Client Acceptance and Engagement Pricing following Auditor Resignations in Family Firms

Samer Khalil
Mohamad Mazboudi
American University of Beirut

SUMMARY: This paper investigates whether auditors' client acceptance and pricing decisions following the resignation of the incumbent auditor in family firms are significantly different from those in non-family firms. Relying on the auditing literature (client acceptance and audit pricing) and using insights from the agency theory, we document that successor auditors incorporate a firm's ownership structure into their acceptance and pricing decisions following the resignation of the incumbent auditor. Big 4 auditors are more likely to serve as successor auditors following auditor resignations in family firms as opposed to non-family firms. The changes in audit fees following auditor resignations in family firms, however, are significantly smaller than those in non-family firms. These results hold when we account for whether a family firm is managed by a founder, a descendant, or by a professional manager, and when we use the percentage of shares held by the family members as another proxy for family ownership. Additional analysis further demonstrates that the likelihood of financial restatements in family firms in the post-resignation period are significantly lower than those in non-family firms. Overall, our findings suggest that Big 4 auditors perceive family firms from which the incumbent auditors resigned as being less risky than their non-family counterparts.

Keywords: client acceptance; audit pricing; auditor resignations; family firms.

INTRODUCTION

Auditor resignations have been a subject for academic research over the past decades. Prior research shows that auditor resignations occur in high-risk clients and engender a negative stock market reaction around the resignation announcement date (DeFond, Ettredge, and Smith 1997; J. Krishnan and J. Krishnan 1997; Wells and Loudder 1997; Raghunandan and Rama 1999; Shu 2000; Chang, Cheng, and Reichelt 2010; Griffin and Lont 2010; Ghosh and Tang 2015a). The existing literature further demonstrates that client acceptance and engagement pricing decisions following auditor resignations are primarily associated with financial and litigation risk (Raghunandan and Rama 1999; Rama and Read 2006; Catanach, Irving, Williams, and Walker 2011). More recent audit research documents an association between auditor-client realignments and corporate governance quality. For instance, Lee, Mande, and Ortman (2004) find that firms having more independent audit committees are more likely to hire a large auditor following auditor resignations. Cassell, Giroux, Myers, and Omer (2012) document that switches from Big 4 to non-Big 4 auditors are more likely to occur in clients having lower corporate governance scores, although the difference is not significant between resignations and dismissals.

In this paper, we extend current research by examining whether a key corporate governance attribute, firm ownership structure, is associated with client acceptance and pricing decisions following the resignation of the incumbent auditor. More specifically, we test whether the identity of the successor auditor (Big 4 or non-Big 4) and the change in audit fees following auditor resignations in family firms are significantly different from those in non-family firms in the U.S. We further investigate whether the aforementioned results hold when we account for the identity of the CEO managing a family firm (founder, descendant, or professional manager), and for the percentage of shares held by the family members. Finally, as an additional analysis, we examine whether the likelihood of financial restatements in family firms over the two-year period following the incumbent auditor resignation is significantly different from that in non-family firms.

We focus on U.S. family firms for three main reasons. First, the auditor-client relationship in U.S. family firms is under researched (Salvato and Moores 2010; A. Trotman and K. Trotman 2010; Prencipe, Bar-Yosef, and Dekker 2014). Khalil,

---

Cohen, and Trompeter (2011) document that auditor resignations are less common in U.S. family firms compared to non-family firms. They further show that abnormal returns following auditor resignations in family firms are higher (less negative) than those in non-family firms. Ho and Kang (2013) find that family firms on the S&P 1500 index are less likely to appoint a top-tier auditor and incur lower audit fees compared to non-family firms, especially when family members are involved in management. Finally, Gosh and Tang (2015b) show that U.S. family firms pay lower audit fees, have lower audit risk, and that their auditors work less to provide the desired level of assurance compared to non-family firms.

Second, family firms play a significant economic role in the U.S. Francis (1993) demonstrates that family businesses contribute more than 50 percent of the U.S. gross domestic product, while La Porta, Lopez-De-Silanes, and Shleifer (1999) state that family firms constitute around 80 percent of all businesses in the U.S. More recent findings show that family firms represent around 48 percent of the S&P 1500 firms and close to 33 percent of the S&P 500 firms, with family members holding close to 11 percent (18 percent) of the cash flow (voting) rights (Anderson and Reeb 2003; Ali, Chen, and Radhakrishnan 2007).

Third, family firms have a unique set of related block holders that are tied by blood and kinship. They normally hold an undiversified equity stake across generations and serve as executives and directors for extended periods of time (Anderson and Reeb 2003; Anderson, Mansi, and Reeb 2003; Chen, Xia, and Hui 2008). These unique attributes are widely believed to alleviate the manager-shareholder agency problem, while exacerbating the agency problem between majority and minority shareholders (Villalonga and Amit 2006). The empirical evidence is far from being conclusive. On the one hand, research findings show that family firms are less likely to offer perquisites to their CEOs (K. Chen, T. Chen, and Hui 2009), less likely to engage in tax planning transactions (Chen, Xia, Cheng, and Shevlin 2010), and have superior financial reporting quality compared to non-family firms (Wang 2006; Ali et al. 2007; Chen et al. 2008; Tong 2008). Other findings, however, document that family firms are more opaque (Anderson, Duru, and Reeb 2009), disclose less information related to corporate governance practices (Ali et al. 2007), and are less (more) likely to increase (omit) dividends than non-family firms (Attig, Boubakri, Ghoul, and Guedhami 2016).

Relying on the auditing literature (client acceptance and audit pricing) and using insights from the agency theory, we first investigate whether Big 4 auditors are more or less likely to serve as successor auditors following auditor resignations in family firms as opposed to non-family firms. Prior research shows that auditor resignations occur in high-risk clients (e.g., Krishnan and Krishnan 1997; Shu 2000). Findings also show that Big 4 auditors generally avoid risky clients in order to escape the potential costs resulting from future litigation and loss of reputation (e.g., Bockus and Gigler 1998; Raghunandan and Rama 1999; Shu 2000; Catanach et al. 2011). Hence, we posit that the identity of the successor auditor, Big 4 or non-Big 4, is a function of whether large auditors perceive family firms from which the incumbent auditors resigned as being more or less risky than their non-family counterparts.

Second, we examine whether the change in audit fees following the resignation of the incumbent auditor in family firms is significantly different from that in non-family firms. Prior research documents that audit fees are positively related to client size, complexity, and risk (Carcello, Hermanson, Neal, and Riley 2002; Ashbaugh, LaFond, and Mayhew 2003). The existing literature further shows that auditors charge higher audit fees for riskier initial engagements in order to cover the costs associated with increased audit scope, the higher billing rates of highly trained and specialized staff, in addition to the potential costs that may arise from future litigation (Simunic and Stein 1996; Venkataraman, Weber, and Willenborg 2008). Thus, we posit a larger (smaller) percentage change in audit fees following auditor resignations in family firms if successor auditors perceive family firms as being more (less) risky than non-family firms.

Third, given that the agency costs arising from family ownership vary with the identity of the CEO and with the percentage of shares held by the family firms (e.g., Wang 2006; Anderson et al. 2009), we test whether the client acceptance and audit pricing decisions following auditor resignations vary based on (1) whether a family firm is managed by a founder, descendant, or hired professional, and on (2) the percentage of shares held by the family members. Finally, as an additional analysis, we test whether the likelihood of financial restatements following auditor resignations in family firms is significantly different from that in non-family firms.

Results obtained using a sample of auditor resignations over the post-SOX period 2004–2012 document the following. First, Big 4 auditors are more likely to serve as successor auditors following auditor resignations in family firms as opposed to non-family firms. Furthermore, the likelihood of having Big 4 auditors serving as successor auditors is higher in family firms managed by a family member, be it a founder or a family descendant, or by a professional manager. Big 4 auditors seem to perceive family firms as being less risky than their non-family counterparts following auditor resignations, irrespective of whether a family member is involved in management or not. These results hold after controlling for other factors that affect the successor auditor decision for accepting new audit engagements including firm complexity, financial distress, discretionary accruals, internal control weaknesses, and board characteristics.

Findings further show that the change in audit fees following auditor resignations in family firms is significantly smaller than that in non-family firms after controlling for a wide battery of variables that affect the change in audit fees. The change in

audit fees following auditor resignations is significantly smaller for family firms managed by founders, descendants, or professional managers. By showing that successor auditors charge an audit fee premium in non-family firms, our findings supplement those of Griffin and Lont (2011), who show that successor auditors charge unusually higher fees following the incumbent auditor resignation. Our results pertaining to the identity of the successor auditor and to the change in audit fees hold when we use the percentage of shares held by family members as another proxy for family ownership. Additional analysis shows that family firms are less likely to restate their financial statements compared to non-family firms over the two-year period following the initial auditor resignation.

This paper responds to Prencipe et al.'s (2014), Salvato and Moores's (2010), in addition to Trotman and Trotman's (2010) calls for future research that investigates audit practices in family firms. It extends Khalil et al. (2011), Ho and Kang (2013), and Ghosh and Tang (2015b), in various ways. First, this paper examines two research questions that were not addressed in the aforementioned studies, and hence constitutes an addition to both auditing and family firm literatures. Our findings supplement Ho and Kang (2013) and Ghosh and Tang (2015b) by showing that the auditor-client relationship following auditor resignations is significantly different from that under the normal course of business, even for clients having similar ownership structure. While Ho and Kang (2013) find that family firms are less likely to hire top-tier auditors, we document that Big 4 (i.e., top-tier) auditors are more likely to accept family firms following the incumbent auditor resignation. Furthermore, our study provides a powerful test for the successor auditor's perceived audit risk by examining the change in audit fees following the incumbent auditor resignation, rather than the level of audit fees as in Ho and Kang (2013) and Ghosh and Tang (2015b). The importance of our findings is heightened since they do not suffer from the endogeneity arising from the inclusion of auditor dismissals, a voluntarily decision made by the client. Finally, our study uses a different theoretical underpinning compared to Ho and Kang (2013). We posit that firms whose auditor resigns are mainly high-risk clients. Hence, the identity of the successor auditor and the accompanying change in audit fees is largely a function of the successor auditor's willingness to accept the client (supply of audit services) rather than a function of the client's decision to hire the successor auditor (demand for audit services). Ho and Kang (2013), however, focus on the demand for audit services by family firms.

Our study makes three other contributions as well. First, our study contributes to the auditor-client realignment literature by examining whether auditors' client acceptance and pricing decisions vary with a key governance attribute—firm ownership structure—which was not investigated before. Related research, with the exception of Lee et al. (2004) and Cassell et al. (2012), primarily focuses on whether auditor-client realignment is a function of financial and litigation risk, audit pricing, and auditor-client mismatch among others (Johnstone and Bedard 2003, 2004; Choi, Doogar, and Ganguly 2004; Rama and Read 2006; Ettredge, Scholz, and Li 2007; Ettredge, Heintz, Li, and Scholz 2011; Hogan and Martin 2009; Landsman, Nelson, and Rountree 2009).

Second, our study contributes to the auditor portfolio management decisions by documenting a significant association between the identity of the successor auditor and firm ownership structure following the resignation of the incumbent auditor. This is important given the potential consequences of auditor changes to both auditors and their clients. For auditors, portfolio management decisions are crucial to their long-term financial security (Bell, Bedard, Johnstone, and Smith 2002). For clients, auditor portfolio management decisions are important because of the economic and social welfare consequences following auditor resignations, such as significant stock price declines (Wells and Loudder 1997; Shu 2000; Whisenant, Sankaraguruswamy, and Raghunandan 2003; Griffin and Lont 2010).

Finally, our study adds to the scant literature investigating the aftermath of auditor resignations by examining whether certain financial and nonfinancial outcomes following auditor resignations in family firms are significantly different from those in non-family firms. Catanach et al. (2011) examine the changes in the firm's financial condition, the survival and delisting of firms, in addition to the resignation of the successor auditor following the resignation of the incumbent auditor. Ghosh and Tang (2015a) also investigate post-resignation outcomes related to class-action lawsuits, internal controls, and delisting from national stock exchanges. Yet, both papers do not incorporate firm ownership structure into their analysis.

The paper proceeds as follows. The second section reviews the related literature and lays out the hypotheses, followed by a third section on research methodology, which includes model specification and sample selection. The fourth section provides our empirical results and the fifth section presents our additional analysis. The final section concludes.

RELATED LITERATURE AND HYPOTHESES

Prior research shows that auditor resignations are positively associated with client risk factors (e.g., Krishnan and Krishnan 1997; Bockus and Gigler 1998; Shu 2000; Johnstone and Bedard 2004).[1] It further shows that large auditors are less likely to accept clients whose predecessor auditors resigned in order to avoid potential costs resulting from future litigation and loss of

---

[1] Relative to auditor dismissals, Landsman et al. (2009) find that auditor resignations are more sensitive to client risk in both the pre- and post-Enron periods. However, they find that neither resignations nor dismissals display an increased sensitivity to client risk in the post-Enron period.

reputation. Bockus and Gigler (1998) analytically demonstrate that clients whose auditors resign are more likely to hire smaller auditors. Raghunandan and Rama (1999) find that large auditors are less likely to serve as successor auditors when predecessor auditors resign, especially for clients that are in financial distress. Shu (2000) documents that large auditors are more likely to drop high-litigation risk clients and are less prone to serve as successor auditors than small auditors. Rama and Read (2006) show that the bankruptcy Z-score for clients with Big 4 successor auditors in 2003 is significantly lower than that for clients with non-Big 4 successor auditors for a sample of clients whose Big 4 auditors resigned. Finally, Catanach et al. (2011) demonstrate that large auditors are less likely to accept new audit engagements relative to small auditors following auditor resignations, especially for clients whose incumbent auditors reported high-risk comments and going concern opinions.

Yet, these findings fall short from documenting whether Big 4 auditors are more or less likely to serve as successor auditors in family firms following auditor resignations as opposed to non-family firms. Agency theory provides two conflicting perspectives on family ownership that translate into two opposing effects on audit risk and the likelihood of Big 4 auditors serving as successor auditors. The entrenchment perspective suggests that family ownership increases audit risk, ultimately lowering client acceptance rates by Big 4 auditors, since family members are well positioned to manipulate financial figures and impair financial reporting quality in order to conceal the consumption of private benefits at the expense of minority shareholders (Demsetz 1983; Fama and Jensen 1983; Anderson et al. 2009; Attig et al. 2016). Family members are insulated from the market for corporate control and from the managerial labor market, control the information flow to minority shareholders, hold key positions, and elect the majority of board members (Anderson and Reeb 2003; Chen et al. 2008; Tong 2008; Anderson et al. 2009).[2] Family members serving on the board are less likely to question their siblings serving as executives and are less likely to rock the boat since they are primarily motivated by altruism and are predominantly loyal to the family (Schulze, Lubatkin, Dino, and Bucholtz 2001; Chen et al. 2010). In fact, corporate governance reforms (e.g., the enactment of the Sarbanes-Oxley Act [SOX] in 2002) highlight the drawbacks of having a large number of related directors, by blood or through another form of relatedness, and the need for independent directors.

In contrast, the alignment perspective suggests that family ownership reduces audit risk, increasing client acceptance rates by Big 4 auditors, since family ownership curbs the consumption of private benefits and/or enhances financial reporting quality (Wang 2006; Ali et al. 2007; Chen et al. 2010; Ghosh and Tang 2015b). Family members forgo the short-term benefits arising from the consumption of private rents and/or from earnings management in order to protect the family's name and reputation, business succession, firm survivability, and socio-emotional wealth (Shleifer and Vishny 1986; Dyer and Whetten 2006).[3] They also hinder earnings management by non-family managers since they (1) face lower information asymmetry, (2) have a better understanding of the business, and (3) rely less on accounting metrics for compensation purposes (Anderson and Reeb 2003).

Given the conflicting perspectives on family ownership, it is not clear whether Big 4 auditors, which are generally less prone to serve as successor auditors for risky clients, are equally likely to serve as successor auditors following auditor resignations in family firms as opposed to non-family firms. Hence, we test the following nondirectional hypothesis:

H1: The likelihood of a Big 4 auditor serving as the successor auditor in family firms following the incumbent auditor resignation is significantly different from that in non-family firms.

The audit pricing literature stipulates that audit fees are positively associated with the amount of audit work or effort provided by auditors (e.g., Davis, Ricchiute, and Trompeter 1993; Bell, Landsman, and Shackelford 2001; Hogan and Wilkins 2008). Prior research also shows that successor auditors charge higher audit fees for high-risk initial engagements in order to cover the costs associated with increased audit scope in high-risk clients, the higher billing rates of highly trained and specialized staff, in addition to the potential costs that may arise from future litigation (Simunic 1980; Simunic and Stein 1996; Bell et al. 2001; Venkataraman et al. 2008; Schelleman and Knechel 2010). Findings also document that audit fees are higher than normal in the year preceding and following auditor resignations (Griffin and Lont 2011), and that successor auditors charge audit fees that are, on average, 11 percent higher in the first year following resignations (Sankaraguruswamy and Whisenant 2009). Findings further show that audit fees following auditor resignations are significantly higher (lower) for clients undertaking lateral switches across Big 4 (non-Big 4) auditors (Rama and Read 2006; Elliott, Ghosh, and Peltier 2013).

The scant empirical evidence related to family ownership documents that family firms incur lower levels of audit fees relative to non-family firms (Ho and Kang 2013; Ghosh and Tang 2015b). Yet, it is not clear whether the pricing of risky initial audit engagements by successor auditors following the incumbent auditor resignation in family firms is significantly different from that in non-family firms. The entrenchment perspective on family ownership suggests that auditors are likely to adjust

---

[2] Family members serve as directors (CEOs) in 22 percent (62 percent) of family firms (Chen et al. 2008).

[3] Socio-emotional wealth encompasses nonfinancial benefits such as exercising authority, perpetuating family values and dynasty, conserving the family's social capital, the fulfillment of family obligations based on blood ties, and being altruistic to family members (Gómez-Mejía, Cruz, Berrone, and De Castro 2011).

their audit plan, exert greater audit effort, bill more hours, or charge a higher rate for specialized personnel to verify high-risk accounts—such as receivables, inventory, and provisions—in family firms as opposed to non-family firms (e.g., Anderson et al. 2009; Attig et al. 2016). The alignment perspective, however, suggests the opposite since family members seek to maintain their reputation and, hence, their estimates are less prone to errors and distortions, and their financials are less susceptible to financial misstatements (e.g., Wang 2006; Ali et al. 2007). Hence, we test the following nondirectional hypothesis:

H2: The change in audit fees following auditor resignations in family firms is significantly different from that in non-family firms.

The agency costs arising from family ownership vary with the identity of the CEO and with the percentage of shares held by the family members. For instance, Chen et al. (2008) show that family firms managed by a family CEO (founder or descendant CEO) are less likely to provide good news forecasts than family firms managed by a non-family CEO. Anderson et al. (2009) find that equity ownership by founders and descendants is inversely related to corporate transparency. Chen et al. (2010) document that family firms managed by a founder or non-family CEO are more (less) likely to forgo potential tax benefits (to engage in tax planning transactions) than non-family firms. Furthermore, Ali et al. (2007) demonstrate that family firms exhibit higher earnings quality than non-family firms when managed by a founder rather than by a non-family or descendant CEO, and Wang (2006) demonstrates that founding family ownership is associated with lower abnormal accruals, greater earnings informativeness, and less persistence of transitory losses in earnings. Finally, Dechow, Sloan, and Sweeney (1996) find that firms managed by a founder CEO are more likely to be subject to accounting enforcement actions by the Securities and Exchange Commission than those managed by a non-founder CEO.

Hence, using the following nondirectional hypotheses, we test whether auditors' client acceptance and pricing decisions following auditor resignation are a function of the CEO identity and the percentage of shares held by the family:

H3a: The likelihood of a Big 4 auditor serving as the successor auditor following auditor resignations in family firms is related to whether the family firm is managed by a founder, descendent, or a non-family professional executive.

H3b: The change in audit fees following auditor resignations in family firms is related to whether the family firm is managed by a founder, descendent, or a non-family professional executive.

H4a: The likelihood of a Big 4 auditor serving as the successor auditor following auditor resignations in family firms is associated with the percentage of shares held by the family.

H4b: The change in audit fees following auditor resignations in family firms is associated with the percentage of shares held by the family.

RESEARCH METHODOLOGY

Model Specification

Successor Auditor Model

To test whether the successor auditor's acceptance decision following auditor resignation varies with family ownership (H1), we use probit analysis with robust standard errors clustered by firm and control for industry and year effects using indicator variables. The dependent variable, *SB4,* takes the value of 1 if the successor auditor is a Big 4 auditor, 0 otherwise. The test variable, *FAM,* is an indicator variable that takes the value of 1 if family member(s) holding 5 percent or more of the total voting rights occupied executives and/or directorate positions in the year of auditor resignation as per the firm's definitive proxy circular (DEF 14A), 0 otherwise (Anderson and Reeb 2003). Hence, we estimate the following model:

$$SB4 = \alpha + \beta * FAM + Control\ Variables + Industry\ Dummies + Year\ Dummies \qquad (1)$$

The model controls for a wide array of variables associated with the likelihood of having a Big 4 successor auditor, as listed and defined in Appendix A. In line with prior research (Landsman et al. 2009; Catanach et al. 2011; Huang and Scholz 2012), we first control for the presence of high-risk comments, namely those pertaining to (1) going concern opinions (*GC*), (2) weaknesses in internal controls (*IC*), (3) disagreements with the client (*DIS*), and (4) financial restatements (*RES*) since Big 4 auditors are less likely to serve clients whose incumbent auditors reported one or more of the aforementioned comments in their audit opinion.

Second, we control for firm-specific, financial, and nonfinancial attributes that alter the likelihood of a Big 4 successor auditor accepting a new audit engagement. Big 4 auditors are more likely to serve larger clients (*LNASSET*) and clients having more complex operations (*LNSEG, FORSAL*) given their expertise and international presence (e.g., Raghunandan and Rama

1999; Rama and Read 2006; Cassell et al. 2012). Big 4 auditors, however, are less willing to accept clients having a larger percentage of inventory and receivables out of total assets (*INVREC*), clients having weaker financial condition (*IB, XI, ZSCORE, LVG*), those having higher magnitude of discretionary accruals (*REDCA*), in addition to clients operating in high-litigation risk industries (*LITIND*) since they increase auditors' exposure to litigation risk (e.g., DeFond and Subramanyam 1998; Raghunandan and Rama 1999; Landsman et al. 2009; Cassell et al. 2012; Krishnan, Sun, Wang, and Yang 2013).

We further control for auditor-related attributes including whether the incumbent auditor is a Big 4 auditor (*IB4*), whether the incumbent auditor resigned before completing the audit engagement (*RESTIM*), the length of the audit report lag (*ARLAG*), and the industry specialization of the incumbent and successor auditors (*SPNOSP, NOSPSP*). Big 4 auditors are more likely to serve as successor auditors in firms that have been previously audited by Big 4 auditors (Huang and Scholz 2012). Yet, they are less willing to accept clients whose incumbent auditor resigned while the audit was presumably underway, since it may signal the presence of troublesome findings (Catanach et al. 2011). We do not make any predictions concerning the association between the successor auditor identity and the audit report lag (or the industry specialization of the incumbent and successor auditors).

Finally, we control for the quality of the board and audit committee including the size of the board of directors and audit committee (*BDSIZE, ACSIZE*), the independence of the board (*BDIND*), and the frequency of board meetings (*BDMTG*) given the association between auditor switches and those corporate governance metrics (Lee et al. 2004; Cassell et al. 2012; Ho and Kang 2013). We also control for mergers and acquisitions activities during the year of resignation and the following year (*MRGNOMRG, NOMRGMRG*), since such activities are likely to be associated with auditor switches (Landsman et al. 2009).

Change in Audit Fee Model

To test whether the change in audit fees following auditor resignations in family firms is significantly different from that in non-family firms (H2), we use OLS regression analysis with robust standard errors clustered by firm and control for industry and year effects using indicator variables. The dependent variable, ΔAF, is measured as the percentage change in audit fees paid in the year following the resignation of the incumbent auditor relative to those paid during the year of resignation. Hence, we estimate the following model:

$$\Delta AF = \alpha + \beta_1 * FAM + Control\ Variables + Industry\ Dummies + Year\ Dummies \tag{2}$$

In line with prior research, we control for the change in a number of independent variables that could be associated with the change in audit fees since (1) our dependent variable is a change variable, and (2) a change specification controls for omitted correlated variables (Ettredge et al. 2007; Huang, Raghunandan, and Rama 2009; Elliott et al. 2013). In particular, we follow previous studies (e.g., Lee et al. 2004; Ghosh and Lustgarten 2006; Huang and Scholz 2012) and first control for the change in high-risk comments reported by the incumbent and successor auditors, namely those pertaining to going concern opinions (*GCNOGC, NOGCGC*), internal control weaknesses (*ICNOIC, NOICIC*), disagreements between auditors and clients (*DISNODIS, NODISDIS*), in addition to financial restatements (*RESNORES, NORESRES*).

We also follow prior studies (e.g., Hay, Knechel, and Wong 2006; Causholli, De Martinis, Hay, and Knechel 2010; Ball, Jayaraman, and Shivakumar 2012; Krishnan et al. 2013) and control for the changes in the financial characteristics of the client including the percentage changes in firm size (*$\Delta ASSET$*) and in inventory and receivables out of total assets (*$\Delta INVREC$*). In addition, we control for the complexity of the clients' operations by including the percentage changes in the number of business segments (*ΔSEG*) and in foreign sales out of total sales (*$\Delta FORSAL$*). We also control for the change in the clients' financial condition, namely the percentage changes in income before extraordinary items scaled by total assets (*ΔIB*), extraordinary items scaled by total assets (*ΔXI*), Zmijewski (1984) Z-score (*$\Delta ZSCORE$*), financial leverage (*ΔLVG*), and discretionary accruals (*$\Delta REDCA$*).

Finally, we control for the changes in the characteristics of both incumbent and successor auditors including their size (*IB4SNB4, INB4SB4*) and their industry specialization (*NOSPSP, SPNOSP*). We also control for the changes in mergers and acquisitions activities during the resignation year and the following year (*MRGNOMRG, NOMRGMRG*), in addition to the percentage changes in the board and audit committee characteristics including the percentage changes in (1) board (*$\Delta BDSIZE$*) and audit committee (*$\Delta ACSIZE$*) size, (2) board independence (*$\Delta BDIND$*), and (3) number of board meetings (*$\Delta BDMTG$*).

Sample Selection

Table 1 provides a summary of the sample selection process. Our initial sample includes 4,253 firm-years reporting auditor resignations in the Audit Analytics database over the period 2004–2012. We start with the year 2004 in order to avoid the increase in auditor switches and audit fees following the enactment of SOX in 2002. We exclude 1,122 observations for firms operating in the financial services industry, 80 observations pertaining to subsidiaries, 603 observations related to audit firm

TABLE 1

Sample Selection

	Number of Firm Years
Initial Sample	4,253
Less:	
Auditor resignations pertaining to firms operating in the financial services industry	(1,122)
Subsidiaries	(80)
Audit firm mergers	(603)
Firms missing financial data	(1,886)
Final Sample	562

mergers, and 1,886 observations missing financial data from the Compustat database. Our final sample consists of 562 observations.

Table 2 displays the distribution of auditor resignations by year and industry in addition to the auditor type following auditor resignations over the period 2004–2012. In line with prior research, Panel A shows that the post-SOX period witnessed an unprecedented increase in auditor resignations. Roughly half of the auditor resignations in our sample occurred in 2004 and 2005, out of which 23 percent (76 percent) are in family (non-family) firms.[4] Out of total auditor resignations in our sample, around 25 percent (75 percent) are in family (non-family) firms.

Table 2, Panel B documents that sample firms are fairly spread across various industries with greater concentration in the manufacturing and services industries. Finally, Panel C shows that having a Big 4 successor auditor following an incumbent auditor resignation occurs in about 17 percent of the sample firms, a majority of which are lateral switches from one Big 4 auditor to another. Having a Big 4 auditor occurs in close to 35 percent of the cases in family firms compared to 11 percent in non-family firms. Lateral switches across Big 4 auditors are more common in family firms (23 percent) compared to non-family firms (8 percent). In addition, auditor changes involving an upgrade in auditor quality (i.e., non-Big 4 to Big 4) reached close to 12 percent in family firms as opposed to a low of 3 percent in non-family firms.

Panel C of Table 2 further demonstrates that having a non-Big 4 auditor following auditor resignations constitutes around 83 percent of our sample, a large percentage of which are lateral changes across non-Big 4 auditors. Lateral switches across non-Big 4 auditors seem to be less common in family firms (39 percent) as opposed to non-family firms (49 percent). Finally, family firms seem to be less likely to have a downgrade in auditor quality (25 percent) as opposed to non-family firms (39 percent).

EMPIRICAL RESULTS

Descriptive Statistics and Univariate Tests

Table 3, Panel A, presents the descriptive statistics for the independent variables included in the successor auditor model and their mean differences by successor auditor type (Big 4 versus non-Big 4 auditor) and firm type (family versus non-family firm). The analysis pertaining to the identity of the successor auditor documents that Big 4 auditors are more likely to serve as successor auditors in family firms compared to non-family firms following the resignation of the incumbent auditor (0.31; $p < 0.01$). Big 4 auditors seem to perceive family firms whose auditors resigned as being less risky compared to their non-family counterparts, a finding that provides preliminary support for the alignment perspective.

Univariate tests also document that Big 4 auditors are more likely to serve as successor auditors for larger clients (3.12; $p < 0.01$) and for clients that have a larger number of business segments (0.48; $p < 0.01$). Big 4 auditors are also more prone to accept clients that witnessed changes in their mergers and acquisitions activities (0.05, $p < 0.01$; 0.04, $p < 0.01$). In addition, and in line with Huang and Scholz (2012), univariate tests document that Big 4 auditors are more prone to accept clients whose incumbent auditor is also a Big 4 auditor (0.26; $p < 0.01$). Furthermore, Big 4 auditors are more likely to accept clients switching from a non-industry specialist to an industry-specialist auditor (0.25; $p < 0.01$). Finally, Big 4 auditors are more

---

[4] We repeated our analysis after excluding observations for the years 2004 and 2005, and the main results remain consistent with those reported in the paper.

TABLE 2
Sample Distribution

Panel A: Distribution by Year

Year	n		Family		Non-Family	
2004	151	(26.87%)	18	(13.04%)	133	(31.37%)
2005	138	(24.56%)	50	(36.23%)	88	(20.75%)
2006	85	(15.12%)	6	(4.35%)	79	(18.63%)
2007	57	(10.14%)	13	(9.42%)	44	(10.38%)
2008	27	(4.80%)	12	(8.70%)	15	(3.54%)
2009	34	(6.05%)	23	(16.67%)	11	(2.59%)
2010	25	(4.45%)	7	(5.07%)	18	(4.25%)
2011	24	(4.27%)	5	(3.62%)	19	(4.48%)
2012	21	(3.74%)	4	(2.90%)	17	(4.01%)
Total	562	(100.00%)	138	(100.00%)	424	(100.00%)

Panel B: Distribution by Industry

Industry Description (SIC Code)	n		Family		Non-Family	
Agriculture, Fishing, Forestry & Mining (0000–1999)	52	(9.25%)	18	(13.04%)	34	(8.02%)
Manufacturing I (2000–2999)	92	(16.37%)	23	(16.67%)	69	(16.27%)
Manufacturing II (3000–3999)	184	(32.74%)	42	(30.43%)	142	(33.49%)
Transport, Communication, Electricity, Gas (4000–4999)	44	(7.83%)	10	(7.25%)	34	(8.02%)
Wholesale Trade, Retail Trade (5000–5999)	46	(8.19%)	11	(7.97%)	35	(8.25%)
Services, General (7000–7999)	124	(22.06%)	29	(20.01%)	95	(22.41%)
Services, Health, Social, Professional (8000–8999)	20	(3.56%)	5	(3.62%)	15	
Total	562	(100.00%)	138	(100.00%)	424	(100.00%)

Panel C: Distribution by Auditor Type

Auditor Type	n		Family		Non-Family	
SB4	95	(16.90%)	48	(34.78%)	47	(11.08%)
IB4-SB4	66	(11.74%)	32	(23.19%)	34	(8.01%)
INB4-SB4	29	(5.16%)	16	(11.59%)	13	(3.07%)
SNB4	467	(83.10%)	90	(65.22%)	377	(88.92%)
INB4-SNB4	265	(47.15%)	55	(39.86%)	210	(49.53%)
IB4-SNB4	202	(35.95%)	35	(25.36%)	167	(39.39%)
Total	562	(100.00%)	138	(100.00%)	424	(100.00%)

See Appendix A for variable definitions.

likely to accept clients having larger boards (1.20; $p < 0.01$), larger audit committees (0.59; $p < 0.01$), and larger percentage of independent directors on board (0.06; $p < 0.01$).

Panel A of Table 3 further shows that Big 4 auditors are sensitive to litigation risk resulting from high-risk comments where they are less likely to serve as successor auditors in clients whose incumbent auditors reported the presence of going concern opinion (-0.20; $p < 0.01$), weaknesses in internal controls (-0.12; $p < 0.05$), or financial restatements (-0.06; $p < 0.10$). Big 4 auditors are also less likely to serve as successor auditors in clients where the incumbent auditor resigned before completing the audit engagement (-0.10; $p < 0.05$), and in clients having a larger percentage of their total assets as inventory and receivables (-0.07; $p < 0.01$), and a weaker financial condition in terms of higher Z-score (-3.63; $p < 0.01$).

As for the univariate analysis pertaining to firm type (family versus non-family firm), Panel A (Table 3) shows that family firms report a lower incidence of high-risk comments mainly those pertaining to going concern opinions (-0.07; $p < 0.10$) and weaknesses in internal controls (-0.10; $p < 0.05$) relative to non-family firms. Family firms are also smaller (-0.64; $p < 0.01$)

TABLE 3

Descriptive Statistics and Univariate Tests

Panel A: Successor Auditor following Auditor Resignations (n = 562)

	Mean	Med.	Std. Dev.	Min.	Max.	SB4	SNB4	Mean Diff.	(t-stat)	FAM	Non-FAM	Mean Diff.	(t-stat)
FAM	0.25	0.00	0.43	0.00	1.00	0.51	0.19	0.31[a]	(6.69)	NA	NA	NA	NA
GC	0.23	0.00	0.42	0.00	1.00	0.06	0.26	−0.20[a]	(−4.26)	0.17	0.25	−0.07[c]	(−1.74)
IC	0.28	0.00	0.45	0.00	1.00	0.18	0.30	−0.12[b]	(−2.40)	0.20	0.30	−0.10[b]	(−2.31)
RES	0.09	0.00	0.28	0.00	1.00	0.04	0.10	−0.06[c]	(−1.76)	0.09	0.09	0.00	(−0.10)
DIS	0.33	0.00	0.47	0.00	1.00	0.34	0.33	0.01	(0.05)	0.30	0.34	−0.04	(−0.86)
LNASSET	17.36	17.43	2.45	9.62	24.78	19.95	16.83	3.12[a]	(12.85)	16.88	17.51	−0.64[a]	(−2.66)
INVREC	0.29	0.23	0.23	0.00	0.98	0.23	0.30	−0.07[a]	(−2.82)	0.26	0.29	−0.03	(−1.36)
ZSCORE	2.01	−0.80	8.62	−9.81	47.80	−1.00	2.63	−3.63[a]	(−3.78)	0.88	2.38	−1.50[c]	(−1.78)
REDCA	0.002	0.000	0.055	−0.457	0.832	0.001	0.003	−0.002	(−0.37)	0.00	0.00	−0.01	(−1.02)
LVG	0.20	0.01	0.50	0.00	6.78	0.23	0.19	0.04	(0.65)	0.19	0.20	0.00	(−0.07)
IB	−1.02	−0.07	6.52	−77.36	55.89	−0.48	−1.12	0.64	(0.87)	−0.72	−1.11	0.39	(0.62)
XI	0.001	0.000	0.013	−0.027	0.266	0.000	0.001	−0.001	(−0.60)	0.000	0.001	−0.001	(−0.76)
FORSAL	0.02	0.00	0.10	0.00	1.00	0.01	0.02	−0.01	(−1.03)	0.01	0.02	−0.01	(−0.90)
LNSEG	1.26	1.10	0.55	0.00	3.10	1.66	1.17	0.48[a]	(8.32)	1.23	1.27	−0.04	(−0.73)
LITIND	0.38	0.00	0.48	0.00	1.00	0.32	0.39	−0.07	(−1.32)	0.38	0.38	0.00	(0.04)
MRGNOMRG	0.03	0.00	0.17	0.00	1.00	0.07	0.02	0.05[a]	(2.92)	0.04	0.02	0.02	(1.22)
NOMRGMRG	0.02	0.00	0.16	0.00	1.00	0.06	0.02	0.04[a]	(2.64)	0.02	0.03	0.00	(−0.27)
IB4	91.98	84.00	42.31	21.00	286.00	0.69	0.43	0.26[a]	(4.75)	0.49	0.47	0.01	(0.23)
RESTIM	0.48	0.00	0.50	0.00	1.00	0.13	0.23	−0.10[b]	(−2.20)	0.12	0.24	−0.12[a]	(−3.14)
SPNOSP	0.21	0.00	0.41	0.00	1.00	0.18	0.25	−0.07	(−1.41)	0.20	0.25	−0.05	(−1.25)
NOSPSP	0.23	0.00	0.42	0.00	1.00	0.28	0.03	0.25[a]	(9.32)	0.12	0.06	0.07[a]	(2.62)
ARLAG	0.07	0.00	0.26	0.00	1.00	87.58	92.88	−5.30	(−1.11)	92.73	91.74	0.99	(0.24)
BDMTG	7.90	7.00	2.88	4.00	16.00	8.26	7.83	0.44	(1.35)	7.88	7.91	−0.03	(−0.11)
BDSIZE	9.98	10.00	2.88	5.00	17.00	10.98	9.78	1.20[a]	(3.73)	8.79	10.37	−1.58[a]	(−5.76)
BDIND	0.70	0.69	0.14	0.25	1.00	0.74	0.69	0.06[a]	(3.65)	0.67	0.70	−0.03[b]	(−2.55)
ACSIZE	4.65	5.00	0.77	3.00	6.00	5.15	4.55	0.59[a]	(7.11)	4.78	4.61	0.17[b]	(2.24)

Panel B: Change in Audit Fees following Auditor Resignations (n = 562)

	Mean	Median	Std. Dev.	Min.	Max.	Percentiles				
						1	25	50	75	99
Δ*AF*	0.3327	0.0595	0.9263	−0.7547	3.0000	−0.7547	−0.2710	0.0595	0.5735	3.0000
GCNOGC	0.0676	0.0000	0.2513	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
NOGCGC	0.0480	0.0000	0.2140	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
ICNOIC	0.1335	0.0000	0.3404	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
NOICIC	0.2367	0.0000	0.4254	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
RESNORES	0.0765	0.0000	0.2661	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
NORESRES	0.0463	0.0000	0.2102	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
DISNODIS	0.0605	0.0000	0.2386	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
NODISDIS	0.0107	0.0000	0.1029	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
Δ*ASSET*	0.2784	0.0283	1.0842	−0.9720	6.7808	−0.9720	−0.1265	0.0283	0.2631	6.7808
Δ*INVREC*	0.2236	0.0402	0.8766	−0.9750	5.1650	−0.9750	−0.1393	0.0402	0.2814	5.1650
Δ*SEG*	0.1797	0.0000	0.3933	−0.6667	1.0000	−0.6667	0.0000	0.0000	0.5000	1.0000
Δ*FORSAL*	0.0161	0.0000	0.1226	−0.4000	0.9900	−0.4000	0.0000	0.0000	0.0000	0.9900
Δ*IB*	0.3232	−0.0001	2.7836	−5.1073	22.3194	−5.1073	−0.0335	−0.0001	0.0081	22.3194
Δ*XI*	0.0000	0.0000	0.0000	−0.0004	0.0000	−0.0004	0.0000	0.0000	0.0000	0.0000
Δ*LVG*	0.0175	0.0000	0.1577	−0.5942	0.9889	−0.5942	−0.0001	0.0000	0.0075	0.9889
Δ*ZSCORE*	0.0183	0.0120	0.1076	−0.2668	0.7276	−0.2668	−0.0085	0.0120	0.0245	0.7276
Δ*REDCA*	0.0002	−0.0001	0.0101	−0.0517	0.0559	−0.0517	−0.0024	−0.0001	0.0019	0.0559

(continued on next page)

American Accounting Association

TABLE 3 (continued)

| | Mean | Median | Std. Dev. | Min. | Max. | Percentiles | | | | |
						1	25	50	75	99
MRGNOMRG	0.0285	0.0000	0.1665	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
NOMRGMRG	0.0249	0.0000	0.1560	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
SPNOSP	0.2349	0.0000	0.4243	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
NOSPSP	0.0730	0.0000	0.2603	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
IB4SNB4	0.3594	0.0000	0.4803	0.0000	1.0000	0.0000	0.0000	0.0000	1.0000	1.0000
INB4SB4	0.0516	0.0000	0.2214	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	1.0000
$\Delta BDMTG$	−0.0599	0.0000	0.3052	−0.6900	1.2800	−0.6900	−0.0275	0.0000	0.0000	1.2800
$\Delta BDSIZE$	0.2355	0.0000	0.4452	−0.5400	1.3600	−0.5400	0.0000	0.0000	0.5600	1.3600
$\Delta BDIND$	−0.0143	0.0000	0.1207	−0.4100	0.3500	−0.4100	0.0000	0.0000	0.0000	0.3500
$\Delta ACSIZE$	−0.0379	0.0000	0.1910	−0.5000	0.5600	−0.5000	−0.2000	0.0000	0.0000	0.5600

[a], [b], [c] Denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
Statistical test for differences in mean is based on a two-tailed t-test. The t-statistics are reported in parentheses.
See Appendix A for variable definitions.

and have lower Z-score (−1.50; $p < 0.10$). Furthermore, family firms have smaller boards (−1.58; $p < 0.01$), lower percentage of independent directors on board (−0.03; $p < 0.05$), and larger audit committees (0.17; $p < 0.05$). Finally, compared to non-family firms, family firms witness a higher incidence of switching from a non-industry specialist to an industry-specialist auditor (0.07; $p < 0.01$) and a lower incidence of incumbent auditors resigning before completing the audit engagement (−0.12; $p < 0.01$).

Panel B of Table 3 presents the descriptive statistics for the variables included in the change in audit fee model. All continuous variables are measured in percentage terms for the year following auditor resignation relative to the year of resignation and are winsorized at the 1st and 99th percentiles (Ettredge et al. 2007; Huang et al. 2009). Descriptive statistics show that audit fees increased by 33 percent, on average, with a maximum decrease of 75 percent and a maximum increase of 300 percent. The increase in audit fees documents that clients whose auditors resign do not realize any cost savings from auditor switches, on average. This is expected given the high-risk profile of clients whose auditors resign, and the fact that successor auditors are likely to charge a risk premium for serving as successor auditors for high-risk clients.

Seven percent of the sample firms had (did not have) a going concern issue reported in the year of resignation (the following year), while 5 percent of the firms in our sample did not have (had) a going concern issue reported in the year of resignation (the following year). The percentages pertaining to internal control weaknesses are 13 and 24 percent, those for restatements are 8 and 5 percent, while those related to auditor-client disagreements are 6 and 1 percent, respectively.

Total assets increased by 28 percent, on average, while the average increase in inventory and receivables as a percentage of total assets is close to 22 percent. Sample firms became more complex with an average increase in business segments and foreign sales of 18 and 1.6 percent, respectively. Sample firms report an increase in income before extraordinary items as a percentage of total assets by around 33 percent, on average, in the year following auditor resignations relative to the resignation year. Financial leverage and Z-score increased by an average of 1.75 percent and 1.83 percent, respectively.

Thirty-six percent of the sample firms witnessed a change from a Big 4 to a non-Big 4 auditor compared to only 5 percent that witnessed an upgrade in their auditor quality (i.e., from a non-Big 4 to a Big 4 auditor). The change from a specialist to a non-specialist auditor is closely in line with the change from a Big 4 to a non-Big 4 auditor with an average of 23 percent, while the opposite change had a mean of 7 percent. The congruence between changes to Big 4 auditors and changes to industry specialists is anticipated given that Big 4 auditors are mostly classified as industry specialists (Ettredge et al. 2007).

Finally, Panel B of Table 3 shows that board meetings decreased by an average of 6 percent, while board size increased by 24 percent, on average. Board independence witnessed a slight decrease by an average of 1 percent, while audit committee size decreased by an average of 4 percent. Firms having a merger activity in the year of resignation but not in the following year represent 3 percent of sample firms, while 2 percent of the firms in our sample did not have (had) a merger activity in the year of resignation (the following year).

In sum, the descriptive statistics and the univariate tests in Table 3 show that several variables included in our two models either differ between family firms (firms with Big 4 successor auditor) and non-family firms (firms with non-Big 4 successor auditors) or have changed following the auditor resignation. Hence, we control for all of these variables in our multivariate tests presented below.

Correlation Matrix

Table 4, Panels A and B, present the Spearman bivariate correlation matrix for the variables included in the successor auditor model, while Panels C and D present the correlations for the variables included in the change in audit fee model. Bivariate correlations presented in Panels A–B show that Big 4 auditors are more likely to serve as successor auditors in family firms as opposed to non-family firms (0.27; $p < 0.01$) providing further support for the alignment perspective. Big 4 auditors are also more likely to serve as successor auditors for larger firms (0.44; $p < 0.01$), firms that are more levered (0.13; $p < 0.01$), firms that have higher ratio of income before extraordinary items to total assets (0.13; $p < 0.01$), and firms having a larger number of business segments (0.25; $p < 0.01$).

The likelihood of having a Big 4 successor auditor is also higher for firms that witnessed mergers and acquisitions either during the year of resignation (0.12; $p < 0.01$) or during the following year (0.11; $p < 0.01$). Having a Big 4 successor auditor is also more likely to occur in firms that were audited by a Big 4 auditor (0.19; $p < 0.01$), firms having an industry specialist in the year following resignation (0.36; $p < 0.01$), in addition to firms having larger board size (0.15; $p < 0.01$), greater percentage of independent directors (0.15; $p < 0.01$), and larger audit committees (0.29; $p < 0.01$).

In contrast, Big 4 auditors are less likely to serve as successor auditors in firms whose incumbent auditors reported high-risk comments related to going concern (−0.17; $p < 0.01$) and weaknesses in internal controls (−0.10; $p < 0.05$), firms having a larger percentage of inventory and receivables out of total assets (−0.11; $p < 0.01$), in addition to firms having a larger Z-score (−0.11; $p < 0.01$). Big 4 auditors are also less likely to accept firms whose incumbent auditors resigned while the audit was presumably underway (−0.09; $p < 0.10$).

Bivariate correlations in Panels C–D of Table 4 document a significantly larger decrease in audit fees following auditor resignations in family firms as opposed to non-family firms (−0.11; $p < 0.01$). The change in audit fees is also smaller in firms switching from an industry specialist to a non-specialist auditor (−0.13; $p < 0.01$) given the potential cost savings resulting from evading the premium charged by a specialist auditor (Ettredge et al. 2007). A similar pattern emerges for firms that switched from a Big 4 auditor to a non-Big 4 auditor (−0.18; $p < 0.01$), which is in line with prior research documenting that Big 4 auditors charge a premium compared to non-Big 4 auditors (Ettredge et al. 2007; Rama and Read 2006).

In contrast, the correlation matrix in Panels C–D of Table 4 document that the change in audit fees is significantly larger in firms that did not report the presence of internal control weaknesses during the year of resignation and reported the presence of such weaknesses in the following year (0.11; $p < 0.01$). The change in audit fees is also larger in firms that witnessed an increase in assets (0.28; $p < 0.01$), in inventory and receivables as a percentage of total assets (0.21; $p < 0.01$), and in Z-score (0.07; $p < 0.10$). Furthermore, the change in audit fees is larger in firms that switched from a non-specialist auditor to a specialist auditor (0.20; $p < 0.01$) or from a non-Big 4 auditor to a Big 4 auditor (0.22; $p < 0.01$), and in firms that witnessed an increase in audit committee size (0.08; $p < 0.05$).

Overall, the bivariate correlations presented in Table 4 are consistent with the significant differences between family firms (firms with Big 4 successor auditor) and non-family firms (firms with non-Big 4 successor auditors) highlighted in Table 3. In addition, the correlation matrix shows that our dependent variables (*SB4* and Δ*AF*) are significantly correlated with *FAM,* our main variable of interest, and with several other independent variables. In the following section, we examine whether the bivariate correlations we obtain for *FAM* in Table 4 remain significant after we control for all the independent variables we have in our two multivariate models.

Multivariate Results

Successor Auditor following Resignations

Table 5, Model 1 tests whether the likelihood of a Big 4 auditor (*SB4*) serving as the successor auditor following the resignation of the incumbent auditor in family firms is significantly different from that in non-family firms (H1). We run our tests using probit regressions with robust standard errors clustered by firm, and we include industry (one-digit SIC code) and year (2004–2012) indicator variables to control for industry and year effects. Findings show that Big 4 auditors are more likely to serve as successor auditors following auditor resignations in family firms as opposed to non-family firms (2.57; $p < 0.01$). In terms of economic significance, the marginal effect of *FAM* on the probability of a Big 4 successor auditor accepting the new audit engagement following the incumbent auditor resignation is 19 percent. This finding, which is consistent with the alignment perspective, suggests that following the incumbent auditor resignation, large auditors perceive family firms as having a lower audit risk. Family firms are likely to have a lower audit risk, as opposed to non-family firms, given the commitment of family members to maintain their reputation and to preserve family wealth for future generations and their close involvement in managing or governing the firm.

With respect to control variables, our findings corroborate those of prior studies documenting that Big 4 auditors are less likely to serve as successor auditors in firms whose incumbent auditors disclose high-risk comments related to going concern

TABLE 4
Correlation Matrix

Panel A: Successor Auditor following Auditor Resignations (n = 562)

	SB4	FAM	GC	IC	RES	DIS	LNASSET	INVREC	ZSCORE	REDCA	LVG	IB	XI
FAM	0.27[a]												
GC	−0.17[a]	−0.07[c]											
IC	−0.10[b]	−0.09[b]	−0.06										
RES	−0.07	0.00	−0.11[a]	0.18[a]									
DIS	0.00	−0.04	−0.08[c]	0.69[a]	0.32[a]								
LNASSET	0.44[a]	−0.09[b]	−0.38[a]	0.17[a]	0.04	0.24[a]							
INVREC	−0.11[a]	−0.05	0.02	0.04	0.02	0.06	−0.05						
ZSCORE	−0.11[a]	−0.11[b]	0.35[a]	−0.06	−0.05	−0.08[b]	−0.40[a]	0.05					
REDCA	−0.04	−0.07[c]	−0.04	0.01	−0.01	−0.04	−0.01	0.07	0.01				
LVG	0.13[a]	−0.02	0.03	0.00	−0.02	0.00	0.11[a]	−0.03	0.26[a]	0.01			
IB	0.13[a]	0.10[a]	−0.28[a]	0.04	0.03	0.08[c]	0.38[a]	0.11[a]	−0.40[a]	0.06	−0.03		
XI	0.01	0.01	0.08[b]	−0.03	0.01	−0.02	−0.09[b]	0.05	−0.04	−0.02	−0.07	0.00	
FORSAL	−0.05	−0.04	0.00	−0.02	0.06	0.00	−0.11[a]	0.11[a]	−0.06	0.01	0.00	0.03	0.07
LNSEG	0.25[a]	−0.05	−0.07[c]	0.01	−0.03	0.05	0.27[a]	0.01	−0.08	−0.07	0.12[a]	0.10[b]	0.00
LITIND	−0.06	0.00	−0.04	0.07	−0.01	0.08[b]	−0.04	0.03	0.02	0.01	−0.08	−0.06	0.08
MRGNOMRG	0.12[a]	0.05	−0.04	0.01	0.02	0.04	0.11[a]	−0.06	−0.04	−0.03	0.02	−0.01	0.00
NOMRGMRG	0.11[a]	−0.01	−0.03	0.03	0.07	0.03	0.10[b]	0.03	0.02	0.04	0.03	−0.01	−0.10[b]
IB4	0.19[a]	0.01	−0.17[a]	0.13[a]	0.05	0.20	0.39[a]	−0.02	−0.12[a]	−0.05	0.07	0.11[a]	−0.08[c]
RESTIM	−0.09[c]	−0.13[a]	0.03	−0.08[c]	−0.07	−0.09[b]	−0.11[a]	−0.03	0.02	0.03	−0.07	−0.05	0.01
SPNOSP	−0.06	−0.05	−0.13[a]	0.10[b]	0.05	0.12[a]	0.17[a]	0.03	−0.04	−0.08[b]	−0.04	0.07	−0.07
NOSPSP	0.36[a]	0.11[a]	−0.02	0.02	−0.02	0.03	0.17[a]	−0.06	−0.08[c]	0.03	0.06	0.06	0.00
ARLAG	−0.06	−0.05	0.16[a]	0.02	0.03	0.01	−0.15[a]	0.05	0.28[a]	0.03	0.02	−0.16[a]	−0.02
BDMTG	0.06	0.00	−0.10[b]	−0.02	0.04	0.01	0.14[a]	−0.07	−0.08[c]	−0.06	0.03	0.04	−0.03
BDSIZE	0.15[a]	−0.23[a]	−0.07[c]	0.04	0.01	0.05	0.33[a]	−0.03	−0.05	0.00	0.12[b]	0.06	−0.02
BDIND	0.15[a]	−0.12[a]	−0.06	0.06	0.02	0.08[c]	0.14[a]	−0.05	−0.07[c]	−0.03	0.00	0.02	−0.02
ACSIZE	0.29[a]	0.09[b]	−0.27[a]	0.16[a]	0.03	0.18[a]	0.57[a]	−0.10[a]	−0.32[a]	0.01	0.10[b]	0.31[a]	−0.03

Panel B: Successor Auditor following Auditor Resignations, continued from Panel A (n = 562)

	FORSAL	LNSEG	LITIND	MRG-NOMRG	NOMR-GMRG	IB4	RESTIM	SPNOSP	NOSPSP	ARLAG	BDMTG	BDSIZE	BDIND
LNSEG	0.02												
LITIND	−0.01	−0.02											
MRGNOMRG	−0.01	0.06	0.04										
NOMRGMRG	0.00	−0.04	−0.05	−0.03									
IB4	−0.02	0.15[a]	0.14[a]	0.05	0.01								
RESTIM	0.05	−0.03	−0.05	0.04	−0.05	−0.24[a]							
SPNOSP	−0.04	0.05	0.16[a]	0.06	0.02	0.58[a]	−0.16[a]						
NOSPSP	0.01	0.13[a]	−0.02	0.08[c]	0.04	0.02	−0.01	−0.15[a]					
ARLAG	−0.04	−0.01	−0.07	0.01	0.01	−0.26[a]	0.03	−0.18[a]	0.00				
BDMTG	−0.05	0.00	0.01	0.02	0.01	0.08	−0.08[b]	0.03	0.03	−0.08[b]			
BDSIZE	−0.04	0.22[a]	−0.01	0.05	−0.02	0.14[a]	−0.10[b]	0.08[b]	0.07	−0.07	0.09[b]		
BDIND	0.03	0.13[a]	0.02	−0.01	−0.02	0.17[a]	−0.11[a]	0.08[c]	−0.01	0.00	0.10[b]	0.22[a]	
ACSIZE	−0.05	0.18[a]	0.01	0.11[a]	0.07	0.30[a]	−0.10[b]	0.10[b]	0.15[a]	−0.11[a]	0.00	0.13[a]	0.10[c]

(continued on next page)

(−0.53; $p < 0.05$) and weaknesses in internal controls (−0.91; $p < 0.01$). Big 4 successor auditors are also less likely to accept firms having a larger percentage of inventory and receivables out of total assets (−1.42; $p < 0.05$), firms that are more levered (−0.73; $p < 0.01$), and firms that switch from a specialist auditor to a non-specialist auditor (−0.77; $p < 0.05$).

However, findings document that Big 4 auditors are more likely to serve as successor auditors in bigger firms (0.73; $p < 0.01$), firms reporting larger profits before extraordinary items as a percentage of total assets (0.08; $p < 0.01$), firms reporting

TABLE 4 (continued)

Panel C: Change in Audit Fees following Auditor Resignations (n = 562)

	ΔAF	FAM	GCN-OGC	NOG-CGC	ICN-OIC	NOI-CIC	RESN-ORES	NORE-SRES	DISN-ODIS	NODI-SDIS	ΔASSET	ΔINV-REC	ΔSEG	ΔFOR-SAL
FAM	−0.11[a]													
GCNOGC	−0.03	−0.05												
NOGCGC	0.01	−0.01	−0.06											
ICNOIC	−0.02	−0.10[b]	0.06	0.08[b]										
NOICIC	0.11[a]	0.10[b]	−0.02	−0.03	−0.22[a]									
RESNORES	0.02	−0.01	0.00	−0.03	0.06	−0.07								
NORESRES	−0.02	0.05	0.04	−0.05	−0.01	0.00	−0.06							
DISNODIS	0.02	−0.04	−0.01	−0.02	0.08[c]	0.03	0.12[a]	0.05						
NODISDIS	−0.05	0.06	−0.03	0.06	0.16[a]	−0.02	−0.03	−0.02	−0.03					
ΔASSET	0.28[a]	−0.01	−0.13[a]	0.01	−0.06	0.14[a]	−0.03	0.04	0.06	0.07				
ΔINVREC	0.21[a]	0.02	0.00	−0.08[c]	−0.06	0.09[b]	−0.04	0.03	0.02	−0.03	0.53[a]			
ΔSEG	−0.01	−0.01	0.13[a]	0.02	0.05	−0.07	0.09[b]	0.07[c]	0.11[b]	−0.06	−0.15[a]	−0.07		
ΔFORSAL	0.06	−0.01	−0.03	0.06	0.01	0.07	−0.07	−0.07	−0.03	−0.01	0.01	0.01	−0.04	
ΔIB	0.01	−0.08[c]	0.07[c]	−0.02	0.01	−0.01	0.09[b]	−0.01	−0.02	0.02	0.33[a]	0.15[a]	0.14[a]	−0.06
ΔXI	−0.02	0.06	0.03	−0.05	0.04	0.06	0.03	0.03	−0.04	0.01	0.01	0.03	−0.02	0.01
ΔLVG	−0.05	−0.01	0.18[a]	0.02	0.11[a]	−0.11[b]	0.06	0.01	−0.02	−0.04	−0.19[a]	−0.08[c]	0.22[a]	−0.09[b]
ΔZSCORE	0.07[c]	0.03	−0.04	−0.03	−0.02	0.10[b]	0.02	−0.04	0.01	0.01	0.08[c]	0.01	−0.08[c]	−0.02
ΔREDCA	−0.08[c]	0.06	−0.06	0.05	0.03	0.05	0.01	−0.07	0.01	0.02	−0.02	−0.08[c]	0.03	0.04
MRGNOMRG	0.05	0.05	−0.05	0.06	−0.04	0.01	0.03	−0.04	−0.04	0.09[b]	0.05	0.05	−0.02	−0.02
NOMRGMRG	0.02	−0.01	−0.04	0.02	0.04	−0.01	0.08[b]	−0.04	−0.04	−0.02	−0.01	−0.04	0.01	0.04
SPNOSP	−0.13[a]	−0.05	0.00	−0.05	−0.04	0.08[b]	0.05	−0.06	0.02	−0.06	−0.13[a]	−0.07[b]	−0.04	0.02
NOSPSP	0.20[a]	0.11[a]	−0.05	0.00	0.03	0.05	0.00	0.00	0.01	0.10[b]	0.12[a]	0.09[b]	0.00	0.01
IB4SNB4	−0.18[a]	−0.13[a]	−0.01	−0.03	0.04	0.02	0.05	−0.09[b]	0.04	−0.08[c]	−0.11[a]	−0.02	0.01	−0.01
INB4SB4	0.22[a]	0.17[a]	−0.06	0.06	0.00	0.00	−0.07	−0.01	−0.03	0.05	0.07[c]	0.02	−0.01	−0.03
ΔBDMTG	0.02	0.18[a]	0.03	−0.05	−0.02	0.12[a]	0.03	−0.01	0.02	0.00	0.09[b]	0.09[b]	0.03	−0.01
ΔBDSIZE	−0.02	−0.34[a]	0.13[a]	0.04	0.10[b]	−0.21[a]	−0.03	0.00	0.02	−0.02	−0.08[b]	−0.04	0.05	−0.02
ΔBDIND	0.05	−0.21[a]	0.01	0.06	0.11[b]	0.01	−0.04	−0.07[c]	0.02	0.03	−0.01	−0.06	−0.03	0.01
ΔACSIZE	0.08[b]	0.26[a]	−0.02	−0.07	−0.09[b]	0.16[a]	0.04	0.04	0.01	0.01	0.11[a]	0.08[c]	0.00	−0.03

Panel D: Change in Audit Fees following Auditor Resignations, continued from Panel C (n = 562)

	ΔIB	ΔXI	ΔLVG	ΔZS-CORE	ΔRE-DCA	MRGN-OMRG	NOMR-GMRG	SPNOSP	NOSPSP	IB4-SNB4	INB-4SB4	ΔBD-MTG	ΔBD-SIZE	ΔBD-IND
ΔXI	0.02													
ΔLVG	0.13[a]	−0.05												
ΔZSCORE	0.09[b]	−0.04	−0.09[b]											
ΔREDCA	−0.03	0.05	−0.05	−0.04										
MRGNOMRG	−0.02	0.02	0.04	−0.03	0.03									
NOMRGMRG	0.06	−0.08[b]	0.03	0.03	−0.05	−0.03								
SPNOSP	−0.03	−0.01	0.03	0.02	0.07[c]	0.06	0.02							
NOSPSP	0.03	0.03	−0.03	−0.01	−0.04	0.08[c]	0.04	−0.16[a]						
IB4SNB4	−0.04	−0.02	0.02	0.04	0.02	0.01	−0.02	0.39[a]	−0.15[a]					
INB4SB4	−0.01	0.03	−0.03	0.02	0.03	0.10[b]	0.12[a]	−0.13[a]	0.24[a]	−0.17[a]				
ΔBDMTG	0.01	−0.01	−0.06	0.06	0.04	0.05	0.05	0.04	0.08[b]	−0.03	0.09[b]			
ΔBDSIZE	0.04	−0.01	0.06	−0.05	−0.04	−0.07[c]	−0.06	−0.08[c]	−0.09[b]	−0.08[b]	−0.15[a]	−0.09[b]		
ΔBDIND	0.01	−0.02	−0.02	0.02	0.08[b]	−0.04	0.01	0.05	0.04	0.01	0.06	−0.20[a]	0.17[a]	
ΔACSIZE	0.01	−0.01	0.03	0.09	−0.01	0.13[a]	0.08[c]	0.08[b]	0.12[a]	0.07[b]	0.13[a]	0.21[a]	−0.37[a]	−0.19[a]

[a], [b], [c] Denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
See Appendix A for variable definitions.

TABLE 5

Successor Auditor and Family Ownership
Dependent Variable: *SB4*

	Pred. Sign	Model 1		Model 2		Model 3	
		Coeff.	(Z-Value)	Coeff.	(Z-Value)	Coeff.	(Z-Value)
Constant	?	−2.09[a]	(−3.03)	−2.50[a]	(−3.89)	−2.24[a]	(−3.01)
FAM	?	2.57[a]	(7.81)				
FOUND	?			2.44[a]	(6.58)		
DESC	?			3.08[a]	(7.24)		
HIRED	?			2.80[a]	(4.79)		
OWN	?					4.82[a]	(4.42)
VOTOWN	?					0.59	(0.29)
GC	−	−0.53[b]	(−1.66)	−0.58[b]	(−1.70)	−0.79[b]	(−2.30)
IC	−	−0.91[a]	(−2.46)	−0.88[a]	(−2.40)	−1.00[a]	(−3.05)
RES	−	−0.37	(−0.56)	−0.36	(−0.56)	−0.18	(−0.32)
DIS	−	0.08	(0.22)	0.07	(0.19)	0.01	(0.03)
LNASSET	+	0.73[a]	(7.76)	0.74[a]	(7.92)	0.56[a]	(6.87)
INVREC	−	−1.42[b]	(−2.17)	−1.45[b]	(−2.23)	−1.18[b]	(−1.81)
ZSCORE	−	−0.03	(−1.00)	−0.03	(−1.06)	−0.03	(−1.35)
REDCA	−	−1.57	(−0.91)	−1.75	(−1.03)	−3.12[b]	(−2.19)
LVG	−	−0.73[a]	(−3.60)	−0.77[a]	(−4.19)	−0.61[a]	(−4.08)
IB	−	0.08[a]	(6.04)	0.08[a]	(6.06)	0.07[a]	(5.60)
XI	?	3.12[a]	(2.78)	3.44[a]	(2.60)	1.56	(0.95)
FORSAL	+	1.47	(1.06)	1.45	(1.05)	1.28	(0.78)
LNSEG	+	1.01[a]	(4.41)	1.07[a]	(4.34)	0.77[a]	(4.27)
LITIND	−	0.04	(0.15)	0.14	(0.44)	0.25	(0.95)
NOMRGMRG	?	0.63	(1.05)	0.74	(1.19)	0.22	(0.40)
MRGNOMRG	?	0.97[c]	(1.72)	0.95	(1.61)	0.76[c]	(1.67)
IB4	+	0.89[a]	(2.90)	0.90[a]	(2.98)	0.82[a]	(3.09)
RESTIM	−	−0.28	(−0.94)	−0.19	(−0.61)	−0.53[b]	(−1.77)
SPNOSP	?	−0.77[b]	(−2.45)	−0.77[b]	(−2.38)	−0.83[a]	(−2.79)
NOSPSP	?	2.28[a]	(4.42)	2.44[a]	(4.61)	2.01[a]	(5.04)
ARLAG	?	0.03[b]	(2.06)	0.02[c]	(1.78)	0.01	(1.31)
BDMTG	?	−0.03	(−0.94)	−0.02	(−0.72)	−0.01	(−0.42)
BDSIZE	?	0.01	(0.22)	0.03	(0.54)	−0.04	(−0.83)
BDIND	?	5.23[a]	(4.75)	5.24[a]	(4.53)	3.88[a]	(4.65)
ACSIZE	?	−0.20	(−1.13)	−0.20	(−1.10)	−0.13	(−0.84)
Industry Dummies		Yes		Yes		Yes	
Year Dummies		Yes		Yes		Yes	
Wald χ^2 (p < 0.000)		189.50		185.36		171.73	
Pseudo R^2		40.59%		41.44%		34.02%	
Observations		562		562		562	

[a], [b], [c] Denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
The p-values are one-tailed for signed predictions, two-tailed otherwise, with standard errors clustered by firm.
See Appendix A for variable definitions.

larger extraordinary items as a percentage of total assets (3.12; $p < 0.01$), and firms having a larger number of business segments (1.01; $p < 0.01$). Big 4 auditors are also more likely to accept firms whose incumbent auditors are Big 4 auditors (0.89; $p < 0.01$), firms that switch from a non-specialist auditor to a specialist auditor (2.28; $p < 0.01$), firms having a larger audit report lag (0.03; $p < 0.05$), and firms that have a larger percentage of independent directors (5.23; $p < 0.01$).

Table 5, Model 2 presents the probit regression results pertaining to whether the likelihood of having a Big 4 successor auditor (*SB4*) following the resignation of the incumbent auditor varies based on the identity of the CEO managing the family firm (H3a). Model 2 replaces the family firm indicator, *FAM,* with three indicator variables *FOUND, DESC,* and *HIRED* that take the value of 1 if a family firm is managed by a founder, descendent, or a non-family professional executive, respectively, and 0 otherwise.

Results show that family firms are consistently more likely to have a Big 4 successor auditor relative to non-family firms irrespective of whether family firms are managed by the founder (2.44; p < 0.01), by a descendant (3.08; p < 0.01), or by a professional executive who is not affiliated with the family (2. 80; p < 0.01).[5] These findings provide further support for the alignment perspective related to family ownership where large auditors seem to attribute a lower audit risk for family firms as opposed to non-family firms following the incumbent auditor resignation. In terms of the control variables, the results are comparable to those reported in Table 5, Model 1.

Finally, Model 3 of Table 5 presents the probit regression results pertaining to whether the likelihood of having a Big 4 successor auditor (*SB4*) following the resignation of the incumbent auditor varies with *OWN,* the percentage of shares owned by the family out of total shares outstanding (H4a). Model 3 replaces *FAM* with *OWN* and also controls for the wedge between the percentage of voting rights and cash flow rights (*VOTOWN*) arising from the presence of dual class share structures, in addition to the variables controlled for in the previous models. Larger percentage of share ownership is likely to align the interests of the family with those of other shareholders after controlling for the entrenchment effect that may result from the divergence between voting rights and cash flow rights arising from dual class shares.

Findings show that Big 4 auditors are more likely to accept family firms where family members hold a larger percentage of shares outstanding (4.82; p < 0.01). Results also show that the identity of the successor auditor is not significantly related to the wedge between voting and cash flow rights arising from dual class share structures. This finding provides additional support for the alignment effect arising from share ownership, after controlling for the potential entrenchment effect resulting from dual class share structures. As for the control variables, the results are comparable to those reported in Table 5, Models 1 and 2, with few exceptions. For instance, findings show that Big 4 auditors are less common in firms having more discretionary accruals (−3.12; p < 0.05) and in firms whose incumbent auditors resigned while the audit was underway (−0.53; p < 0.05). In contrast, the likelihood of having Big 4 auditors following auditor resignations is not significantly related to either extraordinary items as a percentage of total assets or to the audit report lag.

Change in Audit Fees following Resignations

Table 6, Model 1 tests whether the percentage change in audit fees (Δ*AF*) following auditor resignations varies with firm ownership structure (H2) using OLS regression for panel data with robust standard errors clustered by firm while controlling for industry and year effects using indicator variables. Results show larger decreases in audit fees following auditor resignations in family firms compared to non-family firms (−0.58; p < 0.01). In terms of economic significance, the estimated coefficient on *FAM* suggests that the change in audit fees following the resignation of the incumbent auditor in family firms is significantly lower by 58 percent relative to non-family firms, with all other variables assigned to their mean values. This finding supports the notion that the audit scope, the use of substantive testing, and/or the use of specialized personnel following auditor resignations in family firms are significantly less than those in non-family firms. It is also in line with the finding of Ghosh and Tang (2015b), who show that audit risk is lower in family firms and that auditors work less to provide the desired level of assurance.

Results further document that the change in audit fees is significantly larger in firms that witnessed an increase in inventory and receivables out of total assets (0.09; p < 0.05), in foreign sales out of total sales (0.58; p < 0.05), and in Z-score (0.59; p < 0.10). The change in audit fees is also larger in firms that switched from a non-specialist auditor to a specialist auditor (0.62; p < 0.01) and from a non-Big 4 to a Big 4 auditor (1.07; p < 0.01), but it is smaller in firms that switched from a Big 4 to a non-Big 4 auditor (−0.38; p < 0.01).

Model 2 of Table 6 provides the results for H3b pertaining to the identity of the CEO managing the family firm. Results show that the change in audit fees is consistently smaller in family firms irrespective of whether they are managed by a founder (−0.43; p < 0.01), descendant (−0.70; p < 0.01), or by a professional manager (−0.54; p < 0.01).[6] Model 3 of Table 6 provides the results for H4b related to the percentage of shares owned by family members. Results also show a smaller change in audit fees in family firms where family members hold a larger percentage of shares outstanding (−1.39; p < 0.01), after controlling for the wedge between voting rights and cash flow rights arising from the presence of dual class share structures. Furthermore, the sign and significance of the control variables in Models 2 and 3 are comparable to those in Model 1.

---

[5] Additional analysis documents that the difference in parameter estimates across the three combinations is not significant (p > 0.10). This finding suggests that the likelihood of engaging a successor Big 4 audit firm following auditor resignations does not vary with the identity of the CEO managing the firm.

[6] Additional analysis documents that the parameter estimates are statistically different from one another for each of the three categories (p < 0.01) indicating that the change in audit fees following auditor resignations in family firms is related to the identity of the CEO managing the firm.

TABLE 6

Change in Audit Fees and Family Ownership
Dependent Variable: ΔAF

	Model 1		Model 2		Model 3	
	Coeff.	**(t-stat)**	**Coeff.**	**(t-stat.)**	**Coeff.**	**(t-stat)**
Constant	0.63[a]	(2.75)	0.65[a]	(2.84)	0.57[b]	(2.49)
FAM	−0.58[a]	(−6.33)				
FOUND			−0.43[a]	(−3.39)		
DESC			−0.70[a]	(−5.99)		
HIRED			−0.54[a]	(−4.44)		
OWN					−1.39[a]	(−4.02)
VOTOWN					−0.68	(−1.39)
GCNOGC	−0.12	(−0.96)	−0.13	(−1.00)	−0.11	(−0.86)
NOGCGC	−0.02	(−0.13)	−0.03	(−0.21)	−0.05	(−0.33)
ICNOIC	0.11	(0.97)	0.12	(1.03)	0.11	(0.98)
NOICIC	0.15	(1.49)	0.14	(1.45)	0.12	(1.21)
RESNORES	0.03	(0.28)	0.02	(0.14)	0.05	(0.38)
NORESRES	−0.06	(−0.35)	−0.07	(−0.42)	−0.10	(−0.65)
DISNODIS	0.17	(0.87)	0.18	(0.89)	0.19	(0.96)
NODISDIS	−0.34	(−0.91)	−0.33	(−0.86)	−0.37	(−0.92)
$\Delta ASSET$	0.07	(1.65)	0.07[c]	(1.66)	0.08[c]	(1.74)
$\Delta INVREC$	0.09[b]	(2.05)	0.10[b]	(2.13)	0.09[b]	(2.09)
ΔSEG	0.02	(0.21)	0.02	(0.18)	0.01	(0.17)
$\Delta FORSAL$	0.58[b]	(2.38)	0.56[b]	(2.26)	0.58[b]	(2.34)
ΔIB	−0.02	(−0.22)	−0.03	(−0.28)	−0.05	(−0.41)
ΔXI	−0.04	(−0.49)	−0.05	(−0.48)	−0.09	(−0.52)
ΔLVG	−0.08	(−0.51)	−0.10	(−0.69)	−0.14	(−0.95)
$\Delta ZSCORE$	0.59[c]	(1.80)	0.58[c]	(1.77)	0.50	(1.53)
$\Delta REDCA$	−0.30	(−0.87)	−0.04	(−0.80)	−0.27	(−0.84)
MRGNOMRG	0.09	(0.32)	0.09	(0.34)	0.12	(0.44)
NOMRGMRG	0.01	(0.04)	0.04	(0.16)	0.05	(0.20)
SPNOSP	−0.08	(−0.81)	−0.09	(−0.90)	−0.10	(−0.95)
NOSPSP	0.62[a]	(3.06)	0.59[a]	(2.89)	0.57[a]	(2.69)
IB4SNB4	−0.38[a]	(−4.03)	−0.38[a]	(−4.03)	−0.35[a]	(−3.70)
INB4SB4	1.07[a]	(4.28)	1.07[a]	(4.18)	1.05[a]	(3.86)
$\Delta BDMTG$	0.19	(1.39)	0.20	(1.48)	0.18	(1.28)
$\Delta BDSIZE$	−0.15	(−1.59)	−0.15	(−1.52)	−0.11	(−1.13)
$\Delta BDIND$	0.24	(0.79)	0.32	(1.04)	0.47	(1.46)
$\Delta ACSIZE$	0.22	(1.10)	0.20	(0.96)	0.16	(0.76)
Industry Dummies	Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes	
F (p < 0.000)	4.27		4.01		3.27	
R^2	29.71%		29.23%		27.21%	
Observations	562		562		562	

[a], [b], [c] Denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
The p-values are two-tailed with standard errors clustered by firm.
See Appendix A for variable definitions.

ADDITIONAL ANALYSIS

As an additional analysis, we examine whether the likelihood of financial restatements in family firms is significantly different from that in non-family firms over the two-year period following the incumbent auditor resignation (or the initial auditor resignation if there is more than one auditor resignation). We focus on restatements given the conflicting perspectives on family ownership and financial reporting quality, the widely perceived notion that Big 4 auditors accept less risky clients and provide higher-quality audits compared to smaller auditors, the increased occurrence of restatements in recent years, and the

TABLE 7

Restatements following Resignations

Panel A: Family versus Non-Family Firms

n	517	Family Firms 128	Non-Family Firms 389	Mean Diff.	t-stat
Total Restatements	79	12	67	−0.078[a]	t = −2.16
One Restatement	73	12	61		
Two Restatements	6	0	6		

Panel B: Family Firms with Big 4 Successor Auditors versus Non-Family Firms with Big 4 Successor Auditors

n	93	Family Firms with *SB4* 47	Non-Family Firms with *SB4* 46	Mean Diff.	t-stat
Total Restatements	12	5	7	−0.046	t = −0.65
One Restatement	11	5	6		
Two Restatements	1	0	1		

[a] Denotes significance at the 0.05 level.

significant direct and indirect costs associated with financial restatements (Palmrose and Scholz 2004; Wilson 2008; Francis and Yu 2009).

Panel A of Table 7 shows that 79 (15 percent) firms in our sample witnessed at least one financial restatement over the two-year period following the incumbent auditor resignation, 12 (67) firms of which are family (non-family) firms. Findings also demonstrate that all of the 12 family firms witnessed only one financial restatement, while 61 (6) non-family firms witnessed one (2) restatement over the two-year period following the initial auditor resignation. Univariate tests document that the likelihood of a financial restatement over the two-year period following the incumbent auditor resignation in family firms is significantly lower than that in non-family firms (-0.078; $p < 0.05$). Panel B of Table 7 shows that five (seven) family (non-family) firms audited by Big 4 successor auditors witnessed at least one restatement over the two-year period, and the only firm that witnessed two restatements is a non-family firm. Univariate tests show that the likelihood of restatements in firms audited by Big 4 successor auditors is not significantly different between family and non-family firms. Overall, the results in Table 7 show that the likelihood of restatements in family firms over the two-year period following the incumbent auditor resignation is lower than that in non-family firms, although not statistically significant when we partition the sample by the type of successor auditors. These results further support our main tests, which imply that Big 4 auditors perceive family firms from which the incumbent auditors resigned as being less risky than their non-family counterparts.

CONCLUSION

In this paper, we investigate auditor acceptance and audit engagement pricing decisions following auditor resignations in family firms. Relying on the client acceptance and audit pricing literature and using agency theory insights on family ownership and audit risk, we argue that the likelihood of a Big 4 auditor accepting the new engagement and the change in audit fees following auditor resignations in family firms depend on whether family ownership entrenches family members or aligns their interests with those of minority shareholders.

Results obtained using a sample of auditor resignations over the post-SOX period 2004–2012 document the following. Big 4 auditors are more likely to serve as successor auditors following auditor resignations in family firms as opposed to non-family firms. Results also show that the change in audit fees following auditor resignations is significantly smaller in family firms relative to non-family firms. Our results hold when we account for whether a family firm is managed by a founder, a descendant, or by a professional manager, and when we use the percentage of shares held by the family members as another proxy for family ownership. In sum, our findings show that successor auditors consider family ownership an important factor in accepting and pricing new engagements following auditor resignations.

This paper contributes to the literature investigating the association between corporate governance attributes, auditor switches, and audit pricing. It also responds to Prencipe et al.'s (2014), Salvato and Moores (2010), in addition to Trotman and

Trotman's (2010) calls for future research that investigates audit practices in family firms. To the best of our knowledge, this is the first paper that investigates client acceptance and pricing decisions following auditor resignations in family firms. Furthermore, our paper extends current research by examining post-auditor resignation outcomes and by shedding more light over auditors' portfolio management decisions that have significant economic consequences to auditors and their clients.

Future research may provide additional evidence on auditor acceptance and audit engagement pricing decisions in family firms following auditor resignations using international data including Europe and East Asia. The regulatory framework, the financial reporting, and auditing standards, in addition to the nature of family ownership in many European and East Asian countries are significantly different from those in North America, namely the U.S., and thus may provide further support or refute the findings we document using a U.S. sample.

REFERENCES

Ali, A., T. Y. Chen, and S. Radhakrishnan. 2007. Corporate disclosures by family firms. *Journal of Accounting & Economics* 44 (1-2): 238–286.

Anderson, R. C., and D. M. Reeb. 2003. Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance* 58 (3): 1301–1328.

Anderson, R. C., S. Mansi, and D. Reeb. 2003. Founding-family ownership and the agency cost of debt. *Journal of Financial Economics* 68 (3): 263–285.

Anderson, R. C., A. Duru, and D. Reeb. 2009. Founders, heirs, and corporate opacity in the United States. *Journal of Financial Economics* 92 (2): 205–222.

Ashbaugh, H., R. LaFond, and B. Mayhew. 2003. Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review* 78 (July): 611–639.

Attig, N., N. Boubakri, S. El Ghoul, and O. Guedhami. 2016. The global financial crisis, family control, and dividend policy. *Financial Management* 45 (2): 291–313.

Ball, R., S. Jayaraman, and L. Shivakumar. 2012. Audited financial reporting and voluntary disclosure as complements: A test of the confirmation hypothesis. *Journal of Accounting & Economics* 53 (1/2): 136–166.

Bell, T., W. Landsman, and D. Shackelford. 2001. Auditors' perceived business risk and audit fees: Analysis and Evidence. *Journal of Accounting Research* 39 (1): 35–43.

Bell, T., J. C. Bedard, K. Johnstone, and E. Smith. 2002. KRisk[SM]: A computerized decision aid for client acceptance and continuance risk assessments. *Auditing: A Journal of Practice & Theory* 21 (2): 97–113.

Bockus, K., and F. Gigler. 1998. The theory of auditor resignations. *Journal of Accounting Research* 36 (2): 191–208.

Carcello, J., D. Hermanson, T. Neal, and R. Riley. 2002. Board characteristics and audit fees. *Contemporary Accounting Research* 19 (3): 365–384.

Cassell, C., G. Giroux, L. Myers, and T. Omer. 2012. The effect of corporate governance on auditor-client realignments. *Auditing: A Journal of Practice & Theory* 31 (2): 167–188.

Catanach, A., J. Irving, S. Williams, and P. Walker. 2011. An *ex post* examination of auditor resignations. *Accounting Horizons* 25 (2): 267–283.

Causholli, M., M. De Martinis, D. Hay, and W. R. Knechel. 2010. Audit markets, fees and production: Towards an integrated view of empirical audit research. *Journal of Accounting Literature* 29: 167–215.

Chang, H., C. A. Cheng, and K. Reichelt. 2010. Market reaction to auditor switching from Big 4 to third-tier small accounting firms. *Auditing: A Journal of Practice & Theory* 29 (2): 83–114.

Chen, K., T.-Y. Chen, and K. Hui. 2009. *CEO Perquisites and Family Firms*. Working paper, The Hong Kong University of Science and Technology.

Chen, S., C. Xia, and Q. Cheng. 2008. Do family firms provide more or less voluntary disclosure? *Journal of Accounting Research* 46 (3): 499–536.

Chen, S., C. Xia, Q. Cheng, and T. Shevlin. 2010. Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics* 95 (1): 41–61.

Choi, J. H., R. K. Doogar, and A. R. Ganguly. 2004. The riskiness of large audit firm client portfolios and changes in audit liability regimes: Evidence from the U.S. audit market. *Contemporary Accounting Research* 21 (4): 747–785.

Davis, L., D. Ricchiute, and G. Trompeter. 1993. Audit effort, audit fees, and the provision of nonaudit services to audit clients. *The Accounting Review* 68 (1): 135–150.

Dechow, P., R. Sloan, and A. Sweeney. 1996. Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research* 13 (1): 1–26.

DeFond, M., and K. Subramanyam. 1998. Auditor changes and discretionary accruals. *Journal of Accounting & Economics* 25 (1): 35–67.

DeFond, M., M. Ettredge, and D. Smith. 1997. An investigation of auditor resignations. *Research in Accounting Regulation* 11: 25–45.

Demsetz, H. 1983. The structure of ownership and the theory of the firm. *Journal of Law and Economics* 26 (June): 375–390.

Dunn, K., and B. Mayhew. 2004. Audit firm industry specialization and client disclosure quality. *Review of Accounting Studies* 9 (1): 35–58.

Dyer, W., and D. Whetten. 2006. Family firms and social responsibility: Preliminary evidence from the S&P 500. *Entrepreneurship Theory and Practice* 30 (6): 785–802.

Elliott, J., A. Ghosh, and E. Peltier. 2013. Pricing of risky initial audit engagements. *Auditing: A Journal of Practice & Theory* 32 (4): 25–43.

Ettredge, M., S. Scholz, and C. Li. 2007. Audit fees and auditor dismissals in the Sarbanes-Oxley era. *Accounting Horizons* 21 (4): 371–386.

Ettredge, M., J. Heintz, C. Li, and S. Scholz. 2011. Auditor realignments accompanying implementation of SOX 404 ICFR reporting requirements. *Accounting Horizons* 25 (1): 17–39.

Fama, E., and M. Jensen. 1983. Separation of ownership and control. *Journal of Law and Economics* 26 (2): 301–325.

Francis, B. 1993. Family business succession planning. *Journal of Accountancy* 176 (August): 49–51.

Francis, J., and M. Yu. 2009. Big 4 audit size and audit quality. *The Accounting Review* 84 (September): 1521–1552.

Ghosh, A., and S. Lustgarten. 2006. Pricing of initial audit engagements by large and small audit firms. *Contemporary Accounting Research* 23 (2): 333–368.

Ghosh, A., and C. Tang. 2015a. Auditor resignation and risk factors. *Accounting Horizons* 29 (3): 529–549.

Ghosh, A., and C. Tang. 2015b. Assessing financial reporting quality of family firms: The auditors' perspective. *Journal of Accounting & Economics* 60 (1): 95–116.

Gómez-Mejía, L., C. Cruz, P. Berrone, and J. De Castro. 2011. The bind that ties: Socioemotional wealth preservation in family firms. *The Academy of Management Annals* 5 (1): 653–707.

Griffin, P., and D. Lont. 2010. Do investors care about auditor dismissals and resignations? What drives the response? *Auditing: A Journal of Practice & Theory* 29 (2): 189–214.

Griffin, P., and D. Lont. 2011. Audit fees around dismissals and resignations: Additional evidence. *Journal of Contemporary Accounting & Economics* 7 (2): 65–81.

Hay, D., W. R. Knechel, and N. Wong. 2006. Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research* 23 (1): 141–191.

Ho, J., and F. Kang. 2013. Auditor choice and audit fees in family firms: Evidence from the S&P 1500. *Auditing: A Journal of Practice & Theory* 32 (4): 71–93.

Hogan, C., and M. Wilkins. 2008. Evidence on the audit risk model: Do auditors increase audit fees in the presence of internal control deficiencies? *Contemporary Accounting Research* 25 (1): 219–242.

Hogan, C. E., and R. D. Martin. 2009. Risk shifts in the market for audits: An examination of changes in risk for "second tier" audit firms. *Auditing: A Journal of Practice & Theory* 28 (2): 93–118.

Huang, Y., and S. Scholz. 2012. Evidence on the association between financial restatements and auditor resignations. *Accounting Horizons* 26 (3): 439–464.

Huang, H.-W., K. Raghunandan, and D. Rama. 2009. Audit fees for initial audit engagements before and after SOX. *Auditing: A Journal of Practice & Theory* 28 (1): 171–190.

Johnstone, K., and J. C. Bedard. 2003. Risk management in client acceptance decisions. *The Accounting Review* 18 (4): 1003–1025.

Johnstone, K., and J. C. Bedard. 2004. Audit firm portfolio management decisions. *Journal of Accounting Research* 42 (4): 659–690.

Khalil, S., J. Cohen, and G. Trompeter. 2011. Auditor resignation and firm ownership structure. *Accounting Horizons* 25 (4): 703–727.

Krishnan, G., L. Sun, Q. Wang, and R. Yang. 2013. Client risk management: A pecking order analysis of auditor response to upward earnings management risk. *Auditing: A Journal of Practice & Theory* 32 (2): 147–169.

Krishnan, J., and J. Krishnan. 1997. Litigation risk and auditor resignations. *The Accounting Review* 72 (4): 539–560.

La Porta, R., F. Lopez-De-Silanes, and A. Shleifer. 1999. Corporate ownership around the world. *The Journal of Finance* 54 (2): 471–517.

Landsman, W., K. Nelson, and B. Rountree. 2009. An empirical analysis of Big N auditor switches: Evidence from the pre- and post-Enron eras. *The Accounting Review* 84 (2): 531–558.

Lee, H. Y., V. Mande, and R. Ortman. 2004. The effect of audit committee and board of director independence. *Auditing: A Journal of Practice & Theory* 23 (2): 131–146.

Palmrose, Z.-V., and S. Scholz. 2004. The circumstances and legal consequences of non-GAAP reporting: Evidence from restatements. *Contemporary Accounting Research* 21 (1): 139–180.

Prencipe, A., S. Bar-Yosef, and H. Dekker. 2014. Accounting research in family firms: Theoretical and empirical challenges. *European Accounting Review* 23 (3): 361–385.

Raghunandan, K., and D. Rama. 1999. Auditor resignations and the market for audit services. *Auditing: A Journal of Practice & Theory* 18 (1): 124–134.

Rama, D., and W. Read. 2006. Resignations by the Big 4 and the market for audit services. *Accounting Horizons* 20 (2): 97–109.

Salvato, C., and K. Moores. 2010. Research on accounting in family firms: Past accomplishments and future challenges. *Family Business Review* 23 (3): 193–215.

Sankaraguruswamy, S., and S. Whisenant. 2009. *Pricing Initial Audit Engagements: Empirical Evidence following Public Disclosure of Audit Fees.* Available at: https://www.researchgate.net/publication/228253622_Pricing_Initial_Audit_Engagements_Empirical_Evidence_Following_Public_Disclosure_of_Audit_Fees

Schelleman, C., and W. Knechel. 2010. Short-term accruals and the pricing and production of audit services. *Auditing: A Journal of Practice & Theory* 29 (1): 221–250.

Schulze, W., M. Lubatkin, R. Dino, and A. Bucholtz. 2001. Agency relationships in family firms: Theory and evidence. *Organization Science* 12 (2): 99–116.

Shleifer, A., and R. Vishny. 1986. Large shareholders and corporate control. *Journal of Political Economy* 94 (3): 461–488.

Shu, S. 2000. Auditor resignations: Clientele effects and legal liability. *Journal of Accounting & Economics* 29 (2): 173–205.

Simunic, D. 1980. The pricing of audit services: Theory and evidence. *Journal of Accounting Research* 18 (1): 161–190.

Simunic, D., and M. Stein. 1996. The impact of litigation risk on audit pricing: A review of the economics and the evidence. *Auditing: A Journal of Practice & Theory* 15 (2): 119–134.

Tong, Y. 2008. Financial reporting practices of family firms. *Advances in Accounting* 23: 231–261.

Trotman, A., and K. Trotman. 2010. The intersection of family business and audit research: Potential opportunities. *Family Business Review* 23: 216–229.

Venkataraman, R., J. Weber, and M. Willenborg. 2008. Litigation risk, audit quality, and audit fees: Evidence from initial public offerings. *The Accounting Review* 83 (September): 1315–1345.

Villalonga, B., and R. Amit. 2006. How do family ownership, control and management affect firm value? *Journal of Financial Economics* 80 (2): 385–417.

Wang, D. 2006. Founding family ownership and earnings quality. *Journal of Accounting Research* 44 (3): 619–656.

Wells, D., and M. Loudder. 1997. The market effects of auditor resignations. *Auditing: A Journal of Practice & Theory* 16 (1): 138–144.

Whisenant, J., S. Sankaraguruswamy, and K. Raghunandan. 2003. Market reactions to disclosure of reportable events. *Auditing: A Journal of Practice & Theory* 22 (1): 181–194.

Wilson, W. 2008. An empirical analysis of the decline in the information content of earnings following restatements. *The Accounting Review* 83 (2): 519–548.

Zmijewski, M. 1984. Methodological issues related to the estimation of financial distress prediction models. *Journal of Accounting Research* 22 (Supplement): 59–82.

APPENDIX A

Variable Definitions

ACSIZE = number of audit committee members during the resignation year (DEF 14A);

ARLAG = the audit report lag is measured as the number of days between the fiscal year end and the date at which the auditor signed the audit opinion (Audit Analytics);

BDIND = percentage of independent board members during the resignation year (DEF 14A);

BDMTG = number of board meetings held during the resignation year (DEF 14A);

BDSIZE = number of board members during the resignation year (DEF 14A);

DESC = 1 if the family firm is managed by a descendent, 0 otherwise (DEF 14A);

DIS = 1 if the incumbent auditor reported disagreements with client in the resignation year, 0 otherwise (Audit Analytics);

DISNODIS = 1 if the incumbent (successor) auditor reported (did not report) disagreements with client in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; DEF 14A for the following year);

FAM = 1 if family member(s) holding 5 percent or more of the total voting rights occupied executives and/or directorate positions in the resignation year as per the firm's definitive proxy circular, 0 otherwise (DEF 14A);

FORSAL = foreign sales (SALEXG), sum of sales from the nondomestic segments of the firm and export sales from its domestic segments as a percent of total sales (SALE) during the resignation year (Compustat);

FOUND = 1 if the family firm is managed by a founder, 0 otherwise (DEF 14A);

GC = 1 if the incumbent auditor issued a going concern opinion in the resignation year, 0 otherwise (Audit Analytics);

GCNOGC = 1 if the incumbent (successor) auditor issued (did not issue) a going concern opinion in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; DEF 14A for the following year);

HIRED = 1 if the family firm is managed by a hired professional, 0 otherwise (DEF 14A);

IB = income before extraordinary items (IB) scaled by total assets (AT) at end of the resignation year (Compustat);

IB4 = 1 if the incumbent auditor is a Big 4 auditor (either Deloitte, EY, KPMG, or PricewaterhouseCoopers), 0 otherwise (Audit Analytics);

IB4SNB4 = 1 if the incumbent (successor) auditor is a Big 4 (non-Big 4) auditor; 0 otherwise (Audit Analytics);

IC = 1 if the incumbent auditor reported internal control weaknesses in the resignation year, 0 otherwise (Audit Analytics);

ICNOIC = 1 if the incumbent (successor) auditor reported (did not report) internal control weaknesses in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; DEF 14A for the following year);

INB4 = 1 if incumbent auditor is a non-Big 4 auditor, 0 otherwise (Audit Analytics);

INB4SB4 = 1 if the incumbent (successor) auditor is a non-Big 4 (Big 4) auditor, 0 otherwise (Audit Analytics);

INVREC = inventory (INVT) and receivables (RECT) scaled by total assets (AT) at end of the resignation year (Compustat);

LITIND = 1 if the operates in an industry with the following SIC codes: 2833–2836, 8731–8734, 3570–3577, 7370–7374, 3600–3674, 5200–5961, 0 otherwise (Compustat);

LNASSET = natural log of total assets (AT) at end of the resignation year (Compustat);

LNSEG = natural log of the number of business segments at end of the resignation year (Compustat);

LVG = long-term debt (DLTT) scaled by total assets (AT) at end of the resignation year (Compustat);

MRGNOMRG = 1 if the firm had a merger activity (AQC, ACQMETH, AQP, AQD, ACEPS) in the resignation year and had no merger activity in the following year, 0 otherwise (Compustat);

NODISDIS = 1 if the incumbent (successor) auditor did not report (reported) disagreements with client in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; DEF 14A for the following year);

NOGCGC = 1 if the incumbent (successor) auditor did not issue (issued) a going concern opinion in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; DEF 14A for the following year);

NOICIC = 1 if the incumbent (successor) auditor did not report (reported) internal control weaknesses in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; DEF 14A for the following year);

NOMRGMRG = 1 if the firm had no merger activity during the resignation year and had a merger activity (AQC, ACQMETH, AQP, AQD, ACEPS) in the following year, 0 otherwise (Compustat);

NORESRES = 1 if the firm did not restate (restated) the financial statements in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year; Compustat [REA] for the following year);

NOSPSP = 1 if the incumbent (successor) auditor is not an industry specialist (is an industry specialist), 0 otherwise. Following Dunn and Mayhew (2004), auditors are classified as industry specialists if they have an industry market share of 20 percent or more within the two-digit SIC industry (Audit Analytics);

OWN = percentage of shares held by the family out of total shares outstanding (DEF 14A);

REDCA = signed performance-adjusted discretionary current accruals at end of the resignation year estimated following Krishnan et al. (2013, 168) and using Compustat data;

RES = 1 if the firm restated the financial statements in the resignation year, 0 otherwise (Audit Analytics);

RESNORES = 1 if the firm restated (did not restate) the financial statements in the resignation year (the following year), 0 otherwise (Audit Analytics for resignation year, Compustat [REA] for the following year);

RESTIM = 1 if the incumbent auditor resigned after the fiscal year and before the 10-K statutory filing date (as per the SEC filing requirements for non-accelerated, accelerated, and large accelerated filers) and did not sign the audit report for that fiscal year, 0 otherwise (Audit Analytics);

SB4 = 1 if the successor auditor is a Big 4 auditor, 0 otherwise (Audit Analytics);

SNB4 = 1 if the successor auditor is a non-Big 4 auditor, 0 otherwise (Audit Analytics);

SPNOSP = 1 if the incumbent (successor) auditor is an industry specialist (not an industry specialist), 0 otherwise. Following Dunn and Mayhew (2004), auditors are classified as industry specialists if they have an industry market share of 20 percent or more within the two-digit SIC industry (Audit Analytics);

VOTOWN = wedge between the percentage of voting rights and cash flow rights that are held by family members (DEF 14A);

XI = extraordinary items (XI) scaled by total assets (AT) at end of the resignation year (Compustat);

ZSCORE = financial distress at end of the resignation year measured following Zmijewski (1984): $-4.3 - 4.5 *$ (net income (NI)/total assets (AT) $+ 5.7 *$ (total liabilities (LT)/total assets (AT) $+ 0.004 *$ (current assets (ACT)/current liabilities (LCT)) as per Compustat;

$\Delta ACSIZE$ = percentage change in the number of audit committee members between the year following resignation and the resignation year (DEF 14A);

ΔAF = percentage change in audit fees paid between the year following resignation and the resignation year (Audit Analytics);

$\Delta ASSET$ = percentage change in total assets at the end of the year following resignation minus total assets at the end of the resignation year (Compustat);

$\Delta BDIND$ = percentage change in independent board members between the year following resignation and the resignation year (DEF 14A);

$\Delta BDMTG$ = percentage change in the number of board meetings between the year following resignation and the resignation year (DEF 14A);

$\Delta BDSIZE$ = percentage change in the number of board members between the year following resignation and the resignation year (DEF 14A);

$\Delta FORSAL$ = percentage change in foreign sales out of total sales between the year following resignation and the resignation year (Compustat);

ΔIB = percentage change in the income before extraordinary items scaled by total assets between the year following resignation and the resignation year (Compustat);

$\Delta INVREC$ = percentage change in inventory and receivables out of total assets at the end of the year following resignation minus inventory and receivables out of total assets at the end of the resignation year (Compustat);

ΔLVG = percentage change in total liabilities scaled by total assets at the end of the year following resignation minus total liabilities scaled by total assets at the end of the resignation year (Compustat);

$\Delta REDCA$ = percentage change in $REDCA$ (signed performance-adjusted discretionary current accruals) between the year following resignation and the resignation year (Compustat);

ΔSEG = percentage change in the number of business segments between the year following resignation and the resignation year (Compustat);

ΔXI = percentage change in extraordinary items scaled by total assets between the year following resignation and the resignation year (Compustat); and

$\Delta ZSCORE$ = percentage change in $ZSCORE$ between the year following resignation and the resignation year (Compustat).