the predicted *FOWN* (*PFOWN*) is positively associated with Tobin's Q ($\beta = 0.290, p < 0.05$), but the predicted *FDIV* (*PFDIV*) is negatively related to Tobin's Q ($\beta = -0.340, p < 0.05$) (Model 1). Both *PFOWN* and *PFDIV* are negatively related to *AUDITOR* ($\beta = -0.860, p < 0.01$; $\beta = -1.083, p < 0.01$) (Model (4)). These findings are consistent with the main test results. Table 11 also reports the tests of the C statistic, the Hansen's J statistic, and the Anderson-Rubin *F* statistic. The C statistic is adopted to test the null hypothesis that the specified endogenous variables can be treated as exogenous. The results of the C statistic reject the null hypothesis that *FOWN* and *FDIV* may be treated as exogenous at the 5% significance level. The Hansen's J statistic is used for testing the over-identifying restrictions. The results of this test cannot reject the null hypothesis that the instruments are not correlated with the structural errors term in the second-stage regressions. Furthermore, the Anderson-Rubin *F* statistic is used as a test for the weak-instrument robust inference. The results reject the null hypothesis that the endogenous repressors are irrelevant at the 1% significance level, suggesting that the employed instruments are not weak. Overall, the results of these three tests provide support for the validity and relevance of the employed instrumental variables and of the key findings.

Finally, we examine the potential nonlinear relationships between family ownership, firm performance, and auditor choice. Wang (2006) found a nonlinear association between family ownership and earnings quality in the S&P 500 firms. In addition, Yeh, Lee, and Woitdke (2001) found a nonlinear relation between family control and firm performance in a sample of Taiwanese firms. We address this potential issue of non-linearity by adding the square of family ownership (*SqFOWN*) into the models used in Tables 4 and 5. Table 11 shows that *SqFOWN* is

not significantly associated with either Tobin's Q (Model (7)) or *AUDITOR* (Model (8)), suggesting that there is no significant non-linear relationship between family ownership, firm performance, and auditor choice.

Insert Table 11 about here

DISCUSSION AND CONCLUSIONS

Auditor choice is one of the most important decisions a firm has to make, and has significant implications for financial reporting quality and transparency. Despite abundant research on auditor choice, it remains an under-researched issue in family firms (Ho & Kang, 2013; Trotman & Trotman, 2010). Drawing from agency perspectives, this study emphasizes distinctive agency effects arising from family ownership, cash–vote divergence, CEO identity, and the impact of family ownership and control features on auditor choice. Our analysis is focused on Taiwan, in which family firms are prevalent, and where the capital market is characterized by weak shareholder protection.

We find that auditor choices of family firms differ those of their non-family counterparts, with the former being less likely to appoint Big N auditors. Our results further suggest that different family ownership and control configurations result in different agency effects. The alignment effect prevails in family firms with greater family ownership, founder CEOs, and professional CEOs. In contrast, the entrenchment effect is prevalent when there is greater cash–vote divergence. Despite the occurrence of two distinct types of agency effects in firms with different family ownership and control features, these firms are all disinclined to hire Big N auditors. Additionally, we find that neither the alignment effect nor the entrenchment effect is apparent in family firms with descendant CEOs. Thus, the presence of these CEOs is not related to the choice of auditor.

Our findings lead to a number of theoretical and policy implications. First, this study highlights the heterogeneous features relating to family ownership and control within family firms. Our findings reveal the nature of agency effects embedded in family ownership, cash–vote divergence, and the family identities of CEOs, and suggest that these ownership and control features constitute important determinants of auditor choice. Second, these results advance our understanding of the net effects of the interaction between the demands of family owners and outside investors on a firm's auditor choice, in terms of different agency scenarios of family ownership and control. Our empirical evidence suggests that family firms do not tend to appoint higher-quality auditors due to lower outside investor demand when family alignment is present. Although family entrenchment may create greater outside investor demand for higher-quality

auditors, the entrenched family owners may make such demand difficult to realize. Finally, this study offers practical insights regarding how family firms with different family ownership and control features view and value external auditing, and consequently shape their auditor choices. In particular, given the entrenchment characteristics of cash–vote divergence, policymakers should focus on the potential threat to financial reporting quality that arises in the absence of monitoring by higher-quality auditors, as a result of family owners possessing enhanced control power beyond their cash flow rights.

However, we acknowledge that our research has some limitations, which may be addressed in future. First, this study focused on the observable structural features of family firms. This may lead to underestimation of the effects of the unobservable attitudes of controlling family owners and outside investors toward the value of external audits. Second, although private family firms are a common feature around the world, we confined our analysis to listed family firms. Listed and private family firms are generally different in size, organizational structure, and institutional situation. For example, they are likely to have different corporate lifecycle stages and to function in different regulatory environments. Furthermore, listed family firms, compared with private ones, are also more likely to access equity markets in order to raise additional capital. Therefore, it is not clear whether our findings would be replicated for small, private family firms.

ENDNOTES

1. See the detailed discussion below, in the section entitled “Family Firms and Corporate Governance in Taiwan.”
2. Unlike in Taiwan, audit firms in other countries (e.g., the United States or the United Kingdom) can be formed as entities with limited liability. Individual partners in audit firms with unlimited liability face higher levels of potential liability than those in firms with limited liability. Prior research has demonstrated that audit quality is higher when auditors have unlimited liability than when they have limited liability (Dye, 1995).
3. The “Big N auditors” refers to the Big 4 or the Big 5 auditors. Before June 1, 2003, Taiwan’s top-tier audit firms were the Big 5, namely T.N. Soong & Co. (an affiliate of Arthur Andersen), PricewaterhouseCoopers, KPMG, Deloitte and Touche, and Ernst & Young. Following the Enron scandal and Andersen’s consequent ceasing of operations on August 31, 2002, T.N. Soong & Co. merged with Deloitte and Touche on June 1, 2003. The clients of T.N. Soong were also transferred to Deloitte and Touche. Consequently, after June 1, 2003, Taiwan’s top-tier audit firms became the Big 4, namely PricewaterhouseCoopers, KPMG, Deloitte and Touche, and Ernst & Young. Accordingly, before 2003, our measure of auditor quality (*AUDITOR*) measures top-tier designation according to whether the auditor belongs to one of the Big 5 audit firms. After 2003, *AUDITOR* measures auditor quality according to whether the auditor belongs to one of the Big 4 audit firms.
4. *Business Groups in Taiwan* is a book published annually by the China Credit Information Services Ltd.
5. See Endnote 3 for the historical development of Big N audit firms in Taiwan.

6. The voting rights held by family owners (*FVR*) include shareholdings that are not directly owned, but are still controlled by the family member over direct cash flow rights. The data for voting rights is obtained from the Taiwan Economic Journal (TEJ) database. This database follows the measure used by La Porta, Lopez-de-Silanes, and Shleifer (1999) to define voting rights, which include shareholdings directly owned and indirectly controlled by ultimate controlling shareholders.
7. Industrial Diversification = $-\sum_i [P_i \ln(1/P_i)]$, where P_i is the proportion of sales generated in industry segment i , and $\ln(1/P_i)$ is the weight given to each industry segment i .
8. According to Anderson, Duru, and Reeb (2009), the opacity index is developed by ranking four individual proxies for opacity (i.e., trading volume, bid–ask spread, analyst following, and analyst forecast errors) into deciles, with the most opaque firms taking a value of ten and the least opaque firms assuming a value of one. The four rankings are then summed and scaled by a factor of 40 to provide an index that ranges from 0.1 to 1.0 for each sample firm.

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TABLE 1
Characteristics of the Sample Firms

| <i>Panel A: Distribution crossing years</i> | | | | |
|---|---------|------------|----------------|------------|
| Year | All (n) | Family (n) | Non-family (n) | Family (%) |
| 1996 | 325 | 234 | 91 | 72.00% |
| 1997 | 407 | 298 | 109 | 73.21% |
| 1998 | 388 | 272 | 116 | 70.10% |
| 1999 | 471 | 313 | 158 | 66.45% |
| 2000 | 549 | 375 | 174 | 68.31% |
| 2001 | 578 | 408 | 170 | 70.58% |
| 2002 | 618 | 418 | 200 | 67.63% |
| 2003 | 767 | 493 | 274 | 64.27% |
| 2004 | 894 | 595 | 299 | 66.55% |
| 2005 | 989 | 627 | 362 | 63.39% |
| 2006 | 1089 | 688 | 401 | 63.17% |
| 2007 | 1139 | 719 | 420 | 63.13% |
| 2008 | 996 | 629 | 367 | 63.15% |
| 2009 | 965 | 588 | 377 | 60.93% |
| 2010 | 963 | 596 | 367 | 61.88% |
| 2011 | 979 | 595 | 384 | 60.77% |
| 2012 | 998 | 605 | 393 | 60.62% |
| 2013 | 1029 | 636 | 393 | 61.81% |
| 2014 | 1032 | 663 | 369 | 64.24% |
| 2015 | 1049 | 659 | 390 | 62.82% |
| Total | 16,225 | 10,411 | 5,814 | 64.17% |

| <i>Panel B: Distribution crossing industries</i> | | | | | |
|--|-------------------------------------|---------|------------|----------------|------------|
| TEJ code | Industry name | All (n) | Family (n) | Non-family (n) | Family (%) |
| 11 | Cement | 116 | 104 | 12 | 89.65% |
| 12 | Foods | 521 | 450 | 71 | 86.37% |
| 13 | Plastics | 573 | 417 | 156 | 72.77% |
| 14 | Textiles | 1,036 | 708 | 328 | 68.33% |
| 15 | Electric Machinery | 921 | 506 | 415 | 54.94% |
| 16 | Electrical and Cable | 255 | 162 | 93 | 63.52% |
| 17 | Chemical, Biotechnology and Medical | 1,038 | 744 | 294 | 71.67% |
| 18 | Glass, Ceramics | 113 | 99 | 14 | 87.61% |
| 19 | Paper, Pulp | 126 | 109 | 17 | 86.50% |
| 20 | Iron and Steel | 497 | 389 | 108 | 78.26% |
| 21 | Rubber | 354 | 329 | 25 | 92.94% |
| 22 | Automobile | 103 | 98 | 5 | 95.15% |
| 23 | Electron | 7,836 | 4,267 | 3,569 | 54.45% |
| 25 | Building Materials and Construction | 837 | 571 | 266 | 68.21% |
| 26 | Shipping and Transportation | 474 | 365 | 109 | 77.00% |
| 27 | Tourism | 251 | 216 | 35 | 86.27% |
| 29 | Trading and Consumer Goods | 347 | 268 | 79 | 77.23% |
| 99 | Others | 827 | 609 | 218 | 73.63% |
| Total | | 16,225 | 10,411 | 5,814 | 64.17% |

TABLE 2
Descriptive Statistics

| <i>Panel A: Ownership and control characteristics of the 10,411 family firms</i> | | | | | | |
|--|--|-----------|---|---------|-----------------------|-----------------------|
| Characteristics | | | Characteristics | | | |
| 1. <i>FOWN</i> , mean | | 34% | 5. <i>FF_CEO</i> | | 23% | |
| 2. <i>FVR</i> , mean | | 42% | 6. <i>FD_CEO</i> | | 31% | |
| 3. Family firms with cash-vote divergence | | 44% | 7. <i>FH_CEO</i> | | 46% | |
| 4. <i>FDIV</i> , mean | | 8% | | | | |
| <i>Panel B: Descriptive statistics for full sample (No. of obs. = 16,225)</i> | | | | | | |
| Variables | Mean | Std. dev. | Median | Minimum | Maximum | |
| <i>Tobin's Q</i> | 1.374 | 1.215 | 1.155 | 0.368 | 5.127 | |
| <i>AUDITOR</i> | 0.803 | 0.352 | 1.000 | 0.000 | 1.000 | |
| <i>SIZE</i> | 15.256 | 1.499 | 15.095 | 12.534 | 19.425 | |
| <i>AGE</i> | 11.595 | 7.148 | 10.000 | 0.000 | 43.000 | |
| <i>LEV</i> | 0.415 | 0.171 | 0.412 | 0.082 | 0.785 | |
| <i>LOSS</i> | 0.175 | 0.394 | 0.000 | 0.000 | 1.000 | |
| <i>ROA</i> | 0.053 | 0.103 | 0.058 | -0.129 | 0.297 | |
| <i>CAPITAL</i> | 0.079 | 0.070 | 0.058 | 0.013 | 0.124 | |
| <i>R&D</i> | 0.057 | 0.150 | 0.042 | 0.000 | 0.101 | |
| <i>FIRM_RISK</i> | 0.174 | 0.104 | 0.149 | 0.029 | 0.347 | |
| <i>GROWTH</i> | 0.204 | 0.424 | 0.126 | -0.268 | 0.942 | |
| <i>BOARD_SIZE</i> | 9.431 | 3.512 | 9.000 | 3.000 | 29.000 | |
| <i>IND_BOARD</i> | 0.142 | 0.159 | 0.136 | 0.000 | 0.684 | |
| <i>AUDIT_COMMIT</i> | 0.077 | 0.266 | 0.000 | 0.000 | 1.000 | |
| <i>DUALITY</i> | 0.319 | 0.461 | 0.000 | 0.000 | 1.000 | |
| <i>BLOCK_OWN</i> | 0.358 | 0.213 | 0.336 | 0.156 | 0.509 | |
| <i>Panel C: Comparison of firm characteristics between family firms and non-family firms</i> | | | | | | |
| Variables | Family firms (No. of obs. = 10,411) | | Non-family firms (No. of obs. = 5,814) | | Difference in | |
| | Mean | Median | Mean | Median | Means (t-stat) | Medians (z-stat) |
| <i>Tobin's Q</i> | 1.499 | 1.389 | 1.149 | 1.128 | 0.350*** (3.305) | 0.261*** (3.196) |
| <i>AUDITOR</i> | 0.755 | 1.000 | 0.887 | 1.000 | -0.132*** (-4.413) | -0.001*** (-4.381) |
| <i>SIZE</i> | 15.612 | 15.368 | 14.617 | 14.425 | 0.995*** (5.400) | 0.943*** (5.067) |
| <i>AGE</i> | 13.042 | 13.000 | 9.004 | 9.000 | 4.038*** (3.555) | 4.000*** (3.769) |
| <i>LEV</i> | 0.403 | 0.372 | 0.436 | 0.412 | -0.033** (-2.222) | -0.040** (-2.338) |
| <i>LOSS</i> | 0.163 | 0.000 | 0.197 | 0.000 | -0.034* (-1.737) | -0.001* (-1.655) |
| <i>ROA</i> | 0.062 | 0.057 | 0.037 | 0.033 | 0.025** (2.181) | 0.024** (2.308) |
| <i>CAPITAL</i> | 0.085 | 0.070 | 0.068 | 0.056 | 0.017 (1.405) | 0.014 (1.330) |
| <i>R&D</i> | 0.062 | 0.049 | 0.048 | 0.040 | 0.014 (1.602) | 0.009 (1.290) |
| <i>FIRM_RISK</i> | 0.151 | 0.148 | 0.214 | 0.195 | -0.063** (-2.309) | -0.047** (-2.219) |
| <i>GROWTH</i> | 0.222 | 0.206 | 0.173 | 0.158 | 0.049** (2.185) | 0.048** (2.305) |
| <i>BOARD_SIZE</i> | 10.143 | 10.000 | 8.155 | 8.000 | 1.988*** (4.318) | 2.000*** (4.794) |
| <i>IND_BOARD</i> | 0.154 | 0.144 | 0.120 | 0.109 | 0.034 (1.146) | 0.035 (1.635) |
| <i>AUDIT_COMMIT</i> | 0.085 | 0.000 | 0.063 | 0.000 | 0.022** (2.191) | 0.001** (2.436) |
| <i>DUALITY</i> | 0.401 | 0.000 | 0.172 | 0.000 | 0.229*** (3.966) | 0.001*** (4.211) |
| <i>BLOCK_OWN</i> | 0.382 | 0.379 | 0.317 | 0.301 | 0.065*** (3.941) | 0.078*** (4.015) |

This table presents descriptive statistics of the variables used in our analyses. *FOWN* is the percentage of common shares held by the family members. *FVR* is the percentage of voting rights held by the family members. *FDIV* is measured as the difference between *FVR* and *FOWN*. *FF_CEO* is a dummy variable with a value of one if the position of CEO is held by the family founder, and zero otherwise. *FD_CEO* is a dichotomous variable that takes the value of one if the position of CEO is held by a descendant, and zero otherwise. *FH_CEO* is a dummy variable that equals one if the family firm has a professional CEO, and zero otherwise. *Tobin's Q* is the sum of the market value of common stock, the book value of preferred stock, and the book value of long-term debt divided by the book value of total assets. *AUDITOR* is a dummy variable that takes a value of one for firms with Big N auditors, and zero otherwise. *SIZE* is the logarithm of total assets. *AGE* is the number of years since incorporation of the firm. *LEV* is calculated as long-term liabilities divided by total assets. *LOSS* is a dummy variable that is equal to one if the firm has reported a net loss in the previous fiscal year, and zero otherwise. *ROA* is the ratio of earnings before interest and taxes to total assets. *CAPITAL* is the ratio of capital expenditures to total property, plants and equipment. *R&D* is the ratio of research and development expenses to total sales. *FIRM_RISK* is the standard deviation of monthly stock returns for the prior 36 months. *GROWTH* is the percentage change in sales over the last three years. *BOARD_SIZE* is the number of directors on board. *IND_BOARD* is the percentage of independent directors on board. *AUDIT_COMMIT* is a dummy variable with a value of one if the company has an audit committee, and zero otherwise. *DUALITY* is a dummy variable with a value of one if the positions of CEO and chairman are held by one person, and zero otherwise. *BLOCK_OWN* is the percentage of common shares held by external blockholders. T-test and Mann-Whitney U test are adopted to examine differences in mean and median, respectively (two-tailed test).

* < .1
** < .05
*** < .01.

TABLE 3
Pearson Correlation Matrix

| Variables | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. |
|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|----------|
| 1. <i>Tobin's Q</i> | 1 | | | | | | | | | | | | | | | | | | | | | |
| 2. <i>AUDITOR</i> | 0.029 | 1 | | | | | | | | | | | | | | | | | | | | |
| 3. <i>FAM</i> | 0.044 | -0.051 | 1 | | | | | | | | | | | | | | | | | | | |
| 4. <i>FOWN</i> | 0.062 | -0.074 | 0.013 | 1 | | | | | | | | | | | | | | | | | | |
| 5. <i>FDIV</i> | -0.036 | -0.049 | 0.015 | 0.039 | 1 | | | | | | | | | | | | | | | | | |
| 6. <i>FF_CEO</i> | 0.028 | -0.036 | 0.018 | 0.066 | 0.046 | 1 | | | | | | | | | | | | | | | | |
| 7. <i>FD_CEO</i> | 0.022 | -0.029 | 0.015 | 0.054 | 0.037 | 0.069 | 1 | | | | | | | | | | | | | | | |
| 8. <i>FH_CEO</i> | 0.016 | -0.023 | 0.021 | 0.031 | 0.029 | 0.023 | 0.077 | 1 | | | | | | | | | | | | | | |
| 9. <i>SIZE</i> | 0.034 | 0.027 | 0.039 | 0.022 | 0.035 | 0.057 | 0.062 | 0.085 | 1 | | | | | | | | | | | | | |
| 10. <i>AGE</i> | -0.008 | 0.022 | 0.082 | 0.076 | 0.088 | 0.074 | 0.096 | 0.109 | 0.010 | 1 | | | | | | | | | | | | |
| 11. <i>LEV</i> | -0.017 | 0.031 | -0.026 | -0.033 | -0.027 | -0.023 | -0.038 | -0.042 | 0.001 | 0.017 | 1 | | | | | | | | | | | |
| 12. <i>LOSS</i> | -0.026 | 0.058 | -0.033 | -0.029 | -0.035 | -0.027 | -0.039 | -0.035 | 0.018 | 0.001 | 0.010 | 1 | | | | | | | | | | |
| 13. <i>ROA</i> | 0.143 | 0.123 | 0.135 | 0.147 | 0.125 | 0.118 | 0.109 | 0.134 | -0.006 | 0.031 | 0.038 | 0.006 | 1 | | | | | | | | | |
| 14. <i>CAPITAL</i> | 0.034 | 0.041 | 0.014 | 0.022 | 0.019 | 0.022 | 0.030 | 0.028 | -0.007 | -0.011 | 0.037 | 0.024 | 0.032 | 1 | | | | | | | | |
| 15. <i>R&D</i> | 0.046 | 0.025 | 0.021 | 0.030 | 0.034 | 0.024 | 0.023 | 0.021 | 0.018 | -0.012 | -0.045 | 0.023 | -0.038 | -0.006 | 1 | | | | | | | |
| 16. <i>FIRM_RISK</i> | -0.027 | -0.028 | -0.026 | -0.019 | -0.021 | -0.025 | -0.034 | -0.042 | 0.041 | 0.032 | 0.075 | -0.028 | -0.030 | 0.043 | -0.005 | 1 | | | | | | |
| 17. <i>GROWTH</i> | 0.053 | 0.080 | 0.031 | 0.039 | 0.042 | 0.034 | 0.052 | 0.068 | -0.006 | 0.075 | 0.146 | 0.047 | 0.232 | 0.134 | 0.035 | -0.002 | 1 | | | | | |
| 18. <i>BOARD_SIZE</i> | -0.096 | 0.134 | 0.018 | 0.014 | 0.023 | 0.032 | 0.065 | 0.077 | -0.003 | -0.011 | -0.037 | 0.091 | 0.019 | 0.031 | 0.109 | -0.082 | -0.003 | 1 | | | | |
| 19. <i>IND_BOARD</i> | 0.081 | 0.097 | 0.022 | 0.020 | 0.027 | 0.041 | 0.057 | 0.061 | -0.018 | -0.005 | -0.022 | -0.023 | -0.002 | -0.011 | 0.025 | 0.028 | -0.131 | 0.023 | 1 | | | |
| 20. <i>AUDIT_COMMIT</i> | 0.026 | 0.033 | 0.031 | 0.042 | 0.038 | 0.059 | 0.051 | 0.075 | 0.036 | -0.03 | -0.078 | -0.014 | 0.037 | 0.052 | -0.009 | 0.047 | 0.045 | 0.127 | 0.031 | 1 | | |
| 21. <i>DUALITY</i> | -0.032 | -0.014 | 0.056 | 0.045 | 0.051 | 0.067 | 0.087 | 0.101 | 0.081 | 0.062 | 0.130 | -0.049 | -0.062 | -0.054 | 0.042 | -0.017 | 0.064 | 0.035 | 0.058 | -0.067 | 1 | |
| 22. <i>BLOCK_OWN</i> | 0.058 | 0.065 | 0.089 | -0.026 | 0.047 | 0.033 | 0.025 | 0.016 | 0.057 | -0.030 | -0.011 | 0.166 | 0.038 | 0.049 | -0.055 | 0.062 | 0.107 | 0.046 | 0.021 | 0.054 | -0.033 | 1 |

This table presents the Pearson's correlation matrix of all variables used in our regression analyses. Coefficients in bold indicate that the correlations are significant at the 5% level or better (two-tailed test). See Table 2 for detailed variable definitions.

TABLE 4
The Associations between Family Ownership and Control and Firm Performance

| Variables | <i>Dependent variable: Tobin's Q</i> | | |
|---------------------|--------------------------------------|-----------------------|-----------------------|
| | (1) | (2) | (3) |
| Intercept | 1.723*** (3.554) | 1.882*** (3.671) | 1.835*** (3.265) |
| <i>FAM</i> | 0.090*** (3.188) | | |
| <i>FOWN</i> | | 0.201*** (2.598) | |
| <i>FDIV</i> | | -0.242** (-2.505) | |
| <i>FF_CEO</i> | | | 0.153*** (3.620) |
| <i>FD_CEO</i> | | | 0.051 (1.118) |
| <i>FH_CEO</i> | | | 0.108*** (3.363) |
| <i>BOARD_SIZE</i> | -1.127** (-2.445) | -1.134** (-2.461) | -1.172** (-2.543) |
| <i>IND_BOARD</i> | 1.421*** (2.615) | 1.433*** (2.641) | 1.478*** (2.719) |
| <i>AUDIT_COMMIT</i> | 1.274 (1.260) | 1.282 (1.268) | 1.325 (1.310) |
| <i>DUALITY</i> | -1.056 (-1.318) | -1.063 (-1.326) | -1.098 (-1.371) |
| <i>BLOCK_OWN</i> | 1.459** (2.243) | 1.468** (2.258) | 1.517** (2.333) |
| <i>SIZE</i> | 0.102*** (3.361) | 0.105*** (4.541) | 0.099*** (4.065) |
| <i>AGE</i> | -0.025*** (-2.737) | -0.030*** (-2.926) | -0.032*** (-2.780) |
| <i>LEV</i> | -0.109** (-2.130) | -0.112** (-2.110) | -0.108** (-2.068) |
| <i>CAPITAL</i> | 1.102* (1.907) | 1.105* (1.872) | 1.102* (1.883) |
| <i>R&D</i> | 1.917*** (2.911) | 1.890*** (3.098) | 1.922*** (3.094) |
| <i>FIRM_RISK</i> | -0.043*** (-3.109) | -0.047*** (-3.051) | -0.042*** (-3.137) |
| <i>GROWTH</i> | 0.138** (1.984) | 0.139** (1.999) | 0.142** (1.991) |
| Adjusted R^2 | 0.509 | 0.515 | 0.537 |
| <i>F</i> -statistic | 5.913*** | 5.946*** | 6.045*** |
| No. of obs. | 16,225 | 16,225 | 16,225 |

This table reports the effects of the presence of family firms (*FAM*), family ownership (*FOWN*), cash-vote divergence (*FDIV*), the presences of founder CEOs (*FF_CEO*), descendant CEOs (*FD_CEO*) and professional CEOs (*FH_CEO*) on the Tobin's Q. See Table 2 for detailed variable definitions. Fixed effects of years and industries are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1

** < .05

*** < .01

TABLE 5
The Associations between Family Ownership and Control and Auditor Choice

| Variables | <i>Dependent variable: AUDITOR</i> | | |
|---------------------|------------------------------------|-----------------------|-----------------------|
| | (1) | (2) | (3) |
| Intercept | 0.337** (2.115) | 0.340** (2.221) | 0.328** (2.181) |
| <i>FAM</i> | -0.199*** (-4.144) | | |
| <i>FOWN</i> | | -0.634*** (-5.126) | |
| <i>FDIV</i> | | -1.407*** (-3.323) | |
| <i>FF_CEO</i> | | | -0.303*** (-5.197) |
| <i>FD_CEO</i> | | | -0.122 (-1.114) |
| <i>FH_CEO</i> | | | -0.214*** (-4.116) |
| <i>BOARD_SIZE</i> | 0.113** (2.179) | 0.115** (2.344) | 0.108** (2.372) |
| <i>IND_BOARD</i> | 0.375** (2.329) | 0.379** (2.253) | 0.383** (2.419) |
| <i>AUDIT_COMMIT</i> | 0.244* (1.722) | 0.235* (1.694) | 0.234* (1.912) |
| <i>DUALITY</i> | -0.050 (-1.174) | -0.052 (-1.228) | -0.054 (-1.148) |
| <i>BLOCK_OWN</i> | 0.450** (2.198) | 0.443** (2.212) | 0.447** (2.286) |
| <i>SIZE</i> | 0.064*** (3.827) | 0.067*** (3.939) | 0.073*** (4.015) |
| <i>AGE</i> | 0.019*** (2.680) | 0.024*** (2.811) | 0.027*** (2.985) |
| <i>LEV</i> | 0.045** (2.003) | 0.046** (2.018) | 0.048** (2.097) |
| <i>LOSS</i> | 0.084* (1.728) | 0.092* (1.855) | 0.098** (2.005) |
| <i>ROA</i> | 0.092** (2.373) | 0.094** (2.349) | 0.097** (2.422) |
| Log-likelihood | 183.700*** | 189.291*** | 221.626*** |
| No. of obs. | 16,225 | 16,225 | 16,225 |

This table reports the effects of the presence of family firms (*FAM*), family ownership (*FOWN*), cash-vote divergence (*FDIV*), the presences of founder CEOs (*FF_CEO*), descendant CEOs (*FD_CEO*) and professional CEOs (*FH_CEO*) on auditor choice (*AUDITOR*). See Table 2 for detailed variable definitions. Fixed effects of years and industries are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1

** < .05

***<.01

TABLE 6
Organizational Situations and the Effects of Family Ownership and Control on Auditor Choice

| Panel A: Issuing Frequency Dimension | | | | | | | | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|----------------------|---------------------|-----------------------|----------------------|-----------------------|-----------------------|--------------------|----------------------|----------------|
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | ISSUE | FAM× ISSUE | FOWN× ISSUE | FDIV× ISSUE | FF_CEO× ISSUE | FD_CEO× ISSUE | FH_CEO× ISSUE | Log-likelihood |
| (1) | -0.316*** (-3.821) | | | | | | 0.088** (2.198) | -0.628*** (-3.829) | | | | | | 220.178*** |
| (2) | | -0.794** (-2.133) | -1.894*** (-2.787) | | | | 0.095* (1.841) | | -1.802** (-2.515) | -2.399* (-1.880) | | | | 211.761*** |
| (3) | | | | -0.423** (-2.080) | -0.096 (-0.982) | -0.348* (-1.902) | 0.094* (1.677) | | | | -0.913* (-1.656) | -0.185 (-1.143) | -0.703** (-2.437) | 230.656*** |
| Panel B: Operational Risk Dimension | | | | | | | | | | | | | | |
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | ORISK | FAM× ORISK | FOWN× ORISK | FDIV× ORISK | FF_CEO× ORISK | FD_CEO× ORISK | FH_CEO× ORISK | Log-likelihood |
| (4) | -0.285** (-2.557) | | | | | | 0.115** (2.552) | -0.567** (-2.207) | | | | | | 246.324*** |
| (5) | | -0.638** (-2.524) | -1.195*** (-2.845) | | | | 0.105** (2.341) | | -1.131** (-2.190) | -1.671*** (-2.773) | | | | 255.788*** |
| (6) | | | | -0.427*** (-3.255) | -0.121 (-1.464) | -0.286** (-2.521) | 0.111* (1.899) | | | | -0.911*** (-3.267) | -0.200 (-1.298) | -0.661* (-1.819) | 270.316*** |
| Panel C: Organizational Complexity Dimension | | | | | | | | | | | | | | |
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | COMPLE | FAM× COMPLE | FOWN× COMPLE | FDIV× COMPLE | FF_CEO× COMPLE | FD_CEO× COMPLE | FH_CEO× COMPLE | Log-likelihood |
| (7) | -0.262*** (-3.054) | | | | | | 0.109*** (3.230) | -0.422** (-2.041) | | | | | | 189.024*** |
| (8) | | -0.624*** (-3.616) | -1.259** (-1.962) | | | | 0.116*** (2.643) | | -1.022* (-1.852) | -1.566** (-2.020) | | | | 197.433*** |
| (9) | | | | -0.481** (-2.017) | -0.091 (-1.556) | -0.327* (-1.772) | 0.107*** (3.066) | | | | -0.772** (-2.101) | -0.131 (-1.142) | -0.530** (-2.476) | 219.150*** |
| Panel D: Opacity/Transparency Dimension | | | | | | | | | | | | | | |
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | OPACITY | FAM× OPACITY | FOWN× OPACITY | FDIV× OPACITY | FF_CEO× OPACITY | FD_CEO× OPACITY | FH_CEO× OPACITY | Log-likelihood |
| (10) | -0.232*** (-4.569) | | | | | | 0.214** (2.363) | -0.476*** (-3.220) | | | | | | 223.647*** |
| (11) | | -1.145** (-1.973) | -2.317* (-1.866) | | | | 0.217** (2.493) | | -2.389** (-2.196) | -2.905*** (-3.313) | | | | 227.221*** |
| (12) | | | | -0.467*** (-3.004) | -0.071 (-0.588) | -0.235** (-2.179) | 0.208** (2.294) | | | | -0.908** (-2.006) | -0.240 (-1.169) | 0.561** (-2.402) | 241.533*** |

This table shows the interactive effects of the family ownership and control features and the frequency of equity offerings (*ISSUE*), operational risk (*ORISK*), organizational complexity (*COMPLE*), and corporate opacity (*OPACITY*) on auditor choice. *ISSUE* is a dummy variable that takes the value of one if the frequency of that firm's equity offerings is greater than or equal to the sample median, and zero otherwise. *ORISK* is measured by the five-year rolling standard deviation of return on assets. *COMPLE* is measured based on industry diversification. *OPACITY* is the opacity index. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *ISSUE* are *FAM×ISSUE*, *FOWN×ISSUE*, *FDIV×ISSUE*, *FF_CEO×ISSUE*, *FD_CEO×ISSUE* and *FH_CEO×ISSUE*, respectively. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *ORISK* are *FAM×ORISK*, *FOWN×ORISK*, *FDIV×ORISK*, *FF_CEO×ORISK*, *FD_CEO×ORISK* and *FH_CEO×ORISK*, respectively. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *COMPLE* are *FAM×COMPLE*, *FOWN×COMPLE*, *FDIV×COMPLE*, *FF_CEO×COMPLE*, *FD_CEO×COMPLE* and *FH_CEO×COMPLE*, respectively. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *OPACITY* are *FAM×OPACITY*, *FOWN×OPACITY*, *FDIV×OPACITY*, *FF_CEO×OPACITY*, *FD_CEO×OPACITY* and *FH_CEO×OPACITY*, respectively. See Table 2 for the definitions of *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO* and *FH_CEO*. Fixed effects of years and industries and control variables are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1
** < .05
*** < .01

TABLE 7
Outside Investors and the Effects of Family Ownership and Control on Auditor Choice

| Panel A: Foreign Investors Dimension | | | | | | | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|-----------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|----------------------|----------------|
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | FOREIGN | FAM×FOREIGN | FOWN×FOREIGN | FDIV×FOREIGN | FF_CEO×FOREIGN | FD_CEO×FOREIGN | FH_CEO×FOREIGN | Log-likelihood |
| (1) | -0.270*** (-2.645) | | | | | | 1.852*** (3.184) | -1.026*** (-3.519) | | | | | | 236.821*** |
| (2) | | -0.550*** (-3.848) | -0.932* (-1.747) | | | | 2.104*** (4.577) | | -2.228*** (-3.477) | -3.006** (-2.492) | | | | 228.327*** |
| (3) | | | | -0.480** (-2.452) | -0.125 (-1.606) | -0.269** (-2.067) | 1.993*** (4.205) | | | | -1.513** (-2.347) | -0.466 (-1.198) | -0.878** (-2.116) | 238.801*** |
| Panel B: Pressure Resistant Investors Dimension | | | | | | | | | | | | | | |
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | RESIST | FAM×RESIST | FOWN×RESIST | FDIV×RESIST | FF_CEO×RESIST | FD_CEO×RESIST | FH_CEO×RESIST | Log-likelihood |
| (4) | -0.281** (-2.498) | | | | | | 0.659** (2.066) | -0.817*** (-3.212) | | | | | | 233.346*** |
| (5) | | -0.500** (-2.158) | -0.569* (-1.949) | | | | 0.652** (2.404) | | -0.949*** (-3.077) | -1.489*** (-2.599) | | | | 223.474*** |
| (6) | | | | -0.636*** (-2.733) | -0.170 (-1.418) | -0.391** (-2.230) | 0.685** (2.540) | | | | -1.512*** (-3.761) | -0.403 (-1.167) | -0.960** (-2.365) | 240.854*** |
| Panel C: Pressure Sensitive Investors Dimension | | | | | | | | | | | | | | |
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | SENSIT | FAM×SENSIT | FOWN×SENSIT | FDIV×SENSIT | FF_CEO×SENSIT | FD_CEO×SENSIT | FH_CEO×SENSIT | Log-likelihood |
| (7) | -0.262*** (-3.381) | | | | | | 0.531 (1.329) | -0.718 (-1.198) | | | | | | 203.156*** |
| (8) | | -0.436*** (-4.074) | -0.547** (-2.432) | | | | 0.497 (1.359) | | -0.829 (-1.177) | -1.016 (-1.197) | | | | 198.156*** |
| (9) | | | | -0.587*** (-3.720) | -0.110 (-1.508) | -0.234*** (-4.141) | 0.591 (1.177) | | | | -1.805 (-1.228) | -0.409 (-1.238) | -0.816 (-1.333) | 217.237*** |
| Panel D: Individual Blockholders Dimension | | | | | | | | | | | | | | |
| Model | FAM | FOWN | FDIV | FF_CEO | FD_CEO | FH_CEO | IND_OWN | FAM×IND_OWN | FOWN×IND_OWN | FDIV×IND_OWN | FF_CEO×IND_OWN | FD_CEO×IND_OWN | FH_CEO×IND_OWN | Log-likelihood |
| (10) | -0.313*** (-3.592) | | | | | | 0.421 (1.532) | -0.793 (-1.396) | | | | | | 183.317*** |
| (11) | | -0.510*** (-3.825) | -0.579*** (-4.058) | | | | 0.436 (1.286) | | -1.020 (-1.558) | -2.209 (-1.453) | | | | 192.200*** |
| (12) | | | | -0.540** (-2.355) | -0.140 (-1.532) | -0.252* (-1.882) | 0.443 (1.318) | | | | -1.827 (-1.365) | -0.493 (-1.605) | -0.897 (-1.416) | 208.200*** |

This table presents the interactive effects of the family ownership and control features and foreign investors (*FOREIGN*), pressure resistant investors (*RESIST*), pressure sensitive investors (*SENSIT*), and individual blockholders (*IND_OWN*) on auditor choice. *FOREIGN* is the percentage of common shares held by foreign investors. *RESIST* is the percentage of common shares held by pressure resistant investors. *SENSIT* is the percentage of common shares held by pressure sensitive investors. *IND_OWN* is the percentage of common shares held by outside individual blockholders. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *FOREIGN* are *FAM×FOREIGN*, *FOWN×FOREIGN*, *FDIV×FOREIGN*, *FF_CEO×FOREIGN*, *FD_CEO×FOREIGN* and *FH_CEO×FOREIGN*, respectively. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *RESIST* are *FAM×RESIST*, *FOWN×RESIST*, *FDIV×RESIST*, *FF_CEO×RESIST*, *FD_CEO×RESIST* and *FH_CEO×RESIST*, respectively. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *SENSIT* are *FAM×SENSIT*, *FOWN×SENSIT*, *FDIV×SENSIT*, *FF_CEO×SENSIT*, *FD_CEO×SENSIT* and *FH_CEO×SENSIT*, respectively. Interaction terms between *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO*, *FH_CEO* and *IND_OWN* are *FAM×IND_OWN*, *FOWN×IND_OWN*, *FDIV×IND_OWN*, *FF_CEO×IND_OWN*, *FD_CEO×IND_OWN* and *FH_CEO×IND_OWN*, respectively. See Table 2 for the definitions of *FAM*, *FOWN*, *FDIV*, *FF_CEO*, *FD_CEO* and *FH_CEO*. Fixed effects of years and industries and control variables are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1
** < .05
*** < .01

TABLE 8
Results obtained using Alternative Measures for Audit Quality

| Variables | Dependent variable: <i>INSPEC</i> | | | Dependent variable: <i>AUDIT_FEE</i> | | |
|---------------------|--------------------------------------|-----------------------|-----------------------|---|-----------------------|-----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Intercept | 0.593** (2.374) | 0.600** (2.441) | 0.585** (2.411) | 5.254*** (3.155) | 5.337*** (3.180) | 5.138*** (3.110) |
| <i>FAM</i> | -0.456** (-2.476) | | | -0.536*** (-3.906) | | |
| <i>FOWN</i> | | -0.579*** (-3.078) | | | -0.900*** (-4.522) | |
| <i>FDIV</i> | | -0.817** (-2.149) | | | 1.426*** (3.679) | |
| <i>FF_CEO</i> | | | -0.562*** (-3.024) | | | -0.775*** (-4.166) |
| <i>FD_CEO</i> | | | -0.356 (1.077) | | | -0.509 (-1.421) |
| <i>FH_CEO</i> | | | -0.472** (-2.070) | | | -0.619** (-2.073) |
| <i>BOARD_SIZE</i> | 0.342* (1.958) | 0.336** (2.037) | 0.335** (2.242) | | | |
| <i>IND_BOARD</i> | 0.625* (1.713) | 0.630* (1.749) | 0.631* (1.745) | | | |
| <i>AUDIT_COMMIT</i> | 0.504** (2.162) | 0.496** (2.357) | 0.494** (2.229) | | | |
| <i>DUALITY</i> | -0.228*** (-2.985) | -0.233*** (-3.063) | -0.237*** (-2.952) | | | |
| <i>BLOCK_OWN</i> | 1.465*** (3.230) | 1.479*** (3.252) | 1.462*** (3.319) | | | |
| <i>AGE</i> | 0.139* (1.671) | 0.143* (1.716) | 0.142* (1.763) | | | |
| <i>ROA</i> | 0.310 (1.572) | 0.314 (1.569) | 0.318 (1.588) | | | |
| <i>SIZE</i> | 0.258** (1.996) | 0.264** (2.031) | 0.275** (2.144) | 1.287*** (2.757) | 1.325*** (2.762) | 1.384*** (2.853) |
| <i>LEV</i> | 0.216 (1.444) | 0.222 (1.495) | 0.225 (1.478) | 0.288* (1.768) | 0.290* (1.826) | 0.293* (1.908) |
| <i>LOSS</i> | 0.296*** (3.619) | 0.311*** (3.560) | 0.319*** (3.555) | 0.788 (1.294) | 0.801 (1.341) | 0.775 (1.321) |
| <i>INVREC</i> | | | | 1.009** (2.038) | 1.023** (2.208) | 1.040** (2.107) |
| <i>AUDITOR</i> | | | | 1.017*** (2.829) | 1.026*** (2.936) | 1.031*** (2.948) |
| Adjusted R^2 | 0.528 | 0.531 | 0.542 | 0.461 | 0.472 | 0.477 |
| F-statistic | 5.808*** | 5.839*** | 5.914*** | 5.416*** | 5.536*** | 5.473*** |
| No. of obs. | 16,225 | 16,225 | 16,225 | 5,006 | 5,006 | 5,006 |

This table reports the effects of the presence of family firms (*FAM*), family ownership (*FOWN*), cash-vote divergence (*FDIV*), the presences of founder CEOs (*FF_CEO*), descendant CEOs (*FD_CEO*) and professional CEOs (*FH_CEO*) on the choice of industry-specialist auditors (*INSPEC*) and audit fees (*AUDIT_FEE*). *INSPEC* is the percentage of sales for all firms in industry that are audited by auditor of firm in industry to sales for all firms in industry. *AUDIT_FEE* is the natural logarithms of audit fees paid by the firms. See Table 2 for definitions of the other variables. Fixed effects of years and industries are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1
** < .05
*** < .01

TABLE 9
Results Obtained using an Alternative Measure for the Control-enhancing Mechanism

| Variables | Dependent variable: <i>Tobin's Q</i> | | Dependent variable: <i>AUDITOR</i> | |
|-------------------------|---|-----------------------|---------------------------------------|-----------------------|
| | (1) | (2) | (3) | (4) |
| Intercept | 1.738*** (3.026) | 1.772*** (3.085) | 0.359** (2.377) | 0.368** (2.415) |
| <i>FOWN</i> | 0.314*** (4.396) | 0.322*** (4.186) | -0.592*** (-3.552) | -0.586*** (-2.934) |
| <i>FDIV_BOARD</i> | -1.139** (-2.272) | | -2.667** (-2.368) | |
| <i>FDIV_Ratio</i> | | -0.965*** (-3.475) | | -1.566** (-1.975) |
| <i>BOARD_SIZE</i> | -1.048** (-2.274) | -1.068** (-2.319) | 0.137** (2.518) | 0.139** (2.559) |
| <i>IND_BOARD</i> | 1.322** (2.432) | 1.348** (2.480) | 0.390** (2.490) | 0.387** (2.529) |
| <i>AUDIT_COMMIT</i> | 1.185 (1.172) | 1.208 (1.195) | 0.297* (1.768) | 0.302* (1.796) |
| <i>DUALITY</i> | -0.982 (-1.226) | -1.001 (-1.250) | -0.068 (-1.462) | -0.071 (-1.485) |
| <i>BLOCK_OWN</i> | 1.357** (2.086) | 1.383** (2.127) | 0.437** (2.235) | 0.444** (2.271) |
| <i>LOSS</i> | | | 0.100** (2.211) | 0.101** (2.247) |
| <i>ROA</i> | | | 0.125*** (2.942) | 0.127*** (2.989) |
| <i>SIZE</i> | 0.109*** (2.589) | 0.111*** (2.639) | 0.084*** (3.138) | 0.085*** (3.188) |
| <i>AGE</i> | -0.043* (-1.938) | -0.044** (-1.976) | 0.037*** (3.184) | 0.040*** (3.236) |
| <i>LEV</i> | -0.112* (-1.663) | -0.115* (-1.696) | 0.033** (2.207) | 0.035** (2.243) |
| <i>CAPITAL</i> | 1.206* (1.902) | 1.209* (1.939) | | |
| <i>R&D</i> | 1.859*** (3.160) | 1.896*** (3.221) | | |
| <i>FIRM_RISK</i> | -0.058*** (-2.910) | -0.061*** (-2.967) | | |
| <i>GROWTH</i> | 0.164* (1.953) | 0.173** (1.991) | | |
| Adjusted R ² | 0.477 | 0.471 | | |
| F-statistic | 6.199*** | 6.183*** | | |
| Log-likelihood | | | 198.590*** | 201.777*** |
| No. of obs. | 16,225 | 16,225 | 16,225 | 16,225 |

This table presents the effects of two alternative proxies for enhanced family control rights, *FDIV_BOARD* and *FDIV_Ratio*, on the Tobin's Q (*Tobin's Q*) and auditor choice (*AUDITOR*). *FDIV_BOARD* is the difference between the percentage of board members dominated by the founding families and the percentage of voting rights controlled by them. *FDIV_Ratio* is the ratio of voting rights divided by cash flow rights held by family owners. See Table 2 for detailed definitions of the other variables. Fixed effects of years and industries are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1
** < .05
*** < .01

TABLE 10
Results after Removing Firms from Industries with Family Firm Dominance

| Variables | Dependent variable: <i>Tobin's Q</i> | | | Dependent variable: <i>AUDITOR</i> | | |
|-------------------------|---|-----------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Intercept | 1.686*** (3.477) | 1.711*** (3.383) | 1.795*** (3.194) | 0.442** (2.170) | 0.440** (2.242) | 0.430** (2.319) |
| <i>FAM</i> | 0.090*** (3.119) | | | -0.261*** (-4.429) | | |
| <i>FOWN</i> | | 0.197** (2.542) | | | -0.730*** (-4.971) | |
| <i>FDIV</i> | | -0.245** (-2.275) | | | -1.315*** (-3.252) | |
| <i>FF_CEO</i> | | | 0.150*** (3.542) | | | -0.379*** (-5.088) |
| <i>FD_CEO</i> | | | 0.057 (1.094) | | | -0.159 (-1.460) |
| <i>FH_CEO</i> | | | 0.107*** (3.281) | | | -0.280*** (-4.392) |
| <i>BOARD_SIZE</i> | -1.103** (-2.392) | -1.109** (-2.463) | -1.117** (-2.387) | 0.138** (2.229) | 0.141** (2.051) | 0.135** (2.107) |
| <i>IND_BOARD</i> | 1.390** (2.559) | 1.400*** (2.575) | 1.419*** (2.653) | 0.429*** (3.052) | 0.427*** (2.932) | 0.422*** (3.168) |
| <i>AUDIT_COMMIT</i> | 1.247 (1.220) | 1.250 (1.195) | 1.256 (1.282) | 0.320 (1.470) | 0.316 (1.444) | 0.317 (1.505) |
| <i>DUALITY</i> | -1.044 (-1.290) | -1.049 (-1.297) | -1.054 (-1.341) | -0.065 (-1.538) | -0.068 (-1.599) | -0.071 (-1.503) |
| <i>BLOCK_OWN</i> | 1.428** (2.195) | 1.436** (2.209) | 1.444** (2.283) | 0.589*** (2.880) | 0.619*** (2.937) | 0.604*** (2.995) |
| <i>LOSS</i> | | | | 0.083** (2.013) | 0.087** (2.275) | 0.095** (2.260) |
| <i>ROA</i> | | | | 0.124** (2.511) | 0.130** (2.484) | 0.136** (2.392) |
| <i>SIZE</i> | 0.100*** (3.892) | 0.103*** (4.442) | 0.097*** (3.977) | 0.059*** (2.624) | 0.065** (2.513) | 0.063*** (2.747) |
| <i>AGE</i> | -0.024*** (-2.654) | -0.029*** (-2.809) | -0.030*** (-2.620) | 0.036** (2.263) | 0.040** (2.189) | 0.043** (2.276) |
| <i>LEV</i> | -0.106** (-2.067) | -0.109** (-2.045) | -0.105** (-2.005) | 0.061** (2.108) | 0.062** (2.149) | 0.064** (2.173) |
| <i>CAPITAL</i> | 1.079* (1.934) | 1.089* (1.832) | 1.078* (1.848) | | | |
| <i>R&D</i> | 1.788*** (2.848) | 1.813*** (3.081) | 1.811*** (3.027) | | | |
| <i>FIRM_RISK</i> | -0.042*** (-3.042) | -0.045*** (-2.954) | -0.040*** (-3.069) | | | |
| <i>GROWTH</i> | 0.135 (1.544) | 0.136 (1.538) | 0.139 (1.498) | | | |
| Adjusted R ² | 0.480 | 0.485 | 0.526 | | | |
| F-statistic | 5.924*** | 5.843*** | 6.189*** | | | |
| Log-likelihood | | | | 191.647*** | 194.865*** | 203.330*** |
| No. of obs. | 15,652 | 15,652 | 15,652 | 15,652 | 15,652 | 15,652 |

This table reports the effects of the presence of family firms (*FAM*), family ownership (*FOWN*), cash-vote divergence (*FDIV*), the presences of founder CEOs (*FF_CEO*), descendant CEOs (*FD_CEO*) and professional CEOs (*FH_CEO*) on the Tobin's Q (*Tobin's Q*) and auditor choice (*AUDITOR*) after removing sample firms in the Automobile, Rubber, and Cement industries. See Table 2 for detailed variable definitions. Fixed effects of years and industries are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1
** < .05
*** < .01

TABLE 11
Results Controlling for Endogeneity and Nonlinear Relationship

| Variables | Tobin's Q Model | | | Auditor Choice Model | | | Nonlinear | |
|-----------------------------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| | 2 nd Stage | | 1 st Stage | 2 nd Stage | | 1 st Stage | Tobin's Q | AUDITOR |
| | Regression | Regression | Regression | Regression | Regression | | | |
| | Tobin's Q | FOWN | FDIV | AUDITOR | FOWN | FDIV | (7) | (8) |
| | (1) | (2) | (3) | (4) | (5) | (6) | | |
| Intercept | 1.954*** (3.801) | | | 0.452*** (3.226) | | | 2.328*** (3.691) | 0.523*** (3.322) |
| P _{FOWN} | 0.290** (2.027) | | | -0.860*** (-4.436) | | | | |
| P _{FDIV} | -0.340** (-2.116) | | | -1.083*** (-4.144) | | | | |
| FOWN | | | | | | | -0.272 (-1.170) | 0.917 (1.335) |
| SqFOWN | | | | | | | 0.724 (0.901) | -1.818 (-1.047) |
| FDIV | | | | | | | -0.275** (-2.480) | -1.477** (-2.443) |
| BOARD_SIZE | -1.237*** (-2.741) | 1.484*** (2.757) | 0.700*** (2.686) | 0.151*** (3.152) | 1.526*** (2.835) | 0.719*** (2.762) | 1.615*** (3.528) | 0.174*** (3.169) |
| IND_BOARD | 1.522** (2.320) | 0.959*** (2.648) | -0.506** (-2.061) | 0.519*** (3.200) | 0.986*** (2.723) | -0.520** (-2.119) | 1.663*** (3.604) | 0.563*** (3.207) |
| AUDIT_COMMIT | 1.375 (1.591) | 0.861* (1.783) | -0.487 (-1.345) | 0.340*** (2.611) | 0.885* (1.833) | -0.500 (-1.383) | 1.518 (1.573) | 0.362 (1.486) |
| DUALITY | -1.155 (-1.410) | 1.101** (2.096) | 0.585** (2.224) | -0.074* (-1.833) | 1.133** (2.155) | 0.602** (2.287) | -1.518* (-1.816) | -0.079* (-1.731) |
| BLOCK_OWN | 1.562*** (3.311) | 0.679*** (2.628) | -0.469* (-1.875) | 0.543** (2.426) | 0.699*** (2.702) | -0.482** (-1.998) | 1.385** (2.565) | 0.503*** (3.090) |
| LOSS | | | | 0.130** (2.456) | -1.389*** (-3.744) | 0.685* (1.775) | | 0.139** (2.029) |
| ROA | | | | 0.125*** (3.094) | 1.267** (2.051) | -0.626*** (-3.932) | | 0.151*** (3.650) |
| AGE | -0.030* (-1.644) | 0.297 (1.458) | 0.585 (1.578) | 0.033*** (3.732) | 0.305 (1.499) | 0.602 (1.623) | -0.037*** (-3.821) | 0.041** (2.478) |
| SIZE | 0.122*** (4.704) | 0.049** (2.334) | 0.053* (1.895) | 0.095*** (5.017) | 0.050** (2.400) | 0.055* (1.949) | 0.150*** (5.889) | 0.081*** (4.107) |
| LEV | -0.117** (-2.426) | -0.300** (-2.524) | 0.639** (2.554) | 0.075** (2.225) | -0.308*** (-2.595) | 0.657*** (2.626) | -0.141** (-2.290) | 0.084*** (3.410) |
| CAPITAL | 1.249 (1.193) | 2.268 (1.294) | -1.098 (-1.456) | | | | 1.594 (1.604) | |
| R&D | 2.070 (1.242) | 1.984*** (2.651) | -1.118 (-1.707) | | | | 2.446 (1.340) | |
| GROWTH | 0.156** (2.256) | 1.133*** (3.151) | -0.835** (-2.327) | | | | 0.188*** (2.715) | |
| FIRM_RISK | -0.047*** (-3.435) | -0.672* (-1.908) | 0.754** (2.551) | | | | -0.065*** (-3.835) | |
| Instrument Variables | | | | | | | | |
| CSR_DIS | | 0.399*** (3.456) | -0.208** (-2.229) | | 0.517*** (3.081) | -0.342*** (-2.704) | | |
| LAG_DIV | | 1.431*** (2.996) | 1.867*** (3.482) | | 1.516*** (3.080) | 1.919*** (3.581) | | |
| C-statistic | 4.475** (0.034) | | | 6.781** (0.018) | | | | |
| Hansen J-statistic | 5.098 (0.287) | | | 6.673 (0.409) | | | | |
| Anderson-Rubin F test | 46.310*** (0.003) | | | 68.276*** (0.005) | | | | |
| Adjusted R ² | 0.487 | | | | | | 0.499 | |
| Log-likelihood | | | | 245.881*** | | | | 248.820*** |
| No. of obs. | 16,225 | 16,225 | 16,225 | 16,225 | 16,225 | 16,225 | 16,225 | 16,225 |

Columns (1) - (6) of this table report the 2SLS regression results for the effects of family ownership and cash-vote divergence on the Tobin's Q (*Tobin's Q*) and auditor choice (*AUDITOR*). *P_{FOWN}* is the predicted *FOWN* from the first-stage regression. *P_{FDIV}* is the predicted *FDIV* from the first-stage regression. *CSR_DIS* and *LAG_DIV* are employed as instrumental variables in the first-stage analyses. *CSR_DIS* is a dummy variable that has a value of one if the firm discloses CSR activities, and zero otherwise. *LAG_DIV* is the ratio of foreign sales to total sales in the previous year. In addition, Columns (7) and (8) report the results for non-linear effect of family ownership on *Tobin's Q* and *AUDITOR*. *SqFOWN* is the square of family ownership. See Table 2 for detailed definitions of the other variables. Fixed effects of years and industries are included in the regressions but not reported. Numbers in parentheses are *t*-statistics based on clustered robust standard errors. Significance levels are denoted based on two-tailed tests.

* < .1
** < .05
*** < .01