4-2021

Generalist CEOs and audit pricing

Zhiming MA

Rencheng WANG
Singapore Management University, rcwang@smu.edu.sg

Kaitang ZHOU

Citation

1

Generalist CEOs and Audit Pricing

Zhiming Ma
Peking University

Rencheng Wang
Singapore Management University

Kaitang Zhou
Wuhan University

Running Head: Generalist CEOs and Audit Pricing

Zhiming Ma, Guanghua School of Management, Peking University, Beijing, China, mazhiming@gsm.pku.edu.cn; Rencheng Wang, School of Accountancy, Singapore Management University, Singapore, rcwang@smu.edu.sg; Kaitang Zhou, School of Economics and Management, Wuhan University, Wuhan, China, zhoukaitang@whu.edu.cn.

Generalist CEOs and Audit Pricing

SUMMARY: We analyze the consequences of a firm hiring a generalist CEO in terms of the audit fees paid by the firm. We find that audit fees of clients with generalist CEOs are higher than those of clients with specialist CEOs. This relation is robust to considering managerial ability, other CEO characteristics, various fixed effects, instrumental variables, and change analyses. We further show that fee differences are larger for firms with weaker monitoring and higher corporate litigation risks. Through path analysis, we find that both client business risk and misreporting risk contribute to the fee difference. Finally, we find that auditors are more likely to issue going-concern opinions to clients with generalist CEOs. Our study should be of interest to auditing standard setters who link management operating styles to audit risk. We shed light on how management operating styles associated with the CEOs' general or specialized skills affect audit pricing.

I. INTRODUCTION

CEOs play an important role in modern companies, and CEO recruiting is a key decision made by firms. In recent years, an increasing number of firms have hired CEOs from outside of the company rather than relying on internal promotes (Ertimur, Rawson, Rogers, and Zechman 2018). CEOs with general managerial skills (i.e., generalist CEOs, with skills that are not specific to any organization and are transferable across firms or industries) have become more popular in the labor market over the last 15 years (Figure 1) and receive an annual pay premium of 19% (which is nearly one million dollars per year) relative to specialist CEOs (Custódio, Ferreira, and Matos 2013). However, the consequences of having generalist CEOs are not well understood. Whereas some studies find that generalist CEOs are valuable for addressing difficult and complex corporate issues (e.g., Hubbard and Palia 1995; Cunat and Guadalupe 2009; Custódio, Ferreira, and Matos 2019), other studies show that investors consider generalist CEOs to be costly to firms (e.g., Mishra 2014; Gounopoulos and Pham 2017). These mixed findings raise the following questions: (1) whether auditors consider CEOs' general managerial skills to be valuable or risky when contracting with their firms and (2) what types of value or risk are incorporated into contracts between firms and their auditors.

In this study, we draw inferences about auditors' proprietary evaluation of generalist CEOs by examining audit pricing. We focus on audit pricing for several reasons. First, auditors are expected to access and evaluate the underlying characteristics of managers or management operating styles (PCAOB 2007, 2010). Second, auditors are required to evaluate firm fundamentals and reporting issues. They have more proprietary information than outsiders about their clients, including the value or risk of having a generalist CEO. Third, the pricing of audit engagements provides indirect evidence on how a group of sophisticated market participants evaluate the consequences of having a generalist CEO (from the perspective of audit risk).

2

Becker (1962) classifies a manager's skillset into two types: general skills (i.e., skills that are not specific to any firm and are transferable across firms) and firm-specific skills (i.e., skills that are likely valuable only within a firm). Prior studies show that management operating styles vary depending on whether a CEO is a generalist or specialist (e.g., Custódio and Metzger 2013, 2014). Based on the literature on upper echelons theory and audit risk assessment, we propose two opposing views on how the presence of a generalist CEO could affect audit pricing.

On the one hand, having a generalist CEO can generate agency problems for a firm when setting corporate policies because a generalist CEO's incentives may not be aligned with those of shareholders in at least three ways. First, generalist CEOs who take on more risk may have incentives to overestimate financial numbers to convince shareholders to approve their high-risk projects (Biddle, Chen, and Zhang 2001). Second, firms led by generalist CEOs may face weaker financial conditions due to overinvestment in high-risk projects (Giannetti 2011). Third, poor financial conditions may give generalist CEOs stronger incentives to manipulate earnings for hiding poor firm performance (Moser 2020). This leads to an increase in the client business risk and misreporting risk, thus increasing audit fees.

On the other hand, a generalist CEO may have high managerial ability in modern business, reducing a client's business and misreporting risks, thus leading to lower audit fees. First, a generalist CEO is arguably better than a specialist CEO at addressing complex business problems and adapting to evolving economic conditions, thus reducing the firm's business risk (Custódio et al. 2013). Second, managerial ability mitigates the risk of poor performance and unintentionally misstated financial reports because more capable managers are better able to estimate accruals (Demerjian, Lev, and McVay 2012). If auditors believe that generalist CEOs have a higher ability to deliver good performance and process information, they may be less concerned about these CEOs manipulating earnings (Krishnan and Wang 2015). This leads to

a negative relation between the presence of a generalist CEO and audit fees.

Given the countervailing forces above, the net effect of the presence of a generalist CEO on audit pricing is an empirical question. We examine the relation between the presence of a generalist CEO and audit pricing for S&P 1500 firms from 2000 through 2015. To measure the general managerial skills of a CEO, we follow Custódio et al. (2013) and construct a general skill index that captures five aspects of a CEO's professional career: the number of (1) positions, (2) firms, and (3) industries in which the CEO has worked, (4) whether the CEO has held a CEO position at a different company, and (5) whether the CEO has worked for a conglomerate firm. We find that firms headed by generalist CEOs experience significantly higher audit fees after controlling for various firm characteristics and other CEO characteristics. For example, hiring a generalist CEO (i.e., where the general skill index is above the annual median) increases annual audit fees by approximately 6%. Furthermore, we find that the fee difference is smaller for firms with more intensive external monitoring from analysts, institutional owners, and due to increased production market competition. In sum, our results suggest that auditors likely consider generalist CEOs as indicative of more agency problems increasing audit risk.

Next, we explore a series of structural links from CEO general skills to audit fee premiums based on a set of proxies for client business risk and misreporting risk. Using a lead-lag path analysis, we find that generalist CEOs are associated with lower future financial reporting quality, and are more likely to report losses, experience higher financial leverage and performance volatility, and generate lower operating cash flows in the following year. These results suggest that auditors may incorporate CEO general managerial skills into their risk assessments and charge a fee premium due to an increase in both the client business risk and misreporting risk.

We recognize that potential endogeneity issues, such as endogenous matching, omitted variable issues, and reverse causality, may bias our findings. However, our results are robust to

different alternative empirical specifications and identification strategies that help address these endogeneity concerns. In particular, our conclusions are not affected by considering (1) entropy balancing (EB), (2) various instrumental variable approaches, (3) other CEO and CFO characteristics, and (4) fixed effect models and changes analyses that control for time-invariant and slow-moving characteristics. Although we cannot fully rule out the possibility that some endogeneity issues remain, these tests reduce the likelihood that our results are driven by selection bias or by correlated omitted variables.

We also conduct several additional analyses. First, we find that the fee difference becomes larger for financially distressed firms and that auditors are more likely to issue a going-concern opinion for firms with generalist CEOs, further confirming that auditors consider a firm with a generalist CEO to have higher audit risk. Second, we show that our measures of CEO general skills have a low correlation with the managerial ability index developed by Demerjian et al. (2012). We also show that the positive association between CEO general skills and audit fees continues to hold even after controlling for the managerial ability index. In addition, we show that the association between generalist CEOs and audit fees does not vary with the level of diversity and complexity of operations. Thus, there is no indication that auditors view CEO generalist skills as measuring managerial ability, even when clients are likely to benefit from hiring generalist CEOs. Taken together, our analyses suggest that managerial general skills capture an aspect different from managerial ability, at least from an auditor's viewpoint.

Our study contributes to the literature in at least two ways. First, it contributes to a growing body of literature on the consequences of hiring generalist CEOs. This prior literature considers the perspectives of shareholders and analysts (e.g., Custódio et al. 2013, 2019; Custódio and Metzger 2013, 2014).[1] By focusing on a different group of capital market participants, our

---

[1] On the one hand, many researchers contend that generalist CEOs are valuable for restructurings, acqusitions, and innovation (Custódio et al. 2019). In addition, some studies suggest that generalist CEOs are better at achieving goals of external communication with sophisticated participants of capital markets (e.g., rendering analyst forecasts and managerial guidance more uniform, limiting dispersion in analyst forecasting and enhancing

Electronic copy available at: https://ssrn.com/abstract=3795167

evidence shows that the audit fees for a client with a generalist CEO are higher than those of other clients due to potential agency problems which increase the client business risk and misreporting risk. In addition, we do not find strong evidence regarding the potential value of a generalist CEO in terms of audit pricing for a firm engaging in difficult and complex corporate tasks.

Our study also extends our understanding of how CEOs' management operating styles affect audit pricing. Recent research has begun to examine the effects of CEO equity incentives and management characteristics on auditors' risk assessments and pricing (e.g., Chen, Gul, Veeraraghavan, and Zolotoy 2015; Krishnan and Wang 2015). We complement this literature by showing that CEO general managerial skills have an incremental impact on audit pricing after considering other CEO characteristics (e.g., compensation incentives, managerial ability, overconfidence, ownership, financial background, and other individual characteristics). Although auditing standards have long emphasized the importance of assessing "tone at the top" and management operating styles in evaluating financial reporting quality and audit risk (PCAOB 2007, 2010), auditing standards provide little if any specific guidance on this matter. Our study should be of interest to auditing standard setters by shedding light on how management operating styles associated with general or specialized CEO skills can affect audit pricing (Simunic 1980; Houston, Peters, and Pratt 2005). It is important to note that we do not assume that auditors calculate general skills of CEOs as we do; rather, we expect that auditors consider a CEO's past working experience and its impact on organizational outcomes (e.g., client business risk and misreporting risk) when accessing audit risk.[2]

---

analyst followings) (e.g., Hubbard and Palia 1995; Cunat and Guadalupe 2009). However, prior studies also show that hiring a generalist CEO is costly, as reflected by higher corresponding excess compensation that is not associated with superior firm performance, higher costs of equity, and by more frequent IPO failures (e.g., Custódio et al. 2013; Mishra 2014; Gounopoulos and Pham 2017).

[2] Our discussions with an audit partner indicate that auditors are interested in CEO work experience and how it affects a client's corporate policies. This is consistent with our conjecture that (professional) background information about CEOs of interest to auditors, although auditors may not likely calculate an index as we do. Collectively, auditors in practice are interested in CEO work experience and how it affects a client's corporate policies, but we also acknowledge that it is unclear how exactly auditors view CEO work experience and whether

Electronic copy available at: https://ssrn.com/abstract=3795167

II. LITERATURE AND BACKGROUND

Auditing standards require auditors to be familiar with the nature of a firm and its control environment in assessing audit engagement risk. Specifically, they require auditors to obtain sufficient information on management personnel and assess whether management philosophy and operating styles aim to minimize business risks and promote effective internal control over financial reporting (PCAOB 2010). Consistent with this notion, the literature shows that auditors price CEO characteristics. For instance, Hribar, Kim, Wilson, and Yang (2012) find that auditors charge higher fees when a client hires an overconfident CEO. Similarly, Johnson, Kuhn, Apostolou, and Hassell (2013) show that auditors charge higher fees when a client's CEO exhibits narcissistic behavior. Huang, Huang, and Lee (2014) show that audit fees price CEO gender. Kalelkar and Khan (2016) show that CEO work experience in accounting- and finance-related jobs helps lower audit fees. Furthermore, other studies find that a CEO's incentive-based compensation affects audit pricing (Chen et al. 2015; Kim, Li, and Li 2015).[3] Unlike prior studies on a CEO's demographics, psychological characteristics, and compensation-related incentives, we examine how auditors' price management operating styles associated with whether a CEO has a general or specialized skillset.

Recent studies (e.g., Custódio et al. 2013) define the general managerial skills of a CEO as skills acquired through a lifetime of work experience, particularly through work experience gained through CEO positions held at other firms, industries, and conglomerates. We focus on the management operating styles of a generalist vs. specialist CEO for two reasons. First, work experience is one of the most important factors contributing to a CEO's management operating style. The upper echelons theory suggests that a CEO creates a "mindset" of a firm's strategic situation and management operating style based on her experiences, which, in turn, leads to

---

it affects audit pricing.

[3] Also see Wysocki (2010); Billings, Gao, and Jia (2013); Kannan, Skantz, and Higgs (2014).

specific strategic choices (Herrmann and Datta 2006). The CEO's experience includes industry experience and knowledge (Brockmann and Simmonds 1997; Carpenter, Geletkanycz, and Sanders 2004). This type of knowledge is particularly germane to strategic decision-making and management style because it is related to job tenure, industry tenure, and intuition, which are essential factors in forming cognitive perceptions in strategic decision-making processes and management style (Brockmann and Simmonds 1997). Second, auditing standards specify that management's philosophy and operating style may include management's attitudes towards and approaches to minimizing business risks and attitudes, such as those towards internal controls over financial reporting.[4] Previous studies show that generalist CEOs are more likely to invest in high-risk projects than specialist CEOs (Mishra 2014; Custódio et al. 2019). This finding reveals a potential difference between generalist CEOs and other CEOs in their attitudes towards risk-taking as well as approaches to minimize risks.

III. HYPOTHESIS DEVELOPMENT

Theoretically, audit fees should increase as audit risk increases (Houston et al. 2005). Audit risk is composed of risk associated with the failure of auditors to detect misreporting, resulting in primary litigation, and client business risk unrelated to undetected misreporting (Stice 1991; Carcello and Palmrose 1994). Faced with increased audit risk and increased misreporting risk and/or client business risk, auditors may respond by increasing audit effort, charging the client a fee premium for incurring a higher litigation risk, or both.[5]

Following the literature on upper echelons theory and audit risk assessment, we propose two competing views on the effects of a generalist CEO on organizational outcomes, and thus

---

[4] See more details at https://pcaobus.org/Standards/Auditing/Pages/AS2110.aspx.

[5] Although Houston et al. (2005) suggest that audit risk litigation can be mitigated through effective audit procedures and additional audit effort, DeFond and Zhang (2014) counter that audit effort can never completely eliminate litigation risk, suggesting that regardless of audit effort, auditors will still charge a premium for litigation risk (Simunic and Stein 1996). In Section VII, we provide evidence on whether auditors are more likely to issue going-concern opinions to the clients with generalist CEOs in response to audit risk (DeFond and Zhang 2014).

on how auditors evaluate the audit risk of a firm headed by a generalist CEO. These views are the agency problem view and the managerial ability view.

The agency problem view suggests that audit fees will be higher for clients with generalist CEOs. May (1995) argues that human capital becomes more firm-specific as a specialist CEO's tenure with a firm increases, giving specialist CEOs incentives to reduce personal risk by adopting strategies that reduce firm risk. In support of this argument, May (1995) finds that a specialist CEO's tenure with a firm reduces the firm's equity return variance and leverage. In other words, this line of research implies that relative to a specialist CEO, a generalist CEO lacks incentives to adopt risk reduction as a strategic priority. Instead, she may be more inclined to undertake riskier strategies to demonstrate her superior ability. In addition, more recent empirical evidence shows that generalist CEOs enjoy more favorable job market environments and are more likely than other CEOs to be recruited by potential employers (Giannetti 2011).

A corresponding implication is the agency issue that a generalist CEO has more incentives to invest in high-risk projects which compromise firm value, misaligning her incentives with those of shareholders (Mishra 2014; Custódio et al. 2019). There are at least three ways in which this misalignment between generalist CEOs and shareholders increases audit risk. First, financial numbers help guide capital investment decisions (Zhang 2000; Biddle et al. 2001; Penman 2001).[6] In addition, financial numbers can serve as a disciplining mechanism that constrains managerial opportunism (Ball 2001; Watts 2003; Ball and Shivakumar 2005). The CEO's position at the top of the corporate hierarchy makes it possible for a generalist CEO who takes more risk to overestimate financial numbers to facilitate high-risk projects. Second, firms led by generalist CEOs may face a higher probability of weak financial conditions due to overinvestment in high-risk projects (May 1995; Giannetti 2011). Third, potential poor financial conditions may also increase generalist CEOs' incentives to manipulate earnings for

---

[6] Consistent with this argument, Penman (2001, p.4) states, "Financial statements have many uses, but the predominant one is to provide information for investing in businesses."

hiding poor firm performance (DeFond and Jiambalvo 1994; Moser 2020). Overall, the presence of generalist CEOs can increase audit risk and, hence, audit fees because generalist CEOs increase client business risk and misreporting risk. Therefore, we expect firms headed by generalist CEOs to be associated with higher levels of audit risk. Consequently, audit fees should be higher for clients with generalist CEOs.

Alternatively, the managerial ability view suggests that audit fees will be lower for clients with generalist CEOs. Hambrick and Mason (1984) note that although CEOs should adopt a company-wide perspective, they carry an orientation developed from prior work experience in certain functional areas. When a CEO has spent her entire career with one organization, she may offer relatively limited perspective and knowledge when faced with new problems, such as deregulation, suddenly increasing levels of competition, or technological shifts. Consistent with this idea, recent studies find that generalist managerial ability is more valuable than firm-specific skills (Murphy and Zabojnik 2004). For example, general skills are valuable for firms facing product market changes resulting from industry shocks, such as deregulation (Hubbard and Palia 1995) and changes in technology and management practices (Garicano and Rossi-Hansberg 2006). Custódio et al. (2013) show that a generalist CEO performs better at difficult and complex tasks, such as diversified business strategies, restructurings, and acquisitions, and especially when a firm faces industry shocks and distress. In addition, Xuan (2009) shows that a generalist CEO improves segment investment efficiency because, relative to a specialist CEO, a generalist CEO has knowledge and experience in various business areas that allow her to allocate funds across divisions more efficiently. Custódio et al. (2019) show that firms headed by CEOs who have developed more general managerial skills tend to innovate more, which implies that a generalist CEO helps her firm address complex business problems and changes in the economic environment, reducing business risks. In addition, a generalist CEO is more likely to mitigate functional areas through cross-functional teams and to form reliable strategic

alliances with suppliers, customers, and competitors (Hirschhorn and Gilmore 1992). These practices help increase information processing quality and improve communication effectiveness, lowering potential audit risks.

In terms of misreporting risk, if auditors believe that generalist CEOs have higher ability, they may be less concerned that these CEOs will manipulate earnings because managerial ability mitigates the risk of poor performance and unintentionally misstated financial reports (Demerjian et al. 2012; Krishnan and Wang 2015). In addition, a generalist CEO should have weaker career concerns and have less long-term wealth associated with her firm's future performance because any failure in one firm may not necessarily reflect poorly on her abilities. This suggests that generalist CEOs may have weaker incentives to manipulate earnings to boost reported firm performance. Under this line of reasoning, we expect firms headed by generalist CEOs to be associated with lower levels of audit risk. Thus, audit fees should be lower for clients with generalist CEOs.

Considering these contrasting perspectives, whether the effect of having a generalist CEO on audit pricing is positive or negative is an empirical question. Consequently, we examine the following null hypothesis:

HYPOTHESIS 1: *The audit fees for clients with generalist CEOs are not different from those for other clients.*

IV. RESEARCH DESIGN, DATA AND SAMPLE

Empirical Model

To test our hypothesis, we estimate the following regression model:

$$LnAudFee \quad = \quad \beta_0 + \beta_1 \, General \, Skills + \sum \beta_i \, Controls + \varepsilon \qquad (1)$$

We follow Custódio et al. (2013, 2019) and use two variables to measure a CEO's managerial general skills (*General Skills*). First, we use the General Skill Index (*GSIndex*),

11

which captures the generality of a CEO's human capital based on her work experience with publicly traded firms accumulated prior to the start of her current CEO position. A CEO who has worked in different organizational areas for multiple firms and in different industries or with a conglomerate firm or one who previously served as a CEO is classified as having more general skills (Custódio et al. 2013). Specifically, the *GSIndex* is the first component factor from a principal component analysis using five proxies for managerial general skills, measured over the CEO's career: *Number of Positions*, *Number of Firms*, *Number of Industries*, *CEO Experience*, and *Conglomerate Experience*. A higher value reflects a higher level of general skills. Appendix provides more details. Second, consistent with Custódio et al. (2013), we use an indicator variable, *Generalist*, which classifies a CEO as a generalist when her general skill index (*GSIndex*) exceeds the sample annual median, and otherwise applies a zero value, indicating a specialist CEO.

The dependent variable, *LnAudFee*, is measured as the natural logarithm of audit fees. When agency problems related to having a generalist CEO dominate, we expect β_1 to be positive and significant. Alternatively, when managerial ability dominates, we expect β_1 to be negative and significant.

Following prior studies (e.g., Francis, Reichelt, and Wang 2005; Bills, Jeter, and Stein 2015; DeFond, Lim, and Zang 2016), we include control variables that affect audit pricing. We provide detailed information about these variables in Appendix. First, we include several measures to capture client size and audit complexity: the log of total assets (*Size*), mergers and acquisitions (*MA*), research and development intensity (*RD*), the quick ratio (*Quick*), current assets as a proportion of total assets (*CATA*), tangibility (*PPE*), the number of business segments (*Segment*), and the audit report lag (*ReportLag*). Next, to control for client business risk, we include returns on assets (*ROA*), financial leverage (*Leverage*), cash holdings (*Cash*), capital investments (*CAPEX*), operating cash flows (*CFO*), losses (*Loss*), the Altman Z-score

12

(*ZScore*), and going-concern opinions (*GC*). We also include proxies for growth opportunities (*MB*) and firm age (*FirmAge*). In addition, we control for stock market-related variables, specifically beta (*Beta*) and stock returns (*Return*) as well as audit firm size (*Big4*).

In addition to the conventional control variables discussed above, we also control for various CEO-specific variables, such as CEO salary plus bonuses (*CashPay*), restricted stock granted plus options (*EquityPay*), gender (*CEOGender*), age (*CEOAge*), and tenure (*CEOTenure*), as well as whether the CEO is the chairperson (*CEODuality*) or founder (*CEOFounder*), and whether the CEO was promoted from inside the firm (*CEOInsider*). Furthermore, we also control for governance-related variables, including whether the audit committee has at least one accounting expert (*AccExp*), the proportion of audit committee members who are accounting experts (*AccExpPercent*), board size (*BoardSize*), and the proportion of independent directors on the board (*BoardInd*). Lastly, we include both industry and year fixed effects in the regressions.[7] Standard errors are corrected for heteroskedasticity and are clustered at the firm level. All continuous variables are winsorized at the bottom and top 1 percentiles to mitigate the effects of outliers.

Sample and Data

We estimate the baseline regression model using data from the following sources. We follow the method in Custódio et al. (2013) and construct the general skill index (*GSIndex*) ended in 2015. Specifically, we match executives in Execucomp who are identified as CEOs in each year with BoardEx to obtain data on CEOs' prior professional experience. We collect all audit-related information (including audit fees, audit opinions, incidence of financial restatements, and auditor identification data) from the Audit Analytics database. We obtain financial accounting data from the annual Compustat database, business segment data from the

---

[7] Our results are not affected if we explicitly control for a time trend to capture various changes in regulations including Sarbanes-Oxley Act (SOX) in 2002, Auditing Standard No. 2 in 2004, and Auditing Standard No. 5 in 2007 (untabulated).

Compustat segment database, CEO characteristics and compensation data from the Execucomp database, stock return data from the Center for Research in Security Prices (CRSP), and corporate governance data from the BoardEx database. Consistent with prior research, we exclude financial firms (i.e., one-digit SIC code 6) and observations with missing data for the variables in Equation (1). The final sample for our main analysis includes 2,000 unique firms with 18,339 firm-year observations from 2000 through 2015.[8] We start our analysis from the year 2000, as audit fees are available from 2000 through the Audit Analytics database.

[Insert Table 1 here]

Table 1 presents the descriptive statistics for our sample. The mean (median) value of our dependent variable, *LnAudFee*, is 14.250 (14.200), indicating average audit fees of approximately $1.544 million ($1.468 million). The average *GSIndex* is -0.077, and approximately 52% of our sample firms are headed by generalist CEOs (*Generalist*). The mean values of accounting performance (*ROA*) and financial leverage (*Leverage*) are 9% and 20%, respectively. The average market-to-book ratio (*MB*) is 1.96, and stock beta (*Beta*) is 1.27. Approximately 17% of the sample firms report loss (*Loss*). More than 90% are audited by Big 4 auditors (*Big4*), the mean audit reporting lag is approximately 64 days (*ReportLag*), and approximately 0.3% of the sample firms receive a going-concern opinion (*GC*). The values of these variables are comparable with those documented in prior studies (e.g., Bills et al. 2015; Krishnan and Wang 2015; DeFond et al. 2016).

We also compare the difference between firms with generalist CEOs (*Generalist*=1) and those with specialist CEOs (*Generalist*=0). The univariate results show that firms with

---

[8] Custódio et al. (2013) provides general skill index data from 1993 to 2007 (available online at http://jfe.rochester.edu/data.htm). We compare the summary statistics for *GSIndex* and *Generalist* with the statistics directly provided by Custódio et al. (2013) during the common sample period (2000–2007). The distributions of these variables from the two datasets are similar (untabulated). In addition, our inferences hold during this subsample period. More importantly, the results are similar across the two datasets (untabulated). Taken together, our tests suggest that our measures of general skills are comparable with those provided by Custódio et al. (2013) and robust to sampling choices.

generalist CEOs pay higher audit fees (*LnAudFee*). Firms with generalist CEOs also differ across fundamental characteristics such as firm size (*Size*), leverage (*Leverage*), growth opportunities (*MB*), liquidity (*Cash*, *Quick*, and *CATA*), and performance (*ROA*, *CFO*, *Return*, and *Loss*) (Custódio et al. 2013, 2019). Therefore, it is important to control for these variables in multivariate analyses.[9]

V. EMPIRICAL RESULTS

Baseline Results

Table 2 reports the estimation results of the effect of generalist CEOs on audit fees. In Columns (1) and (2), the independent variables of interest are *GSIndex* and *Generalist*, respectively. We find that the coefficients on *GSIndex* and *Generalist* are significantly positive at the 1% level in both columns (0.038, *t*=4.20 in Column (1); 0.055, *t*=3.27 in Column (2)), suggesting that the presence of a generalist CEO is positively associated with audit fees. Untabulated results show that the decrease in the value of the Bayesian Information Criteria (BIC) caused by the inclusion of *GSIndex* (*Generalist*) is 26004.24 (26037.13), respectively.[10] This finding suggests that the variables for generalist CEOs have significant incremental informativeness for the audit fee model. Importantly, this positive association between generalist CEOs and audit fees is economically significant. For example, the coefficient in Column (1) indicates that an increase in *GSIndex* from the 25th to 75th percentile of the distribution translates into a 4.96% increase in audit fees on average (i.e., $e^{0.038*(0.496+0.779)}-1$). Similarly, the coefficient in Column (2) indicates that hiring a generalist CEO (*Generalist*=1) increases annual audit fees by approximately 5.65% (i.e., $e^{0.055}-1$). These results are consistent

---

[9] The correlations between *GSIndex* (or *Generalist*) and control variables are small in magnitude (below 0.32). In addition, the highest variance inflation factor (VIF) is only 4.19 (untabulated), indicating low multicollinearity between our variable of interest and other predictors of audit fees. We also find that the correlations between control variables are low, and the VIFs are all below 4.11 (untabulated), suggesting that following prior studies and including those variables does not lead to a severe multicollinearity concern.

[10] The conventional threshold to decide whether a variable is informationally useful is 2 and the conventional threshold for a strong improvement is 6 (Kass and Raftery 1995).

15

with the prediction that audit fees are higher for clients with generalist CEOs.

[Insert Table 2 here]

Coefficients on the control variables, whenever significant, are consistent with those in prior research (Bills et al. 2015; Krishnan and Wang 2015; DeFond et al. 2016). For example, audit fees are higher when clients are less profitable (*ROA*), have higher operating risks (*Loss* and *Leverage*), are more complex (*Segment*), have longer audit reporting lag (*ReportLag*), and receive a going-concern opinion (*GC*).

Because our results may be affected by an imbalance in the samples of generalist and specialist CEOs, especially when the variable of interest is *Generalist*, we use an entropy balancing (EB) approach to mitigate this issue. We first balance the first three moments of the control variables: the mean, variance, and skewness, conditional on *Generalist*.[11] Next, we re-estimate Equation (1) using *Generalist* to indicate the presence of a generalist CEO. Column (3) of Table 2 shows that *Generalist* remains significant and that the magnitude of the coefficient is not affected.[12]

Cross-Sectional Analysis of Firm Characteristics

Next, we investigate whether the relation between generalist CEOs and audit fees is heterogeneous across different types of firms. We first study how governance and monitoring affect the effect of generalist CEOs. We then examine whether auditors charge a premium for litigation risk in our setting.

Governance and Monitoring

If audit pricing for firms with generalist CEOs is related to potential agency problems perceived by auditors, we expect the fee premium on generalist CEOs to be weaker for firms

---

[11] Untabulated results show that all three moments of the control variables for generalist and specialist CEOs become approximately equal with only marginal differences after the EB procedure is applied. This finding suggests that the level of homogeneity between the treatment and control samples after the EB procedure is high.
[12] An alternative method to control for observable differences between clients hiring generalist CEOs and other CEOs is propensity score matching (PSM). Our inferences are robust to using this method (untabulated).

with better external governance and monitoring. Previous studies show that high levels of analyst following, institutional ownership, and product market competition are associated with more effective monitoring or with constraints on opportunistic management actions (Healy and Palepu 2001; Yu 2008; Giroud and Mueller 2011; Boone and White 2015). We create three partitioning variables, *Analyst Coverage*, *Institutional Ownership*, and *Product Market Competition*, equal to one when analyst coverage is higher, the percentage of institutional investors holdings is higher, or the industry sales Herfindahl is lower, and zero otherwise, respectively. We then re-estimate Equation (1), including one partitioning variable and its interaction with *General Skills*. We report the results using *GSIndex* (*Generalist*) in Columns (1)–(3) of Panel A (B) of Table 3. The coefficients on the interaction terms are negative and significant for all three cases, revealing a stronger relation between generalist CEOs and audit fees for firms with less external monitoring. In summary, our results indicate that the positive association between generalist CEOs and audit fees is stronger for firms with weaker governance and monitoring.[13]

[Insert Table 3 here]

Litigation Risk

A key assumption of our study is that auditors charge a premium for litigation risk associated with high client business risk and misreporting risk (Simunic and Stein 1996; DeFond and Zhang 2014). To provide empirical support for this litigation risk-based framework, we examine how auditors price generalist CEOs in environments in which auditors may be subject to a higher likelihood of litigation from audit risk. Specifically, we follow Moser (2020) and examine whether the positive association between audit fees and the presence of a

---

[13] To test whether internal governance plays a more relevant role in auditor-client contracting (Lisic, Myers, Seidel, and Zhou 2020; Omer, Shelley, and Tice 2020), we replace the external governance variables with board and audit committee characteristics, such as board size, board independence, the presence of financial expertise, and the percentage of financial expertise in the audit committee. Untabulated results show that the positive association between generalist CEOs and audit fees does not vary with these characteristics.

generalist CEO increases for firms with a higher likelihood of corporate litigation risk.[14] We first calculate a litigation risk index—that is, the likelihood that a firm will be subject to litigation in the immediate future, based on the coefficient estimates from the litigation model (3) in Kim and Skinner (2012). We define *Litigation Risk* as an indicator variable equal to one when the firm's litigation risk index is above the annual industry median and zero otherwise. Columns (4) of Table 3, Panels A and B present the results. Our variable of interest is the interaction between *Litigation Risk* and *General Skills* based on either *GSIndex* or *Generalist*. We find that the coefficients on the interaction terms are positive and significant, revealing that audit fees are higher for generalist CEOs when litigation risk is higher.

Path Analysis of Client Business Risk and Misreporting Risk

Our baseline results are consistent with the prediction that auditors perceive generalist CEOs to be associated with higher levels of audit risk and consider this in their pricing. Previous studies propose two main forms of risk: client business risk (Bell, Landsman, and Shackelford 2001) and misreporting risk (Charles, Glover, and Sharp 2010). In this subsection, we present a path analysis and formally test whether both client business and misreporting risks serve as paths through which a firm with a generalist CEO is charged higher audit fees.[15]

We follow Moser (2020) and use discretionary accruals (*AbsDACC* and *DACC*), restatements (*Restatement* and *Restatement Down*), and fraud scores (*FScore*) to measure financial misreporting risks (*Misreporting Risk*). *AbsDACC* is the absolute value of one-year ahead discretionary accruals, *DACC* is the one-year ahead signed discretionary accruals from the modified Jones model following Dechow, Sloan, and Sweeney (1995). *Restatement*

---

[14] We follow Moser (2020) and posit that the litigation concerns of an auditor could be related to either litigation for failing to detect misreporting or residual litigation due to client business risk.

[15] A path analysis uses a structural equation model to determine how a source variable (in our case, generalist CEOs) affects an outcome variable (in our case, audit fees) by decomposing the correlation between the source variable and the outcome variable and by revealing paths through mediating variables (in our case, client business risk and misreporting risk). A mediating path includes a path coefficient between the source variable and a mediating variable as well as a path coefficient between a mediating variable and the outcome variable. The total effect of the mediating path is the product of these two path coefficients.

(*Restatement Down*) is an indicator variable equal to one when earnings in the firm-year or for any quarter of a firm-year are subsequently restated (downward), and zero otherwise. *FScore* is the Dechow et al. (2011) F-score, which is a proxy for expected misstatement risks. To capture the effect of a generalist CEO on the negative outcomes that have not been realized, we follow prior studies (e.g., Hilary and Hui 2009; Stanley 2011; Moser 2020) and proxy for client business risk with the one-year ahead loss (*Loss*), leverage (*Leverage*), operating cash flow (*CFO*), and stock return volatility (*StdRet*), as well as future earnings volatility (*StdROA*). We estimate the following structural equation models:[16]

$$LnAudFee = \beta_0 + \beta_1 General\ Skills + \beta_2 Misreporting\ Risk \qquad (2A)$$
$$+ \beta_3 Client\ Business\ Risk + \sum \beta_i\ Controls + \varepsilon$$

$$Misreporting\ Risk = \alpha_0 + \alpha_1 General\ Skills + \sum \alpha_i\ Controls + \varepsilon \qquad (2B)$$

$$Client\ Business\ Risk = \delta_0 + \delta_1 General\ Skills + \sum \delta_i\ Controls + \varepsilon \qquad (2C)$$

Our focus is on path coefficients $\alpha_1 \times \beta_2$ and $\delta_1 \times \beta_3$, which denote the effects of the mediating path from generalist CEOs to audit fees mediated through *Misreporting Risk* and *Client Business Risk*, respectively. The significance of the mediating effect is estimated using Sobel's (1982) test statistics. We illustrate this framework in Figure 2.

Before we formally conduct the path analysis, we first estimate Equations (2B) and (2C), respectively, as a conventional regression analysis. Untabulated results show that the presence of generalist CEOs is positively and significantly associated with future discretionary accruals (*AbsDACC* and *DACC*). This result is consistent with generalist CEOs increasing the aggressiveness of reporting in their firms. In economic terms, the presence of a generalist CEO is associated with a 7.98% increase in *AbsDACC* and a 19.70% increase in *DACC*, measured

---

[16] We use the same set of control variables from Equation (1) in Equation (2A) as they share the same dependent variable (*LnAudFee*). We follow prior studies (e.g., Moser 2020) and consider following firm level control variables in Equation (2B): *Size, ROA, Leverage, MB, CFO,* and *Loss*. We follow prior studies (e.g., Stanley 2011; Moser 2020) and consider following firm level control variables in Equation (2C): *Size, ROA, MB, PPE, CAPEX, RD, Segment, CFO,* and *Leverage*. Note that we control for CEO specific variables and governance related variables from Equation (1) in both equations.

at the mean. However, we do not find a significant association between *General Skills* and other misreporting risk variables, including *Restatement*, *Restatement Down*, and *FScore*. Taken together, our results suggest that a generalist CEO indeed increases misreporting risk but does not necessarily acquiesce to "cross the line" and violate regulations. Auditors may need to allocate more effort and constrain the actions of generalist CEOs so that they become similar to other CEOs. We further investigate this possibility in the path analysis.

In addition, untabulated results show that the presence of generalist CEOs increases future client business risk. Specifically, the presence of a generalist CEO is positively associated with the likelihood of reporting a loss, the leverage ratio, stock return volatility, and earnings volatility, but is negatively associated with cash flow from operations. In summary, these results suggest that a generalist CEO amplifies client business risk.

[Insert Table 4 here]

Next, Table 4 reports the results of the path analysis, which examines whether the effect on misreporting risk and client business risk documented above results in higher audit fees. Panels A and B present the path coefficients of interest when we measure misreporting risk as one-year-head *AbsDACC*; Panels C and D present these results when we measure misreporting risk as one-year-head *DACC*.[17] We consider all five measures of client business risk in each panel. Our discussion focuses on *GSIndex* and *AbsDACC* for brevity, but the inferences from *Generalist* or *DACC* are similar. For example, Panel A shows that the mediating path coefficient for misreporting risk, P(*GSIndex*, *AbsDACC*)×P(*AbsDACC*, *LnAudFee*) is positive and significant at the 5% level, and the path for the client's business risk, P(*GSIndex*, *Client Business Risk*)×P(*Client Business Risk*, *LnAudFee*), is significantly positive at conventional levels across all five measures. This finding suggests that misreporting risk and client business

---

[17] We do not examine *Restatement*, *Restatement Down*, or *FScore* in the path analysis because the direct impact of generalist CEOs on those three proxies of misreporting risk does not load in the regression analysis as above, suggesting that the mediation effect is mechanically insignificant.

risk associated with the presence of a generalist CEO indeed contribute to higher audit fees.

VI. TESTS TO ADDRESS ENDOGENEITY CONCERNS

Our main results may be subject to endogeneity concerns. First, our estimates could be biased because a firm's decision to select a generalist CEO could be endogenous. Similarly, it is possible that reverse causality could explain our results. For example, audit fees capture operational distress, which leads a firm to hire a generalist CEO. Moreover, the relation between audit fees and generalist CEOs may suffer from a correlated omitted variable problem due to other CEO and firm characteristics associated with CEO career choices and audit pricing. In this section, we present a battery of additional tests which suggest that our results are not driven by these concerns.

Instrumental Variable Estimators

We note that a statistical relation between the presence of generalist CEOs and audit pricing could be attributable to a higher demand for CEO general skills among firms in a certain developmental stage. This leads to either a selection bias or reverse causality issue. We start by verifying that our baseline results hold across Instrumental Variable (IV) specifications. Following Custódio et al. (2019), we make use of the state-wide noncompete agreement enforceability as an IV for the generality of CEO human capital. Noncompete agreements are contracts that prevent employees from joining or creating a competing company in their next position.[18] Garmaise (2011) shows that the job market mobility of managers is indeed low in states with a high enforcement index of non-compete agreements. Specifically, executive job transfers within an industry decline with the level of noncompete enforceability faced by a firm, whereas transfers between industries rise. As a result, a firm is less (more) likely to find a

---

[18] Previous research shows that noncompete clauses are frequently used in CEO contracts, with some restricting CEOs' postemployment activities for more than four years (Tang, Wang, and Zhou 2020).

specialist (generalist) manager if it hires a new CEO in the high enforcement states because the labor markets for specialist managers are constrained more by the enforcement of non-compete agreements. In contrast, the supply of generalist CEOs is higher because high enforcement encourages an outside manager to accumulate general managerial skills. In addition, the enforcement index of non-compete agreements exhibits both cross-sectional (i.e., varying across states) and time-series variation (i.e., differing in dates of adoption at the state level).[19] The cross-sectional and time-series variation of the instrument helps rule out concerns that other state-level characteristics explain both *General Skills* and audit fees. In sum, the index on the enforceability of non-compete agreements presented in Garmaise (2011) showed that it is an appropriate instrument for *General Skills* in our setting because this instrument has the required properties of a valid instrument: exogeneity and a strong correlation with the variable of interest.

We next follow Custódio et al. (2019) and construct IV in two ways. First, we calculate the *Noncompete Enforcement* for each CEO-year observation, which is the average non-compete agreement enforcement index at the state-year level across *all* positions a CEO has held with publicly traded firms (based on the location of a firm's headquarters) (Ertimur et al. 2018). This mitigates the concern that a CEO could strategically choose where to live to avoid noncompete clauses.[20]

[Insert Table 5 here]

Table 5 shows the results of the IV estimation for audit fees *(LnAudFee)*. The regressions

---

[19] According to Garmaise (2011), the index takes values between a minimum of 0 (e.g., California) and a maximum of 9 (e.g., Florida after 1997).

[20] Empirically, a good instrument should be correlated with endogenous variables (*General Skills*) but not with the error term for dependent variables of interest (in our case, audit fees). As discussed above, we expect the *Noncompete Enforcement Index* to be positively related to *General Skills,* because the enforcement of noncompete agreements limits within-industry transfers while enhancing between-industry transfers, contributing to the accumulation of general managerial skills as well as the probability of a firm to hire a generalist CEO. The second important assumption of the instrumental variable method is that the instrument should be a variable that can be excluded from the list of variables affecting the variable of interest (in our case, audit fees). In our setting, the exclusion restriction is likely to be satisfied because the enforceability of non-compete agreements in a state is *not likely to* be directly correlated with the audit fees without accounting for a client or CEO's role.

include the same control variables in Table 2, as well as industry and year fixed effects. Column (1) reports the first-stage regression estimates. As expected, we find that the *Noncompete Enforcement* is positively and significantly correlated with *GSIndex* (with a *t*-statistic of 2.25). The F-statistics of the first-stage regressions are 26.35, which is well above the conventional threshold for weak instruments. Column (2) presents second-stage regression estimates for audit fees (*LnAudFee*). The independent variable in Column (2) is the *GSIndex*. The coefficient on *GSIndex* is positive and significant at the 1% level. The economic effects of *GSIndex* on *LnAudFee* driven by a one-standard-deviation change in the *Noncompete Enforcement* are similar to those estimated previously from the baseline regressions.

Next, we focus on the binary variable of interest, *Generalist*. Wooldridge (2010) suggests that a three-step estimation is more efficient to apply when the endogenous variable is binary. We follow his approach and first estimate a Probit model in which *Generalist* is the dependent variable. We control for variables included in Equation (1) and include our instrument, the *Noncompete Enforcement*. To address the potential estimate inconsistency induced by fixed effects in our Probit specification, we obtain the fitted value from Chamberlain's correlated random effects (CRE) Probit model. We then use this as an instrument to obtain the IV estimators for the next two rounds of regressions. We present the corresponding results of the third step of this procedure in Column (3) of Table 5.[21] We find that *Noncompete Enforcement* is significantly positive with the first step (the untabulated *z*-statistic is 2.26); the fitted value is also significant with the second step (the untabulated *z*-statistic is 4.70). Finally, and importantly, *Generalist* is significantly positive in Column (3) with a *z*-statistic of 3.42. Our inferences continue to hold if we follow Lewbel (2012) and

---

[21] As noted in Custódio et al. (2019), there is a concern that managers with general managerial ability may self-select to move to a state presenting higher levels of noncompete agreement enforceability. This concern is mitigated by using the enforceability of noncompete agreements for the state of the CEO's first position as an instrument and the fact that the *Noncompete Enforcement* is time varying within states. Our inferences are not affected using this alternative method (untabulated).

address the issue of lacking over-identification.

One issue associated with our IV approach is related to the fact that the system lacks over-identification. To conduct a statistical assessment of the quality of our instrument, we follow the approach developed by Lewbel (2012). This approach allows for the identification of structural parameters with endogenous regressors, even in the absence of external instruments (Larcker 2003). We report the results of Lewbel's (2012) procedure in Columns (4) and (5) of Table 5. In Column (4), we apply the Wooldridge three-stage approach via the Lewbel (2012) estimation procedure. As in Column (3), we use the CRE Probit method to obtain fitted values, which are used as an external instrument of the Lewbel (2012) procedure. In Column (5), we directly use the Lewbel (2012) procedure through a two-stage approach while applying *Noncompete Enforcement* as an external instrument. For the second and third specifications of Columns (4) and (5), the untabulated Cragg-Donald Wald F-statistic is approximately 16–21 (16.502 in Column (4) and 21.724 in Column (5)), which is well above the critical value of the Stock-Yogo weak identification test. This suggests that the estimation does not suffer from weak instrument use. The results of the Lewbel procedure also indicate that Hansen J statistics are valued at approximately 119.016, far exceeding the 10% cutoff point for significance. This supports the validity of our instrument.

Overall, the effects of generalist CEOs (*General Skills*) on audit fees (*LnAudFee*) according to IV methods are similar to those in our main tests in Table 2, suggesting that the positive impact of CEOs' general managerial skills on audit fees is robust to endogeneity concerns. These results support our hypothesis that the more generalized management skills of a CEO increase audit prices used in auditor–client contracts.[22]

---

[22] Although our results are robust to using various IV approaches, it is extremely difficult to find fully compelling exclusion restrictions, and ad hoc restrictions are prone to giving unreliable inferences (Lennox, Francis, and Wang 2012). One of the remedies is to compare the effect of generalist CEOs in a sample of auditees that have been hiring generalist CEOs for a long tenure to that in a sample that has been hiring this type of CEO for a short tenure. Prior studies (Lennox and Pittman 2010; Ma, Stice, and Wang 2019) argue that a certain company's choice is more appropriately viewed as pre-determined, and therefore less endogenous, if the choice was not recently

Changes Analysis

Although the baseline model (Equation 1) already includes common determinants of audit pricing, such as client risk measures, additional firm characteristics may still affect audit fees. We further explore the effect of generalist CEOs on audit fees in a changes analysis. We explicitly examine the robustness of our results for a change in auditors and a change in CEOs.

First, we conduct a changes analysis for CEOs, holding auditors unchanged. Specifically, we first form a sample that includes the first year of a CEO (year *t*) and one year before this change (year *t*-1), excluding any changes in auditor. Next, we create two indicator variables: *Gen-to-Spec* and *Spec-to-Gen*, where *Gen-to-Spec* (*Spec-to-Gen*) is equal to one if a firm changes its CEO from a generalist (specialist) to a specialist (generalist), and zero otherwise, respectively. We then regress the difference in audit fees for a firm between year *t* and year *t*-1 (*ΔLnAudFee*) on those two variables in the full change model. Panel A of Table 6 presents the results. We find a decrease (an increase) in audit fees in response to a change from a generalist (specialist) CEO to a specialist (generalist) CEO.

Second, we conduct a changes analysis on auditor changes, holding CEOs unchanged. We expect that new auditors, because of their lack of familiarity with the client and its personnel, may be more likely to assess the background of a CEO and her management style. Specifically, we focus on the sample composed of the first year of a firm's switch to a new auditor (year *t*) and one year before this change (year *t*-1), omitting any changes in CEO. We then regress the difference in audit fees for a firm between year *t* and year *t*-1 (*ΔLnAudFee*) on *Generalist* in the full change model. Consistent with our prediction, Panel B of Table 6 reports the results, showing that audit fees are higher for firms with a new auditor and a generalist CEO than for

---

made. Untabulated results show that the effect of generalist CEOs on audit fees does not differ between the firms in which CEO tenure is less than the sample median and other firms for both measures of CEO managerial general skills. This further increases our confidence that our inferences are robust to controlling for firms' endogenous choice of generalist CEOs.

other firms.

[Insert Table 6 here]

Fixed Effects Specifications

We next explore the robustness of our results using fixed-effect models. In firm fixed effect regressions, only the effects of within-firm changes in *LnAudFee* are considered. Therefore, firm-specific omitted variables cannot explain the observed relation between audit fees and managerial attributes. CEO fixed effects regressions solve a similar problem at the CEO level. For example, they control for CEO characteristics that are time-invariant or slow-moving, such as a CEO's inherent talent, integrity, or degree of risk aversion. Thus, in CEO-firm fixed effects regressions, the coefficient on *General Skills* captures the difference in audit fees due to a change from specialist to generalist leadership or vice versa within the same firm.

Rows (1) and (2) of Table 7 report the results when controlling for firm fixed effects. Rows (3) and (4) show the results when controlling for Firm x CEO fixed effects. The coefficients on *GSIndex* and *Generalist* are positive and significant, suggesting that our main results are unlikely to be driven by unobservable differences in firm and CEO characteristics.

[Insert Table 7 here]

CEO and CFO Characteristics

We also examine whether our analyses are robust to controlling for additional CEO or CFO characteristics that are not fully time-invariant. We define these additional variables in Table 7. First, the literature shows that incentive-based compensation matters for firm risk-taking and audit pricing (Coles et al. 2006; Chen et al. 2015; Kim et al. 2015). We include CEO compensation and incentives in our baseline model (e.g., Coles et al. 2006). Second, we include CEO overconfidence as an additional explanatory variable because it is associated with financial reporting styles (Hribar et al. 2012). In addition, we control for CEO ownership

26

(*CEOHoldings*). Rows (5) and (6) report the results. The coefficients on *GSIndex* and *Generalist* are positive and significant, indicating that our main inferences remain robust when we consider these additional CEO-level control variables. Lastly, our results are not affected when we control for whether the CFO serves on the board, CFO holdings, CFO age, CFO gender, CFO total salary, and CFO equity pay (Ge, Matsumoto, and Zhang 2011; Kannan et al. 2014). Rows (7) and (8) report the results.

In summary, although it is impossible to completely rule out concerns about unobserved differences between the clients with generalist CEOs and others or to completely resolve endogeneity concerns, the robustness of our evidence gives us greater confidence that the relation between generalist CEOs and audit fees is not simply correlational or driven by endogeneity.

VII. ADDITIONAL ANALYSES

The Relation between CEO General Skills and Managerial Ability

One of the CEO characteristics that could be closely related to general skills is managerial aiblity. As discussed in the early section, CEO general skills can capture a CEO's overall time-variant ability, such as the capacity to transform corporate resources into revenues (Demerjian et al. 2012).[23] If this is true, the observed effect of generalist CEOs on audit fees represents a penalty for ability assessed by auditors. However, Krishnan and Wang (2015) find that audit fees are negatively associated with the managerial ability index developed by Demerjian et al. (2012).

The above difference in the effect of managerial ability on audit fees could exist for two reasons. First, conceptually, the managerial ability measure in Demerjian et al. (2012) captures

---

[23] Demerjian et al. (2012) indicate that their managerial ability measure captures an economically significant manager-specific component of ability. The managerial ability data are available online at: https://community.bus.emory.edu/personal/PDEMERJ/Pages/Home.aspx.

27

the *level* of a manager's overall ability to deliver good firm performance. In contrast, whether a CEO is a generalist or specialist is not a measure of the *level* of overall ability. Rather, it is related to the *type* of ability that a manager has. Therefore, a generalist CEO could have either high or low overall managerial ability, as could a specialist CEO. Second, empirically, Demerjian et al. (2012) measure managerial ability as the manager's capability to maximize the level of outputs, given a certain level of resources within the firm, regardless of the CEO's past work experience. Using the Custódio et al. (2013) measure, a CEO who has worked in different organizational areas for multiple firms and in different industries or with a conglomerate firm, or who previously served as a CEO, is classified as having more general skills, regardless of how capable of ultimately delivering good firm performance the CEO is. Empirically, the correlation between the managerial ability index developed by Demerjian et al. (2012) (*MAScore*) and *GSIndex* or *Generalist* is very low (0.022 and 0.030, respectively, untabulated).

We conduct two additional tests to explore the effect of managerial ability in our setting. First, we re-estimate Equation (1) after controlling for the managerial ability index (*MAScore*). Rows (9) and (10) of Table 7 present the corresponding results. The sign and magnitude of the association between audit fees and general skills remain.[24] Second, although our baseline estimation does not suggest that auditors view CEO general skills as a sign of potential superior ability, we investigate this possibility by examining the variation in the effect of CEO general skills conditional on the scope and complexity of a client's operations. Specifically, we examine whether the association between generalist CEOs and audit fees varies with business diversity, firm size, mergers and acquisitions, restructuring costs, and R&D intensity.[25]

---

[24] Consistent with Krishnan and Wang (2015), the coefficient on *MAScore* is negative and significant (-0.258, *t*=-3.96 in row (9); -0.315, *t*=-4.52 in row (10)) (untabulated).

[25] Following a design similar to our cross-sectional analysis in Table 3, we construct five different indicator variables, *HighDiversity*, *LargeFirm*, *HighMA*, *HighRestructuring*, and *HighRDIntensity*. *HighDiversity* is an indicator variable equal to one when the number of firm's business segments is above the yearly median, and zero otherwise. *LargeFirm* is an indicator variable equal to one when a firm's total assets (*Size*) are above the yearly

Untabulated results reveal that the effect of generalist CEOs on audit fees does not differ based on these variables. This finding suggests that auditors do not view CEOs with generalist skills as having high managerial ability, even when the client is likely to benefit from hiring a generalist CEO.

The Effects of Generalist CEOs on Financially Distress Firms

To further analyze whether auditors consider a firm with a generalist CEO to have higher audit risk, we examine the effects of generalist CEOs on financially distressed firms in two ways. First, our findings suggest that auditors are concerned about client business risk and risk-taking behavior associated with having a generalist CEO. We expect this to be more pronounced among distressed firms when auditors must assess whether companies can continue as going concerns over the next 12 months. Panel A in Table 8 shows the cross-sectional effect of financial distress on audit fees. The coefficients on the interaction term between *Loss* and *General Skills* are positive and significant at the 1% level in both columns, revealing a stronger relation between generalist CEOs and audit fees for firms reporting a loss. The coefficient on *General Skills* continues to be positive and significant, confirming a direct relation between generalist CEOs and audit pricing. This finding is consistent with the notion that auditors consider not only observed outcomes but also other information that could be associated with future outcomes.

[Insert Table 8 here]

Second, auditors may issue more going-concern opinions to address potential future risks because higher audit fees cannot protect auditors against risk (DeFond and Zhang 2014). Therefore, we investigate whether auditors are more likely to issue going-concern opinions to

---

median, and zero otherwise. *HighMA* is an indicator variable equal to one when a firm's mergers and acquisitions (*MA*) is above the yearly median, and zero otherwise. *HighRestructuring* is an indicator variable equal to one when a firm's annual restructuring costs (corresponding to the effect of special items on basic earnings per share) is above the yearly median, and zero otherwise. *HighRDIntensity* is an indicator variable equal to one when R&D expenses are above the yearly median, and zero otherwise. Other variables are defined in Appendix.

clients with generalist CEOs, especially when firms are in financial distress. We use the going-concern opinion, *GC*, as the dependent variable, and the regression results are reported in Panel B of Table 8. The coefficients on *GSIndex* and *Generalist* are positive and significant in Columns (1) and (2), suggesting that auditors are more likely to issue going-concern opinions for clients with generalist CEOs. These results are consistent with our argument that auditors issue going-concern audit opinions to lower their future risk exposure.

VIII. CONCLUSION

In this paper, we examine the effect of having a generalist CEO on audit pricing. Our empirical tests show that audit fees for clients with generalist CEOs are higher than those for other clients, consistent with the view that generalist CEOs impose greater audit risk on their auditors. Cross-sectional analyses reveal that the fee premium is more pronounced for firms with weaker external monitoring, suggesting that the presence of a generalist CEO is related to potential agency problems in a firm. Through a path analysis, we find that both client business risk and misreporting risk explain these associations. Additional analyses further suggest that the fee premium is larger for firms with higher litigation risk and in financial distress. Finally, we find that auditors are more likely to issue going-concern opinions for clients with generalist CEOs. Taken together, our results are consistent with the conclusion that the presence of a generalist CEO increases audit risk, which in turn affects audit pricing and opinion issuance. Our study adds to the growing literature on the consequences of hiring generalist CEOs. Our findings suggest that generalist CEOs place another type of cost for shareholders. Our findings have implications for auditing standard setters who link management operating styles to audit risk. Finally, we show that how management operating styles associated with the general or specialized skills of a CEO can be integrated into the theoretical framework of audit pricing.

References

Ball, R., and L. Shivakumar. 2005. Earnings Quality in UK Private Firms: Comparative Loss Recognition Timeliness. *Journal of Accounting and Economics* 39 (1): 83–128.

Ball, R. 2001. Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. *Brookings-Wharton papers on financial services* 2001 (1): 127–169.

Becker, G. S. 1962. Investment in human capital: A theoretical analysis. *Journal of Political Economy* 70 (5, Part 2): 9–49.

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

Biddle, G.C., P. Chen, and G. Zhang. 2001. When capital follows profitability: Non-linear residual income dynamics. *Review of Accounting Studies* 6 (2–3): 229–265.

Bills, K. L., D. C. Jeter, and S. E. Stein. 2015. Auditor industry specialization and evidence of cost efficiencies in homogenous industries. *The Accounting Review* 90 (5): 1721–1754.

Billings, B. A., X. Gao, and Y. Jia. 2013. CEO and CFO equity incentives and the pricing of audit services. *Auditing: A Journal of Practice & Theory*, 33 (2): 1–25.

Boone, A. L., and J. T. White. 2015. The Effect of Institutional Ownership on Firm Transparency and Information Production. *Journal of Financial Economics* 117 (3), 508–533.

Brockmann, E. N. and P. G. Simmonds. 1997. Strategic decision making: The influence of CEO experience and use of tacit knowledge. *Journal of Managerial Issues* 9 (4): 454.

Carcello, J.V. and Z.V. Palmrose. 1994. Auditor litigation and modified reporting on bankrupt clients. *Journal of Accounting Research* 32: 1–30.

Carpenter, M. A., M. A. Geletkanycz, and W. G. Sanders. 2004. Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management* 30 (6): 749–778.

Charles, S. L., S. M. Glover, and N. Y. Sharp. 2010. The association between financial reporting risk and audit fees before and after the historic events surrounding sox. *Auditing: A Journal of Practice & Theory* 29 (1): 15–39.

Chen, Y., F. A. Gul, M. Veeraraghavan, and L. Zolotoy. 2015. Executive equity risk-taking incentives and audit pricing. *The Accounting Review* 90 (6): 2205–2234.

Coles, J., N. Daniel, and L. Naveen. 2006. Managerial incentives and risk-taking. *Journal of Financial Economics* 79 (2): 431–468.

Cunat, V., and M. Guadalupe. 2009. Executive compensation and competition in the banking and financial sectors. *Journal of Banking & Finance* 33 (3): 495–504.

Custódio, C., M. A. Ferreira, and P. Matos. 2013. Generalists versus specialists: Lifetime work experience and chief executive officer pay. *Journal of Financial Economics* 108 (2): 471–492.

Custódio, C., M. A. Ferreira, and P. Matos. 2019. Do general managerial skills spur innovation? *Management Science* 65 (2): 459–476.

Custódio, C., and D. Metzger. 2013. How do CEOs matter? The effect of industry expertise on acquisition returns. *Review of Financial Studies* 26 (8): 2008–2047.

Custódio, C., and D. Metzger. 2014. Financial expert CEOs: CEO′s work experience and firm's financial policies. *Journal of Financial Economics* 114 (1): 125–154.

Dechow, P. M., R. G. Sloan, and A. P. Sweeney. 1995. Detecting earnings management. *The Accounting Review* 70 (2): 193–225.

Dechow, P. M., W. Ge, C. R. Larson, and R. G. Sloan. 2011. Predicting material accounting misstatements. *Contemporary Accounting Research* 28 (1): 17–82.

DeFond, M., and J. Jiambalvo. 1994. Debt covenant violation and manipulation of

accruals. *Journal of Accounting and Economics* 17 (1-2): 145–176.

DeFond, M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58 (2-3): 275–326.

DeFond, M., C. Y. Lim, and Y. Zang. 2016. Client conservatism and auditor-client contracting. *The Accounting Review* 91 (1): 69–98.

Demerjian, P., B. Lev, and S. McVay. 2012. Quantifying managerial ability: A new measure and validity tests. *Management Science* 58 (7): 1229–1248.

Ertimur, Y., C. Rawson, J. Rogers, and S. Zechman. 2018. Bridging the gap: Evidence from externally hired CEOs. *Journal of Accounting Research* 56 (2): 521–579.

Francis, J. R., K. Reichelt, and D. Wang. 2005. The pricing of national and city-specific reputations for industry expertise in the U.S. Audit market. *The Accounting Review* 80 (1): 113–136.

Garicano, L., and E. Rossi-Hansberg. 2006. Organization and inequality in a knowledge economy. *Quarterly Journal of Economics* 121 (4): 1383–1435.

Garmaise, M. J. 2011. Ties that truly bind: Noncompetition agreements, executive compensation, and firm investment. *Journal of Law, Economics, and Organization* 27 (2): 376–425.

Ge, W., D. Matsumoto, and J. L. Zhang. 2011. Do CFOs Have Style? An Empirical Investigation of the Effect of Individual CFOs on Accounting Practices. *Contemporary Accounting Research* 28 (4): 1141–1179.

Giannetti, M. 2011. Serial CEO Incentives and the structure of managerial contracts. *Journal of Financial Intermediation* 20 (4): 633–662.

Giroud, X., and H. M. Mueller. 2011. Corporate governance, product market competition, and equity prices. *Journal of Finance* 66 (2): 563–600.

Gounopoulos, D., and P. Hang. 2017. Credit ratings and earnings management around IPOs. *Journal of Business Finance & Accounting* 44 (1–2): 154–195.

Hambrick, D. C., and P. A. Mason. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review* 9 (2): 193–206.

Herrmann, P., and D. K. Datta. 2006. CEO experiences: Effects on the choice of FDI entry mode. *Journal of Management Studies* 43 (4): 755–778.

Healy, P. M., and K. G. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31 (1–3): 405–440.

Higgins, M. C., and R. Gulati. 2006. Stacking the deck: The effects of top management backgrounds on investor decisions. *Strategic Management Journal* 27 (1): 1–25.

Hilary, G., and K. W. Hui. 2009. Does Religion Matter in Corporate Decision Making in America? *Journal of Financial Economics* 93 (3): 455–473.

Hirschhorn, L., and T. Gilmore. 1992. The new boundaries of the "boundaryless" company. *Harvard Business Review* 70 (3): 104.

Houston, R. W., M. F. Peters, and J. H. Pratt. 2005. Non-litigation risk and pricing audit services. *Auditing: A Journal of Practice & Theory* 24 (1): 37–53.

Hribar, P., J. Kim, R. Wilson, and H. Yang. 2012. Counterparty responses to managerial overconfidence. Working paper.

Huang, T. C., H. W. Huang, and C. C. Lee. 2014. Corporate executive's gender and audit fees. *Managerial Auditing Journal* 29 (6): 527–547.

Hubbard, R. G., and D. Palia. 1995. Executive pay and performance evidence from the U.S. Banking industry. *NBER Working Papers* 39 (1): 105–130.

Johnson, E. N., J. R. Kuhn, B. Apostolou, and J. M. Hassell. 2013. Auditor perceptions of client narcissism as a fraud attitude risk factor. *Auditing: A Journal of Practice & Theory* 32 (1): 203–219.

Kalelkar, R., and S. Khan. 2016. CEO financial background and audit pricing. *Accounting Horizons* 30 (3): 325–339.

Kannan, Y., T. Skantz, and J. Higgs. 2014. The impact of CEO and CFO equity incentives on audit scope and perceived risks as revealed through audit fees. *Auditing: A Journal of Practice & Theory* 33 (2): 111–139.

Kass, R.E., and A.E. Raftery.1995. Bayes factors. *Journal of the American Statistical Association* 90: 773–795.

Kim, Y., H. D. Li, and S. Q. Li. 2015. CEO equity incentives and audit fees. *Contemporary Accounting Research* 32 (2): 608–638.

Kim, I., and D. J. Skinner. 2012. Measuring Securities Litigation Risk. *Journal of Accounting and Economics* 53(1-2): 290–310.

Krishnan, G. V., and C. Wang. 2015. The relation between managerial ability and audit fees and going concern opinions. *Auditing: A Journal of Practice & Theory* 34 (3): 139–160.

Larcker, D. F. 2003. Discussion of "are executive stock options associated with future earnings?" *Journal of Accounting and Economics* 36 (1–3): 91–103.

Lennox, C., and J. Pittman. 2010. Big Five audits and accounting fraud. *Contemporary Accounting Research* 27 (1): 209–247.

Lennox, C., J. R. Francis, and Z. Wang. 2012. Selection models in accounting research. *The Accounting Review* 87 (2): 589–616.

Lewbel, A. 2012. Using heteroscedasticity to identify and estimate mismeasured and endogenous regressor models. *Journal of Business & Economic Statistics* 30 (1): 67–80.

Lisic, L., L. A. Myers, T. A. Seidel, and J. Zhou. 2020. Does Audit Committee Accounting Expertise Help to Promote Audit Quality? Evidence from Auditor Reporting of Internal Control Weaknesses. *Contemporary Accounting Research* 36 (4): 2521–2553.

Ma, Z., D. Stice, and R. Wang. 2019. Auditor choice and information asymmetry: evidence from international syndicated loans. *Accounting and Business Research* 49 (4): 365–399.

May, D., 1995. Do managerial motives influence firm risk reduction strategies? *Journal of Finance* 50 (4): 1291–1308.

Mishra, D. R. 2014. The dark side of CEO ability: CEO general managerial skills and cost of equity capital. *Journal of Corporate Finance* 29: 390–409.

Moser, W. J. 2020. The Audit Pricing of Terrorism. *Auditing: A Journal of Practice & Theory* 39 (2): 163–184.

Murphy, K.J., and J. Zabojnik. 2004. CEO pay and appointments: a market- based explanation for recent trends. *American Economic Review Papers and Proceedings* 94 (2): 192–196.

Omer, T. C., M. K. Shelley, and F. M. Tice. 2020. Do Director Networks Matter for Financial Reporting Quality? Evidence from Audit Committee Connectedness and Restatements. *Management Science* 66 (8): 3295–3798.

PCAOB. 2007. *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements, Auditing Standard No. 5*. Public Company Accounting Oversight Board. Washington D.C.

PCAOB. 2010. *Identifying and assessing risks of material misstatement, AU Section 12*. Public Company Accounting Oversight Board. Washington D.C.

Penman, S.H. 2001. On comparing cash flow and accrual accounting models for use in equity valuation: A response to Lundholm and O'Keefe. *Contemporary Accounting Research* 18 (4): 681–692.

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

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

Sobel, M. 1982. Asymptotic confidence intervals for indirect effects in structural equation

models. Sociological Methodology 13: 290–312.

Stanley, J. D. 2011. Is the audit fee disclosure a leading indicator of clients' business risk? *Auditing: A Journal of Practice & Theory* 30 (3): 157–179.

Stice, J. 1991. Using financial and market information to identify pre-engagement factors associated with lawsuits against auditors. *The Accounting Review* 66: 516–553.

Tang, M.M., R. Wang. and Y. Zhou. 2020. Labor market mobility and expectation management: Evidence from enforceability of non-compete provisions. *Contemporary Accounting Research* (forthcoming).

Watts, R. 2003. Conservatism in accounting part I: Explanations and implications. *Accounting Horizons* 17 (3): 207–221.

Wooldridge, J. M. 2010. *Econometric analysis of cross section and panel data*. MIT press.

Wysocki, P. 2010. Corporate compensation policies and audit fees. *Journal of Accounting and Economics* 49 (1–2): 155–160.

Xuan, Y. 2009. Empire-building or bridge-building? Evidence from new CEOs' internal capital allocation decisions. *Review of Financial Studies* 22 (12): 4919–4948.

Yu, F. 2008. Analyst coverage and earnings management. *Journal of Financial Economics* 88 (2): 245–271.

Zhang, G., 2000. Accounting information, capital investment decisions, and equity valuation: Theory and empirical implications. *Journal of Accounting Research* 38 (2): 271–295.
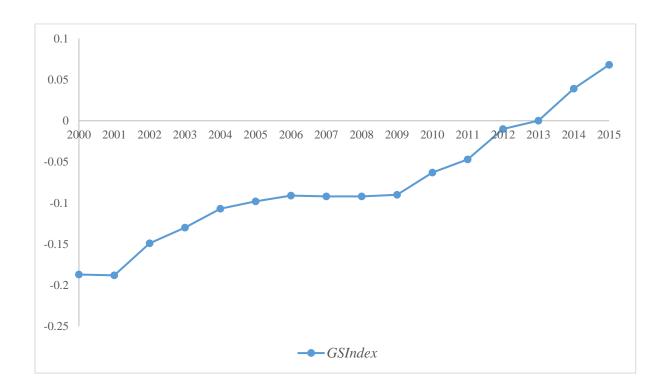
Figure 1. Yearly Distribution of General Skill Index (*GSIndex*)

This figure shows the average level of the General Skill Index (*GSIndex*) from to 2000-2015. See Appendix for the variable definitions.
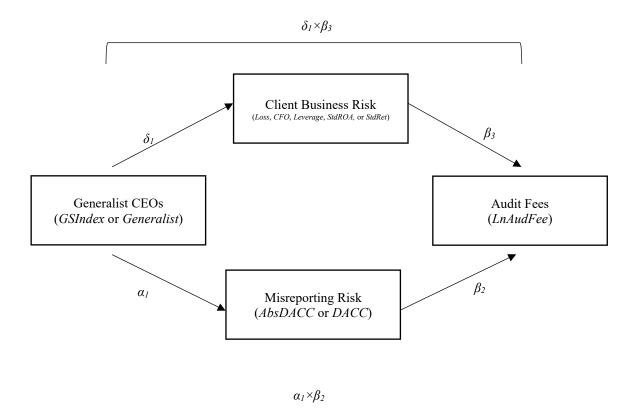
Figure 2. Path Analysis Framework

This figure shows the path analysis framework examining how generalist CEOs (*GSIndex,* or *Generalist*) affect audit fees (*LnAudFee*) through client business risk and misreporting risk. The figure also demonstrates how each path coefficient (a_1, δ_1, β_2, and β_3, respectively) in the following equations reflects the concept of different effects in the framework:

$$
\begin{aligned}
LnAudFee &= \beta_0 + \beta_1 General\ Skills + \beta_2 Misreporting\ Risk & (2A)\\
&\quad + \beta_3 Client\ Business\ Risk + \textstyle\sum \beta_i\ Controls + \varepsilon\\
Misreporting\ Risk &= \alpha_0 + \alpha_1 General\ Skills + \textstyle\sum \alpha_i\ Controls + \varepsilon & (2B)\\
Client\ Business\ Risk &= \delta_0 + \delta_1 General\ Skills + \textstyle\sum \delta_i\ Controls + \varepsilon & (2C)
\end{aligned}
$$

TABLE 1

Sample Descriptions

VARIABLES	Mean	Std. Dev.	P25	Median	P75	*Generalist*=1 (N= 9,550)	*Generalist*=0 (N= 8,789)	Diff.
LnAudFee	14.250	1.110	13.490	14.200	14.980	14.520	13.950	-0.572***
GSIndex	-0.077	0.955	-0.779	-0.254	0.496			
Generalist	0.521	0.500	0.000	1.000	1.000			
Size	7.493	1.610	6.321	7.362	8.534	7.883	7.068	-0.814***
Quick	1.710	1.607	0.766	1.219	1.987	1.551	1.883	0.332***
CATA	0.443	0.220	0.269	0.438	0.607	0.423	0.464	0.041***
PPE	0.271	0.228	0.091	0.194	0.392	0.269	0.273	0.004
MA	1.952	2.345	0.000	0.246	3.889	2.203	1.679	-0.524***
RD	0.030	0.052	0.000	0.000	0.041	0.032	0.029	-0.002***
Segment	2.722	2.193	1.000	2.000	4.000	2.970	2.452	-0.518***
ReportLag	64.430	14.280	56.000	60.000	74.000	63.450	65.500	2.055***
ROA	0.091	0.092	0.052	0.089	0.135	0.089	0.093	0.004***
Leverage	0.208	0.170	0.043	0.198	0.323	0.229	0.184	-0.045***
Cash	0.166	0.176	0.032	0.100	0.245	0.155	0.179	0.024***
CAPEX	0.050	0.048	0.019	0.035	0.063	0.047	0.053	0.006***
CFO	0.102	0.096	0.061	0.100	0.146	0.100	0.105	0.006***
Loss	0.170	0.376	0.000	0.000	0.000	0.177	0.163	-0.014**
ZScore	4.887	4.472	2.373	3.756	5.791	4.270	5.558	1.288***
GC	0.003	0.053	0.000	0.000	0.000	0.004	0.002	-0.002***
MB	1.957	1.150	1.217	1.586	2.265	1.897	2.022	0.125***
FirmAge	28.140	17.460	14.000	22.000	43.000	30.770	25.290	-5.473***
Beta	1.267	1.080	0.559	1.126	1.815	1.246	1.290	0.043***
Return	0.025	0.102	-0.029	0.021	0.074	0.023	0.027	0.004***
Big4	0.930	0.255	1.000	1.000	1.000	0.949	0.909	-0.040***
CashPay	6.748	0.870	6.393	6.762	7.114	6.878	6.606	-0.272***
EquityPay	2.075	3.396	0.000	0.000	5.771	2.221	1.918	-0.303***
CEOGender	0.972	0.165	1.000	1.000	1.000	0.965	0.980	0.014***
CEOAge	63.720	7.860	58.000	63.000	69.000	64.470	62.910	-1.563***
CEOTenure	4.531	3.182	2.000	4.000	6.000	4.562	4.497	-0.066
CEODuality	0.550	0.497	0.000	1.000	1.000	0.596	0.501	-0.095***
CEOFounder	0.035	0.048	0.000	0.000	0.100	0.029	0.043	0.014***
CEOInsider	0.805	0.397	1.000	1.000	1.000	0.789	0.821	0.032***
AccExp	0.699	0.459	0.000	1.000	1.000	0.696	0.703	0.007
AccExpPercent	0.270	0.145	0.167	0.250	0.364	0.276	0.263	-0.013**
BoardSize	9.165	2.280	8.000	9.000	11.000	9.520	8.779	-0.741*
BoardInd	0.773	0.248	0.667	0.825	1.000	0.788	0.757	-0.031*

This table presents the descriptive statistics of our main variables (N=18,339) as well as the comparison between firms with generalist CEOs (*Generalist*=1) and other firms (*Generalist*=0). ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix for the definitions of the variables.

37

TABLE 2

Baseline Results

VARIABLES	(1) OLS LnAudFee Coeff.	(t-stat.)	(2) OLS LnAudFee Coeff.	(t-stat.)	(3) EB LnAudFee Coeff.	(t-stat.)
GSIndex	0.038***	(4.20)				
Generalist			0.055***	(3.27)	0.084***	(4.44)
Size	0.532***	(50.04)	0.534***	(50.70)	0.513***	(46.70)
Quick	-0.055***	(-6.55)	-0.055***	(-6.58)	-0.032***	(-3.39)
CATA	0.720***	(6.67)	0.718***	(6.63)	0.410***	(4.52)
PPE	-0.517***	(-6.51)	-0.522***	(-6.55)	-0.953***	(-12.23)
MA	0.005*	(1.74)	0.005*	(1.75)	0.012***	(3.33)
RD	0.129	(0.56)	0.150	(0.65)	0.796***	(3.46)
Segment	0.018***	(4.08)	0.018***	(4.12)	0.024***	(4.92)
ReportLag	0.006***	(9.02)	0.006***	(8.92)	-0.002**	(-2.03)
ROA	-0.211*	(-1.67)	-0.212*	(-1.67)	0.047	(0.34)
Leverage	0.058	(0.84)	0.061	(0.88)	-0.197**	(-2.51)
Cash	-0.303**	(-2.49)	-0.300**	(-2.46)	-0.198*	(-1.78)
CAPEX	-0.140	(-0.62)	-0.146	(-0.65)	-0.042	(-0.16)
CFO	0.158**	(2.16)	0.159**	(2.17)	0.105	(1.19)
Loss	0.137***	(8.43)	0.138***	(8.48)	0.118***	(6.35)
ZScore	-0.007*	(-1.94)	-0.007*	(-1.93)	-0.021***	(-5.12)
GC	0.153	(1.57)	0.151	(1.54)	0.213*	(1.81)
MB	-0.005	(-0.43)	-0.006	(-0.46)	0.015	(1.09)
FirmAge	0.003***	(4.54)	0.003***	(4.57)	0.004***	(5.29)
Beta	0.011**	(2.36)	0.011**	(2.36)	0.041***	(7.23)
Return	0.062	(1.56)	0.062	(1.58)	0.009	(0.21)
Big4	0.168***	(4.23)	0.168***	(4.21)	0.080*	(1.91)
CashPay	0.030***	(3.19)	0.029***	(3.10)	0.048***	(4.03)
EquityPay	0.003	(1.18)	0.004	(1.27)	-0.049***	(-18.75)
CEOGender	0.026	(0.44)	0.014	(0.24)	0.015	(0.23)
CEOAge	0.002	(1.13)	0.002	(1.38)	-0.007***	(-4.82)
CEOTenure	-0.009***	(-2.82)	-0.009***	(-2.97)	0.018***	(5.96)
CEODuality	0.010	(0.60)	0.011	(0.66)	-0.033*	(-1.78)
CEOFounder	-0.170	(-0.77)	-0.189	(-0.85)	-0.452*	(-1.86)
CEOInsider	-0.044**	(-2.42)	-0.045**	(-2.45)	-0.023	(-1.10)
AccExp	-0.051***	(-2.65)	-0.051***	(-2.64)	-0.047**	(-2.20)
AccExpPercent	0.079	(1.17)	0.080	(1.18)	0.274***	(3.77)
BoardSize	0.016**	(2.26)	0.016**	(2.26)	0.009	(1.22)
BoardInd	0.065*	(1.87)	0.065*	(1.88)	0.098**	(2.44)
Fixed effects	Industry, Year		Industry, Year		Industry, Year	
Observations	18,339		18,339		18,339	
Adjusted R^2	0.815		0.815		0.828	

This table presents the results of the estimation of Equation (1). Columns (1) and (2) show the ordinary least squares (OLS) regression results, and Column (3) presents the results using entropy balancing (EB). We use the EB method to balance the first three moments of the control variables: mean, variance, and skewness. All variables are defined in Appendix. We include but do not report constant terms, industry, and year fixed effects. *t*-statistics based on robust standard errors to heteroskedasticity and clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 3

Cross-Sectional Tests

Panel A: General Skills (*GSIndex*)

	(1) *Analyst Coverage*	(2) *Institutional Ownership*	(3) *Product Market Competition*	(4) *Litigation Risk*
Factor =				
GSIndex	0.055***	0.055***	0.052***	0.044***
	(4.46)	(4.90)	(4.67)	(8.94)
GSIndex × Factor	-0.033**	-0.024*	-0.031**	0.024***
	(-2.25)	(-1.71)	(-2.10)	(2.66)
Factor	0.068***	-0.026	-0.017	0.088**
	(3.88)	(-1.39)	(-1.15)	(2.01)
Control variables	Yes	Yes	Yes	Yes
Fixed effects	Industry, Year	Industry, Year	Industry, Year	Industry, Year
Observations	18,339	18,339	18,339	18,339
Adjusted R^2	0.815	0.790	0.814	0.749

Panel B: General Skills (*Generalist*)

	(1) *Analyst Coverage*	(2) *Institutional Ownership*	(3) *Product Market Competition*	(4) *Litigation Risk*
Factor =				
GSIndex	0.103***	0.095***	0.089***	0.056***
	(4.38)	(4.38)	(4.05)	(4.71)
GSIndex × Factor	-0.088***	-0.034**	-0.071**	0.029**
	(-3.13)	(-2.26)	(-2.51)	(1.96)
Factor	0.116***	-0.015	0.022	0.107**
	(4.87)	(-1.16)	(1.08)	(2.28)
Control variables	Yes	Yes	Yes	Yes
Fixed effects	Industry, Year	Industry, Year	Industry, Year	Industry, Year
Observations	18,339	18,339	18,339	18,339
Adjusted R^2	0.815	0.790	0.814	0.748

This table reports the cross-sectional analyses. *Analyst Coverage* is an indicator variable equal to one when the analyst coverage of a firm is above the sample median, and zero otherwise. *Institutional Ownership* is an indicator variable equal to one if the percentage of institutional investors holdings is above the annual median, and zero otherwise. *Product Market Competition* is an indicator variable equal to one when the industry sales Herfindahl is below the annual median, and zero otherwise. *Litigation Risk* is an indicator variable equal to one when the firm's litigation risk index is above the annual industry median, and zero otherwise. We calculate a firm's litigation risk index using the litigation model estimates from Model (3) following Kim and Skinner (2012). All other variables are defined in Appendix. We include but do not report constant terms, control variables, industry, and year fixed effects used in Equation (1). *t*-statistics based on robust standard errors to heteroskedasticity and clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 4

Path Analysis

Panel A: *Misreporting Risk = AbsDACC$_{t+1}$* and *General Skills = GSIndex*

General Skills = GSIndex	Misreporting Risk = AbsDACC$_{t+1}$ Client Business Risk =				
	Loss$_{t+1}$	Leverage$_{t+1}$	CFO$_{t+1}$	StdROA$_{t, t+5}$	StdRet$_{t+1}$
P(*General Skills, Misreporting Risk*) × P(*Misreporting Risk, LnAudFee*) = $\alpha_1 \times \beta_2$	0.002**	0.002**	0.002**	0.022**	0.009***
	(2.28)	(2.33)	(2.33)	(2.29)	(3.00)
P(*General Skills, Client Business Risk*) × P(*Client Business Risk, LnAudFee*) = $\delta_1 \times \beta_3$	0.024*	0.006**	0.003*	0.016***	0.006*
	(1.65)	(2.02)	(1.93)	(5.09)	(1.73)

Panel B: *Misreporting Risk = AbsDACC$_{t+1}$* and *General Skills = Generalist*

General Skills = Generalist	Misreporting Risk = AbsDACC$_{t+1}$ Client Business Risk =				
	Loss$_{t+1}$	Leverage$_{t+1}$	CFO$_{t+1}$	StdROA$_{t, t+5}$	StdRet$_{t+1}$
P(*General Skills, Misreporting Risk*) × P(*Misreporting Risk, LnAudFee*) = $\alpha_1 \times \beta_2$	0.007**	0.007**	0.007**	0.007*	0.032***
	(2.29)	(2.35)	(2.35)	(1.95)	(2.84)
P(*General Skills, Client Business Risk*) × P(*Client Business Risk, LnAudFee*) = $\delta_1 \times \beta_3$	0.065**	0.013*	0.004*	0.038***	0.024**
	(2.05)	(1.91)	(1.86)	(3.60)	(2.16)

40

TABLE 4 (Cont'd)

Panel C: *Misreporting Risk = DACC$_{t+1}$* and *General Skills = GSIndex*

General Skills = GSIndex	*Misreporting Risk = DACC$_{t+1}$*				
	Client Business Risk =				
	Loss$_{t+1}$	*Leverage$_{t+1}$*	*CFO$_{t+1}$*	*StdROA$_{t, t+5}$*	*StdRet$_{t+1}$*
P(*General Skills, Misreporting Risk*) × P(*Misreporting Risk, LnAudFee*) = $\alpha_1 \times \beta_2$	0.001*	0.001*	0.001*	0.001*	0.003*
	(1.75)	(1.82)	(1.83)	(1.81)	(1.86)
P(*General Skills, Client Business Risk*) × P(*Client Business Risk, LnAudFee*) = $\delta_1 \times \beta_3$	0.032*	0.006*	0.002*	0.016***	0.005*
	(1.83)	(1.82)	(1.80)	(3.07)	(1.74)

Panel D: *Misreporting Risk = DACC$_{t+1}$* and *General Skills = Generalist*

General Skills = Generalist	*Misreporting Risk = DACC$_{t+1}$*				
	Client Business Risk =				
	Loss$_{t+1}$	*Leverage$_{t+1}$*	*CFO$_{t+1}$*	*StdROA$_{t, t+5}$*	*StdRet$_{t+1}$*
P(*General Skills, Misreporting Risk*) × P(*Misreporting Risk, LnAudFee*) = $\alpha_1 \times \beta_2$	0.004*	0.004*	0.002*	0.002*	0.006*
	(1.73)	(1.80)	(1.80)	(1.78)	(1.87)
P(*General Skills, Client Business Risk*) × P(*Client Business Risk, LnAudFee*) = $\delta_1 \times \beta_3$	0.065**	0.013**	0.004*	0.038***	0.023**
	(2.25)	(2.08)	(1.89)	(5.56)	(2.01)

This table reports the results of a path analysis on the effect of generalist CEOs on audit fees through client misreporting risk and business risk. Specifically, we estimate the following structural equations:

$LnAudFee = \beta_0 + \beta_1 General\ Skills + \beta_2\ Misreporting\ Risk + \beta_3 Client\ Business\ Risk + \sum \beta_i\ Controls + \varepsilon$

$Misreporting\ Risk = \alpha_0 + \alpha_1 General\ Skills + \sum \alpha_i\ Controls + \varepsilon$

$Client\ Business\ Risk = \delta_0 + \delta_1 General\ Skills + \sum \delta_i\ Controls + \varepsilon$

We use one-year-ahead absolute discretionary accruals (*AbsDACC*) and one-year-ahead discretionary accruals (*DACC*) to measure misreporting risk (*Misreporting Risk*). *DACC* is the signed discretionary accruals estimated from the modified Jones model following Dechow et al. (1995). *AbsDACC* is the absolute value of *DACC*. Our proxies for client business risk are one-year-head *Loss*, *Leverage*, *CFO*, earnings volatility (*StdROA*), and stock return volatility (*StdRet*). *StdROA$_{t, t+5}$* is the standard deviation of return on assets for a firm from years *t* through *t+5*. *StdRet$_{t+1}$* is the standard deviation of monthly returns over year *t+1*. We report the path coefficients of interest in this table. P(X1, X2) stands for the standardized path coefficients from variable X1 to variable X2. The significance of the indirect effect is estimated using the Sobel (1982) test statistics. We multiple 10 on each coefficient for readability. All other variables are defined in Appendix. We include but do not report control variables, industry, and year fixed effects. *t*-statistics of the coefficients are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 5

Instrumental Variable Approach

VARIABLES	(1) GSIndex	(2) LnAudFee	(3) LnAudFee	(4) LnAudFee	(5) LnAudFee
Noncompete Enforcement	0.024** (2.25)				
GSIndex		0.048*** (4.57)			
Generalist			0.028*** (3.42)	0.085*** (9.14)	0.055*** (2.89)
Control variables	Yes	Yes	Yes	Yes	Yes
Fixed effects	Industry, Year	Industry, Year	Industry, Year	Industry, Year	Industry, Year
Observations	13,683	13,683	13,659	13,659	13,683
Adjusted R^2	0.152	0.826	0.825	0.825	0.826
F-statistics of instrument	26.35				

This table presents the estimates of instrumental variable methods applying two-stage least squares (2SLS) panel regressions following Custódio et al. (2019). Columns (1) and (2) report the first-and second-stage estimates of the *GSIndex,* respectively. Columns (3)–(5) report the estimates on *Generalist* based on the correlated random effects (CRE) Probit model and the Lewbel (2012) estimation procedure, respectively. In Panel A, the *Noncompete Enforcement* is the average Ertimur et al. (2018) noncompete agreement enforcement index for the state-year level for all positions that a CEO has held with publicly traded firms. The regressions include the same control variables as those used in Table 2. All other variables are defined in Appendix. We include but do not report constant terms, industry, and year fixed effects. *t(z)*-statistics based on robust standard errors to heteroskedasticity and clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 6

Changes Analysis

Panel A. CEO Changes (Holding Auditors Unchanged)

VARIABLES	(1) $\Delta LnAudFee$		(2) $\Delta LnAudFee$		(3) $\Delta LnAudFee$	
	Coeff.	(*t*-stat.)	Coeff.	(*t*-stat.)	Coeff.	(*t*-stat.)
Gen-to-Spec	-0.042**	(-2.22)			-0.037*	(-1.95)
Spec-to-Gen			0.034**	(2.94)	0.026	(1.24)
Changes in control variables	Yes		Yes		Yes	
Observations	2,817		2,817		2,817	
Adjusted R^2	0.153		0.152		0.153	

Panel B. Auditor Changes (Holding CEOs Unchanged)

VARIABLES	(1) $\Delta LnAudFee$	
	Coeff.	(*t*-stat.)
Generalist	0.138**	(2.08)
Changes in control variables	Yes	
Observations	1,169	
Adjusted R^2	0.342	

This table presents the results of the changes analysis. Panel A examines a sample with CEO changes, holding auditors unchanged. *ΔLnAudFee* is the difference in *LnAudFee* between year *t* and year *t*-1. *Gen-to-Spec* (*Spec-to-Gen*) is equal to one if a firm changes its CEO from a generalist (specialist) to a specialist (generalist), and zero otherwise. Panel B examines a sample with auditor changes, holding the CEO unchanged. All other variables are defined in Appendix. We include but do not report constant terms and control variables used in Equation (1) except that we recalculate each control variable as the difference between year *t* and year *t*-1. *t*-statistics based on robust standard errors to heteroskedasticity and clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 7

Robustness Tests on Alternative Specifications

	General Skills	Coefficient on *General Skills*	(*t*-statistic)	Observations	Adj. R^2
Firm Fixed Effects Regressions					
(1)	*GSIndex*	0.017**	(2.07)	18,339	0.943
(2)	*Generalist*	0.022*	(1.81)	18,339	0.943
Firm x CEO Fixed Effects Regressions					
(3)	*GSIndex*	0.059**	(2.06)	18,339	0.916
(4)	*Generalist*	0.017*	(1.91)	18,339	0.956
Controlling for Additional CEO Variables (*Delta*, *Vega*, *CEOConfidence*, *CEOHoldings*)					
(5)	*GSIndex*	0.033***	(3.21)	11,628	0.817
(6)	*Generalist*	0.039**	(2.02)	11,628	0.817
Controlling for Additional CFO Variables (*CFOCashPay*, *CFOEquityPay*, *CFODirector*, *CFOAge*, *CFOGender*, *CFOHoldings*)					
(7)	*GSIndex*	0.065***	(3.44)	8,526	0.821
(8)	*Generalist*	0.065***	(3.47)	8,526	0.821
Controlling for Managerial Ability Score (*MAScore*)					
(9)	*GSIndex*	0.034***	(3.72)	16,395	0.818
(10)	*Generalist*	0.063***	(3.47)	16,395	0.818

Control variables	Yes
Fixed effects	Industry, Year

This table reports the results of robustness checks on alternative specifications. The sample size varies because some additional control variables are not available for all observations. *Delta* is the dollar change in a CEO's stock and option portfolio for a 1% change in the stock price, following Coles et al. (2006). *Vega* is the dollar change in a CEO's option holdings for a 1% change in the standard deviation of returns following Coles et al. (2006). *CEOConfidence* is an indicator variable equal to one when a CEO holds options despite experiencing a 67 percent increase in stock prices (or more) at least twice, and zero otherwise. *CEOHoldings* is the percentage of CEO ownership. *CFOCashPay* is the natural logarithm of cash salary plus bonuses in thousands of dollars. *CFOEquityPay* is the natural logarithm of the value of restricted stock granted plus the value of options granted in thousands of dollars. *CFODirector* is an indicator variable equal to one if the CFO serves on the board, and zero otherwise. *CFOHoldings* is the percentage of CFO ownership. *CFOAge* is the age of the CFO. *CFOGender* is an indicator variable equal to one when the CFO is male, and zero otherwise. *MAScore* is the managerial ability score derived from Demerjian et al. (2012). All other variables are defined in Appendix. We include but do not report constant terms, control variables, industry, and year fixed effects as in Equation (1), except that we include other fixed effects as indicated in Rows (1)–(4). *t*-statistics based on robust standard errors to heteroskedasticity and clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 8

Tests on Financial Distress

Panel A: Cross-Section Tests Conditional on Financial Distress

VARIABLES	(1) LnAudFee		(2) LnAudFee	
	Coeff.	(*t*-stat.)	Coeff.	(*t*-stat.)
GSIndex	0.012***	(2.74)		
GSIndex × Loss	0.026***	(3.75)		
Generalist			0.015*	(1.88)
Generalist × Loss			0.039***	(3.01)
Control variables	Yes		Yes	
Fixed effects	Industry, Year		Industry, Year	
Observations	18,339		18,339	
Adjusted R^2	0.944		0.944	

Panel B. Going-Concern Opinions on Financially Distressed Firms

VARIABLES	(1) GC		(2) GC	
	Coeff.	(*z*-stat.)	Coeff.	(*z*-stat.)
GSIndex	0.005**	(2.19)		
Generalist			0.009**	(2.13)
Control variables	Yes		Yes	
Fixed effects	Industry, Year		Industry, Year	
Observations	3,116		3,116	
Pseudo R^2	0.107		0.107	

This table presents the results of the tests on financial distress. Panel A presents the results conditional on financial distress (i.e., when net income is negative). Specifically, we estimate the following model:

$$LnAudFee = \beta_0 + \beta_1 \text{ General Skills} + \beta_2 \text{ General Skills} \times Loss + \Sigma\beta_i \text{ Controls} + \varepsilon$$

Panel B reports the results of going-concern opinions. We estimate the following Logistic model using the subsample of financially distressed (e.g., when the net income is negative) firms:

$$Prob \ (GC=1) = \beta_0 + \beta_1 \text{ General Skills} + \sum\beta_i \text{ Controls} + \varepsilon$$

Controls are the same as in Equation (1). All variables are defined in Appendix. We include but do not report constant terms, control variables, industry, and year fixed effects. *t(z)*-statistics based on robust standard errors to heteroskedasticity and clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

APPENDIX: Variable Definitions

Variable	Definitions	Data Source
Dependent Variable		
LnAudFee	The natural logarithm of audit fees (in $).	Audit Analytics
Independent Variables		
General Skills	General managerial skills measured by *GSIndex* and *Generalist*.	
GSIndex	General skill index, which is the first factor considered in applying a principal components analysis to five proxies of general managerial ability acquired over a CEO's career prior to her current position (*Number of Positions*, *Number of Firms*, *Number of Industries*, *CEO Experience*, and *Conglomerate Experience*) following Custódio et al. (2013). *Number of Positions* is the number of positions CEO has had based on past work experience in public firms; *Number of Firms* is the nnumber of firms where CEO has worked based on past work experience in public firms; *Number of Industries* is the number of industries (four-digit SIC) where CEO has worked based on past work experience in public firms; *CEO Experience* is an indicator variable that equals one if CEO held a CEO position at another company based on past work experience, and zero otherwise; *Conglomerate Experience* is an indicator variable that equals one if CEO worked at multi-segment company based on past work experience, and zero otherwise.	BoardEx, Compustat, Execucomp
Generalist	An indicator variable that equals one when a CEO's general ability index (*GSIndex*) is above the annual sample median, and zero otherwise.	BoardEx, Compustat, Execucomp
Control Variables		
Size	The natural logarithm of total assets (in $millions).	Compustat
Quick	Current assets minus inventories, divided by current liabilities.	Compustat
CATA	Current assets divided by total assets.	Compustat
PPE	Net property, plants, and equipment, divided by total assets.	Compustat
MA	The natural logarithm of the value of acquisitions (in $millions).	Compustat
RD	Research and development expenses divided by total assets, and zero if research and development expenses is missing.	Compustat
Segment	The number of business segments.	Compustat
ReportLag	The number of days between the audit opinion signature date and fiscal year-end.	Audit Analytics
ROA	Earnings before interest and taxes, divided by total assets.	Compustat
Leverage	Total debt defined as long-term debt plus debt in current liabilities, divided by total assets.	Compustat
Cash	Cash and short-term investments, divided by total assets.	Compustat
CAPEX	Capital expenditures divided by total assets.	Compustat
CFO	Operating cash flows divided by total assets.	Compustat

Loss	An indicator variable equal to one when a firm reports a loss (i.e., net income is below zero), and zero otherwise.	Compustat
ZScore	The Altman (1968) Z-score.	Compustat
GC	An indicator variable that equals one when a firm receives a going-concern opinion, and zero otherwise.	Audit Analytics
MB	The market-to-book ratio measured as assets plus the market value of equity minus the book value of equity, divided by total assets.	Compustat
FirmAge	The number of years since a firm first appeared in the Compustat database.	Compustat
Beta	The firm's beta estimated from a market model for the fiscal year.	CRSP
Return	The firm's stock return for the fiscal year.	CRSP
Big4	An indicator variable that equals one when a firm is audited by a Big 4 auditor, and zero otherwise.	Audit Analytics
CashPay	The natural logarithm of CEO salary plus bonuses in thousands of dollars.	Execucomp
EquityPay	The natural logarithm of value of CEO restricted stock granted plus the value of options granted in thousands of dollars.	Execucomp
CEOGender	An indicator variable that equals one when a CEO is male, and zero otherwise.	Execucomp
CEOAge	The age of a CEO.	Execucomp
CEOTenure	The number of years a CEO holding his or her current position.	Execucomp
CEODuality	An indicator variable that equals one if the CEO is the chairperson of the board, and zero otherwise.	Execucomp
CEOFounder	An indicator variable that equals one if the CEO is the founder of the firm, and zero otherwise.	Execucomp
CEOInsider	An indicator variable that equals one if the CEO was promoted from inside the firm (had been in the firm before held the CEO position).	Execucomp
AccExp	An indicator variable that equals one if the audit committee includes at least one accounting expert, and zero otherwise. An accounting expert is defined as an individual with experience as a public accountant, CPA, auditor, principal financial officer, CFO, principal, or chief accounting officer. We used the BoardEx Education and Employment databases to identify whether an audit committee member has accounting experience.	BoardEx, Execucomp
AccExpPercent	The proportion of audit committee members who are accounting experts, where an accounting expert is defined as above.	BoardEx, Execucomp
BoardSize	The total number of directors on the board in the year.	BoardEx, Execucomp
BoardInd	The proportion of independent directors on the board.	BoardEx, Execucomp