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# **Managerial Ability and Audit Outcomes**

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**Managerial Ability and Audit Outcomes** 

Abstract

We examine the role of client firms' managerial ability in audit outcomes. Using a sample of 35,252

firm-year observations of US non-financial firms, we find a statistically significant association

between managerial ability and audit outcomes. This suggests that firms with high-ability managers

experience fewer financial restatements, reduced internal control issues, lower audit fees, shorter

audit report lags, and a decreased likelihood of receiving a going-concern opinion. This evidence is

robust to various endogeneity tests, including a natural experiment, propensity score matching, and

an instrumental variable approach. Moreover, we show that the impact of high-ability managers on

audit outcomes is more pronounced for client firms that suffer from weak governance oversight,

have severe information asymmetry, are located far away from auditors, and lack industry-specific

auditor expertise, which supports the case for the substitution effects of managerial ability. Overall,

our empirical evidence is distinctive and has implications for client firms, auditors, and

policymakers.

Keywords: managerial ability; audit outcomes; corporate governance; information environment

JEL Classification: G14; G38; M12

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#### 1. Introduction

In this paper, we examine how client firms' managerial ability influences audit outcomes. Management competencies are crucial in today's talent market as they shape corporate policies, strategies, and overall outcomes (Bonsall et al., 2017), as well as influence the corporate information environment, which is central to public trust and credibility. A complete understanding of the accounting information environment requires investigating managerial idiosyncrasies, the 'tone at the top' (Wells, 2020), and the auditors' assessment of clients' risk structures (Kizirian et al., 2005). Policymakers, such as the Public Company Accounting Oversight Board (PCAOB), underscore the significance of auditors' assessments of client firms' leadership structures, processes, and communications. Such scrutiny gauges how the 'tone at the top' signals commitment to audit quality and performance.<sup>2</sup> In corporate settings, auditors are critical in ensuring that financial statements conform to Generally Accepted Accounting Principles (GAAP) in the US. Therefore, auditor assessments and opinions about managerial judgments and estimates are critical for audit outcomes (Wells, 2020).

Audit outcomes reflect how auditors evaluate the quality of a client firm's information environment and risk structure in response to audit risks (e.g., recommending restatements for material inaccuracies and issuing opinions on internal controls) and final audit outcomes (e.g., audit fees, audit effort measured by audit report lag, and going-concern opinions). The empirical evidence on the impact of managerial skills and talent on audit outcomes is largely inconclusive and limited to audit fees and audit report lags. Therefore, we seek to provide a comprehensive understanding of whether and how managerial ability impacts both audit risk outcomes and final audit outcomes.

To establish a link between managerial ability and audit outcomes, our framework puts forth two opposing views that explain the potential impact of high-ability managers on audit outcomes.

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<sup>&</sup>lt;sup>2</sup> See Quality Control Standard 20 which is retrieved from https://pcaobus.org/oversight/inspections/inspection-procedures.

We argue that client firms managed by high-ability managers are more likely to achieve favorable audit outcomes, characterized by fewer financial restatements, reduced likelihood of adverse opinions on internal controls, lower audit fees<sup>3</sup>, shorter audit report lags, and a lower probability of receiving going-concern opinions (hereafter collectively referred to as 'favorable audit outcomes') for two reasons. First, high-ability managers have extensive knowledge, expertise, and a deep understanding of their business operations and macroeconomic conditions. This enables them to exercise better judgment, make precise estimations of the firm's current earnings, and forecast future cash flows accurately. Consequently, they enhance the overall information quality within the firm (Demerjian et al., 2013; Baik et al., 2018, Wells, 2020).

Second, a capable management team is likely to enhance the auditors' assessment of client risk by providing credible sources of information and evidence (Kizirian et al., 2005), strengthening internal controls (Judd et al., 2017), and mitigating liquidity and financial distress risks (Krishnan and Wang, 2015). Consequently, firms with superior managerial ability will tend to facilitate audit planning processes and lessen audit engagements. Overall, we argue that more able management teams will significantly contribute to favorable audit outcomes by raising the caliber of the client firm's information environment and positively shaping the auditors' assessment of client risk through improved internal controls, enhanced evidence credibility, and reduced liquidity and financial distress risk.

Conversely, high-ability managers' significant influence over corporate decision-making and resource allocations may lead to managerial entrenchment and opportunistic behavior (Demerjian et al., 2020) like misuse of corporate resources, over-investment, and over-optimistic estimations of project cash flows (Chen et al., 2021). They may also engage in inappropriate

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<sup>&</sup>lt;sup>3</sup> We consider lower audit fees as indicative of favorable audit outcomes based on the notion that lower audit fees are correlated with lower audit engagement risks and inherent risks perceived by the auditor. This lower risk may stem from a range of factors, such as financial transaction simplicity, straightforward accounting treatment, and a less complex organizational structure. Accordingly, auditors need to allocate fewer resources and less time to the audit process, resulting in lower audit fees.

accounting practices to maximize their personal benefit. For instance, high-ability managers who have gained significant power and become entrenched might involve themselves in unethical accounting practices to conceal critical firm-specific information (Koester et al., 2017), and rely on more subjective estimates of discretionary accruals or opportunistic earnings management (Gul et al., 2003). This would ultimately lead to a poor-quality information environment, requiring auditors to exercise greater prudence and professional skepticism (Jha and Chen, 2015), which raises the audit engagement risk, the number of inherent risk assessments, and the audit fees (Gul et al., 2003).

To empirically examine these two competing claims, we use a large sample of 35,252 firm-year observations from 3,987 publicly listed US firms spanning 2000 to 2018. To capture the role of managerial ability, we use the measure developed by Demerjian et al. (2012), which evaluates how effectively managers translate corporate inputs into outputs compared to their industry peers. They are deemed exceptionally capable, for instance, if they generate more substantial revenue from a given level of resources. Across various audit outcomes, our analysis reliably shows that higherability managers are associated with fewer financial restatements, fewer internal control issues, reduced audit fees, shorter audit report lags, and a reduced likelihood of receiving a going-concern opinion. The base result is robust to various econometric specifications, subsamples, and alternative measures of high ability in management.

Despite strong evidence of the links between managerial ability and audit outcomes, there is the possibility of endogeneity limiting our inferences. Such concerns include potentially omitted factors, self-selection bias, and reverse causality. To alleviate these, we employ several identification strategies. First, we re-estimate the association between managers' ability and audit outcomes using firm-fixed effects, which helps us mitigate the issue of unobservable firm characteristics causing time-invariant omitted-variable bias. Second, we adopt an instrumental variable approach to address the heteroskedastic errors from unobserved common factors, as in Lewbel (2012). Third, we accept that self-selection bias could occur whereby high-ability managers

tend to choose to work for firms known for having fewer restatements, fewer adverse opinions on internal controls, lower audit fees, less audit effort, and fewer going-concern opinions. Thus, to address such endogeneity concerns, we use a propensity score matching approach. Finally, we employ the sudden death of CEOs (Chief Executive Officers) as an exogenous shock to firms' management, given their pivotal role in initiating and implementing corporate policies. A sudden death is expected to have a significant impact on managerial efficiency as it affects the ability to transform corporate resources into revenue. To address this causality issue, we run a difference-in-differences analysis. Overall, our base evidence remains robust across all these identification tests.

After establishing the relationship between managerial ability and audit outcomes, we perform several cross-sectional tests to examine the moderating effects of corporate governance, information asymmetry, client-auditor distance, and the industry specialization of auditors. We posit that managerial ability acts as either a complement to or a substitute for effective governance monitoring, better information quality, closer geographic proximity between the client firm and auditor, and the auditor's superior industry specialism, in moderating the impact of these factors on the relationship between managerial ability and audit outcomes. From the perspective of complementary relationships, high-ability managers may benefit from these factors; their combined effects further mitigate audit engagement risk and effort. Such complementary relationships can further strengthen the association between managerial ability and favorable audit outcomes.

With regard to substitution effects, high-ability managers can offset the need for robust governance, mitigate the negative effects of high information asymmetry, compensate for the adverse impacts of greater distance between the auditor and the client firm, and reduce any reliance on auditor industry specialization. This is because high-ability managers possess extensive knowledge, managerial skills and expertise, industry networks, and strong professional reputations. Supporting these substitution effects, we find that the association between high-ability managers and favorable audit outcomes is stronger when the client firm experiences weaker governance

monitoring and higher information asymmetry, is located further from the auditor, and associates with non-specialist auditors.

Our study makes significant contributions to the existing literature. First, our study contributes to the extant literature investigating the relationship between managerial ability and audit fees (Krishnan and Wang, 2015; Gul et al., 2018) and between managerial ability and audit report lag (Abernathy et al., 2018). From an audit fee perspective, Krishnan and Wang (2015) show a negative association between managerial ability and audit fees in general settings, whereas Gul et al. (2018) find a positive association in financially distressed firms. Our study supplements both studies by investigating the relationship in both general and financially distressed firms. Our results confirm a negative relationship between managerial ability and audit fees in general; however, this relationship becomes positive for highly distressed firms, consistent with Gul et al. (2018). Moreover, unlike other studies, we use a more accurate estimate of audit fees to mitigate the risk of mismeasurement. For example, prior empirical research (e.g., Lim and Monroe, 2022) tends to rely on the fees paid to the auditors as a proxy for audit fees, ignoring the audit fees of the successor and predecessor in years of auditor rotation. Audit fees tend to be significantly discounted in the auditor rotation year (Hay et al., 2006). This bias raises questions about the validity of earlier empirical works (Barua et al., 2020). Accordingly, we argue that correcting audit fees during the year of auditor rotation is critical, particularly if the relationship between managerial ability and audit fees is positive for distressed firms. However, after the correction, this relationship should shift to a negative association for distressed firms. Our empirical analysis indeed provides such evidence and demonstrates the significance of correcting audit fees<sup>4</sup>. Hence, our study provides robust evidence to reconcile the inconclusive findings of past studies.

In the context of audit report lags, our study adds a new dimension to Abernathy et al. (2018), by showing the distinct impact of managerial ability on highly distressed vs. non-distressed

<sup>&</sup>lt;sup>4</sup> We follow Barua et al. (2020) for this improved estimate of audit fees.

firms. While Abernathy et al. find that higher managerial ability is associated with shorter audit report lag in general settings, our results confirm that this relationship is mainly prevalent for financially non-distressed firms<sup>5</sup>. Moreover, unlike this study, we employ a number of robustness tests that address endogeneity concerns related to managerial ability and audit report lag. Overall, our research offers new insights into policy and practice in this domain, emphasizing its originality and contribution to the existing body of knowledge.

Second, we add to the literature on the determinants of audit outcomes. As in prior research, audit outcomes are associated with accounting comparability (Zhang, 2018), financial statement footnote readability (Abernathy et al., 2019), accruals quality (Cho et al., 2017), auditor connectedness (Guan et al., 2016) and firm culture (Andiola et al., 2020). However, these studies have not explored the influence of managerial ability on three specific audit outcomes: the possibility of financial restatements, auditor assessment of internal controls, and the issuance of a going-concern opinion. Yet, we argue that audit outcomes, such as financial restatements, audit opinions of internal controls, and going-concern opinions, significantly impact regulators, corporate management, and other stakeholders (e.g., market participants and users of financial statements). For instance, the independence of auditor judgment assures the credibility of accounting information, effectively enabling capital market operations (Hanlon et al., 2022). Moreover, users of financial statements must rely solely on audit opinions (Herrbach, 2001), as they cannot access client firms' accounting systems directly. Since the practical implications of these audit outcomes are crucial, we seek to add a valuable new dimension to this limited body of extant literature, by providing a comprehensive understanding of the distinct impact of managerial ability on various

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<sup>&</sup>lt;sup>5</sup> While we find negative relationships between managerial ability and audit reports lags in both financially distressed and non-distressed firms, such a negative relationship is marginally significant for financially distressed firms at a 10% significance level. Moreover, the Chi-Sq test indicates the coefficient of managerial ability is significantly more negative for financially non-distressed firms. Thus, our results suggest that higher managerial ability significantly reduces audit report lags in financially non-distressed firms than distressed ones.

largely under-explored audit outcomes, such as financial restatements, going-concern opinions, and opinions on the strength of internal controls.

Third, in contrast to prior research, we provide new evidence on the moderating roles of corporate governance, information asymmetry, client-auditor distance, and the auditor's industry specialism on the nexus between managerial ability and audit outcomes. We demonstrate that the relationship between managerial ability and audit outcomes is more pronounced for client firms that exhibit weak governance oversight, deal with severe information asymmetry, are located far from auditors, and lack industry-specific auditor expertise, supporting the case for the substitution effects of managerial ability. Hence, our study contributes to the body of literature (e.g., Armstrong et al., 2010; Frino et al., 2023; Baik et al., 2018; Lim and Monroe, 2022) on these four specific factors that are considered to be critical for ultimate auditor judgments and audit outcomes.

Finally, our analysis adds to the literature on factors that influence the likelihood of a lawsuit. According to prior research, such a likelihood is substantially affected by disclosure, social capital, and political corruption (Jha and Chen, 2015; Jha et al., 2021). Extending this stream of research, our distinct evidence demonstrates a lower litigation risk for firms managed by more able managers. Clearly, a firm's managerial ability influences not only audit outcomes but associated risk as well.

We organize the remainder of our paper as follows. In section 2, we discuss the relevant literature and develop the hypotheses. Then, we present the sample and data, variables, and descriptive statistics in section 3. Subsequently, we provide the baseline evidence along with robustness and endogeneity tests in section 4. Finally, in sections 5 and 6, we highlight cross-sectional and additional analyses before concluding the paper in section 7.

## 2. Theoretical Literature and Hypotheses Development

There seems to be a noticeable shift in the theoretical framework used in contemporary accounting and auditing literature recently, moving from the neoclassical economic assumptions of management homogeneity towards upper echelons theory, which focuses on the idiosyncrasies and individual attributes in senior management (Bertrand and Schoar, 2003; Wells, 2020). This shift has largely been driven by the seminal study of Bertrand and Schoar (2003), which outlines the influence of 'managerial style' on firms' policies. The neoclassical view suggests that senior managers, such as CFOs (Chief Financial Officers), tend towards homogeneous decision-making driven by rational choices and that their individual style should not influence a firm's accounting choices. In contrast, upper echelons theory recognizes how managerial idiosyncrasies affect managerial judgment and decision-making in business conduct in general and accounting practices in particular (Bertrand and Schoar, 2003). Following this theory, DeJong and Ling (2013) find that managerial style has a significant influence on accounting choices and financial reporting quality. Given this backdrop, as shown in Figure 1, we argue that high managerial ability could affect the quality of the client firm's information environment and auditors' assessment of client risk, which in turn could influence audit outcomes. We then clarify how various indicators in the information environment and the client risk perceived by auditors can mediate the association between managerial ability and audit outcomes.

#### [INSERT FIGURE 1]

# 2.1. Managerial Ability, Information Environment, Client Risk Assessment and Audit Outcomes

A growing body of literature explains how managerial idiosyncrasies can influence the quality of the information environment by achieving higher-quality earnings and improved financial reporting quality, thereby affecting audit outcomes. Managerial idiosyncrasies and styles are important determinants of specific accounting choices, and they influence the usefulness of accounting information in decision-making (Wells, 2020). Demerjian et al. (2013) observe that superior

managers possess greater knowledge of their business, client base, and macro-economic conditions. Therefore, they make better judgments and more accurate estimates of accruals (such as bad debt estimates) and future cash flows, leading to higher-quality earnings.

Empirically, prior studies document that managerial ability is positively associated with the quality of earnings forecasts and accrual estimations (Demerjian et al., 2013; Baik et al., 2011), financial reporting quality (García-Meca and García-Sanchez, 2018), and the quality of a firm's information environment (Baik et al., 2018; Wells, 2020). Doukas and Zhang (2020) argue that high-ability managers use discretionary accruals or earnings smoothing to provide more predictable cash flow and earnings, thereby reducing information asymmetries. Similarly, Abernathy et al. (2018) argue that high-ability managers, having more accurate judgments and estimates, can facilitate financial reporting and audit processes effectively and efficiently, reducing audit risk. Accordingly, they find that managerial ability reduces the earnings announcement lag and audit report lag. Overall, high-ability managers improve a firm's information environment.

The positive influence of managerial ability on the quality of a client firm's information environment may influence the auditor's client risk assessment by positively shaping the credibility of the source of information and evidence. As auditors need to rely on management to gather extensive evidence during the audit process, it is critical for them to evaluate the credibility of the client-supplied sources (Kizirian et al., 2005). Jha and Chen (2015) argue that if auditors have high confidence in management, they tend to carry out fewer substantive procedures in the audit planning process, leading to less audit engagement. Dikolli et al. (2020) also assert that CEOs' behavioral integrity enhances trust and credibility in the audit planning process, reducing audit engagement risk and audit fees. In the same vein, Jha and Chen (2015) concur that clients' social capital or trustworthiness significantly influences the audit planning process, with a lower level of trust causing a longer audit report lag and higher audit fees.

Along with a creditable information environment, an auditor's assessment of the quality of their client firm's internal controls is a critical consideration in the audit planning process, as the auditor might perceive the need to exert more audit effort in a weaker internal control environment, giving rise to greater audit engagement risk (Balachandran et al., 2021). Likewise, Causholli et al. (2011) concur that control risk significantly determines audit effort, including the quality of a client's control over financial reporting and an auditor's stated reliance on such controls. In the context of our study, Kizirian et al. (2005) suggest that the 'tone at the top' is an essential determinant of the auditor's assessment of a client firm's risk structure, as it provides a foundation for the client's internal control. Judd et al. (2017) find that firms with narcissistic CEOs tend to exhibit higher internal control weaknesses, suggesting that auditors might need to perform additional procedures to assess elevated inherent risks when a firm has a narcissistic CEO. Thus, we argue that managerial competence can influence the internal control of client firms.

Finally, a few related studies explain how managerial ability can improve financial performance, reduce financial distress risk, and thus reduce audit engagement risk. For example, Shang (2021) refers to the managerial talent hypothesis wherein a more able management team evaluates the firm's investment and growth opportunities more accurately and undertakes value-increasing projects, which boosts firm value and decreases liquidity risk and credit risk. In the same light, Huang and Sun (2017) argue that high-ability managers tend to manage firms' resources more efficiently, leading to superior performance. Similarly, Krishnan and Wang (2015) show that greater managerial ability improves current and future firm performance and reduces a firm's financial distress risks, eventually mitigating audit engagement risk. Likewise, Johnstone (2000) demonstrates a positive link between a client firm's business risk and both audit risk and audit fees. Taken together, we can expect that managers with greater ability are more likely to be associated with favorable audit outcomes for their firms in terms of fewer financial restatements, a lower

likelihood of adverse opinions on internal controls, lower audit fees, less audit effort, and a lower likelihood of going-concern opinions.

Nevertheless, highly capable managers may exhibit managerial entrenchment due to their superior skills and significant influence over decision-making processes and resource allocation (Demerjian et al., 2020). This exacerbates the risk of opportunistic behavior and enables managers to exploit their positions by manipulating corporate governance structures or bypassing oversight mechanisms. This behavior can take various forms, including favoring projects for personal reputation (or financial incentive), disregarding shareholder interests, and engaging in transactions that benefit related parties. Moreover, high-ability managers have greater opportunities to expand enterprise 'empires', potentially misusing free cash flow through over-investment by indulging in over-optimistic estimations of project cash flows (Chen et al., 2021). Consequently, the opportunistic behavior of high-ability managers is extensively discussed in the governance literature.

Prior studies also suggest that high-ability managers might engage in more improper accounting and unethical business practices, such as manipulation in financial reporting. For example, Gul et al. (2003) observe that high-ability managers' subjective judgments and estimates of discretionary accruals are susceptible to manipulation, which is linked to a heightened assessment of inherent risk, leading to increased audit efforts and higher fees. Koester et al. (2017) report that high-ability managers carry out a higher degree of corporate tax avoidance to minimize costs and improve firm performance, tax avoidance being considered an unethical business practice. In sum, highly capable managers may indeed acquire a level of power that spurs them to conceal critical information and entertain unethical business practices, which will negatively affect the auditor's client risk assessment and audit outcomes.

Considering these conflicting views around the relationship between managerial ability and audit outcomes, we draw on a balanced perspective that recognizes the dual impact of high-ability

managers on audit outcomes. We initially highlight that a high-ability managerial team is more likely to enhance the quality of a firm's information environment and shape the auditor's client risk assessment through the higher perceived credibility derived from client-supplied evidence, stronger internal controls, and reduced financial distress risks. Specifically, in the presence of a high-ability managerial team in the client firm, auditors are more likely to assess the quality of the firm's information environment and internal controls with less effort, leading to lower perceived audit engagement risk and favorable audit outcomes. However, we further acknowledge that highly capable managers who have gained significant power and become entrenched can undermine organizational integrity and information transparency, potentially causing unfavorable audit outcomes for the client firm. In considering the tension between the two propositions, we contend that transitioning from virtuous managerial capability toward opportunism features a complex interplay between managerial competence and ethical conduct. This interplay itself might lead to either favorable or unfavorable audit outcomes for the client firm. By offering a balanced perspective, we aim to comprehensively understand this complex relationship. Accordingly, we develop the following non-directional hypothesis:

Hypothesis 1 (H1): Ceteris paribus, high-ability managers are associated with audit outcomes.

## 2.2. Moderation Effects on the Relationship between Managerial Ability and Audit Outcomes

In this section, we elucidate how governance monitoring, information asymmetry, client-auditor distance, and auditor industry specialism moderate the associations between managerial ability and audit outcomes.

## 2.2.1. The moderating effects of corporate governance

The influence of the interaction between managerial ability and corporate governance on audit outcomes is a complex landscape that can be viewed through a 'complementary' or 'substitution' lens. The complementary hypothesis suggests that effective corporate governance in client firms

establishes accountability, improves transparency, and prevents managers from engaging in unethical practices by increasing checks and balances. For example, McCahery et al. (2016) argue that institutional investors, their presence being an indicator of good governance, adopt various exit and voice strategies to improve governance monitoring and reduce managerial entrenchment in their portfolio companies. Stronger governance mechanisms are also likely to strengthen the internal control environment of the client firm (Chen et al., 2017) and reduce earnings manipulation risk (Bedard and Johnstone, 2004). Moreover, Chen et al. (2006) find that good governance, measured by a high proportion of non-executive directors and high board meeting frequency, diminishes the likelihood of firms engaging in fraud, while Pae and Choi (2010) show that firms with effective governance are more committed to business ethics. Finally, Armstrong et al. (2010) observe that stronger monitoring mechanisms reduce moral hazard problems. Considering such positive aspects of robust governance, García-Sánchez and García-Meca (2018) report that internal governance mechanisms, such as board effectiveness, reinforce the positive effect of managerial ability on investment efficiency, suggesting a complementary relationship between corporate governance and managerial ability.

The discussion above suggests that high-ability managers can foster greater transparency and reliability in firms with robust governance. This synergy between managerial ability and governance monitoring can meaningfully decrease audit engagement risk. Moreover, efficient governance mechanisms reduce the opportunistic behavior of high-ability managers, thereby improving the information environment. Thus, the complementary relationship between strong governance and high managerial ability may reduce a firm's audit engagement risk, resulting in favorable audit outcomes.

In contrast, managerial ability can also act as a substitute for governance monitoring. The substitution hypothesis holds that weaker monitoring may increase agency conflicts and informational asymmetries between shareholders and managers due to moral hazard problems

(Armstrong et al., 2010), causing a deterioration of a firm's information environment. In this context, auditors may rely more on the credentials of high-ability managers to determine the audit engagement risk, as the latter can independently maintain high information quality and operational efficiency. This suggests that capable managers might act as a substitute for inadequate governance monitoring by reducing engagement risk, thereby fostering favorable audit outcomes.

Considering the two opposing lines of argument, we posit that the effect of the interaction between managerial ability and governance on audit outcomes is explained by either a complementary or substitution hypothesis. Accordingly, we develop the following incompatible hypotheses:

Hypothesis 2a (H2a): Ceteris paribus, the association between managerial ability and audit outcomes is stronger when the client firm has strong corporate governance.

Hypothesis 2b (H2b): Ceteris paribus, the association between managerial ability and audit outcomes is stronger when the client firm has weak corporate governance.

## 2.2.2. The role of information asymmetry

The relationship between managerial ability and audit outcomes might be influenced by information asymmetry, a condition where external stakeholders, including auditors, encounter difficulties in accurately evaluating financial data. As discussed earlier, the quality of a firm's information environment plays a significant role in shaping a firm's audit outcome. An environment with high information asymmetry increases audit engagement risk, as the auditor needs to spend more time and effort collecting and processing necessary information during the audit (Balachandran et al., 2021; Frino et al., 2023). This infers that less transparent firms have a greater propensity to conceal information from auditors and the public, making it difficult for auditors to provide an accurate representation of them (Frino et al., 2023). Consequently, auditors exercise greater 'professional skepticism' and prudence in assessing poor-quality financial reporting, so they have to exert greater

audit effort and, hence, charge an audit premium (Jha and Chen, 2015). Likewise, Balachandran et al. (2021) observe that auditors are likely to respond to a poor-quality client-firm information environment by recommending financial restatements, issuing a going-concern opinion, or forming an adverse opinion on internal controls. Call et al. (2017) report an inverse association between the quality of the information environment and financial restatements.

In the context of low information asymmetry, we argue that high-ability managers are in an advantageous position to play a pivotal role in shaping the quality and transparency of financial reporting by facilitating clearer and more trustworthy financial disclosure (García-Meca and García-Sanchez, 2018; Baik et al., 2018; Wells, 2020). High managerial ability and low information asymmetry could work together to reduce the perceived engagement risk for auditors. Thus, low information asymmetry is likely to reinforce the relationship between managerial ability and audit outcomes (Abernathy et al., 2018; Doukas and Zhang, 2020).

However, in environments with high information asymmetry, auditors might rely on high-ability managers as they have greater professional integrity in the industry. Auditors may place higher trust in these managers for credible sources of client-supplied evidence, believing that their professional reputation will compensate for any lack of information. Moreover, high-ability managers are presumed to be more effective in implementing risk mitigation strategies (Bonsall et al., 2017). Such perception may lead auditors to lower their risk assessments, affecting audit outcomes favorably. Nevertheless, one may argue that opportunistic high-ability managers might exploit this poor information environment to conceal and manipulate information. As a result, the positive effect of managerial ability on audit outcomes could be diminished.

Taken together, the above arguments suggest that information asymmetry plays a crucial role in the impact of managerial ability on audit outcomes. Accordingly, we also develop the following incompatible hypotheses:

Hypothesis 3a (H3a): Ceteris paribus, the association between managerial ability and audit outcome is stronger when the client firm experiences low information asymmetry.

*Hypothesis 3b (H3b)*: Ceteris paribus, the association between managerial ability and audit outcome is stronger when the client firm experiences high information asymmetry.

## 2.2.3. The role of the distance between auditor and client firm

Auditors' geographic proximity to their client firms might reinforce the relationship between managerial ability and audit outcomes. On the one hand, auditors closer to their client firms are likely to have information and monitoring advantages. Choi et al. (2012)claim that local auditors have better access to client-specific knowledge than their non-local peers. Moreover, local auditors can more frequently interact with their client firms and learn of client-specific incentives, their modus operandi, and negative reporting from local media, all of which enhance auditors' capacity to efficiently monitor the client (Kang and Kim, 2008). The comparative convenience of greater knowledge and monitoring efficiency enables local auditors to mitigate aggressive and biased reporting practices (Krishnan, 2003). Several studies provide empirical evidence to support this argument. For example, Choi et al. (2012) find that the informational advantage of auditors being local effectively empowers them to constrain management from biased earnings reporting, leading to higher-quality audits. Similarly, Dong et al. (2018) demonstrate that audit reports are timelier for geographically proximate auditor clients.

The information and monitoring advantage of auditor proximity is likely to reinforce the positive effect of managerial ability on audit outcomes. Under this assumption, high managerial ability and close auditor-client proximity could work together to reduce engagement risk, resulting in favorable audit outcomes. On the other hand, a higher information asymmetry associated with a greater geographic distance might compel auditors to rely more on high-ability managers as a trustworthy source of client-supplied evidence. Therefore, we contend that managerial ability is

likely to have a greater impact on audit outcomes even when the client firm is located further from the audit firm as high managerial ability can address the negative effects of greater distance between the auditor and the client firm on audit outcomes. Consequently, high-ability managers could be substitutes for mitigating the adverse effect of greater auditor-client distance on the association between managerial ability and audit outcomes. Considering these contradictory arguments, we develop the following incompatible sub-hypotheses:

Hypothesis 4a (H4a): Ceteris paribus, the association between managerial ability and audit outcome is stronger when the geographic distance between the client firm and the auditor is lower. Hypothesis 4b (H4b): Ceteris paribus, the association between managerial ability and audit outcome is stronger when the geographic distance between the client firm and the auditor is higher.

# 2.2.4. The role of auditors' industry specialism

Auditors with specialist expertise in a particular industry are likely to positively impact financial reporting and audit quality as they possess superior industry-specific knowledge and understanding. The growing empirical literature provides evidence of this positive relationship. For example, Dunn et al. (2004) report that clients of industry-specialist audit firms have greater information disclosure quality than clients of non-specialist audit firms. Balsam et al. (2003) also find that clients of industry-specialist auditors have a lower absolute level of discretionary accruals and earnings response than non-specialist auditors. Likewise, Fleming et al. (2014) find that auditor industry specialism helps to reduce audit fees during the first year of Sarbanes-Oxley Act (SOX) compliance. The preceding arguments and evidence suggest a positive association between specialist auditors and favorable audit outcomes, implying that high-ability managers may benefit from specialized auditors' deeper insights and more rigorous assessments. Therefore, auditors' industry specialization might play a complementary role to managerial ability, in leading to optimal client firm audit outcomes.

However, we argue that a substitutive relationship is also possible as high managerial ability might diminish the need for auditor industry specialization in achieving favorable audit outcomes for the client firm. As presented earlier, high-capability managers have superior knowledge and skills to effectively monitor a firm's financial reporting processes, implement robust internal controls, and assure an accurate and transparent information environment. These capabilities could compensate for the absence of auditor specialism. Consistent with this argument, we contend that when auditors are not experts in their client firms' industries, they are likely to depend more on high-ability managers when undertaking client risk assessments. Considering these opposing lines of arguments, we test the following incompatible sub-hypotheses:

*Hypothesis 5b (H5a)*: *Ceteris paribus*, the association between managerial ability and audit outcome is stronger when the auditor possesses specialism in a client firm's industry.

*Hypothesis 5b (H5b)*: *Ceteris paribus*, the association between managerial ability and audit outcome is stronger when the auditor lacks specialism in a client firm's industry.

## 3. Research Method

## 3.1. Data and sample

To compile a comprehensive sample from publicly listed US firms, we use data from various sources spanning the years 2000 to 2018, since 2000 is the first year when information on audit outcomes (such as financial restatement, internal controls, audit fees, restatement and going-concern opinions) emerges in the Audit Analytics database. We access Demerjian's webpage, Compustat, Thomson Reuters Institutional Holdings (13F), Institutional Brokers' Estimate System (I/B/E/S), and BoardEx to obtain measures of managerial ability, firm characteristics, institutional ownership, analyst coverage, and board independence. To regress audit outcomes on managers'

<sup>6</sup> The managerial ability scores were obtained from https://peterdemerjian.weebly.com/managerialability.html but the managerial ability data available was only until 2018 when we conducted the analysis.

ability and derive our final sample, we apply the following filters: (i) limiting sample years to firms with at least two consecutive years of data and excluding observations without the managerial ability score; (ii) removing observations from years where total assets are less than USD 1 million (Barua et al., 2020; Balachandran et al., 2021); (iii) dropping observations from regulated utility and financial industries (Xu et al., 2019)<sup>7</sup>; and (iv) using a modified or corrected measure of audit fees of the successor and predecessor in the year of an auditor change (Barua et al., 2020). The final sample comprises 35,252 firm-year observations from 3,987 non-financial firms over 19 years.

## 3.2. Measures of managerial ability and audit outcomes

The main explanatory variable is managerial ability (*MA*). To measure the influence of high-ability managers, we use the managerial ability score developed by Demerjian et al. (2012) employing data envelopment analysis (DEA). While capturing managers' efficiency against industry peers, this score demonstrates a performance-based evaluation of their innate ability (Baik et al., 2018) as it reflects the transformation of firm resources into revenue (Demerjian et al., 2012).<sup>8</sup>

The key dependent variable is audit outcomes (*AUDOUT*). We use the following five proxies of audit outcome (the first two pertain to 'audit risk outcomes' and the remaining three to 'final audit outcomes'): (i) a binary measure of financial restatements (*RESTMT*); (ii) a binary measure of auditors' opinions on internal control systems (*DAOICS*); (iii) the natural log of the successor auditor's corrected audit fees during the auditor change year (*LAFCOR*), similar to Barua et al. (2020), to mitigate mismeasurement caused by omitting audit fees of the predecessor in year t; (iv) the natural log of auditors' efforts to complete an audit (*LAELAG*), measured as the days between signing an audit opinion and the fiscal year-end, as in Jha and Chen (2015) and Krishnan and Wang (2015); and (v) a binary measure of going-concern opinions (*DGOCON*). These proxies are the

<sup>&</sup>lt;sup>7</sup> This was based on their four-digit standard industrial classification (SIC) codes 4000-4999 and 6000-6999, respectively.

<sup>&</sup>lt;sup>8</sup> For methodological details about the scoring of managers' innate ability, see Demerjian et al. (2012), for example.

same as the measures in prior studies (Xu et al., 2019; Barua et al., 2020; Balachandran et al., 2021).<sup>9</sup>

## 3.3. Model specification

To investigate the relationship between managerial ability and audit outcomes, we use the following specification in Equation (1):

$$AUDOUT_{it} = \alpha + \beta_1 MA_{it-1} + \gamma' CONTROLS_{it-1} + FIXED \ EFFECTS + \varepsilon_{it}$$
(1)

where  $AUDOUT_{it}$  and  $MA_{it-1}$  represent the measures for audit outcomes and managerial ability, respectively. <sup>10</sup> If the audit outcomes favor the firms, we expect  $\beta_I$  to be significantly negative across the five proxies for audit outcomes (*RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*). For our estimation, we proceed as follows. First, we use explanatory measures and controls with a lag of one period to mitigate any simultaneous causality effects. Second, we winsorize all continuous variables at the first and 99<sup>th</sup> percentiles. Third, we cluster standard errors by the firm to reduce potential bias, as firm residuals are likely correlated across firms. Fourth, we incorporate industry-and year-fixed effects to address unobserved industry and year effects. Finally, to reduce any estimation bias due to omitted variables and provide more accurate estimates, we add several controls.

Consistent with earlier studies (Hay et al., 2006; Krishnan and Wang, 2015; Ma et al., 2021; Balachandran et al., 2021), we control for: firm size (*LNTA*), the non-audit fee (*LNONAF*), loss of income (*LOSS*), the firm having reporting dates between December and March (*BUSY*), operating performance (*ROA*), auditor opinion (*AUOP*), being a large audit firm (*BIGAUDIT*), geographic segments (*GEOSEG*), business segments (*BUSSEG*), foreign sales (*FORSALES*), special items (*SPECIAL*), leverage (*LEV*), auditor change (*DAUCHANGE*), market-to-book (*MB*), litigation

<sup>&</sup>lt;sup>9</sup> See Appendix Table 1A for the complete definitions of the variables.

 $<sup>^{10}</sup>$  i, t, and  $\varepsilon_{it}$  refer to firm, year, and error term, respectively.

industry (*LITIGATION*), inherent risk (*INHERENT*), merger and acquisition activity (*DMA*), seasoned equity offerings (*DSEO*), and the number of employees (*EMP*). Our specification is likely to isolate the impact of high-ability managers from known determinants of audit outcomes.

# 3.4. Descriptive statistics and correlation matrix

Table 1 presents the descriptive statistics, including number of observations (Nobs.), mean, P50, minimum (Min), P25, P75, maximum (Max), and standard deviation (SD) of our baseline sample. The managerial ability (MA) score has a mean and standard deviation of -0.003 and 0.133, respectively. These statistics are comparable to those from earlier studies (Demerjian et al., 2012; Krishnan and Wang, 2015; Bonsall et al., 2017). About 15.5% of the firms in the sample restate their financial statements (*RESTMT*), and around 6.33% receive an auditor's opinion on their internal control systems (*DAOICS*). The averages for the natural log of corrected audit fees (*LAFCOR*) and auditors' effort in completing an audit (*LAELAG*) are 13.72 and 4.10, respectively. These values align with earlier investigations (Xu et al., 2019; Balachandran et al., 2021). Additionally, 8.96% of the firms receive a going-concern opinion (*DGOCON*). The statistics of the control measures appear to be standard. For instance, the average firm has a natural log of total assets (*LNTA*) of 6.14, a ratio of return on total assets of -0.02, and a market-to-book value (*MB*) of 1.79. The Big Four firms offer auditing services to nearly 76% of the firms.

Table 2A in the appendix presents a matrix indicating correlations among measures of managerial ability, audit outcomes, and other variables. Our analysis shows a negative correlation between managers' ability and the audit outcome measures, suggesting that firms led by high-ability managers are likely to benefit from auditing services. Further, the correlation coefficient among controls is less than 0.7 in absolute value, which mitigates concerns about multicollinearity. Theoretically, coefficients equal to or exceeding 0.7 in absolute value indicate multicollinearity

<sup>&</sup>lt;sup>11</sup> We round the statistics to two and three decimal places for interpretation.

issues (Liu et al., 2014). Given that our empirical settings adhere to this general rule, multicollinearity is unlikely to affect our analyses.

## [INSERT TABLE 1]

## 4. Empirical Results

#### 4.1. Baseline evidence

To assess the significant influence of high-ability managers on audit outcomes (Hypothesis 1), we employ ordinary least square (OLS) models as our base and regress audit outcome measures on Demerjian's score of manager ability, along with controls, and industry- and year-fixed effects. As seen in Table 2, the coefficients of MA are -0.055 (p < 0.01), -0.039 (p < 0.01), -0.126 (p < 0.01), -0.039 (p < 0.05), and -0.065 (p < 0.01), for RESTMT, DAOICS, LAFCOR, LAELAG, and DGOCON, respectively. These findings demonstrate that higher managerial ability in client firms is associated with fewer financial restatements, a lower likelihood of adverse opinions on internal controls, lower audit fees, shorter audit report lags, and a lower likelihood of a going-concern opinion.

The coefficients of the controls are consistently significant across most audit outcomes <sup>12</sup>. It is evident that larger firms (Xu et al., 2019; Ali et al., 2022), those paying higher non-audit fees (Ali et al., 2022), those experiencing income losses (Hope et al., 2017; Xu et al., 2019), those audited by Big Four firms (Hope et al., 2017), those with more complex operations such as multiple segments and foreign operations (Krishnan and Wang, 2015; Xu et al., 2019), those with a high market-to-book ratio (Ali et al., 2022), and those facing higher litigation risk (Xu et al., 2019) and inherent risk (Ali et al., 2022), experience unfavorable audit outcomes. These outcomes include more financial restatements, a higher likelihood of adverse opinions on internal controls, higher audit fees, longer audit report lags, and a higher likelihood of receiving going-concern opinions.

<sup>&</sup>lt;sup>12</sup> Though our controls meet expectations of audit outcomes, some are insignificant across the dimensions of audit.

However, firms with strong asset returns tend to experience fewer restatements, are less likely to receive adverse opinions on internal controls, and pay lower audit fees (Hope et al., 2017; Ma et al., 2021).

Overall, our evidence confirms and supports our baseline hypothesis (*H1*) that client firms with greater managerial ability experience fewer financial restatements, a lower likelihood of adverse opinions on internal controls, lower audit fees, shorter audit report lags, and a lower likelihood of going-concern opinions.

## [INSERT TABLE 2]

Next, we examine whether the link between high ability managers and audit outcomes may vary between distressed and non-distressed firms. Consistent with Ohlson's model (1980), we define a firm as financially distressed when its pseudo-bankruptcy probability (P') is greater than or equal to 50% (Gull et al., 2018). We rerun our baseline regression for financially distressed and non-distressed firms and provide the results in Table 3. Regarding audit risk outcomes, the coefficients of MA on RESTMT and DAOICS are significantly more negative for non-distressed firms than distressed firms, at the 1% level. In terms of audit fees, we find a positive association between managerial ability and audit fees for distressed firms before audit fees are corrected (unadjusted), based on Barua et al. (2020), so we support the findings of Gull et al. (2018). However, we highlight that this positive association shifts to a negative association for distressed firms after the correction (adjusted). Finally, in the context of audit lag and going-concern opinions, our results confirm that the negative relationships between MA and LAELAG, and MA and DGOCON are more pronounced for financially non-distressed firms. Considered together, this evidence reconciles the conflict of results in prior studies and adds new evidence to the literature.

## [INSERT TABLE 3]

#### 4.2. Robustness test

To confirm the reliability and robustness of our baseline findings, we perform a change analysis on any change in the variables of managerial ability, audit outcomes, and all the controls. The changes are calculated by the variation in the respective variable from year t-1 to year t. Our un-tabulated results suggest that the coefficient of  $\triangle MA$  is negative and statistically significant in all proxies for audit outcomes, which confirms our baseline evidence.

# 4.3. Endogeneity tests

This sub-section addresses potential endogeneity issues surrounding the relationship between managerial ability and audit outcomes. We undertake several approaches, namely firm-fixed effects (FFE), instrumental variables (IV), propensity score matching (PSM), and difference-in-differences (DiD), to ensure the robustness of our main findings against endogeneity concerns.

#### 4.3.1. Firm-fixed effects

Unobserved firm-level time-invariant characteristics are likely to affect the robustness of our relationship between managers' ability and audit outcomes. To mitigate this concern, we re-estimate Equation (1) employing the FFE regression model. Table 3A in the appendix presents the results. We find that firm-fixed effect results are qualitatively similar to the OLS regressions in Table 2 in terms of sign, magnitude, and significance. This validates our baseline results and confirms that the firm-specific omitted variables do not drive our findings. We further examine whether unobserved auditor-level characteristics lead to an under-specification bias. We alleviate this concern by conducting auditor effects and the city of the auditor fixed effect in our baseline regressions. Our results in Appendix Table 4A confirm that the relationship between managerial ability and audit outcomes remains robust even after considering auditor-level heterogeneity.

#### 4.3.2. Instrumental variable approach

Our baseline results indicate that a high-ability manager is associated with favorable audit outcomes. However, one may argue that our results are driven not by managerial ability but by

inherent heterogeneity in preferences. To mitigate this concern, we use an instrumental variable (IV) approach, using the technique developed by Lewbel (2012). This 2SLS technique utilizes heteroskedasticity in the data to create internal instruments for a 2SLS regression. Many prior studies (e.g., Chen et al., 2015; Hasan, 2020) have employed this approach in accounting and finance research due to the challenges in finding suitable exogenous instruments.

In Table 4, we present the results from our IV approach. We find that the internal instruments created by Lewbel (2012) meet all requirements, including the under-identification, weak identification, or overidentification statistics, of proper instruments to estimate the second-stage regressions<sup>13</sup>. These second-stage regressions show that the coefficients of the instrumented managerial ability (*INMA*) remain negative and significant, indicating that firms led by high-ability managers experience fewer financial restatements, fewer adverse opinions on internal controls, lower audit fees, shorter audit report lags, and fewer going-concern opinions. Overall, our IV approach provides strong evidence to support our baseline results, potentially mitigating the concern of heteroskedastic errors that could otherwise challenge our main findings.

## [INSERT TABLE 4]

## 4.3.3. Propensity score matching

Our baseline results could also be subject to other possible endogeneity concerns. For example, one may contend that firms with higher-ability managers and those with lower-ability managers are essentially distinct types of firms. In other words, firm-level attributes can significantly differ between firms with high-ability and low-ability managers. We employ propensity score matching to address the concern that the two groups are indistinguishable in their firm characteristics.

To execute the propensity score estimate, we divide our sample into subsamples of firms with high-ability and low-ability managers. Firms with high managerial ability (above the yearly two-digit SIC industry median) are our treatment firms, while firms with low managerial ability are

<sup>&</sup>lt;sup>13</sup> First-stage and post-estimation results are not reported for brevity.

our control firms. To ensure that the firm-year observations in both groups are identical regarding observable attributes, we compare the mean difference of each control variable used in the baseline regression between the treatment and control firm-year observations.

Panel A of Table 5 documents that the mean differences between the treatment and control groups for all control variables are not statistically significant. This suggests that propensity score matching eliminates all observable distinctions in the control variables between firms with highability and low-ability managers. Our un-tabulated results further show no differences in firm characteristics between the treatment and control firms. We then re-estimate our main regression models using the matched sample and present the results in Panel B of Table 5. It is evident that the coefficient of managerial ability (*MA*) is negative and significant at the 5% level or better in all proxies for audit outcomes. Overall, this confirms our benchmark results in Table 2, indicating that our main findings are not driven by observable variations between the firm-year observations of high-ability and low-ability managers.

#### [INSERT TABLE 5]

## 4.3.4. Difference-in-differences: sudden deaths of CEOs

Our fourth approach to addressing endogeneity concerns is to examine changes in managerial ability when a firm experiences its CEO's sudden death. Chang et al. (2010) suggest that the CEO is the major contributor to a firm's decisions, skills, experience, and leadership qualities. Thus, unexpected CEO turnover due to premature death is likely to have a negative impact on a firm's managerial ability. We contend that CEO sudden deaths are perfectly exogenous events as they are neither planned nor driven by poor managerial performance. Therefore, we examine the effects of managerial ability on audit outcomes following the sudden deaths of CEOs by using the difference-in-difference (DiD) framework.

If the relationship is causal, we will find that managerial ability is associated with unfavorable audit outcomes for the client firm due to a decline in managerial ability after the CEO's

death. To empirically test our assertion, we collect CEO turnover data from Gentry et al. (2021) and identify 19 incidents of CEO turnover due to death. Following Gormley et al. (2013), we construct our treatment and control group cohorts. We consider each CEO's death year as a cohort and utilize two years before and after this exogenous event. In each cohort, we allocate firms to the treatment group if they experienced a sudden CEO death; otherwise, we allocate them to the control group if they did not experience such a shock.

To validate our assumptions about whether managerial ability decreases after a CEO's sudden death, we plot the managerial ability of both treatment and control firms around the event. Figure 1A in the Appendix illustrates this comparison. We demonstrate that the managerial ability of the treatment firms declines following the sudden demise of a CEO, thereby validating the CEO's sudden death as an exogenous shock for our DiD approach.

To implement the DiD analysis, we first use propensity score matching (PSM) to select control firms with similar characteristics in terms of all the control variables used in the baseline regression. We use the nearest propensity score (within a 1% caliper) for matching, ensuring that both groups are identical. We expect no significant variances between the groups other than their association with managerial ability. Our un-tabulated results suggest that firms in both the treatment and control groups are statistically indistinguishable before the shock, except for differences in managerial ability. This allows us to form a matched control-treatment sample for conducting the DiD analysis. We construct the following equation for this purpose:

$$AUDOUT_{i,c,t} = \beta_0 + \beta_1 DPOST_{i,c} * TREAT_{i,c} + CONTROLS + \varphi + \gamma + \varepsilon$$
(2)

where  $DPOST_{i,c}$  is an indicator variable equal to one if year t in cohort c is after the incident year in the cohort, and  $TREAT_{i,c}$  is an indicator variable equal to one if firm i is the treatment firm in cohort c. We are mainly interested in the DiD coefficient ( $DPOST \times TREAT$ ) and expect a positive coefficient since we are considering that managerial ability decreases after the CEO's sudden death. We refrain from incorporating DPOST and TREAT independently since the year-cohort and firm-

cohort absorb their impacts. Table 6 reports the results. The coefficients on  $DPOST \times TREAT$  are positive and statistically significant in all proxies for audit outcomes. The positive coefficients suggest that after the exogenous event of a CEO death, on which managerial ability decreases, the client firm's auditor outcomes tend to degrade significantly.

We also examine the parallel trend assumption of a DiD estimation. We replace  $DPOST_{t,c}*TREAT_{i,c}$  with a set of indicators  $(DPOST_{t,c}*TREAT_{i,c} [-2,+2])$ . Column (2) of Panel B (for each proxy for auditor outcome) reports the parallel-trend analysis results. We find that the coefficients of  $DPOST_{t,c}*TREAT2$  are only positively significant across five indicators of audit outcome, indicating that the treatment impact is only evident in the second year following the CEO's death. Overall, the results from the DiD tests confirm causality between managerial ability and audit outcomes.

## [TABLE 6]

## 4.3.5. Other endogeneity tests

In addition to the above, we use the yearly two-digit SIC industry median firm-level managerial ability as an instrument in the first-stage regression. We then re-estimate Equation (1) using the fitted values of managerial ability. The results reported in Appendix Table 5A show that our instrument is positively related to the endogenous variable (p < 0.01). The Cragg-Donald F statistic exceeds the Stock-Yogo critical value (Stock and Yogo, 2005), indicating that our instrument has no weak instrument problem. Notably, the coefficient on fitted managerial ability remains negative and significant.

### 5. Moderation Analyses

## 5.1. The role of corporate governance

First, we investigate the moderating effect of corporate governance on the relationship between managerial ability and audit outcomes (*H2a* and *H2b*). We follow Hartzell and Starks (2003) in

using independent board directors (*BIND*) and institutional investors (*IO*) as proxies for corporate governance. We classify firm-year observations with higher (lower) than median *BIND* and *IO* as groups with high (low) governance monitoring.

We rerun our baseline regression and present the results in Table 7. We show that the negative coefficient of managerial ability (MA) on all proxies for audit outcomes is significant (at least at the 5% level) for the low BIND (LBIND) group. However, for the high BIND (HBIND) group, such an impact is significant only for LAELAG at the 10% level. Further, we find that the coefficient of managerial ability is significantly more negative for LBIND than HBIND at the 5% level or better for all variables of audit outcomes. We report similar results for institutional investors in Appendix Table 6A. The negative relationship between managerial ability and audit outcomes is stronger when institutional ownership is lower. Overall, we provide evidence in support of the substitution hypothesis (H2b) that greater managerial ability is linked to fewer financial restatements, a lower likelihood of adverse opinions on internal controls, lower audit fees, shorter audit report lags, and a lower likelihood of going-concern opinions when governance monitoring is less effective. These findings conclude that high managerial ability effectively substitutes for poor governance and inefficient monitoring.

#### [INSERT TABLE 7]

## 5.2. The role of information asymmetry

In this section, we examine the impact of information asymmetry on the relationship between managerial ability and audit outcomes (*H3a* and *H3b*). For the tests in this section, we use analyst coverage and the probability of insider trading as proxies for the information environment. Analyst coverage (*ANALYST*) is a widely used proxy for external vigilance that captures the information reflected in the stock price and the range of valuation opinions on the stock. *ANALYST* is measured as the average number of analysts registered as following a stock in a given year according to I/B/E/S. The number of analysts following each stock in a given year is then split at the median into

two groups, namely high (*HighANALYST*) and low (*LowANALYST*) analysts following. In Table 8, we assess the impact of analyst coverage on audit outcomes for these two groups. We show that the magnitude of the relationship between managerial ability and audit outcomes is significantly higher for the client firms with low analysts following.

Our second test examines how the probability of insider trading affects the relationship between managerial ability and audit outcomes. The variable for the probability of insider trading (*PIN*) is derived from theoretical work by Easley and O'Hara (1987). It is measured by examining imbalances between buy and sell trades to estimate the probability of informed and uninformed information events. For our empirical estimation, we split *PIN* at the median to create two categories for high (*HighPIN*) and low (*LowPIN*) probability of insider trading. Our results, as reported in appendix Table 7A, indicate that the negative relationships between managerial ability and audit outcomes are significantly higher for client firms with a high probability of insider trading. Overall, our results support the substitution hypothesis *H3b*, implying that the negative relationships between managerial ability and audit outcomes are more pronounced in firms with high information asymmetry.

## [INSERT TABLE 8]

# 5.3. The role of distance between auditor and client firm

To test *H4a* and *H4b* on the moderating effect of the distance between the auditor and its client firm, we follow Jha and Chen (2015). We calculate the geographical distance between the cities where a firm's headquarters and its auditor's practicing office are located. We divide our sample into two subcategories: local auditors (*SDISTANCE*) and non-local auditors (*LDISTANCE*). The local auditors (*SDISTANCE*) are those in the same metropolitan area as their client firms or within a 100-kilometer radius. Conversely, the non-local auditors are those neither in the same metropolitan statistical area nor within a 100-kilometer radius. We re-estimate our baseline regression for each subcategory and present the findings in Table 9. We find that the associations

between managerial ability and all proxies for audit outcomes are negative and statistically significant for non-local auditors. The differences in the coefficients for all variables of audit outcome are also significant. This evidence is consistent with our hypothesis *H4b* that higher managerial ability is associated with fewer financial restatements, a lower likelihood of adverse opinions on internal controls, lower audit fees, shorter audit report lags, and a lower likelihood of going-concern opinions when the auditor is physically further away from their client firms. Overall, our results confirm that greater managerial ability effectively substitutes for the negative impacts of higher auditor-client distance.

## [INSERT TABLE 9]

### 5.4. The role of auditor industry specialism

We also examine the moderating effect of an auditor's industry specialism on the nexus between managerial ability and audit outcomes (*H5a* and *H5b*). Following Stein (2019), we determine auditor industry specialism by comparing the audit fee revenue generated by an audit office within a particular two-digit SIC industry with the overall fee revenue generated each year. We then classify auditors into two subgroups: specialist auditors (*SPECIALIST*) and non-specialist auditors (*NONSPECIALIST*). When an audit office holds (does not hold) the largest or second largest market share in a year in a two-digit industry, we classify the auditor as a *SPECIALIST* (*NONSPECIALIST*). We run our baseline regression for each sub-group and present the results in Table 10. We observe that the negative effects of managerial ability on the proxies for audit outcomes are significantly more salient for the *NONSPECIALIST* sub-sample. Thus, our evidence supports the substitution hypothesis of *H5b*, indicating that high-ability managers are associated with favorable audit outcomes when the auditors lack specialization in the client firm's industry. This evidence further emphasizes that non-specialist auditors are more likely to rely on high-ability managers for client-firm-specific information and evidence, thereby leading to more favorable audit outcomes in terms

of fewer financial restatements, a lower likelihood of adverse opinions on internal controls, lower audit fees, shorter audit report lags, and a lower likelihood of going-concern opinions.

## [INSERT TABLE 10]

# 6. Additional Tests: Managerial Ability and Lawsuit

From our main analysis, we establish a significant association between managerial ability and audit outcomes. This section extends our analysis to estimate whether there is any impact of a high-ability manager on the likelihood of a lawsuit. Effective monitoring by a more able manager is likely to reduce information asymmetry, improve information disclosure, and result in fewer restatements. Therefore, we expect that greater managerial ability should diminish the risk of lawsuits against the firms. Following Jha and Chen (2015) and Jha et al. (2021), we create *SUED* as a dummy variable that equals one if a lawsuit is initiated in a given year, and zero otherwise. We use the Audit Analytics database to define a lawsuit. A lawsuit is coded if an enforcement action was undertaken in category 54 (Accounting and Auditing Enforcement Release), category 2 (Accounting Malpractice), or category 48 (Financial Reporting), in Audit Analytics.

To investigate the relationship between managerial ability and lawsuits, we employ a logistic regression framework using the controls of our baseline model. Table 11 presents the regression results. We find that the coefficient of *MA* on *SUED* is negative and significant at the 1% level, indicating that managerial ability is negatively associated with the likelihood of lawsuits against client firms.

## [INSERT TABLE 11]

#### 7. Conclusion

This study examines the role of managerial ability in shaping major audit outcomes, namely financial restatements, opinions on internal controls, audit fees, audit effort, and the likelihood of receiving a going-concern opinion. Using a large sample of 35,252 firm-year observations from

publicly listed US firms spanning 2000 to 2018, our analysis reveals negative relationships between managerial ability and audit outcomes. These indicate that client firms with high-ability managers exhibit fewer financial restatements, a lower probability of adverse opinions on internal controls, lower audit fees, reduced audit effort, and a lesser likelihood of receiving a going-concern opinion. These findings remain robust across alternative econometric specifications, including firm-fixed effects, an instrumental variables approach, propensity score matching, and difference-in-differences analysis using sudden CEO deaths as an exogenous shock. Our cross-sectional analyses further highlight that managerial ability exerts a stronger negative influence on audit outcomes under conditions of weaker governance oversight, poor information environments, greater auditor-client distance, and non-specialist auditors, supporting the case for the substitution effects of managerial ability. Finally, our additional analysis shows that firms with greater management ability face a reduced likelihood of lawsuits.

The implications of our findings extend to various stakeholders, including firms, auditors, and policymakers. *First*, corporate boards should prioritize innate managerial abilities when appointing senior management, as these leaders can significantly enhance audit outcomes while reducing litigation risks. *Second*, our insights into the multifaceted dimensions of audit outcomes provide valuable guidance for investors, market participants, and policymakers who rely on limited access to client firms' accounting systems. These findings support regulatory guidelines (PCAOB) or private sector initiatives (COSO), underscoring the importance of the 'tone at the top' in fostering an integrated framework for internal and external audits. *Finally*, our study also underscores the critical role of competent managerial teams in fortifying client firms' information environments, enhancing risk assessment practices, and optimizing audit planning while mitigating audit engagement risks.

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 Table 1. Descriptive Statistics

	Nobs.	Mean	P50	Min	P25	P75	Max	SD
MA	35,252	-0.0036	-0.0311	-0.2715	-0.0805	0.0330	0.6832	0.1327
RESTMT	35,252	0.1552	0.0000	0.0000	0.0000	0.0000	1.0000	0.3621
DAOICS	35,252	0.0633	0.0000	0.0000	0.0000	0.0000	1.0000	0.2435
LAFCOR	35,252	13.7147	13.7731	10.5453	12.7832	14.6220	16.8284	1.3175
LAELAG	35,252	4.1032	4.1109	2.9957	3.9703	4.3175	5.4972	0.3179
DGOCON	35,252	0.0896	0.0000	0.0000	0.0000	0.0000	1.0000	0.2857
LNTA	35,252	6.1385	6.1637	0.0020	4.6975	7.5887	13.5896	2.1115
LNONAF	35,252	7.3834	10.7299	0.0000	0.0000	12.7367	13.7705	6.0229
LOSS	35,252	0.3447	0.0000	0.0000	0.0000	1.0000	1.0000	0.4753
BUSY	35,252	0.8135	1.0000	0.0000	1.0000	1.0000	1.0000	0.3895
ROA	35,252	-0.0250	0.0343	-5.0315	-0.0302	0.0768	0.3897	0.2612
AUOP	35,252	0.0582	0.0000	0.0000	0.0000	0.0000	1.0000	0.2340
BIGAUDIT	35,252	0.7599	1.0000	0.0000	1.0000	1.0000	1.0000	0.4271
GEOSEG	35,252	1.6882	1.7321	1.0000	1.0000	2.0000	4.0000	0.6398
BUSSEQ	35,252	2.6077	2.4495	1.4142	1.7321	3.4641	3.8730	0.8468
<b>FORSALES</b>	35,252	0.0099	0.0022	0.0001	0.0005	0.0106	0.0483	0.0154
SPECIAL	35,252	0.6882	1.0000	0.0000	0.0000	1.0000	1.0000	0.4632
LEV	35,252	0.2190	0.1714	0.0000	0.0131	0.3353	2.9432	0.2342
<i>DAUCHANGE</i>	35,252	0.0748	0.0000	0.0000	0.0000	0.0000	1.0000	0.2631
MB	35,252	1.7921	1.5365	0.9070	1.1512	2.2412	3.4307	0.8034
LITIGATION	35,252	0.3649	0.0000	0.0000	0.0000	1.0000	1.0000	0.4814
INHERENT	35,252	0.2712	0.2437	0.0000	0.1220	0.3798	0.8831	0.1859
DMA	35,252	0.2719	0.0000	0.0000	0.0000	1.0000	1.0000	0.4450
DSEO	35,252	0.0597	0.0000	0.0000	0.0000	0.0000	1.0000	0.2369
EMP	35,252	2.5265	1.6685	1.0000	1.1666	2.9122	12.3045	2.1831

Table 2. High-Ability Managers and Audit Outcomes: Base Evidence

	Audit risk o	outcomes	Fina	al audit outcom	es
	(1)	(2)	(3)	(4)	(5)
Variables	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON
MA	-0.0552	-0.0397	-0.1258	-0.0392	-0.0651
	(-2.73)***	(-3.74)***	(-2.89)***	(-2.47)**	(-3.85)***
LNTA	0.0007	0.0062	0.3924	0.0556	0.0014
	(0.21)	(3.27)***	(48.85)***	(20.01)***	(0.58)
LNONAF	0.0016	0.0024	0.0297	0.0018	0.0028
	(2.82)***	(5.48)***	(23.40)***	(3.93)***	(7.09)***
LOSS	0.0117	0.0314	0.103	0.0501	0.016
	(1.96)*	(6.87)***	(8.77)***	(10.40)***	(3.78)***
BUSY	0.0044	0.0047	0.119	0.0263	0.0039
	(0.56)	(1.01)	(6.30)***	(3.78)***	(0.68)
ROA	-0.0705	-0.0283	-0.1828	-0.0056	-0.0024
	(-5.57)***	(-2.83)***	(-8.85)***	(-0.57)	(-0.33)
AUOP	0.0039	0.008	0.1064	0.039	0.0089
	(0.15)	(0.51)	(2.44)**	(2.00)**	(0.35)
BIGAUDIT	0.0093	0.0362	0.3077	0.0352	0.0019
	(1.34)	(6.15)***	(16.55)***	(5.12)***	(0.34)
GEOSEG	0.0075	0.0215	0.1138	0.0144	0.0046
	(1.12)	(4.40)***	(8.12)***	(2.62)***	(0.80)
BUSSEG	0.0157	0.0035	0.0808	0.0064	0.0066
	(3.09)***	(0.93)	(7.46)***	(1.44)	(1.58)
FORSALES	1.2489	0.5816	0.039	0.5249	0.3001
	(4.84)***	(3.30)***	(0.06)	(2.23)**	(1.48)
SPECIAL	0.0016	0.0071	0.141	0.0048	0.0161
	(0.33)	(2.04)**	(13.56)***	(1.20)	(4.53)***
LEV	0.0127	0.016	0.0391	0.1273	0.0034
	(1.07)	(1.72)*	(1.45)	(12.53)***	(0.43)
DUAUCHANGE	0.0376	0.0172	0.1124	0.017	0.0028
	(1.02)	(1.00)	(0.96)	(0.57)	(0.14)
MB	0.0005	0.008	0.0679	0.0533	0.0073
	(0.14)	(3.25)***	(8.51)***	(17.28)***	(2.82)***
LITIGATION	0.0225	0.0022	0.051	0.0262	0.0147
	(3.52)***	(0.47)	(3.30)***	(4.52)***	(2.66)***
INHERENT	0.0054	0.0223	0.3997	0.0443	0.0027
	(0.31)	(1.72)*	(9.36)***	(2.91)***	(0.23)
DMA	0.0038	0.0016	0.1216	0.0071	0.0105
	(0.67)	(0.48)	(9.80)***	(1.54)	(2.07)**
DSEO	0.008	0.0044	0.024	0.0145	0.0046
	(0.97)	(0.75)	(1.63)	(2.34)**	(0.73)
EMP	0.0098	0.0001	0.0574	0.0001	0.0053
	(4.06)***	(0.08)	(9.65)***	(0.06)	(2.88)***
CONSTANT	Included	Included	Included	Included	Included
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup> /Pseudo R <sup>2</sup>	0.2461	0.1503	0.8300	0.3610	0.1390
Nobs.	35,252	35,252	35,252	35,252	35,252

*Note.* This table reports the regression of audit outcomes on managerial ability. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Table 3. High-ability Managers and Audit Outcomes for Distressed vs. Non-distressed Firms

		(1) RESTMT			(2) DAOICS			(3A) LAFCOR (unadjusted)	
	DISTRESS	NONDISTRESS	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)	DISTRESS	NONDISTRESS	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)	DISTRESS	NONDISTRESS	Diff-in-coeff. and Chi <sup>2</sup> Column
	(1)	(2)	(1) VS. (2)	(1)	(2)	(1) VS. (2)	(1)	(2)	(1) vs. (2)
MA	-0.0338 (-1.88)*	-0.0765 (-2.98)***	0.0427 [15.47]***	-0.0259 (-2.19)**	-0.0863 (-5.54)***	0.0604 [16.54]***	0.0367 (1.98)**	-0.1475 (-3.12)***	0.1842 [36.89]***
CONSTANT All Controls Industry Fixed Effects	Included Yes Yes	Included Yes Yes		Included Yes Yes	Included Yes Yes		Included Yes Yes	Included Yes Yes	
Year Fixed Effects Adj.R2 / PseudoR2 Nobs.	Yes 0.1379 6,873	Yes 0.1732 28,379		Yes 0.1397 6,873	Yes 0.1541 28,379		Yes 0.7943 6,873	Yes 0.8326 28,379	
Model	0,070	(3B)		0,072	(4)		0,075	(5)	
Variables		LAFCOR (Adjusted)		-	LAELAG			DGOCON	
	DISTRESS	NONDISTRESS	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)	DISTRESS	NONDISTRESS	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)	DISTRESS	NONDISTRESS	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)
MA	(1) -0.0621 (-1.79)*	(2) -0.1440 (-2.94)***	0.0819 [17.87]**	(1) -0.0238 (-1.73)*	(2) -0.0624 (-4.72)***	0.0386	(1) -0.0402 (-2.26)**	(2) -0.0688 (-3.98)***	0.0286 [12.56]***
CONSTANT	Included	Included	. ,	Included	Included	. ,	Included	Included	. ,
All Controls	Yes	Yes		Yes	Yes		Yes	Yes	
Industry Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes	
Year Fixed Effects Adj.R2 / PseudoR2 Nobs.	Yes 0.7989 6,873	Yes 0.8341 28,379		Yes 0.3178 6,873	Yes 0.3714 28,379		Yes 0.1267 6,873	Yes 0.1445 28,379	

Note. This table reports the OLS estimates of audit outcomes on managerial ability for subsamples of distressed vs. non-distressed firms. Based on the Ohlson (1980) model, we classify a firm as financially distressed when its pseudo-bankruptcy probability (P') is greater than or equal to 50%. The proxies for audit outcomes are RESTMT, and DAOICS, 3A LAFCOR (actual audit fee before correction), 3B LAFCOR- (corrected audit fee based on Barua et al., 2020), LAELAG, and DGOCON. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Table 4. Endogeneity Tests: Instrumental Variable (IV) Approach

	Audit risk o	outcomes	Fin	al audit outcon	nes
	(1)	(2)	(3)	(4)	(5)
Variables	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON
INMA	-0.0103	-0.0113	-0.0177	-0.0116	-0.014
	(-2.22)**	(-3.53)***	(-2.01)**	(-3.04)***	(-3.70)***
LNTA	0.0001	0.0066	0.3908	0.056	0.0022
	(0.02)	(3.51)***	(48.39)***	(20.21)***	(0.87)
LNONAF	0.0016	0.0024	0.0298	0.0018	0.0028
	(2.89)***	(5.44)***	(23.43)***	(3.90)***	(7.18)***
LOSS	0.0118	0.0315	0.1032	0.0503	0.0159
	(1.97)**	(6.90)***	(8.78)***	(10.43)***	(3.75)***
BUSY	0.0045	0.0046	0.1194	0.0262	0.0039
	(0.57)	(0.99)	(6.32)***	(3.76)***	(0.68)
ROA	-0.0708	-0.0276	-0.1827	-0.0049	-0.0018
	(-5.61)***	(-2.77)***	(-8.85)***	(-0.51)	(-0.25)
AUOP	0.0034	0.0081	0.1049	0.039	0.0092
	(0.13)	(0.51)	(2.38)**	(1.99)**	(0.37)
BIGAUDIT	0.0094	0.0362	0.308	0.0352	0.002
	(1.35)	(6.15)***	(16.56)***	(5.11)***	(0.35)
GEOSEG	0.0077	0.0216	0.1142	0.0145	0.0048
	(1.14)	(4.43)***	(8.15)***	(2.64)***	(0.84)
BUSSEG	0.0157	0.0035	0.0807	0.0064	0.0066
	(3.10)***	(0.93)	(7.45)***	(1.44)	(1.57)
FORSALES	1.2549	0.5604	0.0901	0.501	0.3055
	(4.83)***	(3.21)***	(0.14)	(2.14)**	(1.50)
SPECIAL	0.0012	0.0073	0.142	0.005	0.0165
	(0.25)	(2.10)**	(13.61)***	(1.24)	(4.65)***
LEV	0.0124	0.0156	0.0407	0.1268	0.0035
	1.04	(1.68)*	(1.51)	(12.51)***	0.44
DUAUCHANGE	0.0375	0.0175	0.1115	0.0166	0.0029
	(1.02)	(1.01)	(0.95)	(0.56)	(0.14)
MB	0.0006	0.0083	0.0646	0.0535	0.0083
	(0.18)	(3.40)***	(8.11)***	(17.73)***	(3.31)***
LITIGATION	0.0214	0.0019	0.0477	0.0264	0.0137
	(3.35)***	(0.41)	(3.08)***	(4.58)***	(2.49)**
INHERENT	0.0053	0.0234	0.3984	0.0454	0.0022
	0(.31)	(1.79)*	(9.30)***	(2.99)***	(0.18)
DMA	0.0033	0.0013	0.1226	0.0068	0.011
	(0.59)	(0.39)	(9.86)***	(1.47)	(2.17)**
DSEO	0.0078	0.0042	0.0238	0.0147	0.0049
	(0.95)	(0.71)	(1.62)	(2.38)**	(0.76)
EMP	0.0098	0.0001	0.0572	0.0001	0.0053
	(4.09)***	(0.08)	(9.58)***	(0.06)	(2.85)***
CONSTANT	Included	Included	Included	Included	Included
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adj.R <sup>2</sup> /Pseudo R <sup>2</sup>	0.1458	0.0104	0.8297	0.3611	0.1387
Nobs.	35,252	35,252	35,252	35,252	35,252

*Note.* This table presents the results addressing endogeneity in the relation between managerial ability and audit outcomes using the heteroscedasticity-based instrument (Lewbel, 2012). The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Table 5. Endogeneity Tests: Propensity Score Matching (PSM) Analysis

Panel A: Propensit	y Score Matching		
	Treatment	Control	t- test
LNTA	6.514	6.216	1.36
LNONAF	7.957	7.919	1.43
LOSS	0.324	0.331	1.28
BUSY	0.809	0.791	0.22
ROA	-0.156	-0.187	1.28
AUOP	0.059	0.076	0.72
BIGAUDIT	0.809	0.781	1.07
GEOSEG	1.805	1.733	1.34
BUSSEQ	2.741	2.627	1.34
<i>FORSALES</i>	0.006	0.006	1.14
SPECIAL	0.728	0.692	1.20
TDRATIO	0.232	0.190	1.37
DAUCHANGE	0.088	0.063	1.06
MB	1.791	1.884	1.20
LITIGATION	0.316	0.490	1.47
INHERENT	0.281	0.253	1.50
DMA	0.175	0.136	0.99
DSEO	0.081	0.075	0.23
EMP	2.161	1.870	1.17

Panel B: PSM Regression using Matched Sample

	Audit risk	outcomes	Fi	nal audit outco	mes
Model	(1)	(2)	(3)	(4)	(5)
Variables	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON
MA	-0.0413	-0.0290	-0.0978	-0.0276	-0.0415
	(-1.99)**	(-2.70)**	(-2.97)***	(-2.03)**	(-2.85)***
CONSTANT	Included	Included	Included	Included	Included
All Controls	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adj.R <sup>2</sup> /Pseudo R2	0.2291	0.1372	0.7891	0.3390	0.1182
Nobs.	1,472	1,472	1,472	1,472	1,472

*Note.* Panel A shows the average treatment effects obtained from PSM analysis. Firms with high managerial ability (above the yearly two-digit SIC industry median) are the treatment firms, whereas firms with low managerial ability are the control firms. Panel B presents the results based PSM-matched sample. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Table 6. Endogeneity Tests: Difference-in-Difference (DiD) Approach

		Audit risk	outcomes	
Model	(1)	(2)	(3)	(4)
Variables	RESTMT	RESTMT	DAOICS	DAOICS
DPOST*TREAT	0.0604		0.0312	
	(2.67)***		(2.84)***	
DPOST*TREAT-2		0.0511		0.0182
		(0.90)		(0.21)
DPOST*TREAT-1		0.0844		0.0279
		(0.79)		(1.17)
DPOST*TREAT0		0.0767		0.0124
		(0.84)		(0.86)
DPOST*TREAT1		0.0933		0.0472
		(1.93)*		(2.39)**
DPOST*TREAT2		0.0970		0.0510
		(2.15)**		(2.62)**
CONSTANT	Included	Included	Included	Included
All Controls	Yes	Yes	Included	Included
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
$Adj R^2$	0.1515	0.1589	0.1497	0.1547
Nobs.	824	824	824	824

			Final audit	outcomes		
Model	(1)	(2)	(3)	(4)	(5)	(6)
Variables	LAFCOR	LAFCOR	LAELAG	LAELAG	DGOCON	DGOCON
DPOST*TREAT	0.1274		0.0279		0.0334	_
	(2.60)***		(2.55)**		(1.79)*	
DPOST*TREAT-2		0.0727		0.1126		0.0359
		(1.33)		(0.71)		(0.72)
DPOST*TREAT-1		0.0895		0.0924		0.0484
		(1.46)		(0.56)		(1.33)
DPOST*TREAT0		0.1001		0.1097		0.0232
		(1.61)		(1.30)		(0.56)
DPOST*TREAT1		0.1232		0.1249		0.0318
		(1.82)*		(2.43)**		(1.98)**
DPOST*TREAT2		0.1522		0.1318		0.0587
		(2.69)***		(3.62)***		(2.45)**
CONSTANT	Included	Included	Included	Included	Included	Included
All Controls	Yes	Yes	Yes	Yes	Included	Included
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R²/Pseudo R2	0.8304	0.8327	0.3563	0.3600	0.1341	0.1427
Nobs.	824	824	824	824	824	824

Note. This table presents the results addressing endogeneity in the relation between managerial ability and audit outcomes, using the CEO's sudden death as the exogenous shock to managerial ability. TREAT is an indicator variable equal to one if a firm is affected by a CEO death and zero otherwise. DPOST is an indicator variable equal to one if the year is after the CEO's death and zero otherwise. The proxies for audit outcomes are RESTMT, DAOICS, LAFCOR, LAELAG, and DGOCON. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

**Table 7.** Moderating Effect of Governance Monitoring – Board Independence

					Audit risk	outcomes		
				(1) RESTMT			(2) DAOICS	
			HBIND	LBIND	Diff-in-coeff. and Chi <sup>2</sup> Column	HBIND	LBIND	Diff-in-coeff and Chi <sup>2</sup> Column
			(1)	(2)	(1) vs. (2)	(1)	(2)	(1) vs. (2)
MA			-0.0252 (-0.62)	-0.0913 (-3.03)***	0.0661 [34.90]***	-0.0018 (-0.10)	-0.0247 (-2.35)**	0.0229 [9.48]**
CONSTANT			Included	Included		Included	Included	
All Controls			Yes	Yes		Yes	Yes	
Industry Fixed Effects			Yes	Yes		Yes	Yes	
Year Fixed Effects			Yes	Yes		Yes	Yes	
Adj.R2 / PseudoR2			0.2667	0.2900		0.1452	0.1571	
Nobs.			4,768	5,905		4,768	5,905	
			Final audit o	utcomes				
	(3)			(4)			(5)	
	LAFCOR			LAELAG			DGOCON	
		Diff-in-coeff. and Chi <sup>2</sup>			Diff-in-coeff. and Chi <sup>2</sup>			Diff-in-coeff and Chi <sup>2</sup>
		Column			Column			Column

		LAFCOR			LAELAG			DGOCON	
			Diff-in-coeff.			Diff-in-coeff.			Diff-in-coeff.
			and Chi <sup>2</sup>			and Chi <sup>2</sup>			and Chi <sup>2</sup>
			Column			Column			Column
	HBIND	LBIND	(1) vs. (2)	HBIND	LBIND	(1) vs. (2)	HBIND	LBIND	(1) vs. (2)
	(1)	(2)		(1)	(2)		(1)	(2)	
MA	-0.0192	-0.1631	0.1439	-0.0706	-0.1345	0.0639	-0.0530	-0.0853	0.0303
	(-0.23)	(-2.30)**	[53.28]***	(-1.96)*	(-4.14)***	[31.30]***	(-1.45)	(-2.42)**	[13.98]***
CONSTANT	Included	Included		Included	Included		Included	Included	
All Controls	Yes	Yes		Yes	Yes		Yes	Yes	
Industry Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes	
Year Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes	
Adj.R2 / PseudoR2	0.7372	0.8121		0.3396	0.3417		0.1314	0.1470	
Nobs.	4,768	5,905		4,768	5,905		4,768	5,905	

Note. This table reports the moderating role of board independence in the relationship between client-firm managerial ability and audit outcomes. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

**Table 8.** Moderating Effect of Information Environment - Analyst Following

						Audit risk (	outcomes		
					(1) RESTMT			(2) DAOICS	
				HANALYST	LANALYST	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)	HANALYST	LANALYST	Diff-in- coeff. and Chi <sup>2</sup> Column (1) vs. (2)
				(1)	(2)		(1)	(2)	(1) (3. (2)
MA CONSTANT				0.0514 (2.05)** Included	-0.0926 (-2.80)*** Included	0.0412 [15.70]***	-0.0139 (-1.37) Included	-0.0859 (-3.31)*** Included	0.0720 [28.34]***
All Controls Industry Fixed Effects				Yes Yes	Yes Yes		Yes Yes	Yes Yes	
Year Fixed Effects Adj.R2 / PseudoR2 Nobs.				Yes 0.2404 17,749	Yes 0.2655 17,503		Yes 0.1401 17,749	Yes 0.1477 17,503	
				Final audit	outcomes				
		(3) LAFCOR			(4) LAELAG			(5) DGOCON	
			Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)			Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)			Diff-in- coeff. and Chi <sup>2</sup> Column
	HANALYST	LANALYST		HANALYST	LANALYST		HANALYST	LANALYST	(1) vs. (2)
MA	(1) -0.1289 (-2.67)***	(2) -0.2115 (-5.14)***	0.0826 [40.91]***	(1) -0.0105 (-0.58)	(2) -0.1151 (-4.03)***	0.114 [7.89]**	(1) -0.0534 (-2.39)**	(2) -0.0939 (-4.07)***	0.0405 [14.70]***
CONSTANT All Controls Industry Fixed	Included Yes Yes	Included Yes Yes	,	Included Yes	Included Yes	[]	Included Yes Yes	Included Yes Yes	
Effects Year Fixed Effects Adj.R2 / PseudoR2	Yes 0.7319	Yes 0.7775		Yes Yes 0.3256	Yes Yes 0.3322		Yes 0.1331	Yes 0.1429	

Note. This table reports the moderating role of analysts following on the relation between client-firm managerial ability and audit outcomes. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

**Table 9.** Moderating Effect of the Distance between Audit Office and Client Firm

			Audit risk	outcomes			
		(1)			(2)		
		RESTMT			DAOICS		
			Diff-in-coeff.			Diff-in-coeff.	
			and Chi <sup>2</sup>			and Chi <sup>2</sup>	
			Column			Column	
	LDISTANCE	SDISTANCE	(1) vs. (2)	LDISTANCE	SDISTANCE	(1)  vs  (2)	
	(1)	(2)		(1)	(2)		
MA	-0.0970	-0.0328	0.0642	-0.0503	-0.0082	0.0421	
	(-2.44)**	(-1.60)	[27.82]***	(-3.51)***	(-0.51)	[10.38]***	
CONSTANT	Included	Included		Included	Included		
All Controls	Yes	Yes		Yes	Yes		
Industry Fixed Effects	Yes	Yes		Yes	Yes		
Year Fixed Effects	Yes	Yes		Yes	Yes		
Adj.R2 / PseudoR2	0.2643	0.2365		0.1474	0.1410		
Nobs.	5,794	7,362		5,794	7,362		

## Final audit outcomes (5) (3) (4) Model LAFCOR DGOCON LAELAG Variables Diff-in-coeff. Diff-in-coeff. Diff-in-coeff. and Chi2 and Chi<sup>2</sup> and Chi<sup>2</sup> Column Column Column LDISTANCE **SDISTANCE** LDISTANCE **SDISTANCE SDISTANCE** (1) vs. (2)(1) vs. (2) LDISTANCE (1) vs (2)(1) (2) (1) (1) (2) (2) -0.2249 -0.0920 -0.0181 -0.0925 0.0487 MA0.1329 -0.017 0.0164 -0.0438 (-3.29)\*\*\* (-2.51)\*\*[47.34]\*\*\* (-2.26)\*\*[8.23]\*\* [13.23]\*\*\* (-1.09)(-0.61)(-1.39)**CONSTANT** Included Included Included Included Included Included All Controls Yes Yes Yes Yes Yes Yes Industry Fixed Effects Yes Yes Yes Yes Yes Yes Year Fixed Effects Yes Yes Yes Yes Yes Yes Adj.R2 / PseudoR2 0.7767 0.7686 0.3929 0.3642 0.1375 0.1316 Nobs. 5,794 7,362 5,794 7,362 5,794 7,362

Note. This table reports the moderating role of the distance of the audit office from the client firm's headquarters on the relationship between client-firm managerial ability and audit outcomes. The proxies for audit outcomes are RESTMT, DAOICS, LAFCOR, LAELAG, and DGOCON. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Table 10. Moderating Effect of Auditors' Specialization

## Specialist vs. Non-specialist Auditors Audit risk outcomes (1) (2) DAOICS RESTMT Diff-in-coeff. Diff-in-coeff. and Chi2 and Chi<sup>2</sup> Column Column SPECIALIST NONSPECIALIST (1) vs. (2) SPECIALIST NONSPECIALIST (1) vs. (2)(1) (2) (1) (2) MA-0.0075 0.0655 0.0580 -0.0081 -0.0533 0.0452 (-0.16)(2.46)\*\*[27.19]\*\*\* (-2.57)\*\* [19.83]\*\*\* (-0.61)CONSTANT Included Included Included Included All Controls Yes Yes Yes Yes Industry Fixed Effects Yes Yes Yes Yes Year Fixed Effects Yes Yes Yes Yes 0.2792 Adj.R2 / PseudoR2 0.2586 0.1523 0.1601 Nobs. 12,424 5,220 12,424 5.220

## Final audit outcomes (5) (3) (4) Model LAFCOR LAELAG **DGOCON** Variables Diff-in-coeff. Diff-in-coeff. Diff-in-coeff. and Chi<sup>2</sup> and Chi<sup>2</sup> and Chi<sup>2</sup> Column Column Column SPECIALIST **NONSPECIALIST** (1) vs. (2)SPECIALIST NONSPECIALIST (1) vs. (2)**SPECIALIST** NONSPECIALIST (1) vs. (2) (1) (2) (1) (2) (1) (2) -0.0238 -0.1549 -0.0402 0.521 -0.0236 -0.0765 0.0529 MA0.1311 -0.0923(-0.29)(-2.48)\*\*[43.29]\*\*\* (-1.11)(-2.57)\*\*[24.78]\*\*\*\* (-0.61)(-2.22)\*\*[22.71]\*\*\* **CONSTANT** Included Included Included Included Included Included All Controls Yes Industry Fixed Effects Year Fixed Effects Yes Yes Yes Yes Yes Yes Adj.R2 / PseudoR2 0.7443 0.7916 0.3356 0.3626 0.1445 0.1516 12,424 Nobs. 12,424 5,220 5,220 12,424 5,220

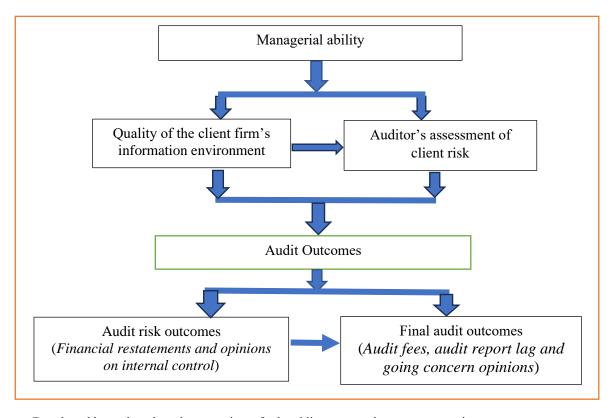
Note. This table reports the moderating role of the specialized versus non-specialized auditors on the relation between client-firm managerial ability and audit outcomes. The proxies for audit outcomes are RESTMT, DAOICS, LAFCOR, LAELAG, and DGOCON. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Table 11. The Impact of Managerial Ability on Lawsuits

Model	(1)
Variables	SUED
MA	-0.0272
	(-4.27)***
CONSTANT	Included
All Controls	Yes
Industry Fixed Effects	Yes
Year Fixed Effects	Yes
Adj.R <sup>2</sup> /Pseudo R2	0.1923
Nobs.	35,252

*Note.* This table reports the regression of lawsuits on managerial ability. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Figure 1: Conceptual framework: Managerial ability and audit outcomes



Source: Developed by authors based on a review of related literature and anonymous review comments.

## **Managerial Ability and Audit Outcomes**

**Online Appendices** 

**Appendix: Table 1A.** Definition of Variables

MA The managerial ability score of Demerjian et al. (2012).

RESTMT An indicator variable, which equals one if a firm restates its financial restatement in a given year

and zero otherwise (restatements initiated solely by auditors).

DAOICS An indicator variable, which equals one if the auditor issues a SOX 404(b) audit opinion on internal

controls and zero otherwise.

LAFCOR The logarithm of the corrected audit fee in USD at the balance sheet date in year t. Audit fees are

corrected during the auditor change year, as per Barua et al. (2020).

LAELAG The logarithm of the number of days between the signature date of the audit opinion and the date

of the fiscal year end.

DGOCON An indicator variable, which equals one if the auditor issues a going concern opinion and zero

otherwise.

AUOP An indicator variable, which equals one for a modified audit opinion and zero for others (Item

149), in year t.

BIGAUDIT An indicator variable, which equals one for large firms and zero for other firms.

DAUCHANGE An indicator variable, which equals one if there is a change in the auditor and zero otherwise.

LDISTANCE Subgroup of firms that are neither within a 100-kilometer radius nor in the same Metropolitan State

Authority (MSA) as their auditor.

SDISTANCE Subgroup of firms located within a 100-kilometer radius or in the same metropolitan statistical area

(MSA) as their auditor.

LNONAF The logarithm of non-audit fee as of the balance sheet date.

NONSPECIALST Classification when an audit office does not hold the largest or second largest market share in a

year in a two-digit industry.

SPECIALIST Classification when an audit office has the largest or second largest market share in a year in

a two-digit industry.

ANALYST Monthly average number of analysts following a firm over a 12-month period in year t.

HANALYST Subgroup with analysts following greater than the median value of analysts following.

Subgroup with analysts following less than or equal to the median value of analysts following.

BIND The percentage of outside directors on the board of directors.

HBIND Subgroup with values of BIND greater than the median value of BIND.

LBIND Subgroup with values of BIND less than or equal to the median value of BIND.

BUSY An indicator variable equals one for a firm with a reporting date in the period December to

March and zero otherwise.

DMA An indicator variable equals one if the firm is engaged in a merger or acquisition and zero

otherwise.

DSEO An indicator variable equals one if the number of shares outstanding increased by 10% or more

and zero otherwise.

FORSALES An indicator variable equals to one if a firm reports foreign sales and zero otherwise.

*PIN* Probability of insider trading

HPIN Subgroup with values of PIN greater than the median value of PIN.

*LPIN* Subgroup with values of PIN less than or equal to the median PIN for the year.

INHERENT The sum of receivables and inventory, scaled by total assets (RECT + INVT)/AT).

IO The average proportion of institutional investors over the four quarters of a firm's financial

year t (data obtained from the Thomson Reuters Institutional Holdings (13F) database).

HIO Subgroup with values of IO greater than the median value of IO.

LIO Subgroup with values of IO less than or equal to the median value of IO.

*LITIGATION* The following two-digit SIC codes are labelled as belonging to the litigation industry: 28, 35, 36,

38, 60, 67, and 73, as per Hogan et al. (1999).

TA Total assets at the balance sheet date in year t.

LOSS An indicator variable, which equals one if a firm's average ROA during the period t-1, t, and t+1

is negative and zero otherwise in year t.

The market value of equity (CSHO \* PRCC\_F) divided by the stockholders' equity in year t.

ROA The ratio of net income before extraordinary items to total assets (IB/AT) in year t.

GEOSEG The square root of the number of geographic segments in year t.

BUSSEG The square root of the number of business segments in year t.

EMP The square root of the number of employees in year t.

LEV The ratio of total debt to total assets (total debt = long-term debt + debt in current liabilities Item)

**Appendix:** Table 2A. Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RESTMT (1)	1.00													
DAOICS (2)	0.08	1.00												
LAFCOR (3)	0.11	0.12	1.00											
LAELAG (4)	0.14	0.13	0.29	1.00										
DGOCON (5)	0.07	0.09	0.17	0.09	1.00									
MA (6)	-0.13	-0.15	-0.16	-0.18	-0.14	1.00								
LNTA (7)	0.19	-0.11	0.82	0.45	-0.18	0.19	1.00							
LNONAF (8)	0.06	0.07	0.73	0.24	0.13	0.13	0.15	1.00						
LOSS (9)	0.08	0.10	0.24	0.23	0.04	-0.13	-0.14	0.16	1.00					
BUSY (10)	0.08	0.04	0.16	0.07	0.06	0.16	0.01	0.04	0.07	1.00				
ROA (11)	-0.10	-0.10	-0.19	-0.21	-0.04	0.11	0.16	0.15	-0.16	0.08	1.00			
AUOP (12)	0.07	0.14	0.15	0.05	0.09	-0.08	0.12	0.11	0.12	0.05	-0.07	1.00		
BIGAUDIT (13)	0.04	0.12	0.14	0.16	0.08	0.03	-0.12	0.12	0.16	0.04	0.12	0.08	1.00	
GEOSEG (14)	0.04	0.09	0.16	0.12	-0.06	0.12	0.23	0.11	0.04	0.05	0.05	0.04	0.15	1.00
BUSSEQ (15)	0.08	0.14	0.12	0.13	-0.05	0.13	0.12	0.16	0.08	0.02	0.09	0.06	0.10	0.08
FORSALES (16)	0.05	-0.10	0.18	0.12	-0.08	0.08	0.16	0.12	0.11	0.01	0.25	0.12	0.10	0.05
SPECIAL (17)	0.04	0.04	0.14	0.08	-0.06	0.09	0.19	0.23	0.07	0.04	0.13	-0.05	0.16	0.19
TDRATIO (18)	0.08	0.06	0.12	0.03	0.07	0.22	0.14	0.14	0.02	0.08	0.13	0.05	0.10	0.06
DAUCHANGE (19)	0.05	0.07	0.04	0.02	0.03	0.04	0.06	0.02	0.09	0.01	0.09	0.01	0.04	0.05
MB (20)	0.06	0.03	0.10	0.16	-0.09	0.15	0.00	0.15	0.10	0.01	0.22	0.06	0.09	0.07
LITIGATION (21)	0.13	0.08	0.07	0.08	0.04	0.19	0.14	0.06	0.13	0.10	-0.09	-0.03	0.08	0.06
INHERENT (22)	0.07	0.02	0.08	0.07	0.08	0.07	0.16	0.09	0.12	0.13	-0.12	0.04	0.11	0.11
DMA (23)	-0.09	-0.06	0.13	0.14	-0.05	0.08	0.12	0.16	0.20	0.04	0.18	0.02	0.24	0.20
DSEO (24)	-0.04	0.09	0.05	0.04	-0.09	0.12	0.06	0.04	0.06	0.02	0.06	0.01	0.05	0.08
EMP (25)	-0.11	-0.10	0.21	0.20	-0.08	0.09	0.19	0.12	0.07	0.06	0.15	0.09	0.13	0.12
	15	16	17	18	19	20	21	22	23	24	25			
BUSSEQ (15)	1.00													
FORSALES (16)	0.13	1.00												
SPECIAL (17)	0.14	0.14	1.00											
TDRATIO (18)	0.07	0.14	0.18	1.00										
DAUCHANGE (19)	0.11	0.07	0.07	0.00	1.00									
MB (20)	0.08	0.00	0.05	0.16	0.02	1.00								
LITIGATION (21)	0.03	-0.12	0.01	0.15	0.12	0.10	1.00							
INHERENT (22)	0.12	-0.16	0.06	0.08	0.06	0.13	0.10	1.00						
DMA (23)	0.09	0.11	0.16	0.04	0.06	0.12	0.01	-0.05	1.00					
DSEO (24)	0.08	0.06	0.01	0.04	0.03	0.05	0.02	-0.08	0.11	1.00				
EMP (25)	0.22	0.19	0.16	0.16	0.04	0.09	0.11	0.06	0.13	0.01	1.00			

*Note*. This table presents the descriptive statistics (the number of observations (Nobs.), mean, P50, minimum (Min), P25, P75, maximum (Max), and standard deviation (SD)) and correlation analysis of our baseline sample, in Panels A and B, respectively. See Appendix Table 1A for definitions of the variables.

Appendix: Table 3A. Endogeneity Tests: Firm Fixed Effects (FFE)

	Audit risk	outcomes	Final audit outcomes				
Model	(1)	(2)	(3)	(4)	(5)		
Variables	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON		
MA	-0.0389	-0.0481	-0.0824	-0.0366	-0.0518		
	(-2.21)**	(-3.36)***	(-2.49)**	(-2.52)**	(-2.39)**		
LNTA	0.0125	0.0104	0.2349	0.0395	0.0191		
	(1.65)*	(2.15)**	(22.50)***	(6.88)***	(3.65)***		
LNONAF	0.0033	0.0013	0.0258	0.0012	0.0022		
	(4.52)***	(2.47)**	(23.90)***	(2.09)**	(4.59)***		
LOSS	0.0058	0.0248	0.0112	0.0468	0.0140		
	(0.76)	(4.49)***	(1.22)	(8.57)***	(2.51)**		
BUSY	0.0057	0.0042	0.113	0.0401	0.0032		
	(0.21)	(0.18)	(2.56)**	(2.07)**	(0.14)		
ROA	-0.0408	-0.0003	-0.046	-0.011	-0.005		
	(-2.72)***	(-0.04)	(-2.40)**	(-0.91)	(-0.58)		
AUOP	0.0092	0.0115	0.0416	0.0158	0.0045		
	(0.34)	(0.63)	(1.11)	(0.87)	(0.17)		
BIGAUDIT	0.0085	0.0071	0.1712	0.0014	0.0108		
	(0.69)	(0.71)	(7.99)***	(0.11)	(1.24)		
GEOSEG	0.0012	0.0135	0.0587	0.0194	0.0081		
	(0.12)	(1.93)*	(4.00)***	(2.28)**	(0.93)		
BUSSEG	0.0163	0.0008	0.0388	0.0084	0.0191		
	(2.34)**	(0.15)	(4.00)***	(1.46)	(3.17)***		
FORSALES	0.1904	0.5276	1.0584	0.8288	0.2727		
FORSALES	0.46	(2.21)**	(2.11)**	(2.74)***	(0.93)		
SPECIAL	0.0053	0.0045	0.0176	0.0013	0.0001		
, 2011	(0.94)	(1.29)	(2.68)***	(0.32)	(0.02)		
LEV	0.0055	0.0212	0.0302	0.0879	0.0308		
,	(0.30)	(1.41)	(1.11)	(5.70)***	(2.12)**		
DUAUCHANGE	0.0629	0.0989	0.0479	0.0696	0.0716		
Delle chinvel	(0.73)	(0.76)	(0.72)	(0.78)	(0.49)		
MB	0.002	0.0059	0.0046	0.0409	0.0023		
, TD	(0.39)	(1.68)*	(0.67)	(9.96)***	(0.56)		
LITIGATION	0.0181	0.0106	0.0313	0.0124	0.0163		
Lilloninon	(1.16)	(1.11)	(1.72)*	(1.80)*	(1.11)		
INHERENT	0.0701	0.0281	0.247	0.0034	0.0369		
IIVIILKLIVI	(1.90)*	(0.94)	(4.27)***	0.11	(1.23)		
DMA	0.0067	0.0064	0.0134	0.0035	0.014		
DMI	(1.08)	(1.59)	(1.82)*	(0.77)	(2.38)**		
DSEO	0.0125	0.0127	0.0124	0.0004	0.0064		
DSEO	(1.32)	(2.06)**	(1.11)	(0.06)	(0.85)		
EMP	0.018	0.0026	0.1254	0.0009	0.0231		
L/VII	(2.75)***		(11.51)***		(4.20)***		
CONSTANT		(0.89)		(0.19)			
	Included	Included	Included	Included	Included		
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes		
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes		
Adj. R <sup>2</sup> /Pseudo R <sup>2</sup>	0.3693	0.2827	0.9335	0.6140	0.2516		
Nobs.	35,252	35,252	35,252	35,252	35,252		

*Note*. This table reports the FFE estimates of audit outcomes on managerial ability. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, and *DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Appendix: Table 4A. Impact of the Auditor Effects and City of the Auditor Fixed Effects

Panel A: Auditor Effects						
	Audit risk o	outcomes	Final audit outcomes			
Model	(1)	(2)	(3)	(4)	(5)	
Variables	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON	
MA	-0.0542	-0.0394	-0.113	-0.0383	-0.065	
	(-2.70)***	(-3.70)***	(-2.70)***	(-2.44)**	(-3.84)***	
CONSTANT	Included	Included	Included	Included	Included	
All Controls	Yes	Yes	Yes	Yes	Yes	
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	
Adj.R <sup>2</sup> /Pseudo R2	0.2486	0.1532	0.8405	0.3672	0.1401	
Nobs.	35,252	35,252	35,252	35,252	35,252	
Panel B: City of the Audit	or Effects					
	Audit risk outcomes Final audit outcomes					
Model	(1)	(2)	(3)	(4)	(5)	

	Audit risk o	utcomes	Fi	nal audit outcome	es
Model	(1)	(2)	(3)	(4)	(5)
Variables	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON
MA	-0.0453	-0.0268	-0.1584	-0.0296	-0.0617
	(-2.04)**	(-2.40)**	(-3.66)***	(-1.99)**	(-3.06)***
CONSTANT	Included	Included	Included	Included	Included
All Controls	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adj.R²/Pseudo R2	0.2283	0.1665	0.7836	0.2998	0.1464
Nobs.	26,724	26,724	26,724	26,724	26,724

Note. This table reports the regression results of the auditor effects and the city of the auditor effects. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, *and DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

**Appendix:** Table 5A. Endogeneity Tests: The Yearly Two-digit SIC Industry Median Firm-level Managerial Ability as Instrument

	Panel A: 1st Stage	Panel B: 2 <sup>nd</sup> Stage							
	-	Audit risk	outcomes	Fi	nal audit outcon	nes			
Model	(1)	(1)	(2)	(3)	(4)	(5)			
Variables	MA	RESTMT	DAOICS	LAFCOR	LAELAG	DGOCON			
INDMA	0.1158								
	(4.15)***								
EXPMA		-0.9975	-0.4785	-0.1552	-0.4352	-0.1614			
		(-5.06)***	(-3.61)***	(-2.32)**	(-2.45)**	(-3.05)***			
CONSTANT	Included	Included	Included	Included	Included	Included			
All Controls	Yes	Yes	Yes	Yes	Yes	Yes			
Industry Fixed	Yes	Yes		Yes	Yes	Yes			
Effects			Yes						
Year Fixed									
Effects	Yes	Yes	Yes	Yes	Yes	Yes			
Adj.R <sup>2</sup> /Pseudo									
R2	0.3829	0.2457	0.1499	0.8299	0.3608	0.1382			
Nobs.	35,252	35,252	35,252	35,252	35,252	35,252			

*Note.* This table reports the regression results of the 2SLS model (two-stage least squares). In Panel A, we use the yearly two-digit SIC industry median firm-level managerial ability as an instrument in the 1<sup>st</sup> stage, predicting the score of managerial ability as the dependent variable. In Panel B, we present the results of the 2<sup>nd</sup> stage based on the predicted managerial ability. The proxies for audit outcomes are *RESTMT*, *DAOICS*, *LAFCOR*, *LAELAG*, *and DGOCON*. The measure for managerial ability is the score developed by Demerjian et al. (2012). *t*-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Appendix: Table 6A. Moderating Effects: High Institutional Ownership (HIO) vs. Low Institutional Ownership (LIO)

						Audit risk	outcomes		
Model Variables					(1) RESTMT			(2) DAOICS	
				IIIO	Ш	Diff-in-coeff. and Chi <sup>2</sup> Column	IIIO	110	Diff-in-coeff. and Chi <sup>2</sup> Column
				HIO	LIO	(1) vs. (2)	HIO	LIO	(1) vs. (2)
MA				(1) 0.0513 (2.04)**	(2) -0.0928 (-4.26)***	0.0415 [24.73]***	(1) -0.0163 (-1.55)	(2) -0.0708 (-3.35)***	0.0545 [29.39]***
CONSTANT				Included	Included		Included	Included	
All Controls				Yes	Yes		Yes	Yes	
Industry Fixed Effects				Yes	Yes		Yes	Yes	
Year Fixed Effects				Yes	Yes		Yes	Yes	
Adj.R2 / PseudoR2				0.244	0.2542		0.1394	0.1506	
Nobs.				17,626	17,626		17,626	17,626	
				Final audit or					
Model		(3)			(4)			(5)	
Variables		LAFCOR			LAELAG			DGOCON	
			Diff-in-coeff. and Chi <sup>2</sup> Column			Diff-in-coeff. and Chi <sup>2</sup> Column			Diff-in-coeff. and Chi <sup>2</sup> Column
	HIO	LIO	(1) vs. (2)	HIO	LIO	(1) vs. (2)	HIO	LIO	(1) vs. (2)
MA	(1) -0.0976 (-1.91)*	(2) -0.1335 (-3.50)***	0.0359 [18.29]***	(1) -0.0032 (-0.18)	(2) -0.0965 (-3.85)***	0.0933 [38.72]***	(1) -0.0688 (-2.98)***	(2) -0.0993 (-5.33)***	0.0305 [19.29]***
CONSTANT	Included	Included	[-0>]	Included	Included	[552]	Included	Included	[->>]
All Controls	Yes	Yes		Yes	Yes		Yes	Yes	
Industry Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes	
Year Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes	
Adj.R2 / PseudoR2	0.7444	0.8024		0.3306	0.3487		0.1241	0.1492	
Nobs.	17,626	17,626		17,626	17,626		17,626	17,626	

Nobs. 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 17,626 Note. This table reports the moderating role of institutional ownership in the relationship between client-firm managerial ability and audit outcomes. The proxies for audit outcomes are RESTMT, DAOICS, LAFCOR, LAELAG, and DGOCON. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

Appendix: Table 7A. Moderating Effects: High Probability Informed Trading (HPIN) vs. Low Probability Informed Trading (LPIN)

						Audit risk	outcomes		
Model Variables					(1) RESTMT			(2) DAOICS	
				LPIN	HPIN	Diff-in-coeff. and Chi <sup>2</sup> Column (1) vs. (2)	LPIN	HPIN	Diff in coeff. and Chi <sup>2</sup> Column (1) vs (2)
MA				(1) -0.0320 (-0.95)	(2) -0.0537 (-1.98)**	0.0217 [10.98]**	(1) -0.0088 (-0.69)	(2) -0.0485 (-2.63)**	0.0397 [13.40]***
CONSTANT All Controls Industry Fixed Effects				Included Yes Yes	Included Yes Yes		Included Yes Yes	Included Yes Yes	
Year Fixed Effects Adj.R2 / PseudoR2 Nobs.				Yes 0.2487 6,135	Yes 0.2648 6,134		Yes 0.1457 6,135	Yes 0.1727 6,134	
				Final audit out	comes				
Model Variables		(3) LAFCOR			(4) LAELAG			(5) DGOCON	
			Diff-in-coeff. and Chi <sup>2</sup> Column			Diff-in-coeff. and Chi <sup>2</sup> Column			Diff in coeff. and Chi <sup>2</sup> Column (1)
	LPIN	HPIN	(1) vs. (2)	LPIN	HPIN	(1) vs. (2)	LPIN	HPIN	vs (2)
MA	(1) -0.1061 (-1.51)	(2) -0.1663 (-2.81)***	0.0602 [27.01]***	(1) -0.0055 (-0.19)	(2) -0.0625 (-2.35)**	0.0570 [23.49]***	(1) -0.0122 (-0.77)	(2) -0.0731 (-4.12)***	0.0609 [27.19]***
CONSTANT All Controls Industry Fixed	Included Yes Yes	Included Yes Yes		Included Yes	Included Yes		Included Yes	Included Yes	
Effects Year Fixed Effects Adj.R2 / PseudoR2	Yes 0.724	Yes 0.7708		Yes Yes 0.3372	Yes Yes 0.3409		Yes Yes 0.1323	Yes Yes 0.1433	
Nobs.	6,135	6,134		6,135	6,134		6,135	6,134	

Note. This table reports the moderating role of analysts following and the probability of informed trading on the relation between client-firm managerial ability and audit outcomes. The proxies for audit outcomes are RESTMT, DAOICS, LAFCOR, LAELAG, and DGOCON. The measure for managerial ability is the score developed by Demerjian et al. (2012). t-statistics are based on standard errors clustered at the firm level. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively. See Appendix Table 1A for definitions of the variables.

**Appendix:** Figure 1A. Managerial ability of the treatment and control firms (CEO sudden death as an exogenous shock)

