THE EFFECT OF AUDIT COMMITTEE INTERNAL AUDIT EXPERTISE ON FINANCIAL REPORTING AND OPERATING PERFORMANCE

By

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ABSTRACT

This study examines whether internal audit expertise on the audit committee is positively associated with financial reporting quality and operating performance. Internal audit exposes individuals to holistic risk management, develops a deep understanding of firm risks and operations, and generates valuable financial reporting knowledge. Because internal auditors perform both monitoring and advising duties, individuals with this expertise are uniquely positioned to both identify weaknesses and implement solutions in a way that is distinct from other accounting experts and external auditors. I hypothesize audit committee members with internal audit expertise will leverage this distinct knowledge to effectively manage both financial and non-financial risks. As predicted, I find firms with audit committees who possess internal audit expertise are associated with stronger financial reporting quality, as proxied by a lower likelihood a firm experiences a material misstatement of their financial statements and lower levels of accruals-based earnings management. Additionally, I find a positive association between audit committees with internal audit expertise and changes to operating income but no association for other measures of non-financial reporting performance. Taken together, the evidence suggests that internal audit expertise on the audit committee contributes positively to financial reporting and has some, but limited, effects on operating performance.

To Mark, Cynthia, and Joe
Isaiah 40: 30-31

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CHAPTER 1: INTRODUCTION

"The expansion of the audit committee's role has in turn raised questions about audit committee composition, prompting us to examine it more closely in this year's survey. Audit committees may need more expertise in certain areas, but they are simultaneously wary of bringing on narrowly-focused subject matter specialists"

- **Krista Parsons**, Managing Director, Deloitte & Touche LLP, & **Vanessa Teitelbaum**, Senior Director, Center for Audit Quality 2023

Audit committees (AC) play an important role in corporate governance. While the primary concern of an audit committee is financial reporting oversight (Krishnan, Wen, and Zhao 2011), the scope of ACs is broad and encompasses a variety of responsibilities (Clayton, Teotia, and Hinman 2019). Driven by evolving business needs and emerging risks, a considerable number of ACs today are responsible for monitoring financial reporting (and associated internal controls) and overseeing risks related to non-financial duties like operations, asset management, and capital structure (Parsons and Teitelbaum 2023). The rising complexity of issues ACs face calls into question what skills members should embody to effectively perform their duties. Practitioners reiterate this concern and emphasize the need for audit committees to re-examine whether members possess the knowledge to be effective monitors (Parsons and Teitelbaum 2023). This study examines whether internal audit (IA) expertise on the audit committee generates improvements to a firm's financial reporting quality and operating performance.

Prior literature on AC effectiveness is vast with most research focused on the financial reporting oversight role (DeZoort, Hermanson, Archambeault, and Reed 2002). One important aspect of AC effectiveness is the composition and skills that AC members possess. Studies that evaluate skills of the AC generally concentrate on the role of financial experts (Bédard and Gendron 2010).[1] These papers closely align the definition of a financial expert to that of the SEC

[1] A few notable exceptions include studies that examine the effect of legal (Krishnan et al. 2011), technology (Ashraf et al. 2020), or industry expertise (Cohen et al. 2014) on AC effectiveness.

and broadly investigate the role of individuals with experience in accounting, finance, or generic audit roles (or supervisors of these roles) (Agrawal and Chadha 2005; Krishnan 2005; Dhaliwal, Naiker, and Navissi 2010; Cohen, Hoitash, Krishnamoorthy, and Wright 2014; Krishnan and Visvanathan 2009; DeFond, Hann, and Hu 2005; Bédard, Chtourou, and Courteau 2004; Hoitash and Hoitash 2009; Farber 2005).

Although this research has yielded valuable insights, the incremental impact of IA expertise, specifically, remains unexplored. Skills gained as an internal auditor are unique from those learned as an external auditor or in an accounting role in several important ways. First, unlike external auditors, internal auditors engage in both monitoring and consulting duties (IIA 2023b; Madenburg 2023). Serving in both capacities develops a comprehensive understanding of risk management and creates a balanced perspective when evaluating findings and opportunities for improvement. Second, the scope of IA assessments includes both financial and non-financial activities, exposing individuals to a breadth of risks, business processes, and key stakeholders (IIA 2016; Bequevort and Caeneghem 2018). In contrast to external auditors, who focus on audit risks specific to the possibility audit procedures will not detect a material misstatement when one exists, internal auditors concentrate on a broader profile of risks beyond those strictly related to financial reporting. This fosters a robust understanding of how risks are integrated across an enterprise. Lastly, the mission of internal audit is to "enhance and protect organizational value" (IIA 2023b). This mission – combined with IA's core principles of holistic risk management, organization alignment, and objectivity – cultivates distinct perspectives and skillsets that enable effective risk management while continually adding value (Fedele 2021; IIA 2023b).

I argue audit committees with members who possess IA expertise are uniquely positioned to effectively manage both financial and non-financial risks and objectives. My first prediction is

related to financial reporting quality. Internal auditors work within an organization, allowing them to develop a deep understanding of both a firm's operations and stakeholders (Smith 2002; Clarke 2022). Because of this insight, I expect ACs with IA expertise will be better prepared to both collaborate with the multitude of individuals that report to an AC and identify diverse risks that could impact the financial statements. Given non-financial risks are closely aligned with financial reporting quality, (COSO 2013; Lawrence, Minutti-Meza, and Vyas 2018), enhanced communication and an intimate awareness of operations should improve an ACs ability to perform its financial reporting oversight duties.

Additionally, internal auditors possess an extensive understanding of compliance requirements and regulatory restrictions that should magnify their awareness of the implications of low-quality financial reporting (Ege, Seidel, Sterin, and Wood 2022). ACs with IA expertise are therefore less likely to tolerate practices that could have negative repercussions on financial reporting quality. Lastly, given individuals with IA experience comprehend the intricacies of internal audit functions, ACs with IA expertise should be better positioned to monitor a firm's internal audit function (Jaggi 2023) or provide a firm with IA knowledge if the internal audit function is ineffective or does not exist.[2] Altogether, I argue IA expertise on the AC improves an AC's knowledge of risks, communication with stakeholders, awareness of the consequences of low-quality financial reporting, and monitoring of a firm's internal audit function. Formally, I predict firm-years with AC IA expertise will be associated with higher quality financial reporting.

While I predict a positive association between AC internal audit expertise and financial reporting quality, there are several reasons why IA expertise may not incrementally matter. First,

[2] Only firms listed on the New York Stock Exchange are required to have an internal audit function (Ege et al. 2022).

internal audit expertise may not provide knowledge that is substantially greater than other accounting experts that serve on audit committees. Second, to influence an audit committee's responsibilities and duties, the audit committee must value and consider the internal audit expert's perspective. Given the internal audit profession can be perceived negatively (Eulerich, Kremin, Saunders, and Wood 2021), an internal audit expert's recommendation may not be regarded.

To test the first hypothesis, I examine AC members' work histories from BoardEx and identify individuals with work experience in internal audit. Experiential learning theory suggests individuals learn from their experiences (Kolb 1984). The theory posits learning is best achieved by direct, concrete experiences and interactions. Based on experiential learning theory, I use the existence of work experience in IA as a proxy for IA expertise.[3] I measure AC IA expertise as both the proportion of AC members with IA expertise and the presence of at least one member with IA expertise on the AC. I first test the association between AC IA expertise and financial reporting quality, proxied by misstatement of the financial statements disclosed in a later period and accrual-based earnings management (Zang 2012). For a sample of non-financial and non-utility firm-years from 2005 to 2020, I find ACs with IA expertise are less likely to experience a material misstatement of the financial statements as revealed by future restatements and engage less in accrual-based earnings management. Economically, the results are meaningful, as a one standard deviation increase in the ratio of IA expertise on an audit committee can reduce low-quality financial reporting by up to 19%. Further, the results are robust to the inclusion of commonly documented determinants of misstatements and accrual-based earnings management (e.g., firm

[3] This is similar to other research that uses the existence of prior work experience in a specific field of interest as evidence of expertise (Krishnan et al. 2011; Chychyla et al. 2019; Ashraf et al. 2020).

size, financial health, external monitors), controls for other types of AC expertise (i.e., accounting, finance, auditing, legal, technology), and the use of firm and year fixed effects.

My second prediction is regarding AC IA expertise and non-financial reporting performance. Although IA has some overlapping experiences with external auditors and other accounting experts, a distinct characteristic of internal auditors is their involvement in activities beyond financial reporting. While external auditors concentrate on financial statement audits and other accounting experts focus on performing or analyzing accounting transactions, internal auditors perform additional activities focused on adding organizational value (IIA 2023b). This work exposes them to a variety of business processes and risks and creates a robust understanding of operating activities, firm procedures, and holistic risk management (IIA 2016). Importantly, internal auditors are trained to not only detect risks across multiple settings but also identify solutions to mitigate these risks. Because of these arguments, I predict firms with AC IA expertise will realize benefits beyond financial reporting quality.

I examine my second prediction by testing whether AC IA expertise is associated with better non-financial reporting performance, specifically operating efficiency / performance and real earnings management. For firm operating efficiency, I use the measure developed by Demerjian, Lev, and McVay (2012), which captures the ratio of a firm's revenue generating outputs to production inputs. Additionally, I examine improvements to operating performance, defined as changes in a firm's operating income or operating cash flow from year *t-1* to year *t* (Barber and Lyon 1996; Wasley and Wu 2006; Kleppe 2023). Lastly, I examine real earnings management, which involves the manipulation of operating activities (e.g., overproduction of inventory, opportunistic timing of expenses). All four measures capture aspects of a firm's operating performance, highlighting areas where the unique knowledge of an AC IA expert might be

particularly beneficial. I find AC IA expertise is associated with increases to only operating income, implying there are some, but limited, incremental benefits to AC IA expertise and non-financial reporting performance.

While multivariate regressions present initial results that suggest IA expertise on the AC is valuable, it is possible the inferences may be driven by characteristics related to a firm's tendency to have AC IA expertise. In my main specification, I address these concerns in several ways. First, all models include firm fixed effects. This design controls for unobservable, time-invariant firm differences. Second, I include a control for a disclosed Chief Audit Executive. Prior research shows the disclosure of a role is associated with the importance and prominence of the role to an organization (Morse, Wang, and Wi 2016; Koo and Lee 2018; Zhang 2019). Because the Chief Audit Executive is the leader of the internal audit function (Bills, Huang, Yin, and Wood 2024) and data on internal audit function quality is not available, this control likely captures aspects of internal audit function importance and, indirectly, internal audit function quality. Lastly, I include several controls prior research shows are correlated with internal audit function quality (e.g., firm characteristics, board governance) (Prawitt, Smith, and Wood 2009; Ege 2015).

I make my predictions based on two key assumptions: 1) IA experts indeed rely on and are shaped by their experience working as an internal auditor and 2) audit committees consider and incorporate an IA expert's opinion and knowledge when performing their duties. I perform several additional tests to examine instances when the internal audit experience is likely more salient to the AC IA expert and when the AC IA expert has more influence over the audit committee. Overall, my results suggest that AC IA expertise is most beneficial to financial reporting quality when the internal audit work experience is more significant to an AC IA expert and when the IA expert has a greater perceived authority over an audit committee. Results for non-financial reporting

performance do not consistently suggest benefits of an AC IA expert are dependent on the authority of the IA expert or the importance of internal audit experience to the expert.

This study contributes to the literature in three ways. First, it provides relevant and timely information on the value of a previously unexplored type of audit committee expertise. Emerging risks have prompted boards to re-evaluate the skills audit committee members possess in order to stay abreast of new responsibilities (Oven, Parsons, and Teitelbaum 2023). Prior research has focused on the impact of financial, legal, technological, and industry expertise on the AC (Badolato, Donelson, and Ege 2014; Cohen, Hoitash, Krishnamoorthy, and Wright 2014; Krishnan et al. 2011; Ashraf, Michas, and Russomanno 2020), but, to my knowledge, IA expertise has not been explored.

IA expertise is unique in that individuals with this knowledge have a deep understanding of operations, enterprise risk management, value-adding initiatives, and regulatory requirements. Because audit committees must monitor financial reporting quality but are also commonly charged with other oversight duties, boards often prefer committee members that are strategic thinkers and possess a broad profile of experiences (Oven et al. 2023; Jacklin, Green, and Mucisko 2023). IA experts embody a comprehensive and diverse skillset that highlights their potential incremental contribution to an audit committee. Examining the impact of AC IA expertise on financial and non-financial reporting performance can speak to the importance of this skill. This should be of interest to regulators, firms, and stakeholders, especially when assessing the competency of the AC and selecting candidates to serve on an AC.

Second, this research speaks to the significance of expertise in internal audit. While research on IA is growing (DeFond and Zhang 2014), most studies focus on the presence or quality of the internal audit function (Prawitt et al. 2009; Abbott, Daugherty, Parker, and Peters 2016;

Jaggi 2023; Ege, Kim, and Wang 2023). Little is known about the value of IA knowledge outside the firm or the internal audit function itself.[4] My study provides insights into whether these skills are incrementally beneficial by examining an environment where IA expertise might be advantageous: the audit committee.

Lastly, changes in regulatory environments and compliance laws have driven a steep increase in the demand for internal audit professionals (Tandym 2013). Despite this increase, firms struggle to attract and retain qualified talent in IA (Flood 2023). This research explores a setting where firms can leverage IA expertise from outside the firm (i.e., the audit committee). While the New York Stock Exchange (NYSE) requires listed firms to have an internal audit function, other exchanges do not have such requirements (Ege 2015). Examining the value of IA expertise on the AC may provide firms with an alternative method to obtain this expertise.

[4] One study examines the effect of managers with IA experience on real earnings management (Ege et al. 2022). To my knowledge, this is the only study to examine the benefits of working as an internal auditor outside the internal audit function.

CHAPTER 2: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This section is organized as follows: First, I begin by providing background information on internal audit and the profession. Next, I review related literature on internal audit. I then discuss the audit committee and provide background knowledge, followed by a literature review of audit committee research. I end with a discussion of the theory, mechanism, and hypotheses development and predictions.

2.1. Literature Review and Background

2.1.1. Background on Internal Audit

The Institute of Internal Audit (IIA) defines internal auditing as an "independent, objective assurance and consulting activity designed to add value and improve an organization's operations" (IIA 2023b). Internal auditors evaluate a firm's risk management, controls, and governance processes and provide solutions aimed at meeting firm objectives (IIA 2023b). Both financial reporting and non-financial risks are monitored by internal auditors (Anderson 2016). Stakeholders view the internal audit function as a trusted business partner who adds value to a firm by identifying and remediating critical risks and inefficiencies (Madenburg 2023; Liu 2020).

Internal auditors engage in a variety of activities that are distinct from other roles in external audit or accounting (IIA 2016; IIA 2023a). While internal control and accounting audits are likely similar to those completed as an external auditor, internal auditors perform work beyond financial reporting, allowing them to develop diverse subject matter expertise. The IA cycle involves an enterprise risk assessment that inherently allows internal auditors exposure and experience with all aspects of risk that may impact a company (Bequevort and Caeneghem 2018). Audit plans for the internal audit function consist of finance, accounting, information technology,

operations, and any other area deemed to have a high level of risk (Bequevort and Caeneghem 2018). Beyond the diverse scope of these audits, working as an internal auditor offers individuals the opportunity to gain a deep understanding of a firm and its operations. Combined, these experiences offer insight into both financial and non-financial areas.

Within an organization, internal auditors serve in highly visible leadership roles with exposure to various key stakeholders. Internal auditors interact with process owners when performing audits and reviews, including both financial reporting individuals as well as those outside traditional accounting roles (e.g., supply chain, technology, compliance) (IIA 2024). Additionally, internal auditors' partner with management to communicate complex findings and provide recommendations (IIA 2024). Outside the firm, internal auditors coordinate with external auditors during the financial statement audit and report to the audit committee. Audit committee communications vary by company but often include discussion of enterprise risks, communication of internal audit findings, delegation of internal audit resources, and reviewing the internal audit charter (IIA 2024).

2.1.2. Internal Audit Literature

Though growing, the literature on internal audit is comparatively small (DeFond and Zhang 2014 pg. 278). Most existing research focuses on the presence or quality of the internal audit function within a firm and the impact on financial reporting quality. Using survey data, Prawitt et al. (2009) develop a composite measure of the quality of a firm's internal audit function and show firms with higher quality internal audit functions are associated with lower levels of earnings management. Similarly, Lin, Pizzini, Vargus, and Bardhan (2011) examine characteristics of the internal audit function and find the education of internal audit staff and the internal audit functions involvement in key activities are negatively associated with internal control material weakness

disclosures, while Pizzini, Lin, and Ziegenfuss (2015) document a positive association between internal audit function quality and audit efficiencies. Other studies indicate both internal audit function competence and independence are jointly necessary in creating an internal audit group that effectively monitors financial reporting (Abbott et al. 2016), and internal audit groups that are larger with more experience and education are associated with higher financial reporting quality (Renschler, Ahn, Hoitash, and Hoitash 2023). Altogether, these studies suggest internal audit function quality is positively associated with financial reporting outcomes.

Additional literature focuses on the internal audit function's organizational structure and the impact of using internal audit functions as a management training ground. Related to management training grounds, empirical findings are mixed, suggesting there are both benefits and consequences to internal audit function management training grounds. Messier, Reynolds, Simon, and Wood (2011) document an increase in external audit fees for firms that use the internal audit function as a management training ground, implying external auditors perceive rotational programs as higher risk. Christ, Masli, Sharp, and Wood (2015) show that, on average, firms with rotational internal audit models have lower quality financial reporting than firms without rotational models; however, this reduction can be mitigated when firms implement compensating controls (e.g., audit committee oversight, internal audit function supervision). In contrast, evidence from Carcello, Eulerich, Masli, and Wood (2020) indicates CAEs believe senior executives are more likely to implement recommendations from internal auditors who are in a management training ground. Related to outsourcing of the internal audit function, several studies conclude outsourcing the internal audit function is associated with higher quality, including higher levels of perceived objectivity (Glover, Prawitt, and Wood 2008), lower accounting risk (Prawitt, Sharp, and Wood

2012), and higher levels of assessed internal audit competence (Carey, Subramaniam, and Ching 2006).

Other research explores the internal audit function's role in mitigating and preventing management misconduct. Coram, Ferguson, and Moroney (2008) document a reduction in misappropriation of asset fraud for firms with internal audit functions. Ege (2015) corroborates this conclusion and notes high quality internal audit functions are negatively associated with both accounting and non-accounting related management misconduct. The evidence presented in Ege (2015) illustrates the integral role internal auditors play in monitoring functions outside of accounting. Lastly, Ege et al. (2023) find firms increase their demand for internal auditors following an accounting or operational failure. Their results indicate firms view internal auditors as an effective way to remediate errors.

Although internal audit functions are tasked with several responsibilities beyond financial reporting, research has predominately focused on financial reporting related outcomes (i.e., earnings management, misstatement, disclosure of material weakness, accounting related fraud). A recent study by Carcello et al. (2020) hypothesizes internal audits add firm value by reducing organizational risk. Using survey data, they find managers of audited business units perceive lower levels of risk and higher levels of performance than managers of non-audited business units. Similarly, Jiang, Messier, and Wood (2020) document a positive relationship between the internal audit functions involvement in operating services and operating performance.

2.1.3. Background on Audit Committees and Financial Reporting Monitoring

Audit committees (AC) are primarily responsible for the "independent review and oversight of a company's financial reporting processes, internal control and independent auditors"

(SEC 2003). Established as a mechanism to monitor potentially opportunistic agents, the AC is an important aspect of effective corporate governance (Gramling, Maletta, Schneider, and Church 2004; Ege et al. 2022). Literature examining attributes that affect AC success is robust, and generally focuses on four properties of AC effectiveness: composition, authority, resources, and diligence (DeZoort et al. 2002). DeZoort et al. (2002) synthesizes determinants of audit committee effectiveness and defines them as follows: 1) composition: characteristics and skills of audit committee members; 2) diligence: incentives and motivations of audit committee members; 3) authority: responsibilities of the AC; 4) resources: size of the AC and the ACs access to managers, internal auditors, external auditors.

2.1.4. Audit Committee Literature: Financial Reporting Quality

Most related to this study is research on the composition of the audit committee. This literature concentrates on attributes AC members possess including independence, objectivity, integrity, and expertise. Generally, these studies conclude AC independence and AC objectivity improve AC effectiveness (DeZoort and Salterio 2001; Klein 2002; Abbott, Park, and Parker 2000; Abbott, Parker, and Peters 2004). Prior research finds evidence that indicates audit committee independence is negatively associated with abnormal accruals (Klein 2002), the probability of receiving an SEC sanction (Abbott et al. 2000), and the likelihood of misstating the financial statements (Abbott et al. 2004). Collectively, the results suggest ACs benefit significantly from increased independence and objectivity.

A large body of research examines the role of expertise on the AC's ability to effectively monitor financial reporting (Agrawal and Chadha 2005; Krishnan 2005; Dhaliwal et al. 2010; Cohen et al. 2014; Krishnan and Visvanathan 2009; DeFond et al. 2005; Bédard et al. 2004;

Hoitash and Hoitash 2009; Farber 2005).[5] Early literature focuses on the presence of financial expertise, typically defined as individuals with a CPA or experience in accounting or finance, on the AC in the pre-Sarbanes-Oxley (SOX) period (DeZoort 1998; DeZoort and Salterio 2001; Archambeault and DeZoort 2001; Abbott et al. 2004; Bédard et al. 2004; Farber 2005). These studies document AC financial / accounting expertise is associated with improvements to financial reporting quality, in the form of a lower likelihood of experiencing a misstatement (Abbott et al. 2004), reductions to earnings management (Bédard et al. 2004), better internal control judgments (DeZoort 1998), and a lower probability of experiencing fraud (Farber 2005) or receiving a material weakness (Krishnan 2005). Further, ACs with financial / accounting expertise are more likely to interact with internal auditors (Raghunandan, Read, and Rama 2001), engage less in suspicious auditor switches (Archambeault and DeZoort 2001), and provide more support for the external auditor during management disputes (DeZoort and Salterio 2001).

After the passage of SOX implemented substantial changes to the AC, several studies re-examined aspects of AC financial expertise in the post-SOX period. This literature focuses on outcomes related to SOX, such as internal control disclosures and the incremental impact of accounting financial experts versus supervisory financial experts (Krishnan 2005; DeFond et al. 2005; Zhang, Zhou, and Zhou 2007; Krishnan and Visvanathan 2009; Hoitash, Hoitash, and Bédard 2009). Notably, this research does not explicitly differentiate between accounting expertise and internal audit expertise. Studies examining accounting expertise use various definitions, but mostly focus on accounting / finance roles or supervisors, experience at a CPA firm or as an auditor, or professional certifications and do not distinguish internal audit experience as a specific type of

[5] Refer to DeZoort et al. (2002) and Bédard and Gendron (2010) for a complete review of literature on audit committees.

expertise.[6] Lastly, other research examines non-financial AC expertise such as legal (Krishnan et al. 2011), technology (Ashraf et al. 2020), or industry (Cohen et al. 2014) and finds positive benefits to financial reporting quality.

2.1.5. Audit Committees and Non-Financial Reporting Duties

Though most research on AC effectiveness focuses on financial reporting quality and the oversight role of ACs, an additional duty of the AC is strategic management (Boyd 1990; Williamson 1999; Cohen, Krishnamoorthy, and Wright 2008). In contrast to the agency-principal perspective, resource dependency theory states stakeholders and managers may rely on the board to provide knowledge when information and expertise within an organization is scarce (Boyd 1990; Williamson 1999; Cohen et al. 2008). This theory posits that in addition to the monitoring role typically thought of for boards, boards can provide strategic advice that promotes effective risk management and enhances firm performance (Boyd 1990; Williamson 1999; Cohen, Krishnamoorthy, and Wright 2008). From this perspective, the objective of the audit committee is to generate value beyond simply identifying or preventing financial failures.

For example, audit committees often monitor key expenses, investments, asset management, capital structure, and operating performance (Ashraf, Choudhary, and Jaggi 2024). By overseeing and advising on these activities, audit committee members can identify inefficiencies and enhance firm value. In addition, ensuring compliance with laws and regulatory requirements, as well as mitigating fraud, are essential duties of the audit committee (Deloitte

[6] Early studies do not include individuals with experience in "audit" as financial experts (Bédard et al. 2004; Abbott et al. 2004; Krishnan 2005; Dhaliwal et al. 2010; Agrawal and Chadha 2005; Hoitash and Hoitash 2009; Farber 2005). Recent studies have expanded their definition of financial expertise to include individuals on audit committees with prior work experience as an external CPA or as a generic auditor (DeFond et al. 2005; Krishnan and Visvanathan 2009; Cohen et al. 2014; Chychyla et al. 2019). Although there may be some overlap in the generic search for "auditor" or "audit", no study, to my knowledge, has specifically focused on internal audit expertise.

2022). Effective management of these areas can also contribute to improving firm performance (via reduction in fines or theft). Last, because audit committees play a critical role in overseeing risk and strategic management, they frequently become the most obvious choice for delegation of a new risk (Cunningham, Stein, Walker, and Wolfe 2023). This can include a variety of risks such as technology or environment concerns (Deloitte 2022). Together, this highlights the diverse responsibilities audit committee members are tasked with.

Though still emerging, some prior literature has focused on the role of audit committees beyond financial reporting oversight. Cunningham et al. (2023) interview AC members and note several participants believe AC responsibilities include both financial reporting and non-financial reporting duties. Similarly, Ashraf et al. (2024) review AC charters and document increases in AC responsibility for noncore duties. Lastly, Chen, Hartmann, and Gottfried (2022) find AC IT expertise is negatively associated with the probability a firm experiences a data breach, indicating ACs can influence non-financial outcomes.

2.2. Theory

2.2.1. Theoretical Framework

Kolb (1984) defines experiential learning theory as the process of creating knowledge through experiences (pg. 38). In other words, the theory posits learning is best achieved by direct, hands-on training. Kolb (1984) predicts effective learning requires immersive experiences that allow for reflection and application towards decision-making and problem-solving. A distinguishing feature of this theory is that the focus is on the process of learning and experiences, rather than on the outcome of learning (Kolb 1984). Kolb posits experiential learning involves four phases: concrete experiences, reflective observations, abstract conceptualization, and active

experimentation. These phases are interactive and begin with an individual participating in concrete experiences, reflecting on these experiences, modifying or altering their behavior because of their reflection and feedback, and lastly, applying the learned and adapted concepts in a new situation (Kolb 1984). The cyclical nature of the process enables individuals to continuously improve.

Relative to my study, I contend individuals who have worked as internal auditors embody distinct knowledge and skills only attainable through direct experience as an internal auditor. Working as an internal auditor allows an individual to engage in all four phases of the learning process. For example, an individual participates in projects as an internal auditor (concrete experiences) and reflects on the successes or opportunities for improvements after the completion of a project (reflective observation). Feedback is often received in real-time or quickly after the close of a project, allowing an internal auditor to change or alter their actions moving forward (abstract conceptualization). Lastly, internal auditors apply their learned knowledge from previous audits to new projects (active experimentation). The process continues throughout the life of their career in internal audit, mimicking the iterative and cyclical process described by Kolb. Further, experiential learning theory suggests individuals who have worked as an internal auditor will continue to retain their knowledge and attitudes as they progress in their careers, and this knowledge will be difficult to obtain outside direct experience as an internal auditor (e.g., reading about internal audit or interacting with an internal auditor).[7]

[7] Other research that focuses on the impact of career choices documents a similar effect. These studies find early career experiences can have a lasting "imprinting" effect on an individual's mindset and actions (Higgins 2005; Marquis and Tilcsik 2013; Schoar and Zuo 2017).

2.3. Hypothesis Development

My primary prediction is that IA expertise is distinct and beneficial and that audit committees with this expertise will be incrementally effective. Based on experiential learning theory, I argue that individuals will bring the knowledge and skills learned during their time as an internal auditor to an audit committee. While the knowledge is obtained working as an internal auditor at a different firm, I expect the individual will be able to impart their perspectives and internal audit skills to an audit committee. I predict that AC IA expertise will facilitate not only effective monitoring of financial reporting but also benefit non-financial areas. This is because internal auditors develop knowledge in non-financial areas by regularly performing reviews and assessments of these topics, highlighting the unique knowledge IA expertise brings to ACs.

2.3.1. Mechanism - Knowledge Transfer

I argue IA expertise will influence the AC in three ways. First, an individual with IA expertise will shape what the AC focuses on (e.g., key risks, audit procedures, compliance) and how the AC performs its monitoring duties (e.g., interpretation of information, knowledge dissemination, communication with key individuals). The primary activity ACs engage in is AC meetings. During these meetings, members review materials, communicate with key individuals, and assess risks and abnormalities. Typically, AC members examine regulatory filings, communications from the external auditor, reports from the internal auditors, and press releases or statements from legal counsel (Beasley, Carcello, Hermanson, and Neal 2009). Beasley et al. (2009) examine activities conducted during AC meetings and document an overwhelming 76% of ACs are responsible for reviewing firm policies, and 77% of ACs are involved in assessing the reasonableness of firm specific judgments, estimates, and assumptions used in accounting procedures.

Given ACs meet only a small number of times and operate in a constrained environment (Free, Trotman, and Trotman 2021), it is critical AC members can quicky comprehend information and identify potential issues. ACs receive, at best, secondhand knowledge and are less familiar with a company's operations than those within the firm. These constraints, coupled with infrequent meetings, increase the need for AC members to possess qualified skills. IA experts have a broad, comprehensive skillset with exposure to operations and other enterprise risks that should equip them with the ability to effectively manage these challenges. Such varied knowledge should also shape the risks an AC chooses to prioritize. Practitioners reiterate the importance of equipping an audit committee with members that are strategic thinkers and possess a broad profile of experiences (Oven et al. 2023; Jacklin et al. 2023). IA experts can utilize their comprehensive insights when reviewing material and detecting abnormalities, leading to changes in what the AC monitors and how they perform their duties.

Second, an important role of the AC is overseeing and interacting with a firm's internal audit function. This varies by firm and stock exchange, but typically a firm's internal audit function will meet with the AC and communicate findings, risks, and information from within the firm. Given internal audit functions act as the "eyes and ears" of management (IIA 2016, pg. 8), it is critical an AC considers and understands information from the internal audit group. An IA expert is acutely aware of what internal audit does and how they add value. ACs with IA expertise might serve as an ally to internal auditors and enhance the internal audit function by both easily comprehending internal audit findings and cooperating better with the group. Jaggi (2023) corroborates this idea and finds ACs that better utilize the firm's internal function are associated with improvements in financial reporting reliability. In contrast, if a firm's internal audit function

is ineffective or does not exist, AC IA expertise can serve as an alternative way the firm and AC can obtain internal audit knowledge.

Third, IA experts enhance interactions with key stakeholders. AC members communicate with a variety of individuals, including firm managers, firm executives, external auditors, and internal auditors (Beasley et al. 2009). A crucial role of the audit committee is to ask challenging questions to management and auditors aimed at detecting abnormalities (Beasley et al. 2009). Internal auditors have experience working with individuals throughout an organization, as well as external auditors and regulators. These experiences should encourage ACs with IA expertise to communicate directly with management and maximize limited time with individuals.

2.3.2. Hypothesis 1: Audit Committee Internal Audit Expertise and Financial Reporting Quality

Internal audit knowledge differs from other types of accounting or external audit expertise in several distinct ways. First, internal auditors work within a firm, allowing them to develop a deep understanding of a firm's operations and stakeholders.[8] This is unique from other accounting roles in that internal auditors embody a comprehensive knowledge of both the firm, its operations, and its specific compliance requirements. While accounting positions concentrate on preparing and analyzing financial statements and external auditors focus on auditing prepared financial statements, internal auditors engage in consulting and monitoring activities for a variety of processes not limited to the preparation of the financial statements. Experience beyond financial reporting enables them to cultivate well-rounded skills in diverse subject areas and processes.

[8] After the passage of the Sarbanes-Oxley Act, all members of an audit committee must be independent. While knowledge gained as an internal auditor is developed at a different firm than the focal firm for which the IA expert serves on the AC, I argue this knowledge can be transferred to the AC through the IA expert.

Further, internal auditors collaborate with diverse managerial teams throughout an organization, creating an understanding of the complexities across various groups within a firm that should enhance the ability to understand complex secondhand knowledge ACs typically receive.

In addition to exposure to diverse activities and stakeholders, compliance is a core principle for the IA profession. Internal auditors harbor a deep understanding of regulatory repercussions for low quality financial reporting. Because internal auditors work within a firm, they possess an acute awareness of how low-quality reporting can cause not only compliance consequences but also operating consequences for processes that rely on accurate financial information. Prior research has shown earnings management can have damaging repercussions, such as future misstatements and future declines in operating performance (Ettredge, Scholz, Smith, and Sun 2010; Bhojraj, Hribar, Picconi, and McInnis 2009; Zang 2012). Given the mission of IA is to protect and enhance organizational value, internal auditors have incentives to detect and prevent questionable accounting practices that may negatively impact a firm long term.

The last differentiating characteristic of IA is that internal auditors possess rich insights of risk management and controls (IIA 2023b). Internal auditors assess risks related to financial and non-financial activities, as well as offer advice to management once detected (Clarke 2022). While external auditors also perform risk identification procedures, they concentrate on audit risk and the risk that audit procedures will not identify a material misstatement when one exists. In contrast, internal auditors focus on a broader profile of risks that includes both misreporting risks and risks related to overarching governance, operations, compliance, and reputation. The Committee of Sponsoring Organizations of the Treadway Commission (COSO 2013) emphasizes the importance of considering both non-financial and financial risks in developing a comprehensive understanding of a firms financial reporting and control environment (Lawrence et al. 2018). Internal auditors

engage in both financial and non-financial audits, enabling them to attain a robust perspective on potential risks that, unlike other financial experts, are not limited to those identified solely in a financial statement audit.

Overall, accurate financial reporting and internal controls are fundamental objectives for internal auditing. Individuals with IA expertise have not only an acute awareness of the importance of compliance with standards and regulations, but also a considerable understanding of the consequences of misreporting. Given internal auditors are trained to resist behaviors that deteriorate firm value, ACs with IA experts are less likely to tolerate behaviors that could harm a firm. Additionally, internal audit experts possess an extensive understanding of how firms operate and how to communicate with key stakeholders that should further enhance an ACs effectiveness. I hypothesize that audit committees with IA expertise are likely influenced by their perspective. These experts will communicate their unique knowledge and insights gained from internal audit experience to help identify potential earnings management and highlight consequences from failing to do so. Specifically, I predict this expertise will facilitate an AC's ability to effectively monitor financial reporting. Formally, I state my hypothesis in the alternative form as follows:

H1: The proportion or existence of audit committee members with internal audit expertise is positively related to financial reporting quality.

2.3.3. Hypothesis 2: Audit Committee Internal Audit Expertise and Non-Financial Reporting Performance

An important distinguishing characteristic of internal audit from other types of accounting experts is IA's involvement in activities beyond financial reporting. Internal auditors engage in audits related to all aspects of businesses, with the primary objective of improving an

organization's operations (IIA 2023b; Malekie 2021). Related to understanding operations, internal auditors perform enterprise risk assessments that naturally provide exposure to multiple aspects of a firm and create a robust understanding of how risks across an organization connect. This understanding engenders valuable operational and firm knowledge, as well as knowledge of revenue generating activities (Robert Half 2019). Internal auditors are also charged with performing reviews of operating efficiencies and supply chain risks, further highlighting the unique knowledge obtained from time as an internal auditor (Bequevort and Van Caeneghem 2018). Altogether, internal audit principles and experiences instill a dynamic set of approaches that equip internal auditors with skills to successfully assess and advise on a robust set of risks.

In addition to exposure to non-financial activities, internal auditors are trained to reduce inefficiencies and improve firm performance. The mission of internal audit is to "enhance and protect organizational value" (IIA 2023b). Internal auditors are rooted in a mindset focused on adding value to an organization. Internal auditors promote firm and operating efficiency by identifying redundancies and unnecessary expenses and mitigating risks so firms can focus on profit increasing activities (Ngah 2018; IIA 2023b; Gupta 2023).

I hypothesize that ACs with IA expertise are uniquely positioned to provide value beyond financial reporting. Research and anecdotal evidence illustrate audit committees' evolving role in risk management and strategic management. Today, ACs are responsible for a variety of risks, including not only financial reporting, but also operating efficiency, budgeting, compliance, and mergers and acquisitions (Ashraf et al. 2023; Cunningham et al. 2023; Oven et al. 2023). Because IA experts possess knowledge of various non-financial topics with a focus on enhancing firm value, I predict ACs with IA expertise will be better prepared to effectively manage non-financial risks. Taken together, I state my hypothesis in the alternative form as follows:

H2: The proportion or existence of audit committee members with internal audit expertise is positively related to non-financial reporting performance.

2.3.4. Considerations Against the Hypotheses

Though I hypothesize that IA expertise on the AC generates benefits, IA expertise may not have an incremental effect if other types of accounting expertise are sufficient. Prior literature documents accounting expertise improves financial reporting quality (Abbott et al. 2004; Krishnan 2005; Dhaliwal et al. 2010; Cohen et al. 2014; Krishnan and Visvanathan 2009; DeFond et al. 2005; Bédard et al. 2004). Because a portion of work performed by internal auditors is comparable to work engaged in by other accounting experts or external auditors, IA expertise may not provide new knowledge that is incrementally beneficial above other expertise. Additionally, nearly all audit committees today include at least one member with traditional accounting or financial expertise. The incremental value of an internal audit expert may not be substantially better than expertise already provided by accounting experts.

Further, AC members may not value or consider IA perspectives. The IA profession often experiences negative stereotypes (Carcello et al. 2020; Eulerich et al. 2021; Irani 2014). These preconceived stigmas may impede an IA expert's views from being appropriately considered or implemented within an AC. Even if an AC considers an IA expert's opinion, the IA expert may not have sufficient status to influence the AC. Several prior studies show the status of AC members is an important determinant in shaping AC outcomes. Badolato et al. (2014) provide evidence that suggests expertise and status are jointly necessary in enabling an AC to monitor financial reporting. Beck and Mauldin (2014) affirm this and show ACs are more likely to impact fees when the power of an AC relative to the CFO is higher. Together these studies imply that although an IA expert

may provide beneficial knowledge to an AC, an AC may still not be influenced by such perspectives.

While these statements suggest AC IA expertise may not matter, I state my hypotheses in the alternative form because, overall, I contend IA expertise will benefit an AC by providing the AC with unique and valuable skills.

CHAPTER 3: RESEARCH DESIGN AND SAMPLE SELECTION

3.1. Measure of Internal Audit Expertise

I define an internal audit expert as someone who has worked as an internal auditor. This is based on experiential learning theory and prior studies that identify expertise as individuals with work experience in a specific field of interest (Krishnan et al. 2011; Chychyla, Leone, and Minutti-Meza 2019; Ashraf et al. 2020). Following Ege et al. (2022), I use BoardEx to identify audit committee members that have work experience as internal auditors. The database contains information on key executives' and board members' education, work experience, certifications, and other achievement-based award data. I focus on work histories to identify audit committee members with prior internal audit experience. Specifically, I use the North America - Individual Profile Employment database to categorize roles related to internal audit. I classify work experience as internal audit if either the variable "ROLENAME" or the variable "FULLTEXTDESCRIPTION" includes the word(s) "audit" or "internal audit".[9] After removing duplicates, all roles are manually inspected to confirm the work experience is related to internal audit. Given my focus is specific to internal audit, I remove any role where the employer is a public accounting firm.[10] Lastly, to ensure audit committee roles are performed during or after employment as an internal auditor, I require internal audit work experience is started before serving on an audit committee.

The primary variable of interest, $IA\_EXPERTISE\_RATIO_{it}$, is the number of audit committee members with IA expertise divided by the total size of the audit committee. I use a

[9] I also include roles that have "SOX" listed in the field "FULLTEXTDESCRIPTION". All roles are manually reviewed to confirm roles are related to internal audit roles.

[10] To ensure I am not erroneously including a public accounting firm role as an internal audit role, I cross reference the list of companies from BoardEx with the entire population of public accounting firms in the Audit Analytics opinions database.

continuous measure to quantify the prevalence of IA expertise on an AC. Alternatively, I measure the existence of an IA expert on an AC and replace $IA\_EXPERTISE\_RATIO_{it}$ with a binary variable that equals one if an AC has at least one IA expert, defined as an individual with work experience in internal audit, and zero otherwise ($IA\_EXPERTISE_{it}$).

3.2. Hypothesis 1: Measures and Empirical Models

3.2.1. Measure of Accruals-Based Earnings Management

The first measure of financial reporting quality is accruals-based earnings management. I focus on accruals-based earnings management because accruals-based earnings management exploits the discretion afforded within GAAP that allows firms to strategically time accruals to illustrate a favorable position (Black, Christensen, Taylor Joo, and Schmardebeck 2017). This strategic timing reduces the transparency and usefulness of the information presented in the financial statements. Prior research documents the relationship between accruals-based earnings management and the quality of the financial statements, making it an ideal proxy to capture aspects of financial reporting quality (DeFond and Zhang 2014). I follow Jones (1991), Dechow, Sloan, and Sweeney (1995) and Ball and Shivakumar (2006) for calculation of accruals-based earnings management (i.e., the modified Jones model with controls for timely loss recognition). A detailed discussion of the calculation of this variable is included in Appendix A.

3.2.2. Empirical Model: Accruals-Based Earnings Management

My first hypothesis focuses on the association between AC IA expertise and financial reporting quality. Accruals-based earnings management is defined as the amount of accruals-based earnings management (AEM_{it}) scaled by prior year total assets for firm *i* in year *t*. I use ordinary

least squares to estimate the following model adopted from Zang (2012), Cunningham, Johnson, Johnson, and Lisic (2020), and Ege et al. (2022) to test my prediction:

$$AEM_{it} = \beta_0 + \beta_1 IA\_EXPERTISE\_RATIO_{it}(IA\_EXPERTISE_{it}) + \beta\, CONTROLS + Firm\, FE_i + Year\, FE_t + e_{it} \quad (1A)$$

Hypothesis 1 predicts AC IA expertise (either $IA\_EXPERTISE\_RATIO_{it}$ or $IA\_EXPERTISE_{it}$) will be positively associated with financial reporting quality. Because reductions in accruals-based earnings management lead to improvements in financial reporting quality, I expect a negative and significant coefficient on β_1. Following prior research, I include several control variables known to influence accrual-based earnings management (Roychowdhury 2006; Zang 2012; Cunningham et al. 2020; Ege et al. 2023). These include controls for firm and market size ($SIZE_{it}$, MKT_SHARE_{it-1}), firm bankruptcy risk ($ALTMANZ_{it-1}$), firm profitability (ROA_{it}, $SALES\_GROWTH_{it}$, $WRITEDOWN_{it}$, BM_{it}, $CYCLE_{it-1}$), the firm's marginal tax rate (MTR_{it}), future and current equity financing ($SHARES_{it}$, $ISSUE_{it+1}$), restructuring charges ($RESTRUCT_{it}$), the extent of external monitoring ($INST\_OWN_{it-1}$, $LN\_ANALYST_{it}$), auditor influence ($LONG\_AUD\_TENURE_{it}$, $BIGN_{it}$), the extent of earnings previously managed, measured as firms whose net operating income to prior year total assets is above the median in an industry year, (NOA_{it-1}), and the number of times the firm meets or beats consensus analyst forecast in the previous four quarters ($BEAT_{it}$). Following Cunningham et al. (2020) and Ege et al. (2022), I add predicted and unpredicted real-earnings management ($PRED\_REM_{it}$, $UNPRED\_REM_{it}$) to isolate accruals-based earnings management.

Additionally, I include an indicator variable that equals 1 if firm *i* has a disclosed Chief Audit Executive (CAE_{it}) in year *t*, and 0 otherwise.[11] This control attempts to capture the prominence of a firm's internal audit function. The Chief Audit Executive is the leader of a firm's internal audit function and plays a critical role in monitoring and supervising the internal audit group (Bills et al. 2024; Lobo, Lyu, Wang, and Zhang 2022). Prior literature documents a relationship between the disclosure of key individuals and their influence over an organization, concluding the disclosure of a role is associated with important roles (Morse et al. 2016; Koo and Lee 2018). Given data on internal audit functions and their quality is not publicly available, the variable, $CAE_{it,}$ proxies for the relative prominence of a firm's Chief Audit Executive, and, relatedly, elements of the importance and quality of a firm's internal audit function. Though this control does not perfectly measure the quality of a firm's internal audit function, it provides some comfort that certain aspects of internal audit quality are controlled for in the model (Zhang 2019; Bills et al. 2024; Lobo et al. 2022).

Lastly, I include several board level governance variables to control for board of director characteristics other than IA expertise that are associated with financial reporting quality (Bédard et al. 2004; Krishnan et al. 2011; Ashraf et al. 2020). These include the percentage of independent directors on the board ($BOARD\_INDEP_{it}$), whether the CEO is chairman of the board ($CEO\_IS\_CHAIR_{it}$), and various proxies for AC expertise (i.e., legal expertise $(LEGAL\_EXPERT_{it})$, the ratio of accounting and financial experts ($ACCT\_FINC\_RATIO_{it}$), information technology expertise (IT_EXPERT_{it}), and public accounting firm experience

[11] I use the BoardEx North America Organization Summary database to classify firm years that have a Chief Audit Executive. I follow Zhang (2019) to identify Chief Audit Executives or similar roles using a variety of key words (e.g., VP Internal Audit, Director Internal Audit, Senior Manager of Internal Audit). BoardEx collects data from a variety of public sources including regulatory filings, annual reports, company websites, press articles, and proxy statements, providing confidence the data is relatively complete (BoardEx 2023).

(EA_EXP_{it})). Inclusion of other types of AC expertise controls for improvements in financial reporting quality due to expertise unrelated to internal audit (Abbott et al. 2004; Cohen et al. 2014; Krishnan et al. 2011; Ashraf et al. 2020).[12] Last, since prior research has shown the gender of committee members can impact monitoring efforts and firm performance (Adams and Ferreira 2009), I include a control that equals the ratio of females on the AC ($AC\_FEMALE\_RATIO_{it}$).

I employ firm and year fixed effects in all models. The use of firm fixed effects controls for the possibility that time-invariant, firm specific characteristics associated with the tendency to have IA expertise on the AC and high-quality financial reporting drive the results. The use of year fixed effects removes time varying macroeconomic characteristics that may be associated with changes or trends in financial reporting quality over time. Finally, standard errors are clustered by the firm to mitigate serial correlation (Petersen 2008).

3.2.3. Measures of Misstatement

My second proxy for financial reporting quality is accounting misstatements. I examine both misstatements, in general, and non-reliance misstatements (i.e., 8-K Item 4.02 disclosures). Misstatements represent the most egregious accounting failures and are a common proxy for financial reporting quality used in the literature (Dechow, Ge, and Schrand 2010). While accruals-based earnings management captures properties of earnings themselves, misstatements capture external signals of financial reporting quality (Dechow et al. 2010). Examining both proxies allows for a comprehensive understanding of the impact on financial reporting quality.

[12] In additional analyses, I explore whether audit committees with both an internal audit expert and an additional accounting expert differentially impact audit committee outcomes. I also explore the incremental impact of an audit committee member who has both internal audit and accounting expertise. Refer to Chapter 5 for details.

3.2.4. Empirical Model: Misstatement

In the second model, financial reporting quality equals either $MISSTATE_{it}$ or $BIGR_{it}$. $MISSTATE_{it}$ equals 1 if the firm year contains a misstatement disclosed in future years and 0 otherwise. $BIGR_{it}$ equals 1 if the firm year contains a non-reliance misstatement (i.e., Item 8-K 4.02 disclosure) disclosed in future years and 0 otherwise. I use the following linear probability model adopted from Ashraf et al. (2023) to test my prediction specific to restatements:

$$MISSTATE\ (BIGR)_{it} = \lambda_0 + \lambda_1\ IA\_EXPERTISE\_RATIO_{it}\ (IA\_EXPERTISE_{it}) + \lambda\ CONTROLS + Firm\ FE_i + Year\ FE_t + e_{it} \quad (1B)$$

Hypothesis 1 predicts AC IA expertise (either $IA\_EXPERTISE\_RATIO_{it}$ or $IA\_EXPERTISE_{it}$) will be positively associated with financial reporting quality. Because reduction in misstatements leads to improvements in financial reporting quality, I expect a negative and significant coefficient on λ_1. I include a vector of controls prior research has shown to be associated with the probability a firm misstates their financials (Bills et al. 2016; Ashraf et al. 2020). $BIGN_{it}$, $INST\_OWN_{it}$, BM_{it}, $SIZE_{it}$, ROA_{it}, $RESTRUCT_{it}$, $SALES\_GROWTH_{it}$, CAE_{it} are discussed above in equation 1A. Additionally, I include controls for firm loss ($LOSS_{it}$), firm financial position ($ISSUANCE_{it}$, LEV_{it}), internal control strength (MW_{it}), and firm complexity ($LN\_SEGMENTS_{it}$, AQC_{it}, $FOREIGN_{it}$). Controls for governance characteristics are identical to those included in equation 1A ($BOARD\_INDEP_{it}$, $CEO\_IS\_CHAIR_{it}$, $LEGAL\_EXPERT_{it}$, $ACCT\_FINC\_RATIO_{it}$, IT_EXPERT_{it}, EA_EXP_{it}, $AC\_FEMALE\_RATIO_{it}$). Lastly, I use firm and year fixed effects with standard errors clustered at the firm level.

3.3. Hypothesis 2: Measures and Empirical Models

3.3.1. Measures of Non-Financial Reporting Performance

Non-financial reporting performance can be defined in several ways. I define non-financial reporting performance as improvements to a firm beyond the quality of external financial reports or reported earnings. I focus on operating performance / efficiency and real earnings management because these measures capture situations where the unique knowledge gained from experience as an internal auditor is likely the most valuable. As described in Chapter 2, internal auditors perform both monitoring and advising duties and often engage in reviews aimed at enhancing and improving operating activities. Evaluating changes in operating performance and constraints to real earnings management, which involves strategic alteration of operating activities, is ideal to assess if AC IA expertise is beneficial beyond enhancements to financial reporting quality.

I use three proxies to measure operating performance / efficiency: firm efficiency, changes in operating income, and changes in operating cash flow. Firm efficiency captures a firm's ability to turn operating inputs into revenue generating outputs. I employ a measure developed from Demerjian et al. (2012), which quantifies a firm's production optimization based on the relationship between revenue generating outputs and production inputs. Numerous accounting studies have used this measure to examine operating efficiency (Cho, Lee, and Park 2015; Cheng, Goh, and Kim 2018; Imdieke, Lo, and Zhou 2022), making it an appropriate proxy.

My second measure is changes in operating income. Examining changes in operating income is ideal because operating income does not include interest expenses, income taxes, or other non-operating items, providing a relatively direct measure of performance (Barber and Lyon 1996; Kleppe 2023). Alternatively, I use changes in operating cash flow to measure a firm's

operating cash flow performance. This proxy reflects a similar construct as changes in operating income but is less impacted by accruals-based manipulations (Barber and Lyon 1996; Wasley and Wu 2006). Related to my prediction, internal auditors are trained to identify operating inefficiencies and provide remediations. This can include activities related to optimizing expenses and reducing overhead costs and unnecessary complexities (Ngah 2018; Gupta 2023). Changes in operating income or cash flow are ideal to test whether ACs with IA expertise realize benefits to these areas.

The last measure of non-financial performance is real earnings management. Real earnings management captures manipulation of activities related to a firm's operations including the opportunistic timing of discretionary expenses (e.g., selling, general, and administration expenses, research and development expenses), unusual price discounts, abnormal asset sales, or the overproduction of inventory (Roychowdhury 2006; Zang 2012; Cunningham et al. 2020). Essentially, real earnings management captures deviations from normal business activities with the intention of meeting or improving earnings positions. The detection of real earnings management is difficult and involves a comprehensive understanding of firm operations, making it optimal to examine if AC IA expertise is incrementally helpful.

3.3.2. Empirical Model: Non-Financial Reporting Performance

My second hypothesis focuses on the association between AC IA expertise and non-financial reporting performance. I test my second hypothesis with the following model:

$$NON\_FRP_{it} = \delta_0 + \delta_1 IA\_EXPERTISE\_RATIO_{it} (IA\_EXPERTISE_{it}) + \delta CONTROLS + Firm FE_i + Year FE_t + e_{it} \quad (2)$$

NON_FRP$_{it}$ is measured using one of the following outcome variables intended to capture operating performance / efficiency or real earnings management: *FIRM_EFF*$_{it}$, *ΔOPIN*$_{it}$, *ΔOPCF*$_{it}$, or *REM*$_{it}$.

The first measure (*FIRM_EFF*$_{it}$) is firm *i's* operating efficiency in year *t*, obtained directly from Demerjian et al. (2012), who use data envelope analysis to estimate an entity's relative efficiency in turning inputs into outputs. [13] Values range from 0 to 1, with higher values equating to higher levels of operating efficiency. This variable indicates how efficient a firm is at turning seven inputs (cost of goods sold, selling, general, and administrative, net plant, property, and equipment, capitalized operating leases, capitalized R&D costs, purchased goodwill, and other intangibles) into revenue. The second measure, *ΔOPIN*$_{it}$, equals the change in operating income from prior year (i.e., year *t* minus year *t-1)* scaled by average total assets (Barber and Lyon 1996). The third measure, *ΔOPCF*$_{it}$, equals the change in operating cash from prior year (i.e., year *t* minus year *t-1)* scaled by average total assets (Wasley and Wu 2006). For both *ΔOPIN*$_{it}$ and *ΔOPCF*$_{it}$, changes are measured over a one-year period relative to the current year (i.e., *t-1* to *t*) because I expect improvements will materialize in the year an individual with IA expertise is actively serving on an AC. Lastly, *REM*$_{it}$ represents the amount of real earnings management scaled by prior year total assets for firm *i* in year *t*. I follow Roychowdhury (2006) for the calculation of *REM*$_{it}$, refer to Appendix A for details.

Hypothesis 2 predicts AC IA expertise will be positively associated with non-financial reporting performance measures. When *NON_FRP*$_{it}$ equals *FIRM_EFF*$_{it,}$ *ΔOPIN*$_{it}$, or *ΔOPCF*$_{it}$, I

[13] The data is obtained directly from Dr. Peter Demerjian's website: https://peterdemerjian.weebly.com/managerialability.html. I thank Dr. Demerjian for making the data public and available for research.

expect a positive and significant coefficient on δ_1. Following Imdieke et al. (2022), for the $FIRM\_EFF_{it}$, $\Delta OPIN_{it}$, or $\Delta OPCF_{it}$ analysis, I include controls that generally capture firm resources and profitability (LN_MVE_{it}, $FIRM\_AGE_{it}$, FCF_{it}, $LOSS_{it}$, ROA_{it}, LEV_{it}, RET_{it}, CFO_SD_{it}, BM_{ti}), firm complexity ($FOREIGN_{it}$, $RESTRUCT_{it}$, $LN\_SEGMENTS_{it}$), industry concentration (HHI_{it}), financial reporting environment ($ICFR\_AUDIT_{it}$, MW_{it}, CAE_{it}), auditor characteristics ($BIGN_{it}$), and governance characteristics ($BOARD\_INDEP_{it}$, $CEO\_IS\_CHAIR_{it}$, $ACCT\_FINC\_RATIO_{it}$, $LEGAL\_EXPERT_{it}$, IT_EXPERT_{it}, EA_EXP_{it}, $AC\_FEMALE\_RATIO_{it}$), and include both firm and year fixed effects with standard errors clustered at the firm level.

When NON_FRP_{it} equals REM_{it}, I expect a negative and significant coefficient on δ_1 because reductions in real earnings management reflect improvements. Controls and model specifications for the REM_{it} analysis are identical to those presented in equation 1A except an additional control to mitigate mechanical correlations between pre-managed and managed earnings is included ($PREMAN\_EARN_{it}$) and $PRED\_REM_{it}$ and $UNPRED\_REM_{it}$ are excluded.[14]

3.4. Sample Selection

Table 1 illustrates the sample selection process. First, all Compustat firm-years from 2005 to 2020 with cik and fyear are collected, resulting in an initial sample of 137,200. I begin the sample in 2005 to avoid changes from the Sarbanes-Oxley Act of 2002, as well as to allow time for sufficient data coverage in BoardEx.[15] Next, 45,843 firm-years in the financial and utility industries (SIC 6000-6999 and 4400-4999) are deleted.[16] Because I require data on AC

[14] These variables are created from the real earnings management model. Real earnings management is estimated first to allow for these variables to be included in the accruals-based earnings management estimation as controls.
[15] Although founded in 1999, robust data collection for BoardEx began in the early 2000s (BoardEx 2023).
[16] Financial and utility firms are highly regulated, resulting in significantly different accounting procedures as well as financial incentives (Roychowdhury 2006; Zang 2012). Because of this, firms in this industry are not included in the analysis.

compositions, 45,023 firm-years missing AC BoardEx data are discarded. Lastly, I drop firm-years missing the data required for each analysis and singletons.[17] The final sample for H1 equation 1A and 1B is 32,122. The final sample for each measure used to test H2 equation 2 (equation 1A for REM) is 29,258, 29,834, and 32,122 (firm efficiency, Δoperating cash flow / income, REM, respectively).

[17] I first drop firm-years missing required variables from equation 1A (accruals-based earnings management analysis). For the remaining analyses (equations 1B and 2), firm-years missing required variables are dropped from this base sample.

CHAPTER 4: EMPIRICAL RESULTS AND ROBUSTNESS

4.1. Descriptive Statistics

4.1.1. Individuals with Internal Audit Expertise

Table 2 Panel A provides descriptive information at the individual level for audit committee members with internal audit expertise in the sample of firm-years. Most audit committee members with internal audit expertise have additional work experience in another area.[18] 76% of AC IA experts have also worked in accounting or finance, and 56% are certified public accountants.[19] A smaller portion of audit committee internal audit experts have experience as an auditor at a public accounting firm (25%), and very few have additional experience working in information technology (2%) or in legal services (3%). Audit committee members with internal audit expertise on average spend a cumulative 6 years working in internal audit, and internal audit encompasses 18% of their total professional career, suggesting internal audit is a meaningful experience. Most AC IA experts have worked in an upper-level internal audit role. Specifically, 65% of AC IA experts worked at the internal audit manager level or above (e.g., director, vice president, senior manager).[20] The majority of AC IA experts are a disclosed financial expert on the audit committee (78%) or an audit committee chair (45%). Lastly, very few AC IA experts concurrently serve on an audit committee and work in internal audit (4%).

[18] Table 2 Panel A has a total of 1,832 audit committee member years with internal audit expertise. This is higher than the number of firm-years in the sample with at least one AC IA expert (1,776) because some audit committees have more than one member with internal audit expertise.
[19] Certified Public Accountant designation includes Chartered Accountants.
[20] This includes internal audit roles as a manager, executive, president or vice president, senior manager, or director.

4.1.2. Audit Committees with Internal Audit Expertise

Panel B of Table 2 provides information at the audit committee level for audit committees with at least one internal audit expert in the sample of firm-years. The majority of audit committees with at least one internal audit expert also possess at least one additional AC member with accounting or finance expertise.[21] Some, but far fewer, audit committees with at least one internal audit expert have an additional member who has worked as an auditor at a public accounting firm (8%) or an additional member with legal expertise (22%). Audit committees with internal audit expertise rarely include an additional information technology expert (4%).

4.1.3. Firm-Year Panel

Table 3 Panel A presents descriptive statistics for the sample of firm-years used across all analyses.[22] On average, 6% of audit committees have at least one member who has internal audit expertise ($IA\_EXPERTISE_{it}$). For the entire sample of firm-years, IA experts comprise 2% of audit committee members ($IA\_EXPERTISE\_RATIO_{it}$). Figure 1 Panel A illustrates the trend of AC IA expertise across time. Generally, the presence of AC IA expertise increases steadily, with a low 3% in 2005 and a high of 9% in 2020. This is consistent with anecdotal evidence from practitioners that cites increases in regulatory requirements and corporate scandals has driven a steep rise in the demand for internal auditors (Tandym 2013; Zippia 2023). The average tenure of members on an AC is 5 years (untabulated), and ACs that have IA expertise retain this expertise on average for 5 years (untabulated). Figure 1 Panel B shows the rate of AC IA expertise across Fama French 12-

[21] This includes individuals who are Certified Public Accountants or Chartered Accountants.
[22] All continuous variables are winsorized and replaced at the 1st and 99th percentiles. Results are consistent in sign and significance using unwinsorized data.

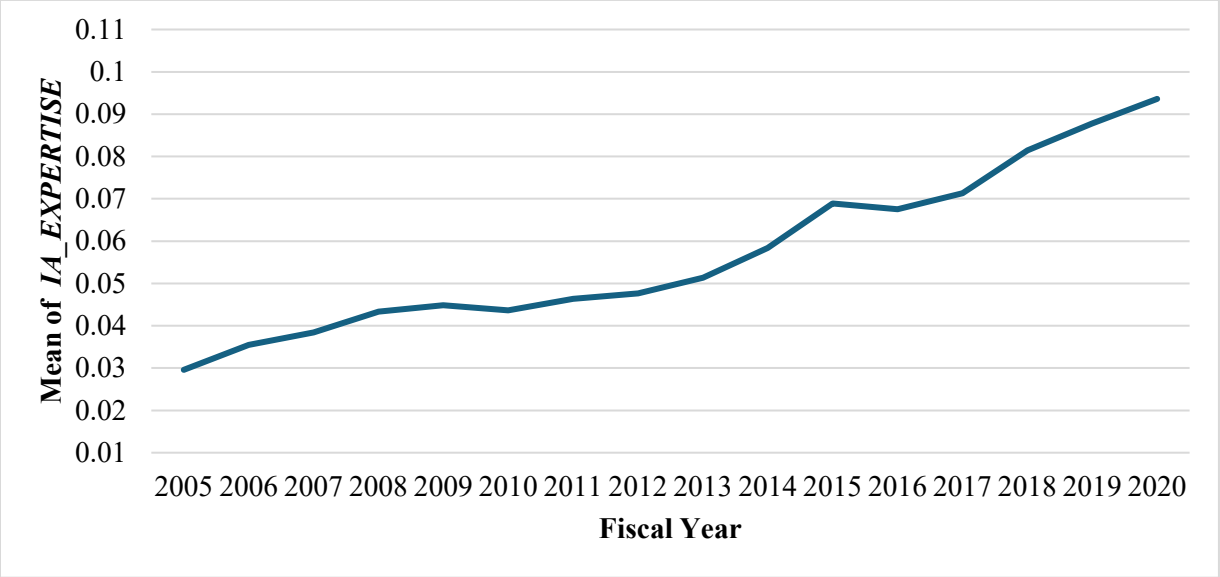
industry classification. Consumer durables has the highest percentage of firm-years with AC IA expertise (11%), while healthcare, medical, equipment, and drugs has the least (4%).

Figure 1

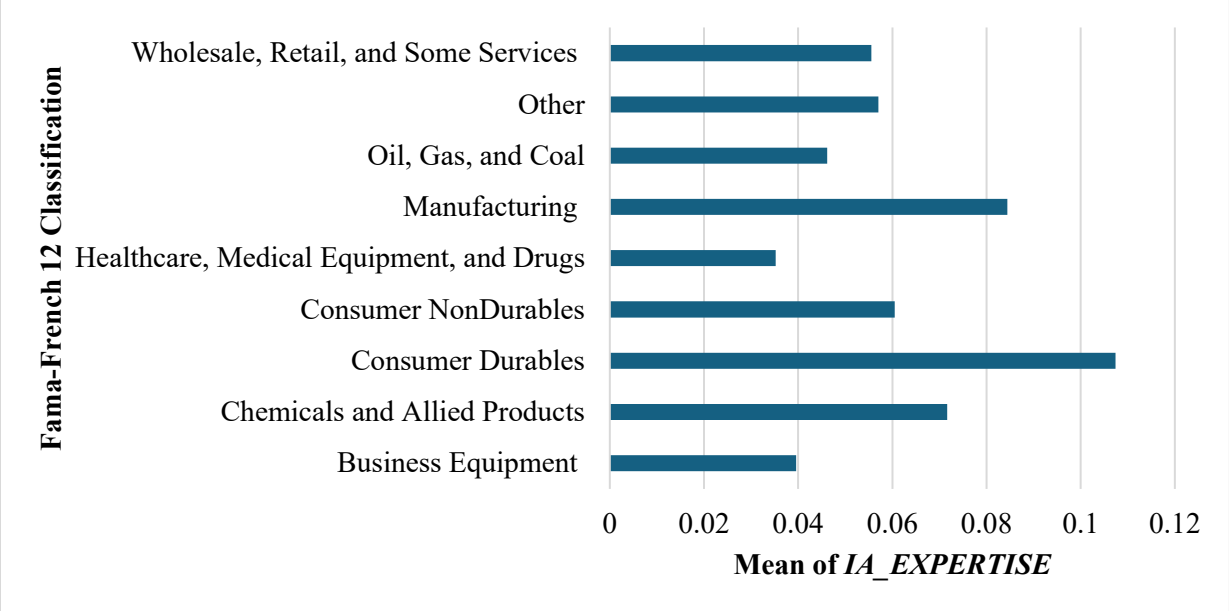
Trends in Audit Committee Internal Audit Expertise

Panel A illustrates the trend of audit committee internal audit expertise across years in the sample. Panel B documents the trend of audit committee internal audit expertise across industries (Fama-French 12 industry classification).

Panel A: Audit Committee Internal Audit Expertise Time Trends



Panel B: Audit Committee Internal Audit Expertise Industry Trends



Related to the dependent variables for H1, the mean of accruals-based earnings management (AEM_{it}) for the sample is 2% of prior total assets, similar to averages reported in previous research (Cunningham et al. 2020; Ege et al. 2022).[23] On average, 9% of firm-years misstate their financials, as evidenced by a future announcement, ($MISSTATE_{it}$) and 3% experience a non-reliance misstatement ($BIGR_{it}$). Similarly, dependent variables for H2 are consistent with prior research and contain sufficient variation (Demerjian et al. 2012; Cho et al. 2015; Cheng et al. 2018; Kleppe 2023). The mean change in operating income ($\Delta OPIN_{it}$) and cash flow ($\Delta OPCF_{it}$) is a 1% increase relative to average total assets. A firm's average operating efficiency score ($FIRM\_EFF_{it}$) is 0.34, and the mean of real earnings management (REM_{it}) for the sample is 6% of prior total assets.[24]

Firms in the sample have average total assets ($SIZE_{it}$) equaling $644 million, and 80% are audited by a Big N auditor ($BIGN_{it}$). The average book to market ratio (BM_{it}) is 52%, implying that most firm-years in the sample have a greater book value than market value. Generally, 33% of firm-years in the sample experience a loss ($LOSS_{it}$) and 16% of firm-years impair assets other than goodwill ($WRITEDOWN_{it}$). Approximately 7% of firm-years have a publicly disclosed Chief Audit Executive or similar type role. Other controls variables are generally consistent with those presented in prior research (Cohen et al. 2014; Zhang 2012; Czerney, Schmidt, and Thompson 2014; Bills et al. 2016; Ashraf et al. 2020; Cunningham et al. 2020; Ege et al. 2022). Most notably, on average, 63% of outstanding shares in year *t* are owned by institution owners ($INST_OWN_{it}$),

[23] The mean reported in my sample for AEM_{it} is slightly larger than those presented in Cunningham et al. (2020) (.002) and Ege et al. (2022) (.01). Relative to these two studies, my sample period is longer and the average size of firms in my sample is larger, likely contributing to the difference.

[24] The mean of REM_{it} is slightly larger than those presented in Cunningham et al. (2020) (-.003) and Ege et al. (2022) (.03). My sample period is longer and the average size of firms in my sample is larger, likely contributing to the difference.

the average firm-year's analyst following is 6 unique analysts (unlogged $LN\_ANALYST_{it}$). 12% of firm-years have a disclosed material weakness (MW_{it}), and 59% of firm-years have foreign income generating operations ($FOREIGN_{it}$).

To provide a more complete picture of the characteristics for firm-years with AC IA expertise, Panel B of Table 3 presents the sample from Panel A split into two subsamples based on whether the firm-year AC includes a member with IA expertise ($IA\_EXPERTISE_{it}$ = 1). Means, standard deviations, and a test of mean difference are included. For firm-years where $IA\_EXPERTISE_{it}$ equals one, approximately 28% of members on the AC have IA expertise ($IA\_EXPERTISE\_RATIO_{it}$). The test of mean differences shows firm-years with at least one member on the AC with IA expertise are less likely to experience a material misstatement of their financial statements ($BIGR_{it}$) and engage less in accruals-based earnings management (AEM_{it}), providing initial evidence against the null hypothesis in favor of H1. Additionally, firm-years with AC IA expertise have higher firm efficiency ($FIRM\_EFF_{it}$) but are not statistically different in terms of changes to operating income or cash flow ($\Delta OPIN_{it}$, $\Delta OPCF_{it}$). Lastly, firm-years with AC IA expertise tend to be larger ($SIZE_{it}$, LN_MVE_{it}), have more independent boards ($BOARD\_INDEP_{it}$), fewer losses and material weaknesses ($LOSS_{it}$, MW_{it}), more acquisitions and foreign activity (AQC_{it}, $FOREIGN_{it}$), and higher financing ($SHARES_{it}$).

Table 4 documents a Pearson pairwise correlation matrix. The main variable of interest, $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$), is negatively and significantly correlated with AEM_{it}. $IA\_EXPERTISE_{it}$ is negatively and significantly correlated with material misstatements ($BIGR_{it}$), but $IA\_EXPERTISE\_RATIO_{it}$ is insignificantly correlated with any kind of misstatement. $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$) is positively and significantly correlated with firm efficiency ($FIRM\_EFF_{it}$) but insignificantly related to changes in operating income or cash flow

($\Delta OPIN_{it}$, $\Delta OPCF_{it}$). Generally, $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$), is positively correlated with variables representing firm size, profitability, and governance, and negatively correlated with financial distress or financial pressure.[25] AEM_{it} and REM_{it} are negatively and significantly correlated, providing support of their inverse relationship (Zang 2012).[26]

4.2. Multivariate Results

4.2.1. Determinants of Audit Committee Internal Audit Expertise

Before presenting the multivariate results for my hypotheses, I conduct an exploratory analysis to provide insight into what types of firms possess an internal audit expert on their audit committee. To examine determinants of AC IA expertise, I estimate a model where the dependent variable equals one for the existence of an AC IA expert in year $t+1$, and zero otherwise ($IA\_EXPERTISE_{it+1}$).[27] The determinants analysis focuses on the subsequent year's audit committee composition because the election process for board members typically occurs during a firm's annual shareholders meeting but prior to the release of the current year financial statements (Barlow 2017; Hayes 2024).

The independent variables of interest included in the model represent firm, board, and other characteristics that might affect a firm's tendency to have an IA expert on the AC. Specifically, I include variables for financial reporting quality (REM_{it}, AEM_{it}, $MISSTATE_{it}$, MW_{it}), firm size and profitability ($SIZE_{it}$, $SALES\_GROWTH_{it}$, ROA_{it}, BM_{it}, $FIRM\_AGE_{it}$, $WRITEDOWN_{it}$, $SHARES_{it}$,

[25] $IA\_EXPERTISE\_RATIO_{it}$ and REM_{it} are positively correlated. However, the significance is univariate and does not control for other associated covariates. Refer to the multivariate analysis in Table 9.
[26] Consistent with prior research, AEM_t is negatively correlated with variables that proxy for governance and external monitoring ($INST\_OWN_{it-1}$, $LN\_ANALYST_{it}$, $BIGN_{it}$). REM_{it} is positively correlated with these variables, highlighting the substitution effect between AEM_{it} and REM_{it}.
[27] The sample size for this analysis is slightly smaller than the main analyses because I examine the composition of the audit committee in the following, rather than current, year.

$BEAT_{it}$), financial position ($LOSS_{it}$, $ISSUANCE_{it}$, LEV_{it}), internal / external monitors ($BIGN_{it}$, $INST\_OWN_{it}$, $LN\_ANALYST_{it}$, CAE_{it}), firm complexity ($RESTRUCT_{it}$, $LN\_SEGMENTS_{it}$, AQC_{it}, $FOREIGN_{it}$), and board characteristics ($BOARD\_INDEP_{it}$, $CEO\_IS\_CHAIR_{it}$, $ACCT\_FINC\_RATIO_{it}$, $LEGAL\_EXPERT_{it}$, IT_EXPERT_{it}, EA_EXP_{it}, $AC\_FEMALE\_RATIO_{it}$). Because firms listed on the New York Stock exchange are required to have an internal audit function, I also include an indicator variable that equals one if the firm is listed on the New York Stock Exchange ($NYSE_{it}$), and zero otherwise.

Table 5 presents the determinants analysis. Column 1 documents the results with the inclusion of industry and year fixed effects. Within an industry, results suggests that older firms and firms who more consistently beat the analyst forecast are more likely to have an IA expert on their audit committee in the following year, while firms with higher institutional ownership and firms who issue higher amounts of debt are less likely. The composition of the audit committee is also significantly associated with the tendency for an audit committee to have an IA expert in the following year. Audit committees with a higher percentage of female members, a higher percentage of accounting expertise, and audit committees who possess a member who worked as an auditor in public accounting are positively associated with the likelihood of AC IA expertise in the following year. However, audit committees with legal expertise are negatively associated.

Importantly, variables for financial reporting quality in the current year (REM_{it}, AEM_{it}, $MISSTATE_{it}$, MW_{it}) are not significantly associated with the presence of an audit committee internal audit expert in the following. This suggests that firms are not reacting to prior year financial failures by adding an internal audit expert to their audit committee in the following year. Further, while nearly all variables in Panel B of Table 3 indicate a significant univariate test of mean differences between firm-years with and without an AC IA expert, most of the variables in the

determinants model are not significant. This indicates that after including controls for various firm-level attributes, time trends, and industry trends, there is little direct relationship between several key characteristics ($SALES\_GROWTH_{it}$, ROA_{it}, BM_{it}, $BIGN_{it}$, $LN\_ANALYST_{it}$, CAE_{it}) and the likelihood an audit committee has an internal audit expert in the following year.

In an alternative specification, I examine determinants of the first instance an audit committee obtains an IA expert. Column 2 of Table 5 presents the results, where the dependent variable now equals one for the first occurrence an AC has an IA expert in year $t+1$, and zero otherwise ($FIRST\_IA\_EXPERTISE_{it+1}$).[28] Results suggest larger firms and firms with a material weakness disclosure are moderately more likely to have an audit committee member with IA expertise for the first time in the following year. Audit committees that currently possess legal expertise or have a member with experience as an auditor at a public accounting firm are less likely, implying skills of current audit committee members influence expertise of future members. Interestingly, the percentage of AC members with accounting expertise currently serving on the AC is not associated with the first occurrence of AC IA expertise in the following year.

4.2.2. Hypothesis 1: Financial Reporting Quality

Table 6 documents the multivariate results for equation 1A (accruals-based earnings management). In column 1 (2), $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$) is negative and significantly associated with accruals-based earnings management (AEM_{it}) (p-value < 0.05).[29] This suggests that, within a firm, as the proportion (or presence) of AC IA expertise increases, firms engage less in accruals-based earnings management. Economically, a one standard deviation

[28] Firm-years after the first treatment event are omitted from the analysis. Because of this and the choice to examine audit committee composition in the subsequent year, the sample size is smaller than that of the main analyses.
[29] Because I make a directional prediction, p-values on hypothesized variables are reported using one-tailed tests when the sign matches the directional prediction. All other variables use two-tailed test.

increase in $IA\_EXPERTISE\_RATIO_{it}$ is associated with an estimated decrease in accruals-based earnings management of approximately .33% of assets at the beginning of the year.[30] Given the mean of AEM_{it} is 2% of assets at the beginning of the year, this equals a 16% relative decrease compared to the average of AEM_{it}.

Table 7 documents the results for equation 1B (misstatement). Columns 1 and 2 show the results for any misstatement ($MISSTATE_{it}$), while columns 3 and 4 show the results for non-reliance misstatements ($BIGR_{it}$). $IA\_EXPERTISE_{it}$ ($IA\_EXPERTISE_{it}$) is not significantly associated with any $MISSTATE_{it}$ (column 1: p-value > 0.10; column 2: p-value > 0.10); however, $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$) is negative and significantly associated with the probability a firm experiences a material misstatement (column 3: p-value < 0.01; column 4: p-value < 0.01). Together, the results suggest AC IA expertise is only beneficial in reducing the probability a firm experiences an egregious, significant misstatement (i.e., non-reliance). The results are economically meaningful, as a one standard deviation increase in $IA\_EXPERTISE\_RATIO_{it}$ is associated with a 19% decrease in the likelihood a firm experiences a material misstatement ($BIGR_{it}$).[31]

Generally, control variables in both models are similar in sign and significance to prior research (Bills et al. 2016; Ashraf et al. 2020; Cunningham et al. 2020; Ege et al. 2022). Larger firms ($SIZE_{it}$) engage less in accruals-based earnings management but are more likely to misstate their financials. Higher percentages of institutional ownership ($INST\_OWN_{it}$) are negatively

[30] This is calculated by multiplying the coefficient from Column 1 of Table 6 (.0542) by the standard deviation of $IA\_EXPERTISE\_RATIO_{it}$ (.06). The final product is multiplied by 100 to represent a percent. Descriptive statistics are available in Table 3.

[31] This is calculated by multiplying the coefficient from Column 3 of Table 7 (.0945) by the standard deviation of $IA\_EXPERTISE\_RATIO_{it}$ (.06) and dividing by the mean of $BIGR_{it}$ (.03). The final product is multiplied by 100 to represent a percent. Descriptive statistics are available in Table 3.

related to both accruals-based earnings management and material misstatement of the financial statements. Firms with higher return on assets (ROA_{it}) and sales growth ($SALES\_GROWTH_{it}$) are positively associated with accruals-based earnings management. Lastly, firms with a disclosed material weakness (MW_{it}) are positively associated with financial misstatement.

Related to board level controls, firms with more independent boards are less likely to misstate their financial statements. However, AC expertise variables are not generally significantly related to most measures of financial reporting quality.[32] Most notably, I only find a moderate association between the ratio of accounting experts on the audit committee ($ACCT\_FINC\_RATIO_{it}$) and material misstatements ($BIGR_{it}$) (p-value < 0.10). $ACCT\_FINC\_RATIO_{it}$ is not significantly associated with accruals-based earnings management.[33] Additionally, experience at a public accounting firm (EA_EXP_{it}) is not associated with any measure of financial reporting quality. Though early studies document a relationship between accounting expertise and financial reporting quality (Abbott et al. 2004; Cohen et al. 2014; Ege et al. 2022), several recent studies fail to find an association (Albrecht, Mauldin, and Newton 2018; Ashraf et al. 2020). This research attributes the lack of significance to differences in sample periods and time trends that show majority of ACs include an accounting expert, making the incremental difference of adding this expert less impactful in later years. My findings are consistent with this conjecture. On average, 83% of firm-years (untabulated) in my sample have at least one AC member with

[32] Unlike Krishnan et al. (2011), I do not find an association between $LEGAL\_EXPERT_{it}$ and financial reporting quality. This is likely attributable to sample difference, as Krishnan et al. (2011) examines fiscal years 2003 to 2005, while my sample includes fiscal years 2005 to 2020. Additionally, I do not find IT_EXPERT_{it} is significantly associated with non-reliance misstatements, unlike Ashraf et al. (2020). I do not include quarterly misstatements in my sample, I exclude firms in highly regulated industries (i.e., financial, utility), and my sample period includes additional fiscal years.

[33] Results are consistent if I replace $ACCT\_FINC\_RATIO_{it}$ with an indicator variable that equals one if the audit committee has at least one accounting or finance expert in year *t*, and zero otherwise.

accounting, finance, or auditing experience at a public accounting firm. This rate grows linearly, beginning with 78% in 2005 and ending with 89% in 2020.[34]

In summary, the results from equations 1A and 1B imply AC IA expertise is incrementally beneficial in enhancing an audit committee's ability to effectively monitor financial reporting. Firms with AC IA expertise are associated with higher quality financial reporting in the form of lower levels of accruals-based earnings management and a lower likelihood of experiencing a material misstatement of the financial statements disclosed in a later period. Importantly, the results suggest AC IA expertise is incrementally valuable even after controlling for other AC expertise including accounting and public auditing experience, determinants of financial reporting quality, and firm heterogeneity. Collectively, the evidence provides support in favor of hypothesis 1: IA expertise is positively associated with financial reporting quality.

4.2.3. Hypothesis 2: Non-Financial Reporting Performance

Tables 8 and 9 document the results for H2 (non-financial reporting performance). Table 8, columns 1-6 examine the association between AC IA expertise and measures of operating performance or efficiency. Column 1 (2) finds the proportion (presence) of AC IA expertise $IA\_EXPERTISE\_RATIO_{it}$, ($IA\_EXPERTISE_{it}$) is insignificantly related to firm efficiency ($FIRM\_EFF_{it}$) (p-value > 0.10). However, AC IA expertise is positively and significantly associated with changes in operating income (Columns 3 and 4: $\Delta OPIN_{it}$; p-value < 0.05), but not associated with changes in operating cash flow (Columns 5 and 6: $\Delta OPCF_{it}$; p-value > 0.10). This

[34] Because $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$) is positively correlated with $ACCT\_FINC\_RATIO_{it}$, in an untabulated additional analysis, I remove my variables of interest ($IA\_EXPERTISE\_RATIO_{it}$, $IA\_EXPERTISE_{it}$) to determine if the inferences on $ACCT\_FINC\_RATIO_{it}$ are consistent. Results continue to suggest $ACCT\_FINC\_RATIO_{it}$ is not associated with accruals-based earnings management and only moderately associated (p-value < 0.10) with $BIGR_{it}$. Further, in additional analyses I examine audit committees with both accounting expertise and internal audit expertise and internal audit experts with additional accounting knowledge. Refer to Chapter 5 for details.

suggests firms realize improvements only to operating income as the firm's proportion (or existence) of AC IA expertise increases. Economically, a one standard deviation increase in $IA\_EXPERTISE\_RATIO_{it}$ is associated with a 15% increase in $\Delta OPIN_{it}$ (relative to the sample mean of $\Delta OPIN_{it}$).[35]

Table 9 presents the results when real earnings management is the dependent variable. In column 1 (2), the association between $IA\_EXPERTISE\_RATIO_{it}$ ($IA\_EXPERTISE_{it}$) and REM_{it} is not statistically significant (p-value > 0.10). This indicates there is no significant difference in a firm's use of real earnings management between audit committees that have an IA expert and ACs that do not.

Collectively, the evidence from Tables 8 and 9 implies that there are some, but limited, non-financial reporting benefits for firms whose audit committee contains an IA expert. These benefits are only observed for improvement to operating income. Given audit committee's primary duty is to oversee and monitor financial reporting quality, it is perhaps not surprising that the benefits beyond accounting are minimal. While an audit committee with IA expertise may possess knowledge beyond financial-reporting, audit committees may not be influenced by this knowledge due to capacity constraints and the audit committee's principal focus on financial-reporting.

4.3. Robustness

My main results could be biased if an unobserved factor drives both the choice to have an individual with IA expertise on the AC and the outcome variable. One possibility is that firms that value IA have high quality internal audit functions, and high quality internal audit functions

[35] This is calculated by multiplying the coefficient from Column 3 of Table 8 (0.0256) by the standard deviation of $IA\_EXPERTISE\_RATIO_{it}$ (.06) and dividing by the mean of $\Delta OPIN_{it}$ (.01). The final product is multiplied by 100 to represent a percent. Descriptive statistics are available in Table 3.

improve financial reporting quality and non-financial reporting performance. It is also possible these firms are more likely to have internal IA expertise on the AC because they value internal audit.[36]

My main specification attempts to address this concern in three ways. First, I include firm fixed effects in all models. Firm fixed effects control for unobservable, time-invariant firm specific characteristics that may correlate with a firm's tendency to retain audit committee members with IA expertise and the applicable outcome variable (e.g., financial reporting quality). The use of a fixed effect structure provides a "within firm" analysis, removing the possibility that unobservable, time-invariant firm differences drive the results (Roberts and Whited 2013).[37] Second, I include a control for the disclosure of a Chief Audit Executive. The Chief Audit Executive is the leader of the internal audit function, and prior research documents a correlation between influential individuals and disclosure of their identities (Morse et al. 2016; Koo and Lee 2018). Though indirect, disclosure of employment of a Chief Audit Executive captures aspects of internal audit function quality (e.g., influential Chief Audit Executives are more likely to be leaders of high quality internal audit functions). Lastly, I include a robust vector of controls that include variables correlated with internal audit function quality (Prawitt et al. 2009; Ege 2015). These variables help mitigate the possibility that time varying, observable differences drive the results.

4.3.1. Entropy Balancing

To provide additional evidence of my inferences, I re-perform the analyses using an entropy-balanced sample. Entropy-balancing reweights control variables mean and skewness so

[36] Board candidates are typically nominated by board members or shareholders. It is important to note that for U.S. publicly listed firms AC members are elected by shareholders (Chen 2023). Because a firm cannot directly appoint who serves on its board or AC, this limits some concern that firms with high quality internal audit functions select AC members with IA expertise.

[37] I acknowledge firm fixed effects cannot rule out firm specific, time-varying unobservable characteristics.

that there are no statistical differences across treatment (i.e., firms-years where $IA\_EXPERTISE_{it}$ = 1) and control groups.[38] This design lessens concerns that firms-years with AC IA expertise are inherently different from those without this expertise (Hainmueller 2012). However, while entropy-balancing provides evidence results are not driven by observable differences in the covariates, it cannot empirically address unobservable characteristics.

Table 10 Panels A – D document the results of H1 and H2 after performing entropy balancing. I balance each sub-sample individually.[39] Related to accrual-based earnings management, Panel A shows the coefficient on $IA\_EXPERTISE_{it}$ is negatively and moderately significantly (p-value < 0.10) associated with AEM_{it}, supporting the findings in Table 6. Panel B examines the results for the misstatement sample (equation 1B). Consistent with the inferences in Table 7, $IA\_EXPERTISE_{it}$ is negatively and significantly (p-value < 0.01) associated with $BIGR_{it}$ but is not significantly associated with $MISSTATE_{it}$. Panel C presents the results of H2. After entropy balancing, the results are no longer significant when examining operating / firm efficiency ($FIRM\_EFF_{it}$, $\Delta OPIN_{it}$, $\Delta OPCF_{it}$), suggesting the inferences in Table 8 are not robust to placing a larger weight on observations closest to the treatment firm-years. Lastly, Table 8 Panel D documents a significant and negative association between REM_{it} and $IA\_EXPERTISE_{it}$. This is inconsistent with the results in Table 9, which are insignificant, but implies that AC IA expertise is associated with lower levels of real earnings management when weighting control firm-years most similar to treatment firm-years with higher amounts.

[38] I balance on the binary variable, $IA\_EXPERTISE_t$, that equals one when an audit committee has at least one member with experience in IA in year *t*, and zero otherwise.
[39] I balance on the mean (first moment), but results are consistent if I balance on both the mean and variance (second moments). I cannot balance on the mean, variance, and skewness because the data becomes collinear.

4.3.2. Untabulated Sensitivity Tests

I perform additional untabulated sensitivity tests to confirm the inferences are robust to alternative specifications. First, I re-run the analysis for Tables 6-9 after dropping influential observations. I define influential observations as firm-years whose Cook's distance is greater than one. The results remain consistent in sign and significance as those included in the main analysis. Second, because prior literature has shown overcontrolling can introduce bias (Whited, Swanquist, Shipman, and Moon 2022), I re-estimate Tables 6-9 after limiting the controls to a basic set that controls for firm size, financial reporting quality, financial health, and auditor quality. Results are consistent with the main analyses.

CHAPTER 5: ADDITIONAL ANALYSIS

5.1. Additional Analyses

I argue individuals with internal audit expertise will leverage this expertise when serving on an audit committee, and this will ultimately influence what and how the audit committee performs their duties. A central assumption to my prediction is that IA experts indeed rely on and are shaped by their experience working as an internal auditor. I perform several additional tests to examine instances when the internal audit experience is likely more salient to the AC IA expert and likely more influential. I also explore situations when the AC IA expert has more influence over audit committee actions and is more likely to change audit committee outcomes.

5.1.1. Significance of Internal Audit Expertise: Level of Expertise

To examine the effect of the significance or extent of internal audit expertise to an AC IA expert, I test whether the prominence of the internal audit role differentially impacts audit committee effectiveness. Individuals who worked in higher level internal audit roles (e.g., managers, directors, presidents) may develop more impactful expertise and in turn be more valuable to an audit committee. Additionally, higher level roles in internal audit may provide an experience that is richer, allowing for development of deeper internal audit knowledge. Audit managers and higher level roles focus on strategy, development, and communication, while lower level internal auditors focus on execution of audit plans. Further, higher level roles have more power and prominence within an organization, which may translate to an individual's ability to influence an audit committee (Ege et al. 2022).

To test this possibility, I separate the binary variable of interest, $IA\_EXPERTISE_{it}$, into two mutually exclusive variables: $MANAGER\_ABOVE\_IA_{it}$ and $OTHER\_IA_{it}$.

MANAGER_ABOVE_IA$_{it}$ is an indicator variable that equals one if the audit committee has at least one internal audit expert whose experience in internal audit is at the manager level or higher (i.e., manager, vice president, executive, president, senior manager, director), and zero otherwise. *OTHER_IA*$_{it}$ is an indicator variable that equals one if the audit committee has only internal audit experts whose experience is not manager level or higher, and zero otherwise.[40]

Table 11 presents the results for the level of IA expertise on the AC. For firm-years with audit committees that possess IA expertise, 65% have at least one IA expert with internal audit experience at the manager level or above (Panel A). Panel B columns 1-3 document the relationship between the level of internal audit experience for an AC IA expert and financial reporting quality (H1). Column 1 shows the association between accruals-based earnings management, while columns 2 and 3 focus on misstatement of the financial statements. Controls for the accruals-based model are identical to equation 1A, while controls for the misstatement model are identical to equation 1B. Multivariate results suggest ACs with at least one IA expert whose internal audit experience is at the manager level or higher (*MANAGER_ABOVE_IA*$_{it}$) are negatively associated with accruals-based earnings management (column 1: p-value < 0.01) and negatively associated with the likelihood of experiencing a material misstatement (column 3: *BIGR*$_{it}$: p-value < 0.01). Non-manager AC IA expertise (*OTHER_IA*$_{it}$) is not associated with financial reporting quality (p-value > 0.10).

Panel C presents the results of AC IA expertise partitioned by the level of internal audit experience and the impact on non-financial reporting performance (H2). Controls are identical to those included in the main analyses for each applicable dependent variable. Interestingly, AC IA

[40] *MANAGER_ABOVE_IA*$_{it}$ and *OTHER_IA*$_{it}$ are mutually exclusive. If an audit committee has more than one IA expert, *MANAGER_ABOVE_IA*$_{it}$ takes a value of one if there is at least one IA expert who has experience at the manager level or higher, and *OTHER_IA*$_{it}$ takes a value of zero.

expertise at the manager level or higher (*MANAGER_ABOVE_IA*$_{it}$) is moderately and positively associated with firm efficiency and changes in operating income (columns 1 and 2: p-value < 0.10), while non-manager AC IA expertise (*OTHER_IA*$_{it}$) is moderately and positively associated with changes in operating income and cash flow (columns 2 and 3: p-value < 0.10). No association is observed between real-earnings management and any level of AC IA expertise (Column 4), consistent with the main analysis.

Collectively, the results in Table 11 imply AC IA expertise gained at the manager level or higher is most valuable for associated improvements to financial reporting quality. This is consistent with the idea that the prominence of the internal audit experience an AC IA expert gained is an important contributor to the ability to influence an audit committee's monitoring duties. Other evidence implies benefits to non-financial performance can be obtained from any level of AC IA expertise, suggesting the level of the role is less critical to influencing nonfinancial duties of an audit committee.

5.1.2. Significance of Internal Audit Expertise: Proportion of Expertise

To further examine a scenario where internal audit is likely more important to an AC IA expert, I examine the proportion of time an individual works in internal audit relative to their total cumulative work experiences. Individuals who have spent a larger portion of their career working in internal audit may leverage their internal audit experiences more when advising an audit committee. To explore this possibility, I replace the variables of interest with a continuous variable that represents the proportion of internal audit work experience relative to total work experience for an AC IA expert (*IA_PROP*$_{it}$). This is calculated as the ratio of total cumulative days an audit committee member has worked in internal audit relative to the total cumulative days an audit committee member has worked in their entire career. Days worked are calculated up until the fiscal

year end for an audit committee year to represent the work ratio during an audit committee advising year. Higher levels of IA_PROP_{it} represent individuals who have spent a larger proportion of their career in internal audit.

On average, AC IA experts spend 18% of their career working in internal audit, suggesting internal audit is a meaningful experience for most AC IA experts (Table 2 Panel A). Table 12 Panel A columns 1-3 documents the relationship between the proportion of internal audit experience an AC IA expert possesses and impact on financial reporting quality (H1).[41] Column 1 shows a negative and significant association between IA_PROP_{it} and accruals-based earnings management (p-value < 0.05), while column 3 shows a negative and significant association between IA_PROP_{it} and material misstatement of the financial statements (p-value < 0.05). The results suggest that as the proportion of time an AC IA expert spends working in internal audit roles increases, financial reporting quality improves.

Panel B presents the results for the proportion of internal audit experience an AC IA expert has and the impact on non-financial reporting performance (H2). Interestingly, there is no significant association between the proportion and any measure of non-financial reporting performance (p-value > 0.10). A higher percentage of time an AC IA expert spends in internal audit is not incrementally beneficial beyond financial reporting quality.

Together the results suggest that AC IA experts who have spent a larger portion of their career in internal audit are most beneficial in improving financial reporting quality. This is consistent with individuals who worked relatively longer in internal audit being more influenced

[41] Controls for all tests in the additional analyses are identical to those in the main analyses.

by their knowledge from internal audit. However, the higher levels of internal audit experience are not significantly beneficial for monitoring non-financial reporting performance.

5.1.3. Influence of Internal Audit Expert

Prior research documents the importance of both the expertise and the authority of audit committee members in effectively performing their duties (Badolato et al. 2014; Beck and Mauldin 2014). These studies illustrate that the influence of an audit committee member is critical in their ability to impart their knowledge on an AC. I perform two additional analyses to test whether the influence of the AC IA expertise differentially affects AC outcomes.

First, I examine instances where the AC IA expert is also a disclosed financial expert on the audit committee. The Sarbanes-Oxley Act of 2002 requires that audit committees disclose whether the audit committee has at least one financial expert and the name of the individual if one exists (SEC 2003). While audit committees can, and usually do, have more than one individual that meets the SEC's definition of a financial expert, these individuals are not always a "disclosed financial expert" on the audit committee. Prior research has shown the disclosure of an individual is associated with importance and prominence of the individual and role (Morse et al. 2016; Koo and Lee 2018). A disclosed expert is likely to have more power relative to other members on the audit committee and may be more likely to influence the actions of an AC.

To test this possibility, I partition the binary variable of interest, $IA\_EXPERTISE_{it}$, into two mutually exclusive variables: $IA\_DISC\_EXPERT_{it}$ and $IA\_NOT\_DISC\_EXPERT_{it}$. $IA\_DISC\_EXPERT_{it}$ is an indicator variable that equals one if the audit committee has at least one internal audit expert who is also a disclosed financial expert, and zero otherwise.

IA_NOT_DISC_EXPERT$_{it}$ is an indicator variable that equals one if the audit committee has only internal audit experts who are not also disclosed financial experts, and zero otherwise.[42]

Table 13 shows the results when bifurcating on whether the AC has at least one AC IA expert who is a disclosed financial expert on the audit committee. 79% of audit committees with IA expertise also disclose the IA expert(s) as a financial expert (Panel A). Panel B columns 1-3 document the relationship between ACs with at least one IA expert who is also a disclosed financial expert and the impact on financial reporting quality (H1). Column 1 shows a negative and significant association between ACs with at least one IA expert who is also disclosed financial expert (*IA_DISC_EXPERT*$_{it}$) and accruals-based earnings management (p-value < 0.01), while column 3 shows a negative and significant association between *IA_DISC_EXPERT*$_{it}$ and material misstatement of the financial statements (p-value < 0.01). There is no statistical association between *IA_NOT_DISC_EXPERT*$_{it}$ and any measure of financial reporting quality. Together, the results indicate being both an IA expert and a disclosed financial expert is important in incrementally improving financial reporting quality. This is consistent with more prominent AC IA experts being more influential over AC monitoring duties and actions.

Panel C presents the results for the AC IA experts who are also disclosed financial experts and the impact on non-financial reporting performance (H2). Interestingly, ACs who only have IA experts who are not also disclosed financial experts are positively and significantly associated with improvements to both operating income and operating cash flow (p-value < 0.05). This suggests that AC IA experts who are not also disclosed financial experts provide benefits to firm performance in the form of operating enhancements. A possible explanation for this is that an AC

[42] *IA_DISC_EXPERT*$_{it}$ and *IA_NOT_DISC_EXPERT*$_{it}$ are mutually exclusive. If an audit committee has more than one IA expert, *IA_DISC_EXPERT*$_{it}$ takes a value of one if there is at least one IA expert who is a disclosed financial expert, and *IA_NOT_DISC_EXPERT*$_{it}$ takes a value of zero.

IA expert who is not a disclosed financial expert can focus on areas outside of financial reporting, allowing them to utilize the unique knowledge from internal audit to advise on operating activities.

To further test instances where the influence of the AC IA expert is greater, I next examine AC IA experts that are also the chair of the audit committee. The chair of the audit committee is the leader of the audit committee. Practitioners emphasize the importance of the AC chair in creating an effective audit committee (Copnell 2019). The audit committee chair is critical to the strategy of the audit committee, including guiding the focus of the audit committee, understanding key risks, and overseeing internal audit (Copnell 2019). AC IA experts who are also audit committee chairs likely have greater power over the audit committee and have a greater ability to influence how the audit committee performs its duties.

I partition the binary variable of interest, $IA\_EXPERTISE_{it}$, into two mutually exclusive variables: $IA\_AC\_CHAIR_{it}$ and $IA\_NOT\_AC\_CHAIR_{it}$. $IA\_AC\_CHAIR_{it}$ is an indicator variable that equals one if the audit committee has at least one internal audit expert who is also an audit committee chair, and zero otherwise. $IA\_NOT\_AC\_CHAIR_{it}$ is an indicator variable that equals one if the audit committee has only internal audit experts who are not also audit committee chairs, and zero otherwise.[43]

Table 14 shows the results when bifurcating on whether the AC has at least one AC IA expert who is an audit committee chair. 47% of audit committees with IA expertise have at least one AC IA expert who is an audit committee chair (Panel A). Panel B columns 1-3 document the relationship between ACs with at least one IA expert who is an AC chair and the impact on

[43] $IA\_AC\_CHAIR_{it}$ and $IA\_NOT\_AC\_CHAIR_{it}$ are mutually exclusive. If an audit committee has more than one IA expert, $IA\_AC\_CHAIR_{it}$ takes a value of one if there is at least one IA expert who is an audit committee chair, and $IA\_NOT\_AC\_CHAIR_{it}$ takes a value of zero.

financial reporting quality (H1). Column 1 shows a negative and significant association between ACs with at least one IA expert who is an AC chair ($IA\_AC\_CHAIR_{it}$) and accruals-based earnings management (p-value < 0.05), while column 3 shows a negative and significant association between any AC IA expert and material misstatement of the financial statements (p-value < 0.05). Together, the results indicate being both an IA expert and an audit committee chair is important in incrementally improving accruals-based earnings management, but this is less critical for misstatement risk, as any AC IA expert impacts the likelihood of material misstatement. A possible explanation for this is that holding a position of power via AC chair is important in mitigating smaller, more judgement manipulations (i.e., accruals-earnings management), but is not necessary in mitigating egregious, publicly visible signals of financial reporting failure (i.e., material misstatement).

Panel C presents the results for the AC IA experts who are AC chairs and the impact on non-financial reporting performance (H2). ACs with at least one IA expert who is an AC chair are positively and significantly associated with firm efficiency (column 1: p-value < 0.05), while ACs who have only IA experts who are not AC chairs are positively and significantly associated with changes to only operating income (p-value < 0.05). Together the evidence suggests being both an AC chair and AC IA expert is less consistently associated with benefits to non-financial performance.

5.1.4. Internal Audit Expertise and Other Expertise

Audit committee members are often individuals who are more senior in their careers and have held several positions and jobs. I next examine whether an AC IA expert with additional work experience in accounting, finance, or as an auditor at a public accounting firm is beneficial in improving audit committee outcomes. To do this, I partition the binary variable of interest,

IA_EXPERTISE$_{it}$, into two mutually exclusive variables: *IA_ACCT_EA*$_{it}$ and *IA_NO_ACCT_EA*$_{it}$. *IA_ACCT_EA*$_{it}$ is an indicator variable that equals one if the audit committee has at least one internal audit expert who has also worked in accounting, finance, or as an auditor at a public accounting firm, and zero otherwise.[44] *IA_NO_ACCT_EA*$_{it}$ is an indicator variable that equals one if the audit committee has only internal audit experts who have not also worked in accounting, finance, or as an auditor at a public accounting firm, and zero otherwise.

Table 15 presents the results of this examination. For audit committees with IA expertise, 79% have at least one AC IA expert who has also worked in either accounting, finance, or as an auditor at a public accounting firm (Panel A). Because AC members tend to be more senior in their careers (Dao, Huang, and Zhu 2013), it is not surprising most AC IA experts have other career experiences besides internal audit.

Overall, the results suggest that ACs with at least one IA expert who has also worked in other accounting, finance, or public auditing roles are associated with incremental benefits to financial reporting quality in the form of lower levels of accruals-based earnings management and a lower likelihood of experiencing a material misstatement of the financial statement (Panel B). However, ACs with at least one IA expert who has also worked in other accounting, finance, or public auditing roles have no significant association with non-financial performance (Panel C). In contrast, ACs with IA experts without other accounting, finance, or public auditing experiences are associated with a lower likelihood of material misstatements and higher levels of operating income. Together the results imply that additional experience in accounting, finance, or public auditing is most beneficial for reducing within GAAP accruals-based earnings management, but

[44] I identify other roles using the phrases described for *ACCT_FINC_RATIO*$_{it}$ and *EA_EXP*$_{it}$ except I do not include individuals with a certified public accounting license. Refer to Appendix A for details.

not necessary for egregious financial reporting failures (i.e., material misstatement). Given accruals-based earnings management is closely related to GAAP and difficult to detect, it is logical that other accounting, finance, or public auditing experience is an important contributor to lessening this.

5.1.5. Other Audit Committee Member's Influence

The above additional analyses thus far have focused on attributes at the individual AC IA expert level (e.g., other career experiences of the individual, time in internal audit). However, AC IA expertise may also be contingent on the skills and influence of other members on the audit committee. For example, if the audit committee's only member with financial literacy is the IA expert, the audit committee may rely more heavily on the IA expert for financial reporting oversight. However, if an audit committee has additional members with an understanding of financial reporting, the IA expert may be able to focus their attention on broader risks unrelated to accounting. Alternatively, additional individuals on an audit committee that understand and contribute to financial reporting monitoring may create a collaborative environment that enhances the knowledge of the IA expert.

I explore this possibility in an additional test where I partition the binary variable of interest, $IA\_EXPERTISE_{it}$, into two mutually exclusive variables: $IA\_AND\_AC\_ACCT_{it}$ and $IA\_NO\_AC\_ACCT_{it}$. $IA\_AND\_AC\_ACCT_{it}$ is an indicator variable that equals one if the audit committee has at least one internal audit expert and at least one AC member who is an accounting expert and is not an IA expert, and zero otherwise.[45] $IA\_NO\_ACCT\_EA_{it}$ is an indicator variable

[45] Accounting expertise is defined in $ACCT\_FINC\_RATIO_{it}$. Refer to Appendix A for details.

that equals one if the audit committee has at least one internal audit expert and zero additional accounting experts, and zero otherwise.

Table 16 reports the results of the test. On average, 70% of audit committees with at least one IA expert also have an additional member who has accounting expertise and is not an IA expert (Panel A). The multivariate results suggest that additional accounting expertise on the audit committee is important for an AC IA expert to enhance AC outcomes. ACs with both an IA expert and additional accounting expertise are positive and significantly associated with financial reporting quality and changes in operating income. Together, the results imply the total composition of the audit committee is central in enabling an IA expert to generate better AC outcomes.

5.1.6. Summary of Additional Analyss

The additional analyses indicate AC IA expertise is most beneficial when the internal audit experience is more significant to the individual and when the AC IA expert has more influence over the audit committee. These results are strongest and most consistent in an AC's ability to effectively monitor financial reporting. AC IA experts with internal audit experience at the manager level or higher, who have spent more of their career in internal audit, are a disclosed financial expert on the audit committee, or are an audit committee chair are positively associated with financial reporting quality. This implies the influence of an AC IA expert over an AC and the significance of internal audit to the expert are important in enabling an AC IA expert to improve an AC's oversight of financial reporting. Further, analyses also support the conclusion that the overall composition of the audit committee (i.e., other expertise) and other career experiences (i.e., other accounting, finance, or public auditing) can influence an AC IA experts' impact to financial oversight.

Tests that examine an AC IA experts' incremental benefit to non-financial reporting performance are less contingent on attributes of the expert. Results less consistently conclude that the influence or significance of the IA expert differentially impacts the ability to oversee non-financial aspect. Overall, it appears that when the AC IA expert does not hold prominent roles (i.e., disclosed expert, chair), ACs with IA expertise are associated with moderate, but limited, increases to operating performance.

CHAPTER 6: CONCLUSION

Research on internal audit is still emerging (DeFond and Zhang 2014). Even more nascent is literature on whether skills learned from experience as an internal auditor is incrementally beneficial. This study explores whether IA expertise is valuable in the setting of the audit committee. I find firms with AC IA expertise are positively associated with financial reporting quality and operating income. Within a firm, increases in the proportion (or presence) of AC IA expertise is associated with lower levels of accruals-based earnings management and a lower likelihood a firm experiences a material misstatement of the financial statements. I also find AC IA expertise is associated with positive increases in operating income, suggesting that benefits of this skillset may not be limited to financial reporting quality.

In additional analyses, I explore whether AC IA experts whose internal audit experience is more meaningful or who have greater influence over the audit committee are more likely to generate improvements to audit committee outcomes. I find evidence that supports this conclusion. Audit committees whose internal audit expert worked in internal audit at the manager level or higher or spent a longer proportion of their career in internal audit are positively associated with financial reporting quality. Further, AC IA experts who are also a disclosed financial expert or an audit committee chair are associated with better financial reporting quality.

Overall, this study contributes to the literature on audit committees and internal audits. While a vast literature has studied AC effectiveness, the literature predominantly focuses on the impact of traditional accounting, financial, or public auditing experience (e.g., Bédard et al. 2004). The importance of internal audit expertise has not been examined. The demand for internal auditors within a firm continues to rise (Zippia 2023), yet firms struggle to find qualified talent to fill internal audit roles (Flood 2023). This study explores an alternative avenue to obtain IA expertise:

the audit committee. It should be of interest to regulators and investors when assessing audit committee effectiveness, as well as when examining the value of skills learned working as an internal auditor.

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APPENDIX A: VARIABLE DEFINITIONS

Variable	Definition	Source
Dependent Variables:		
AEM	The residual from the following discretionary accruals modified Jones model (Jones 1991; Dechow et al. 1995) with controls for timely loss recognition following Ball and Shivakumar (2006). The model is estimated by industry (SIC2) year for groups with a minimum of 15 observations per group: $Accruals_{it} = \alpha_1 + \alpha_2(1/A_{it-1}) + \alpha_3((\Delta S_{it} - \Delta REC_{it}) /A_{it-1}) + \alpha_4(PPE_{it} /A_{it-1}) + \alpha_5(CFO_{it} /A_{it-1}) + \alpha_6 NEG\_CFO_{it} + \alpha_7((NEG\_CFO_{it} * CFO_{it})/A_{it-1}) + \varepsilon_{it}$, Accruals = earnings before extraordinary items and discontinued operations, minus operating cash flows in *t*, scaled by total assets at the end of *t-1*; A = total assets S= total sales; REC = total receivables; PPE = gross plant, property, and equipment; CFO = cash flows from operations; NEG_CFO = indicator variable equal to one if CFO < 0, and zero otherwise.	Compustat
REM	Following Roychowdhury (2006), *REM* equals the sum of abnormal production (residual from equation (3A) below) and negative abnormal discretionary expenses (residual from equation (3B) below times negative one). The model is estimated by industry (SIC2) year for groups with a minimum of 15 observations per group: 3A: $PROD_{it} / A_{it-1} = \alpha_1 + \alpha_2(1/A_{it-1}) + \alpha_3(S_{it}/A_{it-1}) + \alpha_4 (\Delta S_{it} /A_{it-1}) + \alpha_5(\Delta S_{it-1} /A_{it-1}) + \varepsilon_{it}$, 3B: $DISX_{it} / A_{it-1} = \alpha_1 + \alpha_2(1/A_{it-1}) + \alpha_3(S_{it-1} /A_{it-1}) + \varepsilon_{it}$, PROD = sum of cost of goods sold in year *t* and the change in inventory from *t*-1 to *t*; DISX = sum of selling, general and administrative expenses in *t*; A = total assets; S= total sales Following Srivastava 2019, DISX is measured with XSGA from Compustat.	Compustat
MISSTATE	An indicator that equals 1 if the financials in year *t* contains a misstatement announced in a future period, and 0 otherwise.	Audit Analytics
BIGR	An indicator that equals 1 if the financials in year *t* contains a non-reliance (i.e., Item 402 in 10-K) misstatement announced in a future period, and 0 otherwise.	Audit Analytics
FIRM_EFF	A continuous variable ranging from 0 to 1. The variable is taken directly from Demerjian et al. (2012) and represents firm *i's* ratio of revenue generating outputs to inputs in year *t*, where highest numbers represent more efficient firms. The	Demerjian et al. 2012

	data is available at: https://peterdemerjian.weebly.com/managerialability.html	
ΔOPIN	Operating income before depreciation in year *t* minus operating income before depreciation in year *t-1*, scaled by average total assets.	Compustat
ΔOPCF	Cash flow from operations in year *t* minus cash flow from operations in year *t-1*, scaled by average total assets.	Compustat
Variables of Interest (Main and Determinants Analyses):		
IA_EXPERTISE_RATIO	The number of individuals with prior experience working as an internal auditor that serve on an audit committee in year *t* divided by the total number of members on an audit committee in year *t.*	BoardEx
IA_EXPERTISE	An indicator variable that equals one if the firm has at least one individual on the audit committee in year *t* with prior work experience as an internal auditor, 0 otherwise.	BoardEx
FIRST_IA_EXPERTISE	An indicator variable that equals one for the first time *IA_EXPERTISE* equals one for firm *i*, 0 otherwise.	BoardEx
Control Variables Equation 1A:		
MKT_SHARE	Sales divided by the sum of sales in the 3-digit SIC code industry year.	Compustat
ALTMANZ	Altman Z score from (Altman 1983) calculated as: 0.717 * (current assets$_t$-current liabilities$_t$) / total assets$_t$ + 0.847 * retained earnings$_t$/ total assets$_t$ + 3.107 * earnings before interest and taxes$_t$ / total assets$_t$ + 0.42 * book value of equity$_t$ / total liabilities$_t$ + 0.998 * sales$_t$ / total assets$_t$	
INST_OWN	The percentage of outstanding shares owned by institutional owners.	Thomson Reuters
MTR	The simulated marginal tax rate, developed and provided by Professor John Graham (https://faculty.fuqua.duke.edu/~jgraham/taxform.html). For missing values, tax rates are estimated using the estimated coefficients from Table 4, Panel A, Model C in Graham and Mills (2008).	Graham and Mills (2008)
BIGN	An indicator variable that equals one if the firm is audited a BIGN auditors in year *t*, and 0 otherwise. A BIGN auditor is defined as any of the following public accounting firms: EY, Deloitte, PwC, KPMG, Arthur Anderson, Grant Thorton.	Audit Analytics
LONG_AUD_TENURE	An indicator variable that equals one if the length of the auditor-client relationship is greater than the sample median, and 0 otherwise.	Audit Analytics

NOA	An indicator variable that equals one if net operating assets (NOA) divided by lagged total assets is above the industry-year median, and 0 otherwise. NOA is calculated as shareholder's equity minus cash and marketable securities plus total debt.	Compustat
CYCLE	Following Dechow (1994), day's receivable plus the day's sales in inventory calculated as: (average receivables) / ($sales_t$ / 360) + ((average inventory) / (cost of goods $sold_t$ / 360)	Compustat
ROA	Income before extraordinary items divided by lagged total assets.	Compustat
SIZE	The natural log of one plus total assets.	Compustat
BM	The book value of equity divided by the market value of equity.	Compustat
PREMAN_EARN	Following Zang (2012), earnings before extraordinary items minus total accruals unscaled and total production costs, plus discretionary expenses, all divided by lagged total assets.	Compustat
SALES_GROWTH	Current year sales minus prior year sales, scaled by prior year sales.	Compustat
RESTRUCT	Indicator variable that equals one if the firm reports a non-zero restructuring charge, and 0 otherwise.	Compustat
WRITEDOWN	An indicator variable that equals one if the firm reports an asset write-down other than goodwill, and 0 otherwise.	Compustat
LN_ANALYST	The natural log of one plus the number of analysts following the firm in year *t*.	IBES
SHARES	The natural log of one plus the number of common shares outstanding.	Compustat
ISSUE	An indicator variable that equals one if the firm issues equity in the following fiscal year, and 0 otherwise.	Compustat
BEAT	Number of times the firm meets or beats analysts' consensus forecasts in the past four quarters.	IBES
BOARD_INDEP	Proportion of independent directors serving on firm *i's* board in year *t*.	BoardEx
CEO_IS_CHAIR	An indicator variable that equals one if the CEO for firm *t* is chairman of the board in year *t*, and 0 otherwise.	BoardEx

ACCT_FINC_RATIO	The proportion of audit committee members with accounting financial expertise in year *t*. An accounting financial expert is defined as someone who has experience working as any of the following: Chief Financial Officer, Accounting Officer, Chief Accountant, Controller, Certified Public Accountant, Chartered Accountant, Head of Accounting, Vice President of Accounting, Accounting Director, Vice President of Finance, or Treasurer (following Badolato et al. 2014, Cohen et al. 2014, and Ashraf et al. 2019).	BoardEx
LEGAL_EXPERT	An indicator variable that equals one if firm *i* has at least one legal expert on the audit committee in year *t*, and zero otherwise. A legal expert is defined as someone with experience as an attorney, lawyer, or general counsel or has a Juris Doctor or Doctor of Jurisprudence (following Krishnan et al. 2011 and Ashraf et al. 2019).	BoardEx
IT_EXPERT	An indicator variable that equals one if firm *i* has at least one IT expert on the audit committee in year *t,* and zero otherwise. Following Ashraf et al. 2019, an IT expert as someone with experience as any of the following: Chief Information Officer, Director, Vice President, Senior Vice President, Head, Manager, or General Manager of Information Technology, Information, Information Services, Information Systems, or Information Management.	BoardEx
EA_EXP	An indicator variable that equals one if the firm has at least one individual on the audit committee in year *t* with prior work experience as an auditor at a public accounting / CPA firm, and 0 otherwise.	BoardEx
AC_FEMALE_RATIO	The proportion of audit committee members that are female.	BoardEx
CAE	Following Zang 2019, an indicator variable set equal to one if the firm has a Chief Audit Executive disclosed in BoardEx in year *t*, and zero otherwise. A Chief Audit Executive is defined as someone with currently serving in the following roles: Auditor General, Chief Audit and Compliance Officer, Chief Audit Executive, Chief Audit Officer, Chief Auditor, Chief Internal Audit Officer, Chief Internal Auditor, Chief of Internal Audit, Chief Risk & Audit Executive, Chief Risk and Audit Officer, Corporate Director - Internal Audit, Director - Audit, Director - Internal Audit, Director of Audit Services, Director of Internal Audit, General Auditor, General internal auditor, General Manager - Internal Audit, Head of Audit, Head of Internal Audit, Senior Audit Manager, Senior Director - Audit, Senior Manager - Internal Audit, Vice President - Audit, Vice President - Corporate Audit Services, Vice	BoardEx

	President - Internal Audit, Vice President of Internal Audit, VP - Audit, VP - Internal Audit, VP of Internal Audit.	
PRED_REM	Fitted value from estimating equation (1A) when estimating REM.	Compustat
UNPRED_REM	Residual from estimating equation (1A) when estimating REM.	Compustat
Additional Control Variables Equation 1B:		
ISSUANCE	An indicator variable that equals one if the amount of debt issued or stock sold in year *t* that is greater than 10% of total assets in year *t*, and 0 otherwise.	Compustat
LEV	Short and long term debt scaled by total assets for firm *i* in year *t*.	Compustat
LOSS	An indicator variable that equals one if firm *i's* income before extraordinary items is negative in year *t*, and 0 otherwise.	Compustat
FOREIGN	An indicator variable that equals one if firm *i's* pre-tax foreign income is non-zero in year *t*, and 0 otherwise.	Compustat
LN_SEGMENTS	The natural log of one plus the number of business and geographical segments for firm *i* in year *t*.	Compustat
AQC	An indicator variable that equals one if firm *i* engages in an acquisition in year *t*, and 0 otherwise.	Compustat
MW	An indicator variable that equals one if a material weakness over internal controls is disclosed in SOX 404 or SOX 302, and 0 otherwise.	Audit Analytics
Additional Control Variables Equation 2:		
LN_MVE	The natural log of the market value of equity for firm *i* in year *t.*	Compustat
FIRM_AGE	The natural log of 1 plus the age of firm *i* in year *t*.	Compustat
FCF	An indicator variable that equals one if a firm's free cash flow is not negative, and 0 otherwise. FCF is defined as earnings before depreciation and amortization less capital expenditures and the change in working capital, where working capital is defined as (RECT + INVT + ACO – LCO – AP).	Compustat
RET	The annual stock return for the firm calculated as (closing price in *t* minus closing price in *t-1*) / closing price in *t-1* where the price is adjusted for stock splits and dividends.	Compustat

CFO_SD	The standard deviation of cash flow from operations scaled by average total assets from years *t-5* to *t-1*.	Compustat
HHI	The Herfindahl index for industry concentration calculated as the industry year sum of firm *i's* sales in year *t* divided by the total industry sales in year *t* where the ratio is squared. Industries are defined using 2 digit SIC codes.	Compustat
ICFR_AUDIT	An indicator variable that equals one if the firms was subject to a SOX 404B audit in year *t*, and 0 otherwise.	Audit Analytics
Variables in Additional Analyses:		
MANAGER_ABOVE_IA	An indicator that equals one if the audit committee has at least one internal audit expert with experience in internal audit at the manager level or higher (i.e., manager, vice president, executive, president, senior manager, director), and 0 otherwise.	BoardEx
OTHER_IA	An indicator that equals one if the audit committee has only internal audit expert(s) with experience in internal audit below the manager level, and 0 otherwise.	BoardEx
IA_PROP	The proportion of time an audit committee internal audit expert spent working in internal audit relative to their total career (cumulative). If more than one internal audit expert is on an audit committee, this becomes the average of each individual's internal audit proportion.	BoardEx
IA_DISC_EXPERT	An indicator that equals one if the audit committee has at least one internal audit expert who is also a disclosed financial expert on the audit committee, and 0 otherwise.	BoardEx
IA_NOT_DISC_EXPERT	An indicator that equals one if the audit committee has only internal audit expert(s) who are not also a disclosed financial expert on the audit committee, and 0 otherwise.	BoardEx
IA_AC_CHAIR	An indicator that equals one if the audit committee has at least one internal audit expert who is also an audit committee chair, and 0 otherwise.	BoardEx
IA_NOT_AC_CHAIR	An indicator that equals one if the audit committee has only internal audit expert(s) who are not an audit committee chair(s), and 0 otherwise.	BoardEx
IA_ACCT_EA	An indicator that equals one if the audit committee has at least one internal audit expert who has additional experience in accounting, finance, or auditing at a public accounting firm, and 0 otherwise.	BoardEx
IA_NO_ACCT_EA	An indicator that equals one if the audit committee has only internal audit expert(s) who have no additional experience in	BoardEx

	accounting, finance, or auditing at a public accounting firm, and 0 otherwise.	
IA_AND_AC_ACCT	An indicator that equals one if the audit committee has at least one internal audit expert and at least one member with additional accounting expert, and 0 otherwise.	BoardEx
IA_NO_AC_ACCT	An indicator that equals one if the audit committee has at least one internal audit expert and no additional accounting experts, and 0 otherwise.	BoardEx

APPENDIX B: TABLES

TABLE 1

Sample Selection

Panel A: Financial reporting quality sample

	Observations
Firm-year observations from 2005 - 2020 with cik and fyear (Compustat)	137,200
Less: Firms-years from financial and utility industries	(45,843)
Less: Firm-years missing BoardEx audit committee data	(45,023)
Less: Missing data for equations 1A and 1B and singletons	(14,212)
Sample for Hypothesis 1	**32,122**
Unique Firms	*3,772*

Panel B: Non-financial reporting performance sample

	Observations		
Related Measure	Firm Efficiency	ΔOPIN / ΔOPCF	REM
Firm-year observations from Hypothesis 1	32,122	32,122	32,122
Less: Missing data to calculate required variables and singletons	(2,864)	(2,288)	-
Sample for Hypothesis 2	**29,258**	**29,834**	**32,122**
Unique Firms	*3,384*	*3,444*	*3,772*

TABLE 2

Descriptive Statistics on Internal Audit Experts

Panel A: Information on audit committee internal audit experts

			N = 1,832		
Variables	**Mean**	**Std. Dev.**	**25%**	**Median**	**75%**
$ACCT\_FINC\_EXPERT_t$	0.76	0.43	1.00	1.00	1.00
CPA_t	0.56	0.50	1.00	1.00	1.00
EA_EXP_t	0.25	0.44	0.00	0.00	1.00
IT_EXPERT_t	0.02	0.13	0.00	0.00	0.00
$LEGAL\_EXPERT_t$	0.03	0.18	0.00	0.00	0.00
$EXCLUSIVE\_IA_t$	0.12	0.33	0.00	0.00	0.00
$CURRENT\_IA_t$	0.04	0.19	0.00	0.00	0.00
IA_PROP_t	0.18	0.16	0.06	0.12	0.25
$MANAGER\_ABOVE\_IA_t$	0.65	0.48	0.00	1.00	1.00
$TIME\_IA\_YRS_t$	6.16	5.66	2.00	4.00	9.01
$DISCLOSED\_EXPERT_t$	0.78	0.42	1.00	1.00	1.00
AC_CHAIR_t	0.45	0.50	0.00	0.00	1.00

Number of unique audit committee members with internal audit expertise = 280

This panel presents descriptive information at the audit committee member level for individuals that are internal audit experts. $ACCT\_FINC\_EXPERT_t$ equals one if the audit committee internal audit expert also has experience in accounting or finance, and zero otherwise. CPA_t equals one if the audit committee internal audit expert also is a Certified Public Accountant or Chartered Accountant, and zero otherwise. EA_EXP_t equals one if the audit committee internal audit expert also has experience in auditing at a public accounting firm, and zero otherwise. IT_EXPERT_t equals one if the audit committee internal audit expert is also an information technology expert, and zero otherwise. $LEGAL\_EXPERT_t$ equals one if the audit committee internal audit expert is also a legal expert, and zero otherwise. $EXCLUSIVE\_IA_t$ equals one if the audit committee internal audit expert has no other work experience outside of internal audit, and zero otherwise. $CURRENT\_IA_t$ equals one if the audit committee internal audit expert concurrently works in an internal audit role and serves on the audit committee, and zero otherwise. IA_PROP_t is a continuous variable that measures the proportion of the individual's career spent working in internal audit. $DISCLOSED\_EXPERT_t$ equals one if the audit committee internal audit expert is also a disclosed financial expert on the audit committee, and zero otherwise. AC_CHAIR_t equals one if the audit committee internal audit expert is also an audit committee chair, and zero otherwise.

TABLE 2 (cont'd)

Panel B: Audit committees with internal audit expertise

	N = 1,776				
Variables	**Mean**	**Std. Dev.**	**25%**	**Median**	**75%**
ADDIT_ACCT_FINC_EXPERT$_t$	0.70	0.46	0.00	1.00	1.00
ADDIT_EA_EXP$_t$	0.08	0.27	0.00	0.00	0.00
ADDIT_IT_EXPERT$_t$	0.04	0.19	0.00	0.00	0.00
ADDIT_LEGAL_EXPERT$_t$	0.22	0.41	0.00	0.00	0.00

Number of unique audit committees with internal audit expertise = 373

This panel present descriptive information at the audit committee level for audit committees with at least one internal audit experts. *ADDIT_ACCT_FINC_EXPERT$_t$* equals one if the audit committee has at least one internal audit expert and has at least one additional member who is an accounting expert, and zero otherwise. *ADDIT_EA_EXP$_t$* equals one if the audit committee has at least one internal audit expert and at least one additional member who has worked as an auditor at a public accounting firm, and zero otherwise. *ADDIT_IT_EXPERT$_t$* equals one if the audit committee has at least one internal audit expert and has at least one additional member who is an information technology expert, and zero otherwise. *ADDIT_LEGAL_EXPERT$_t$* equals one if the audit committee has at least one internal audit expert and has at least one additional member who is a legal expert, and zero otherwise.

TABLE 3
Descriptive Statistics

Panel A: Descriptive Statistics (Firm-Year Panel)

			N = 32,122		
Variable	**Mean**	**SD**	**p25**	**Median**	**p75**
Test Variable					
IA_EXPERTISE_RATIO$_t$	0.02	0.06	0.00	0.00	0.00
IA_EXPERTISE$_t$ (binary)	0.06	0.23	0.00	0.00	0.00
Equation 1A (AEM)					
AEM$_t$	0.02	0.19	-0.05	0.01	0.08
MKT SHARE$_{t-1}$	0.05	0.12	0.00	0.01	0.04
ALTMANZ$_{t-1}$	1.77	3.86	1.14	2.05	3.05
INST_OWN$_{t-1}$	0.60	0.33	0.32	0.70	0.88
MTR$_t$	0.15	0.14	0.02	0.10	0.32
BIGN$_t$	0.80	0.40	1.00	1.00	1.00
LONG_AUD_TENURE$_t$	0.58	0.49	0.00	1.00	1.00
NOA$_{t-1}$	0.59	0.49	0.00	1.00	1.00
CYCLE$_{t-1}$	143.68	245.58	70.26	110.61	165.08
ROA$_t$	-0.02	0.38	-0.03	0.04	0.09
SIZE$_t$	6.47	2.02	5.03	6.48	7.85
BM$_t$	0.52	0.66	0.23	0.42	0.70
SALES_GROWTH$_t$	0.14	0.54	-0.03	0.07	0.19
RESTRUCT$_t$	0.37	0.48	0.00	0.00	1.00
WRITEDOWNt	0.16	0.37	0.00	0.00	0.00
LN_ANALYST$_t$	1.94	1.01	1.39	2.08	2.71
SHARES$_t$	3.88	1.26	3.05	3.78	4.61
ISSUE$_{t+1}$	0.79	0.41	1.00	1.00	1.00
BEAT$_t$	2.30	1.45	1.00	3.00	4.00
BOARD_INDEP$_t$	0.77	0.13	0.70	0.80	0.88
CEO_IS_CHAIR$_t$	0.57	0.50	0.00	1.00	1.00
ACCT_FINC_RATIO$_t$	0.38	0.25	0.25	0.33	0.50
LEGAL_EXPERT$_t$	0.30	0.46	0.00	0.00	1.00
IT_EXPERT$_t$	0.04	0.21	0.00	0.00	0.00
EA_EXP$_t$	0.18	0.38	0.00	0.00	0.00
AC_FEMALE_RATIO$_t$	0.12	0.17	0.00	0.00	0.25
CAE$_t$	0.07	0.25	0.00	0.00	0.00
PRED_REM$_t$	0.06	0.38	-0.11	0.07	0.26
UNPRED_REM$_t$	0.00	0.18	-0.09	0.00	0.09

TABLE 3 (cont'd)

Additional Variables for Equation 1B (Misstatement)

			N = 32,122		
$MISSTATE_t$	0.09	0.29	0.00	0.00	0.00
$BIGR_t$	0.03	0.18	0.00	0.00	0.00
$INST\_OWN_t$	0.63	0.32	0.37	0.73	0.89
$ISSUANCE_t$	0.37	0.48	0.00	0.00	1.00
LEV_t	0.22	0.23	0.02	0.18	0.33
$LOSS_t$	0.33	0.47	0.00	0.00	1.00
$FOREIGN_t$	0.59	0.49	0.00	1.00	1.00
$LN\_SEGMENTS_t$	1.04	0.43	0.69	0.69	1.39
AQC_t	0.41	0.49	0.00	0.00	1.00
MW_t	0.12	0.32	0.00	0.00	0.00

Additional Variables for Equation 2 (Non-Financial Reporting Performance)

			Firm Efficiency: N = 29,258 Operating Performance: N = 29,834 REM: N = 32,122		
$FIRM\_EFF_t$	0.34	0.17	0.23	0.28	0.39
$\Delta OPIN_t$	0.01	0.11	-0.02	0.01	0.04
$\Delta OPCF_t$	0.01	0.11	-0.03	0.01	0.04
REM_t	0.06	0.47	-0.12	0.07	0.28
$PREMAN\_EARN_t$	-0.72	0.90	-0.96	-0.52	-0.22
LN_MVE_t	6.60	2.11	5.13	6.63	8.04
$FIRM\_AGE_t$	3.07	0.63	2.64	3.05	3.56
FCF_t	0.73	0.45	0.00	1.00	1.00
RET_t	0.12	0.54	-0.21	0.05	0.33
CFO_SD_t	0.07	0.12	0.03	0.05	0.08
HHI_t	0.07	0.06	0.03	0.04	0.08
$ICFR\_AUDIT_t$	0.83	0.38	1.00	1.00	1.00

TABLE 3 (cont'd)

Panel B: Univariate Test of Difference (Firm-Year Panel)

	N = 30,346		N = 1,776			
	IA_EXPERTISE$_t$ = 0		*IA_EXPERTISE$_t$ = 1*		*Test of Mean Differences*	
Variable	**Mean**	**SD**	**Mean**	**SD**	**T-Value**	**P-Value**
Test Variable						
IA_EXPERTISE_RATIO$_t$	0.00	0.00	0.28	0.08	-771.25	0.000***
Equation 1A (AEM)						
AEM$_t$	0.02	0.19	0.01	0.15	2.35	0.019**
MKT SHARE$_{t-1}$	0.05	0.12	0.09	0.15	-12.80	0.000***
ALTMANZ$_{t-1}$	1.76	3.93	2.03	2.44	-2.85	0.004***
INST_OWN$_{t-1}$	0.60	0.33	0.66	0.30	-7.50	0.000***
MTR$_t$	0.15	0.14	0.15	0.13	0.80	0.410
BIGN$_t$	0.79	0.41	0.87	0.34	-8.15	0.000***
LONG_AUD_TENURE$_t$	0.57	0.49	0.67	0.47	-8.25	0.000***
NOA$_{t-1}$	0.58	0.49	0.63	0.48	-3.65	0.000***
CYCLE$_{t-1}$	144.66	251.73	126.87	88.22	2.95	0.003***
ROA$_t$	-0.02	0.39	0.02	0.16	-4.10	0.000***
SIZE$_t$	6.43	2.01	7.13	2.04	-14.20	0.000***
BM$_t$	0.51	0.66	0.53	0.68	-1.10	0.267
SALES_GROWTH$_t$	0.14	0.55	0.09	0.40	3.85	0.000***
RESTRUCT$_t$	0.36	0.48	0.47	0.50	-9.40	0.000***
WRITEDOWNt	0.16	0.37	0.19	0.39	-3.25	0.001***
LN_ANALYST$_t$	1.93	1.01	2.13	0.92	-8.10	0.000***
SHARES$_t$	3.86	1.25	4.12	1.33	-8.30	0.000***
ISSUE$_{t+1}$	0.79	0.41	0.74	0.44	5.85	0.000***
BEAT$_t$	2.29	1.45	2.56	1.35	-7.85	0.000***
BOARD_INDEP$_t$	0.77	0.13	0.80	0.12	-11.05	0.000***
CEO_IS_CHAIR$_t$	0.57	0.50	0.56	0.50	0.25	0.810
ACCT_FINC_RATIO$_t$	0.38	0.25	0.47	0.22	-15.80	0.000***
LEGAL_EXPERT$_t$	0.31	0.46	0.24	0.43	5.85	0.000***
IT_EXPERT$_t$	0.04	0.21	0.05	0.22	-1.55	0.119
EA_EXP$_t$	0.17	0.38	0.33	0.47	-17.60	0.000***
AC_FEMALE_RATIO$_t$	0.12	0.17	0.19	0.20	-17.20	0.000***
CAE$_t$	0.06	0.24	0.11	0.31	-7.05	0.000***
PRED_REM$_t$	0.06	0.38	0.12	0.35	-6.25	0.000***
UNPRED_REM$_t$	0.00	0.18	0.00	0.17	0.05	0.965

TABLE 3 (cont'd)

Additional Variables for Equation 1B (Misstatement)

	N = 30,346		**N = 1,776**			
	$IA\_EXPERTISE_t = 0$		*$IA\_EXPERTISE_t = 1$*		*Test of Mean Differences*	
	Mean	**SD**	**Mean**	**SD**	**T-Value**	**P-Value**
$MISSTATE_t$	0.10	0.29	0.09	0.29	0.30	0.758
$BIGR_t$	0.03	0.18	0.03	0.16	2.00	0.046**
$INST\_OWN_t$	0.62	0.32	0.68	0.29	-6.80	0.000***
$ISSUANCE_t$	0.37	0.48	0.34	0.47	2.95	0.003***
LEV_t	0.22	0.23	0.24	0.20	-3.80	0.000***
$LOSS_t$	0.33	0.47	0.28	0.45	4.70	0.000***
$FOREIGN_t$	0.58	0.49	0.68	0.47	-7.75	0.000***
$LN\_SEGMENTS_t$	1.03	0.43	1.12	0.47	-8.20	0.000***
AQC_t	0.41	0.49	0.49	0.50	-6.55	0.000***
MW_t	0.12	0.33	0.09	0.29	3.60	0.001***

Additional Variables for Equation 2 (Non-Financial Reporting Performance)

	FE: N = 27,623 **OP: N = 28,166** **REM: N = 30,346**		**FE: N = 1,635** **OP: N = 1,668** **REM: N = 1,776**			
	$IA\_EXPERTISE_t = 0$		*$IA\_EXPERTISE_t = 1$*		*Test of Mean Differences*	
	Mean	**SD**	**Mean**	**SD**	**T-Value**	**P-Value**
$FIRM\_EFF_t$	0.33	0.17	0.36	0.18	-4.90	0.000***
$\Delta OPIN_t$	0.01	0.11	0.01	0.08	-0.10	0.913
$\Delta OPCF_t$	0.01	0.11	0.01	0.08	-0.20	0.861
REM_t	0.05	0.47	0.11	0.40	-5.40	0.000***
$PREMAN\_EARN_t$	-0.72	0.91	-0.75	0.70	1.40	0.155
LN_MVE_t	6.56	2.10	7.16	2.14	-11.20	0.000***
$FIRM\_AGE_t$	3.06	0.63	3.26	0.67	-12.70	0.000***
FCF_t	0.72	0.45	0.81	0.40	-7.25	0.000***
RET_t	0.12	0.54	0.12	0.50	-0.35	0.732
CFO_SD_t	0.07	0.12	0.05	0.07	6.55	0.000***
HHI_t	0.07	0.06	0.07	0.05	2.60	0.009***
$ICFR\_AUDIT_t$	0.83	0.38	0.87	0.34	-4.65	0.000***

TABLE 4

Correlation Matrix

Variables: Equation 1A (REM, AEM)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) *IA_EXPERTISE_RATIO*$_t$	**1.00**														
(2) *IA_EXPERTISE*$_t$	**0.97**	**1.00**													
(3) *AEM*$_t$	**-0.02**	**-0.01**	**1.00**												
(4) *MKT SHARE*$_{t-1}$	**0.05**	**0.07**	**-0.01**	**1.00**											
(5) *ALTMANZ*$_{t-1}$	**0.01**	**0.02**	**-0.02**	**0.07**	**1.00**										
(6) *INST_OWN*$_{t-1}$	**0.03**	**0.04**	**-0.05**	**0.20**	**0.19**	**1.00**									
(7) *MTR*$_t$	-0.01	0.00	**0.05**	**0.11**	**0.20**	**0.11**	**1.00**								
(8) *BIGN*$_t$	**0.03**	**0.05**	**-0.05**	**0.19**	**0.11**	**0.45**	**0.09**	**1.00**							
(9) *LONG_AUD_TENURE*$_t$	**0.03**	**0.05**	0.01	**0.15**	**0.06**	**0.28**	**0.04**	**0.25**	**1.00**						
(10) *NOA*$_{t-1}$	**0.02**	**0.02**	**-0.04**	**-0.04**	**0.13**	**0.08**	**0.08**	0.00	**0.02**	**1.00**					
(11) *CYCLE*$_{t-1}$	**-0.02**	**-0.02**	**0.03**	**-0.05**	**-0.07**	**-0.06**	**-0.06**	**-0.07**	**-0.02**	**0.02**	**1.00**				
(12) *ROA*$_t$	**0.02**	**0.02**	**0.23**	**0.08**	**0.61**	**0.21**	**0.21**	**0.16**	**0.10**	**0.10**	**-0.10**	**1.00**			
(13) *SIZE*$_t$	**0.05**	**0.08**	**-0.05**	**0.42**	**0.15**	**0.56**	**0.17**	**0.54**	**0.30**	**0.09**	**-0.09**	**0.24**	**1.00**		
(14) *BM*$_t$	0.01	0.01	**-0.03**	**-0.04**	**0.09**	**-0.04**	**-0.01**	**-0.07**	**-0.02**	**0.10**	0.01	**0.02**	**-0.06**	**1.00**	
(15) *SALES_GROWTH*$_t$	**-0.02**	**-0.02**	**0.05**	**-0.07**	**-0.11**	**-0.10**	**-0.03**	**-0.05**	**-0.11**	0.00	**0.21**	**-0.14**	**-0.07**	**-0.08**	**1.00**
(16) *RESTRUCT*$_t$	**0.04**	**0.05**	**-0.07**	**0.16**	**-0.01**	**0.22**	**-0.05**	**0.20**	**0.13**	0.00	**-0.03**	**0.03**	**0.30**	-0.01	**-0.13**
(17) *WRITEDOWNt*	**0.02**	**0.02**	**-0.07**	**0.04**	-0.01	**0.05**	**-0.03**	**0.04**	**0.01**	**0.02**	0.01	**-0.04**	**0.07**	**0.04**	**-0.04**
(18) *LN_ANALYST*$_t$	**0.03**	**0.05**	**-0.03**	**0.24**	**0.07**	**0.56**	**0.10**	**0.49**	**0.21**	**0.03**	**-0.06**	**0.15**	**0.74**	**-0.15**	0.01
(19) *SHARES*$_t$	**0.03**	**0.05**	**-0.02**	**0.31**	**-0.05**	**0.31**	**0.04**	**0.39**	**0.20**	**-0.02**	**-0.02**	**0.06**	**0.78**	**-0.14**	0.00
(20) *ISSUE*$_{t+1}$	**-0.04**	**-0.03**	**0.01**	**-0.05**	**-0.05**	**0.06**	0.01	**0.06**	**-0.03**	**0.01**	**0.01**	**-0.02**	**-0.01**	**-0.13**	**0.08**
(21) *BEAT*$_t$	**0.03**	**0.04**	**0.01**	**0.15**	**0.08**	**0.45**	**0.10**	**0.36**	**0.15**	**0.02**	**-0.06**	**0.18**	**0.46**	**-0.16**	0.00
(22) *BOARD_INDEP*$_t$	**0.04**	**0.06**	**-0.02**	**0.12**	**-0.01**	**0.34**	**-0.02**	**0.22**	**0.19**	**-0.02**	-0.01	**0.05**	**0.29**	**-0.04**	**-0.05**
(23) *CEO_IS_CHAIR*$_t$	**-0.02**	0.00	-0.01	**0.12**	**0.01**	**0.12**	**0.03**	**0.14**	**0.10**	**-0.02**	**-0.03**	**0.05**	**0.20**	**-0.04**	**-0.03**
(24) *ACCT_FINC_RATIO*$_t$	**0.10**	**0.09**	**-0.02**	0.00	0.01	**0.11**	**-0.04**	**0.08**	**0.03**	0.01	**-0.02**	**0.02**	**0.08**	0.00	**-0.02**
(25) *LEGAL_EXPERT*$_t$	**-0.04**	**-0.03**	0.00	**0.05**	**0.02**	**0.01**	**0.02**	0.00	**0.02**	**0.01**	**-0.02**	**0.01**	**0.05**	0.00	**-0.01**
(26) *IT_EXPERT*$_t$	0.00	0.01	0.00	**0.03**	0.00	**0.06**	-0.01	**0.04**	**0.05**	**-0.02**	**-0.03**	**0.01**	**0.06**	**-0.02**	**-0.02**
(27) *EA_EXP*$_t$	**0.10**	**0.10**	-0.01	0.01	**0.01**	**0.07**	**-0.02**	**0.05**	**0.04**	**0.02**	0.00	**0.01**	**0.05**	**-0.01**	**-0.02**
(28) *AC_FEMALE_RATIO*$_t$	**0.09**	**0.10**	0.00	**0.15**	**0.02**	**0.17**	**0.03**	**0.17**	**0.11**	-0.01	**-0.03**	**0.04**	**0.29**	**-0.06**	**-0.05**
(29) *CAE*$_t$	**0.02**	**0.04**	0.00	**0.18**	**0.03**	**0.12**	**0.04**	**0.12**	**0.11**	0.00	**-0.02**	**0.05**	**0.27**	**-0.01**	**-0.04**
(30) *PRED_REM*$_t$	**0.02**	**0.03**	0.00	**0.07**	**0.21**	**0.14**	**0.06**	**0.06**	**0.10**	**0.22**	**-0.03**	**0.19**	**0.23**	**0.12**	**-0.15**
(31) *UNPRED_REM*$_t$	0.00	0.00	**-0.05**	0.00	0.00	**-0.01**	0.00	0.00	-0.01	-0.01	0.00	**-0.01**	0.00	0.00	**0.01**
(32) *REM*$_t$	**0.02**	**0.03**	**-0.02**	**0.06**	**0.24**	**0.12**	**0.05**	**0.06**	**0.09**	**0.18**	**-0.03**	**0.24**	**0.20**	**0.10**	**-0.13**
(33) *PREMAN_EARN*$_t$	-0.01	-0.01	**-0.03**	**-0.10**	**0.03**	**0.11**	**-0.04**	**0.09**	**0.04**	**0.11**	**0.09**	**0.25**	**0.11**	**-0.03**	**-0.09**

TABLE 4 (cont'd)

Variables: Equation 1A (REM, AEM)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
(16) $RESTRUCT_t$	**1.00**																
(17) *WRITEDOWNt*	**0.14**	**1.00**															
(18) $LN\_ANALYST_t$	**0.17**	**0.04**	**1.00**														
(19) $SHARES_t$	**0.23**	**0.07**	**0.71**	**1.00**													
(20) $ISSUE_{t+1}$	**-0.03**	**-0.02**	**0.16**	**0.08**	**1.00**												
(21) $BEAT_t$	**0.15**	**-0.01**	**0.60**	**0.41**	**0.18**	**1.00**											
(22) $BOARD\_INDEP_t$	**0.20**	**0.04**	**0.30**	**0.23**	**0.07**	**0.24**	**1.00**										
(23) $CEO\_IS\_CHAIR_t$	**0.10**	**0.01**	**0.15**	**0.17**	**0.01**	**0.11**	**0.12**	**1.00**									
(24) $ACCT\_FINC\_RATIO_t$	**0.08**	**0.02**	**0.12**	**0.05**	**0.01**	**0.10**	**0.13**	**-0.06**	**1.00**								
(25) $LEGAL\_EXPERT_t$	**-0.01**	0.00	-0.01	**0.02**	**-0.03**	**-0.03**	**-0.02**	**0.02**	**-0.11**	**1.00**							
(26) IT_EXPERT_t	**0.05**	0.00	**0.05**	**0.05**	0.01	**0.05**	**0.07**	**-0.02**	0.01	**-0.05**	**1.00**						
(27) EA_EXP_t	**0.03**	0.00	**0.06**	**0.02**	-0.01	**0.05**	**0.08**	**-0.06**	**0.18**	**-0.03**	**0.02**	**1.00**					
(28) $AC\_FEMALE\_RATIO_t$	**0.13**	**0.04**	**0.23**	**0.24**	**-0.02**	**0.16**	**0.17**	**-0.03**	**0.08**	**0.02**	**0.09**	**0.06**	**1.00**				
(29) CAE_t	**0.11**	**0.03**	**0.16**	**0.20**	**-0.02**	**0.10**	**0.12**	**0.08**	0.01	**0.04**	0.01	**0.03**	**0.09**	**1.00**			
(30) $PRED\_REM_t$	**0.13**	**0.04**	0.01	**0.05**	**-0.10**	0.00	**0.06**	**0.05**	0.01	**0.03**	-0.01	-0.01	**0.04**	**0.06**	**1.00**		
(31) $UNPRED\_REM_t$	-0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**-0.02**	**1.00**	
(32) REM_t	**0.11**	**0.04**	**0.02**	**0.05**	**-0.08**	0.00	**0.06**	**0.05**	0.01	**0.02**	0.00	0.00	**0.04**	**0.06**	**0.87**	**0.42**	**1.00**
(33) $PREMAN\_EARN_t$	**0.07**	**0.03**	**0.19**	**0.19**	**0.06**	**0.13**	**0.09**	**0.01**	0.01	**-0.01**	0.01	0.00	**0.02**	**-0.02**	**-0.13**	0.00	**-0.09**

TABLE 4 (cont'd)

Additional Variables: Equation 1B (Misstatement)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) $IA\_EXPERTISE\_RATIO_t$	**1.00**										
(2) $IA\_EXPERTISE_t$	**0.97**	**1.00**									
(3) $MISSTATE_t$	0.00	0.00	**1.00**								
(4) $BIGR_t$	-0.01	**-0.01**	**0.57**	**1.00**							
(5) $INST\_OWN_t$	**0.03**	**0.04**	0.00	**-0.04**	**1.00**						
(6) $ISSUANCE_t$	**-0.02**	**-0.02**	**0.01**	0.00	**-0.01**	**1.00**					
(7) LEV_t	**0.02**	**0.02**	**0.01**	0.00	**0.08**	**0.32**	**1.00**				
(8) $LOSS_t$	**-0.01**	**-0.03**	0.01	**0.02**	**-0.30**	**0.13**	**0.07**	**1.00**			
(9) $FOREIGN_t$	**0.03**	**0.04**	0.01	**-0.03**	**0.29**	**-0.04**	**0.02**	**-0.11**	**1.00**		
(10) $LN\_SEGMENTS_t$	**0.03**	**0.05**	**0.02**	**-0.01**	**0.15**	0.00	**0.07**	**-0.16**	**0.15**	**1.00**	
(11) AQC_t	**0.03**	**0.04**	**0.03**	0.00	**0.24**	**0.08**	**0.05**	**-0.18**	**0.21**	**0.19**	**1.00**
(12) MW_t	**-0.01**	**-0.02**	**0.13**	**0.16**	**-0.13**	**0.04**	**0.02**	**0.15**	**-0.04**	**-0.03**	**-0.04**

Additional Variables: Equation 2 (Non-Financial Reporting Performance)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) $IA\_EXPERTISE\_RATIO_t$	**1.00**										
(2) $IA\_EXPERTISE_t$	**0.97**	**1.00**									
(3) $FIRM\_EFF_t$	**0.02**	**0.03**	**1.00**								
(4) $\Delta OPIN_t$	0.00	0.00	**0.11**	**1.00**							
(5) $\Delta OPCF_t$	0.00	0.00	**0.08**	**0.47**	**1.00**						
(6) LN_MVE_t	**0.04**	**0.06**	**0.55**	**0.04**	**0.04**	**1.00**					
(7) $FIRM\_AGE_t$	**0.06**	**0.07**	**0.13**	**-0.02**	**-0.02**	**0.26**	**1.00**				
(8) FCF_t	**0.03**	**0.04**	**0.22**	**0.10**	**0.17**	**0.36**	**0.23**	**1.00**			
(9) RET_t	0.00	0.00	**0.07**	**0.23**	**0.17**	**0.18**	0.00	**0.12**	**1.00**		
(10) CFO_SD_t	**-0.03**	**-0.04**	**-0.07**	0.01	**0.01**	**-0.24**	**-0.20**	**-0.24**	**-0.02**	**1.00**	
(11) HHI_t	**-0.01**	**-0.02**	**0.02**	-0.01	-0.01	**0.05**	**0.05**	**0.05**	0.00	**-0.07**	**1.00**
(12) $ICFR\_AUDIT_t$	**0.01**	**0.03**	**0.27**	-0.01	0.00	**0.62**	**0.12**	**0.25**	**0.02**	**-0.19**	**0.06**

This table presents the Pearson pairwise correlation matrix for key variables. Correlations in boldface type are significant at the 10% level.

TABLE 5

Determinants of Audit Committee Internal Audit Expertise

	DV = $IA\_EXPERTISE_{t+1}$		DV = $FIRST\_IA\_EXPERTISE_{t+1}$	
	(1)		(2)	
Independent Variables	coef.	tstat	coef.	tstat
REM_t	0.0068	0.97	0.0004	0.32
AEM_t	-0.0058	-0.81	0.0048	1.43
$MISSTATE_t$	0.0047	0.70	0.0025	1.23
MW_t	-0.0045	-0.82	0.0032*	1.67
$SIZE_t$	0.0010	0.27	0.0015*	1.86
$SALES\_GROWTH_t$	0.0015	0.65	-0.0006	-0.89
ROA_t	0.0005	0.14	0.0000	0.03
BM_t	0.0017	0.44	-0.0011	-1.06
$BIGN_t$	0.0088	1.07	-0.0012	-0.75
$RESTRUCT_t$	0.0061	1.12	0.0020	1.34
$WRITEDOWN_t$	0.0007	0.17	-0.0008	-0.50
$LN\_ANALYST_t$	0.0019	0.40	0.0004	0.37
$SHARES_t$	-0.0008	-0.17	-0.0014	-1.45
$BEAT_t$	0.003*	1.80	0.0006	1.14
$INST\_OWN_{t-1}$	-0.0266**	-2.12	-0.0038	-1.29
$ISSUANCE_t$	-0.0131***	-3.25	0.0007	0.57
LEV_t	-0.0032	-0.26	-0.0007	-0.21
$LOSS_t$	0.0024	0.43	0.0022	1.45
$FOREIGN_t$	0.0007	0.09	0.0007	0.52
$LN\_SEGMENTS_t$	0.0057	0.64	0.0014	0.90
AQC_t	0.0071	1.43	0.0008	0.63
$FIRM\_AGE_t$	0.0118**	2.08	0.0008	0.85
$NYSE_t$	0.0053	0.58	-0.0011	-0.77
$BOARD\_INDEP_t$	0.0312	1.27	0.0057	1.16
$CEO\_IS\_CHAIR_t$	-0.0052	-0.86	0.0003	0.30
$ACCT\_FINC\_RATIO_t$	0.0497***	4.40	-0.0019	-0.84
$LEGAL\_EXPERT_t$	-0.0163***	-2.58	-0.0032***	-2.67
IT_EXPERT_t	-0.0077	-0.62	-0.0011	-0.37
EA_EXP_t	0.0374***	3.26	-0.0035**	-2.55
$AC\_FEMALE\_RATIO_t$	0.0297***	3.98	0.0006	0.43
CAE_t	0.0039	0.25	0.0031	1.02
Constant	-0.0440	-1.63	-0.0033	-0.66
Year Fixed Effects	YES		YES	
Industry Fixed Effects	YES		YES	
Cluster	Firm		Firm	
Observations	30,927		26,546	
Adjusted R-squared	0.0393		0.0022	

This table reports determinants of audit committee internal audit expertise. Column 1 presents the results for audit committee internal audit expertise in the subsequent year, while column 2 presents the results of the first occurrence of audit committee internal audit expertise in the subsequent year. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, based on two-tailed p-values. Columns 1 & 2 present coefficient estimates with t-statistics presented to the right.

TABLE 6
Internal Audit Expertise on the Audit Committee and the Impact on Accruals-Based Earnings Management

		DV = AEM_t			
		(1)		(2)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat
IA_EXPERTISE_RATIO$_t$	(-)	**-0.0542****	**-1.91**		
IA_EXPERTISE$_t$	(-)			**-0.0126****	**-1.74**
MKT SHARE$_{t-1}$		0.0872**	2.22	0.0868**	2.21
ALTMANZ$_{t-1}$		-0.0204***	-3.72	-0.0204***	-3.72
INST_OWN$_{t-1}$		-0.0448**	-2.14	-0.0448**	-2.14
MTR$_t$		0.0448***	2.96	0.0449***	2.96
BIGN$_t$		-0.0026	-0.29	-0.0026	-0.29
LONG_AUD_TENURE$_t$		0.0020	0.67	0.0020	0.67
NOA$_{t-1}$		-0.0354***	-5.01	-0.0354***	-5.01
CYCLE$_{t-1}$		0.0000*	-1.89	0.0000*	-1.89
ROA$_t$		0.2726***	9.22	0.2726***	9.22
SIZE$_t$		-0.0216*	-1.77	-0.0215*	-1.76
BM$_t$		0.0018	0.55	0.0018	0.55
SALES_GROWTH$_t$		0.0376***	2.63	0.0375***	2.62
RESTRUCT$_t$		-0.0154***	-2.88	-0.0154***	-2.88
WRITEDOWNt		-0.0189***	-6.09	-0.0189***	-6.10
LN_ANALYST$_t$		0.0098**	2.03	0.0097**	2.03
SHARES$_t$		0.0012	0.22	0.0012	0.22
ISSUE$_{t+1}$		0.0079*	1.78	0.0079*	1.79
BEAT$_t$		0.0016	1.32	0.0016	1.31
BOARD_INDEP$_t$		0.0212	1.07	0.0215	1.09
CEO_IS_CHAIR$_t$		-0.0084**	-2.08	-0.0083**	-2.06
ACCT_FINC_RATIO$_t$		-0.0052	-0.64	-0.0056	-0.69
LEGAL_EXPERT$_t$		0.0020	0.56	0.0021	0.58
IT_EXPERT$_t$		0.0072	1.14	0.0073	1.16
EA_EXP$_t$		0.0043	0.81	0.0041	0.78
AC_FEMALE_RATIO$_t$		-0.0077	-0.80	-0.0078	-0.81
CAE$_t$		-0.0067	-1.41	-0.0067	-1.39
PRED_REM$_t$		0.2797	1.42	0.2795	1.42
UNPRED_REM$_t$		-0.0432***	-4.38	-0.0432***	-4.38
Constant		0.1843**	2.37	0.1837**	2.36
Year Fixed Effects		YES		YES	
Firm Fixed Effects		YES		YES	
Cluster		Firm		Firm	
Observations		32,122		32,122	
Adjusted R-squared		0.3077		0.3076	
Within R-squared		0.1786		0.1785	

This table reports the results of the effect of audit committee internal audit expertise on accruals-based earnings management (equation 1A). Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Columns 1 & 2 present coefficient estimates with t-statistics presented to the right of coefficient estimates.

TABLE 7

Internal Audit Expertise on the Audit Committee and the Impact on Financial Misstatements

		DV = $MISSTATE_t$				DV = $BIGR_t$			
		(1)		(2)		(3)		(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	coef.	tstat
***IA_EXPERTISE_RATIO**$_t$*	(-)	**-0.0624**	**-1.24**			**-0.0945*****	**-2.67**		
***IA_EXPERTISE**$_t$*	(-)			**-0.0084**	**-0.59**			**-0.0236*****	**-2.55**
$INST\_OWN_t$		-0.0207	-1.40	-0.0208	-1.41	-0.0208**	-2.08	-0.021**	-2.10
$BIGN_t$		0.0016	0.10	0.0016	0.10	-0.0115	-0.92	-0.0115	-0.92
$ISSUANCE_t$		0.0008	0.18	0.0008	0.19	-0.0034	-1.29	-0.0033	-1.29
LEV_t		0.0192	1.04	0.0192	1.04	0.0139	1.03	0.0139	1.03
$SALES\_GROWTH_t$		-0.0018	-0.63	-0.0019	-0.64	-0.0000	-0.02	-0.0001	-0.03
$LOSS_t$		0.0096	1.64	0.0096	1.64	0.0004	0.12	0.0004	0.11
$FOREIGN_t$		0.0010	0.09	0.0009	0.08	-0.0041	-0.59	-0.0042	-0.61
$LN\_SEGMENTS_t$		-0.0085	-0.70	-0.0084	-0.70	-0.0061	-0.79	-0.0060	-0.78
AQC_t		0.0028	0.61	0.0028	0.61	0.0028	1.09	0.0029	1.09
$RESTRUCT_t$		0.0114**	2.08	0.0113**	2.08	0.0045	1.42	0.0045	1.42
ROA_t		-0.0052	-0.75	-0.0052	-0.75	0.0028	1.23	0.0027	1.22
BM_t		0.0042	0.93	0.0041	0.92	-0.0001	-0.05	-0.0002	-0.06
$SIZE_t$		0.0335***	5.18	0.0335***	5.19	0.017***	4.20	0.0171***	4.22
MW_t		0.0527***	6.02	0.0527***	6.02	0.0347***	5.49	0.0347***	5.49
$BOARD\_INDEP_t$		-0.0758**	-2.53	-0.0753**	-2.52	-0.05**	-2.42	-0.0494**	-2.39
$CEO\_IS\_CHAIR_t$		-0.0061	-0.90	-0.0059	-0.87	-0.0054	-1.32	-0.0053	-1.28
$ACCT\_FINC\_RATIO_t$		-0.0123	-0.83	-0.0133	-0.90	-0.0153*	-1.67	-0.0159*	-1.72
$LEGAL\_EXPERT_t$		-0.0002	-0.02	-0.0000	-0.00	0.0025	0.59	0.0026	0.62
IT_EXPERT_t		-0.0037	-0.26	-0.0036	-0.26	-0.0024	-0.38	-0.0022	-0.34
EA_EXP_t		-0.0048	-0.48	-0.0054	-0.53	0.0032	0.46	0.0030	0.44
$AC\_FEMALE\_RATIO_t$		-0.0203	-1.01	-0.0207	-1.03	0.0046	0.37	0.0044	0.36
CAE_t		0.0216*	1.79	0.0215*	1.79	0.0146**	2.22	0.0147**	2.24
Constant		-0.0538	-1.11	-0.0545	-1.12	-0.0090	-0.27	-0.0098	-0.29
Year Fixed Effects		YES		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES		YES	
Cluster		FIRM		FIRM		FIRM		FIRM	

TABLE 7 (cont'd)

Observations	32,122	32,122	32,122	32,122
Adjusted R-squared	0.2043	0.2042	0.2553	0.2553
Within R-squared	0.0076	0.0075	0.0081	0.0080

This table reports the results of the effect of audit committee internal audit expertise on financial misstatements (equation 1B). Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Columns 1-4 present coefficient estimates with t-statistics presented to the right of coefficient estimates.

TABLE 8

Internal Audit Expertise on the Audit Committee and the Impact on Operating Performance and Efficiency

		DV = *FIRM_EFF$_t$*				**DV = *ΔOPIN$_t$***				**DV = *ΔOPCF$_t$***			
		(1)		(2)		(3)		(4)		(5)		(6)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	coef.	tstat	coef.	tstat	coef.	tstat
IA_EXPERTISE_RATIO$_t$	(+)	**0.0170**	**0.76**			**0.0256****	**2.07**			**0.0139**	**1.17**		
IA_EXPERTISE$_t$	(+)			**0.0048**	**0.77**			**0.0053****	**1.78**			**0.0031**	**1.06**
LN_MVE$_t$		0.0259***	11.78	0.0259***	11.78	-0.0136***	-5.73	-0.0137***	-5.73	-0.0103***	-6.02	-0.0103***	-6.03
FIRM_AGE$_t$		-0.0705***	-6.36	-0.0704***	-6.36	-0.0012	-0.21	-0.0013	-0.22	-0.0196***	-3.32	-0.0196***	-3.32
FCF$_t$		0.0213***	9.85	0.0213***	9.86	0.0234***	10.54	0.0234***	10.54	0.0677***	26.15	0.0677***	26.15
LOSS$_t$		-0.0306***	-10.37	-0.0306***	-10.37	-0.0365***	-11.01	-0.0365***	-11.01	-0.0123***	-4.22	-0.0123***	-4.22
ROA$_t$		0.0427***	3.18	0.0427***	3.18	0.1024***	5.72	0.1024***	5.72	0.056***	4.09	0.056***	4.09
LEV$_t$		0.0011	0.13	0.0011	0.13	0.0496***	4.29	0.0496***	4.28	0.0173	1.29	0.0173	1.29
RET$_t$		-0.0086***	-5.67	-0.0086***	-5.66	0.048***	20.11	0.048***	20.11	0.0341***	16.65	0.0341***	16.65
CFO_SD$_t$		0.0336**	2.17	0.0335**	2.17	0.0210	1.01	0.0209	1.00	-0.0026	-0.11	-0.0026	-0.11
FOREIGN$_t$		-0.0032	-0.67	-0.0032	-0.67	-0.0049*	-1.74	-0.0049*	-1.72	-0.0051*	-1.68	-0.0051*	-1.68
RESTRUCT$_t$		-0.0072***	-3.49	-0.0072***	-3.49	0.0002	0.10	0.0002	0.10	-0.0028*	-1.65	-0.0028*	-1.65
LN_SEGMENTS$_t$		-0.0011	-0.27	-0.0011	-0.27	-0.0002	-0.08	-0.0002	-0.08	0.0008	0.32	0.0008	0.32
BM$_t$		-0.0013	-0.79	-0.0013	-0.79	-0.0101**	-2.18	-0.0101**	-2.17	-0.0012	-0.74	-0.0012	-0.74
HHI$_t$		0.1998***	3.17	0.1999***	3.17	-0.0097	-0.30	-0.0097	-0.30	0.0452	1.52	0.0452	1.52
ICFR_AUDIT$_t$		-0.0088**	-2.02	-0.0088**	-2.02	-0.0168***	-3.87	-0.0169***	-3.88	-0.0123***	-2.74	-0.0124***	-2.74
MW$_t$		-0.0037	-1.57	-0.0037	-1.57	0.0024	0.80	0.0024	0.80	0.0022	0.89	0.0022	0.90
BIGN$_t$		0.0033	0.78	0.0033	0.78	-0.0056	-1.04	-0.0055	-1.03	-0.0084*	-1.76	-0.0084*	-1.76
BOARD_INDEP$_t$		-0.0011	-0.08	-0.0012	-0.09	-0.0118	-1.10	-0.0120	-1.12	-0.0179*	-1.79	-0.018*	-1.80
CEO_IS_CHAIR$_t$		-0.0035	-1.29	-0.0035	-1.29	0.0021	1.14	0.0021	1.11	0.0019	1.13	0.0018	1.12
ACCT_FINC_RATIO$_t$		0.0009	0.13	0.0009	0.14	-0.0054	-1.25	-0.0052	-1.20	-0.0099***	-2.60	-0.0098**	-2.58
LEGAL_EXPERT$_t$		-0.0008	-0.24	-0.0008	-0.24	-0.0025	-1.30	-0.0025	-1.32	-0.0036*	-1.86	-0.0036*	-1.87
IT_EXPERT$_t$		0.0043	0.78	0.0042	0.77	-0.0065	-1.32	-0.0066	-1.33	0.0013	0.26	0.0012	0.25
EA_EXP$_t$		-0.0049	-1.07	-0.0049	-1.07	0.0022	0.72	0.0023	0.76	0.0012	0.47	0.0013	0.48
AC_FEMALE_RATIO$_t$		0.0021	0.24	0.0021	0.24	-0.0083*	-1.70	-0.0082*	-1.69	-0.0033	-0.68	-0.0033	-0.67
CAE$_t$		0.0051	0.94	0.0051	0.94	0.0002	0.08	0.0002	0.08	-0.0009	-0.50	-0.0009	-0.50
Constant		0.3741***	9.54	0.374***	9.54	0.1182***	4.87	0.1185***	4.89	0.1185***	5.51	0.1187***	5.52
Year Fixed Effects		YES		YES		YES		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES		YES		YES		YES	
Cluster		FIRM		FIRM		FIRM		FIRM		FIRM		FIRM	

TABLE 8 (cont'd)

Observations	29,258	29,258	29,834	29,834	29,834	29,834
Adjusted R-squared	0.7161	0.7161	0.1349	0.1349	0.0724	0.0724
Within R-squared	0.0800	0.0800	0.1333	0.1333	0.0955	0.0955

This table reports the results of the effect of audit committee internal audit expertise on non-financial reporting performance (equation 2). Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Columns 1-6 present coefficient estimates with t-statistics to the right.

TABLE 9

Internal Audit Expertise on the Audit Committee and the Impact on Real Earnings Management

		DV = REM_t			
		(1)		(2)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat
IA_EXPERTISE_RATIO$_t$	(-)	**-0.0252**	**-0.49**		
IA_EXPERTISE$_t$	(-)			**-0.0056**	**-0.43**
MKT SHARE$_{t-1}$		-0.1353*	-1.69	-0.1355*	-1.69
ALTMANZ$_{t-1}$		0.0223***	4.33	0.0223***	4.33
INST_OWN$_{t-1}$		0.1054***	8.21	0.1054***	8.21
MTR$_t$		-0.0695***	-3.78	-0.0695***	-3.78
BIGN$_t$		-0.0018	-0.12	-0.0018	-0.12
LONG_AUD_TENURE$_t$		0.0030	0.57	0.0030	0.58
NOA$_{t-1}$		0.0353***	6.39	0.0353***	6.39
CYCLE$_{t-1}$		0.0001***	4.48	0.0001***	4.48
ROA$_t$		0.1172***	5.34	0.1172***	5.34
SIZE$_t$		0.0551***	6.70	0.0551***	6.70
BM$_t$		0.0115***	2.95	0.0115***	2.95
PREMAN_EARN$_t$		0.0048	0.36	0.0048	0.36
SALES_GROWTH$_t$		-0.0686***	-9.21	-0.0686***	-9.21
RESTRUCT$_t$		0.026***	5.93	0.026***	5.93
WRITEDOWNt		0.0104**	2.53	0.0104**	2.53
LN_ANALYST$_t$		-0.0163***	-2.74	-0.0163***	-2.74
SHARES$_t$		0.0032	0.31	0.0032	0.31
ISSUE$_{t+1}$		-0.0156**	-2.57	-0.0156**	-2.56
BEAT$_t$		-0.0035**	-2.22	-0.0035**	-2.22
BOARD_INDEP$_t$		-0.0449	-1.61	-0.0448	-1.60
CEO_IS_CHAIR$_t$		0.0111**	1.99	0.0112**	2.00
ACCT_FINC_RATIO$_t$		0.0180	1.28	0.0178	1.26
LEGAL_EXPERT$_t$		-0.0020	-0.29	-0.0019	-0.29
IT_EXPERT$_t$		-0.0050	-0.42	-0.0049	-0.42
EA_EXP$_t$		-0.0051	-0.59	-0.0052	-0.60
AC_FEMALE_RATIO$_t$		0.0221	1.22	0.0220	1.22
CAE$_t$		0.0101	1.05	0.0101	1.05
Constant		-0.3568***	-5.98	-0.3571***	-5.99
Year Fixed Effects		YES		YES	
Firm Fixed Effects		YES		YES	
Cluster		Firm		Firm	
Observations		32,122		32,122	
Adjusted R-squared		0.7688		0.7688	
Within R-squared		0.1531		0.1531	

This table reports the results of the effect of audit committee internal audit expertise on real earnings management (equation 1A). Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Columns 1 & 2 present coefficient estimates with t-statistics presented to the right of coefficient estimates.

TABLE 10

Entropy Balanced Sample

Panel A: Audit committee internal audit expertise and accruals-based earnings management

		Entropy Balanced Sample	
		DV = AEM_t	
		(1)	
Independent Variables	**Pr.**	coef.	tstat
IA_EXPERTISE$_t$	(-)	**-0.0116***	**-1.51**
$MKT\ SHARE_{t-1}$		0.0445	0.87
$ALTMANZ_{t-1}$		-0.0226***	-4.99
$INST\_OWN_{t-1}$		-0.0376	-1.62
MTR_t		0.0051	0.24
$BIGN_t$		0.0095	0.90
$LONG\_AUD\_TENURE_t$		0.0023	0.44
NOA_{t-1}		-0.0177*	-1.94
$CYCLE_{t-1}$		-0.0000	-0.36
ROA_t		0.4963***	13.38
$SIZE_t$		-0.0148	-1.08
BM_t		0.0030	0.57
$SALES\_GROWTH_t$		0.0050	0.35
$RESTRUCT_t$		-0.0069	-1.05
$WRITEDOWN_t$		-0.0056	-1.15
$LN\_ANALYST_t$		0.0068	1.10
$SHARES_t$		0.0025	0.32
$ISSUE_{t+1}$		0.0088	1.33
$BEAT_t$		-0.0030	-1.64
$BOARD\_INDEP_t$		0.0005	0.02
$CEO\_IS\_CHAIR_t$		-0.0026	-0.55
$ACCT\_FINC\_RATIO_t$		-0.0165	-1.41
$LEGAL\_EXPERT_t$		0.0043	0.57
IT_EXPERT_t		-0.0029	-0.34
EA_EXP_t		0.0068	0.86
$AC\_FEMALE\_RATIO_t$		0.0090	0.62
CAE_t		-0.0120*	-1.78
$PRED\_REM_t$		-0.0432***	-2.69
$UNPRED\_REM_t$		0.1052	0.50
Constant		0.1563*	1.72
Year Fixed Effects		YES	
Firm Fixed Effects		YES	
Cluster		Firm	
Observations		32,122	
Adjusted R-squared		0.3253	

TABLE 10 (cont'd)

Panel B: Audit committee internal audit expertise and financial misstatements

		Entropy Balanced Sample			
		DV = *MISSTATE*$_t$		**DV = *BIGR*$_t$**	
		(1)		(2)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat
***IA_EXPERTISE*$_t$**	(-)	**0.0023**	**0.14**	**-0.022*****	**-3.21**
INST_OWN$_t$		-0.0068	-0.31	-0.017*	-1.80
BIGN$_t$		0.0330	0.77	0.0138	0.38
ISSUANCE$_t$		-0.0030	-0.33	-0.0099**	-2.08
LEV$_t$		0.0224	0.52	0.0004	0.02
SALES_GROWTH$_t$		-0.0077	-1.42	-0.0002	-0.08
LOSS$_t$		0.0057	0.39	0.0008	0.09
FOREIGN$_t$		-0.0082	-0.38	0.0030	0.27
LN_SEGMENTS$_t$		-0.0040	-0.27	-0.0083	-1.31
AQC$_t$		0.0101	1.16	0.0022	0.53
RESTRUCT$_t$		-0.0089	-0.80	-0.0036	-0.44
ROA$_t$		0.0021	0.08	0.0162	0.74
BM$_t$		0.0081	1.01	0.0040	1.21
SIZE$_t$		0.0313**	2.39	0.0138*	1.95
MW$_t$		0.0363*	1.89	0.0223	1.62
BOARD_INDEP$_t$		-0.0557	-0.96	-0.0040	-0.16
CEO_IS_CHAIR$_t$		-0.0154	-1.25	-0.0014	-0.27
ACCT_FINC_RATIO$_t$		-0.057*	-1.92	-0.0243	-1.25
LEGAL_EXPERT$_t$		-0.0003	-0.03	0.0018	0.39
IT_EXPERT$_t$		0.0217	1.04	0.0040	0.90
EA_EXP$_t$		-0.0080	-0.45	0.0015	0.12
AC_FEMALE_RATIO$_t$		-0.0466	-1.38	-0.0140	-0.80
CAE$_t$		0.0206	0.95	0.0089	0.56
Constant		-0.0712	-0.72	-0.0388	-0.83
Year Fixed Effects		YES		YES	
Firm Fixed Effects		YES		YES	
Cluster		FIRM		FIRM	
Observations		32,122		32,122	
Adjusted R-squared		0.2773		0.3448	

TABLE 10 (cont'd)

Panel C: Audit committee internal audit expertise and operating performance and efficiency

		Entropy Balanced Sample					
		DV = *FIRM_EFF*$_t$		**DV = *ΔOPIN*$_t$**		**DV = *ΔOPCF*$_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
***IA_EXPERTISE*$_t$**	(+)	**-0.0013**	**-0.16**	**0.0033**	**1.16**	**-0.0020**	**-0.64**
LN_MVE$_t$		0.022***	5.82	-0.016***	-5.72	-0.0103***	-4.27
FIRM_AGE$_t$		-0.0789***	-3.04	-0.0052	-0.59	-0.0155*	-1.75
FCF$_t$		0.0216***	4.59	0.0193***	4.38	0.0598***	13.23
LOSS$_t$		-0.022***	-4.27	-0.0144***	-3.05	-0.0057	-1.23
ROA$_t$		0.1100***	5.53	0.2173***	8.57	0.1105***	5.62
LEV$_t$		0.0188	1.10	0.0137	1.22	-0.0103	-1.12
RET$_t$		-0.0105***	-3.69	0.0426***	12.55	0.0347***	7.78
CFO_SD$_t$		-0.0055	-0.09	0.0172	0.42	0.0017	0.03
FOREIGN$_t$		-0.0181**	-2.06	0.0038	0.87	0.0035	0.76
RESTRUCT$_t$		-0.0075**	-2.07	0.0020	0.67	0.0001	0.03
LN_SEGMENTS$_t$		0.0070	0.91	-0.0000	-0.01	-0.0059**	-2.04
BM$_t$		-0.0029	-1.04	-0.0109***	-3.71	-0.0028	-1.08
HHI$_t$		-0.0211	-0.14	-0.0561	-1.11	-0.0054	-0.12
ICFR_AUDIT$_t$		-0.0116*	-1.82	-0.0018	-0.23	0.0006	0.06
MW$_t$		-0.0018	-0.32	-0.0008	-0.24	-0.0035	-0.68
BIGN$_t$		0.0042	0.85	-0.0028	-0.31	-0.0038	-0.67
BOARD_INDEP$_t$		-0.0384	-1.59	-0.0468**	-2.21	-0.0342	-1.51
CEO_IS_CHAIR$_t$		-0.0117**	-1.98	-0.0013	-0.49	-0.0013	-0.54
ACCT_FINC_RATIO$_t$		-0.0005	-0.03	-0.0019	-0.33	-0.0080	-1.44
LEGAL_EXPERT$_t$		-0.0010	-0.14	0.0026	0.89	-0.0001	-0.03
IT_EXPERT$_t$		-0.0003	-0.05	-0.0016	-0.31	0.0068*	1.77
EA_EXP$_t$		-0.0014	-0.14	0.0039	1.46	0.0048	1.49
AC_FEMALE_RATIO$_t$		-0.0138	-0.94	0.0016	0.23	0.0019	0.28
CAE$_t$		0.0046	0.58	0.0003	0.10	-0.0003	-0.10
Constant		0.4985***	4.80	0.1598***	4.62	0.1219***	3.61
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		FIRM		FIRM		FIRM	
Observations		29,258		29,834		29,834	
Adjusted R-squared		0.7541		0.2400		0.1445	

TABLE 10 (cont'd)

Panel D: Audit committee internal audit expertise and real earnings management

		Entropy Balanced Sample	
		DV = REM_t	
		(1)	
Independent Variables	**Pr.**	coef.	tstat
IA_EXPERTISE$_t$	(-)	**-0.0216****	**-1.73**
MKT SHARE$_{t-1}$		-0.2134**	-2.02
ALTMANZ$_{t-1}$		0.0274***	6.09
INST_OWN$_{t-1}$		0.0552***	3.08
MTR$_t$		-0.0571*	-1.89
BIGN$_t$		0.0063	0.33
LONG_AUD_TENURE$_t$		-0.0082	-0.91
NOA$_{t-1}$		0.0273***	2.83
CYCLE$_{t-1}$		0.0001	1.18
ROA$_t$		-0.0581	-1.15
SIZE$_t$		0.1001***	5.28
BM$_t$		0.0125**	2.38
PREMAN_EARN$_t$		-0.0229*	-1.67
SALES_GROWTH$_t$		-0.0757***	-6.47
RESTRUCT$_t$		0.0053	0.83
WRITEDOWNt		0.0065	1.08
LN_ANALYST$_t$		-0.0080	-0.79
SHARES$_t$		-0.0149	-1.49
ISSUE$_{t+1}$		-0.0120	-1.30
BEAT$_t$		-0.0043*	-1.67
BOARD_INDEP$_t$		-0.0796	-1.54
CEO_IS_CHAIR$_t$		0.0095	1.18
ACCT_FINC_RATIO$_t$		0.0455	1.19
LEGAL_EXPERT$_t$		-0.0087	-0.80
IT_EXPERT$_t$		-0.0085	-0.48
EA_EXP$_t$		0.0072	0.45
AC_FEMALE_RATIO$_t$		-0.0020	-0.07
CAE$_t$		0.0349	1.64
Constant		-0.5714***	-3.70
Year Fixed Effects		YES	
Firm Fixed Effects		YES	
Cluster		Firm	
Observations		32,122	
Adjusted R-squared		0.8028	

This table reports the results of equations 1A, 1B, and 2 after performing entropy balancing. Panel A presents the effect of AC IA expertise on accruals-based earnings management. Panel B presents the effect of AC IA expertise on financial misstatements. Panel C presents the results of AC IA expertise on non-financial reporting performance. Panel D presents the results of AC IA expertise on real earnings management. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.

TABLE 11

Experience Level of Internal Audit Expert

Panel A: Partition of audit committees with internal audit experts by experience level

	$IA\_EXPERTISE_t = 1$	
	Frequency	Percent
$MANAGER\_ABOVE\_IA_t$	1,154	65%
$OTHER\_IA_t$	622	35%
Total	1,776	

Panel B: Examination of the level of internal audit experience for audit committee internal audit experts and the impact on financial reporting quality

		DV = AEM_t		**DV = $MISSTATE_t$**		**DV = $BIGR_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
MANAGER_ABOVE_IA$_t$	(-)	**-0.0224*** **	**-2.47**	**-0.0171**	**-1.17**	**-0.0242*** **	**-2.43**
OTHER_IA$_t$	(-)	**0.0093**	**0.91**	**0.0111**	**0.37**	**-0.0221**	**-1.14**
Controls		YES		YES		YES	
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		Firm		Firm		Firm	
Observations		32,122		32,122		32,122	
Adjusted R-squared		0.3077		0.2043		0.2552	

TABLE 11 (cont'd)

Panel C: Examination of the level of internal audit experience for audit committee internal audit experts and the impact on non-financial reporting performance

		DV = *FIRM_EFF*$_t$		**DV = *ΔOPIN*$_t$**		**DV = *ΔOPCF*$_t$**			**DV = *REM*$_t$**	
		(1)		(2)		(3)			(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	**Pr.**	coef.	tstat
***MANAGER_ABOVE_IA*$_t$**	(+)	**0.0101***	**1.34**	**0.0048***	**1.34**	**0.0007**	**0.22**	(-)	**-0.0046**	**-0.30**
***OTHER_IA*$_t$**	(+)	**-0.0069**	**-0.72**	**0.0064***	**1.35**	**0.009***	**1.56**	(-)	**-0.0079**	**-0.35**
Controls		YES		YES		YES			YES	
Year Fixed Effects		YES		YES		YES			YES	
Firm Fixed Effects		YES		YES		YES			YES	
Cluster		Firm		Firm		Firm			Firm	
Observations		29,258		29,834		29,834			32,122	
Adjusted R-squared		0.7162		0.1348		0.0724			0.7688	

This table reports the results of an examination of the level of internal audit experience an audit committee internal audit expert possesses. Panel A presents descriptive information on the percentage of audit committees that have at least one internal audit expert whose internal audit experience was at the manager level or higher. Panel B presents the results of audit committee internal audit expertise partitioned by the level of expertise on financial reporting quality. Panel C presents the results of audit committee internal audit expertise partitioned by the level of expertise on non-financial reporting performance. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.

TABLE 12

Proportion of Career in Internal Audit

Panel A: Examination of the proportion of internal audit career experience for audit committee internal audit experts and the impact on financial reporting quality

		DV = *AEM*$_t$		**DV = *MISSTATE*$_t$**		**DV = *BIGR*$_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
IA_PROP$_t$	(-)	**-0.0684****	**-1.68**	**0.0120**	**0.15**	**-0.1206****	**-2.20**
Controls		YES		YES		YES	
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		Firm		Firm		Firm	
Observations		32,104		32,104		32,104	
Adjusted R-squared		0.3079		0.2041		0.2551	

Panel B: Examination of the proportion of internal audit career experience for audit committee internal audit experts and the impact on non-financial reporting performance

		DV = *FIRM_EFF*$_t$		**DV = *ΔOPIN*$_t$**		**DV = *ΔOPCF*$_t$**			**DV = *REM*$_t$**	
		(1)		(2)		(3)			(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	**Pr.**	coef.	tstat
IA_PROP$_t$	(+)	**-0.0184**	**-0.56**	**0.0194**	**1.16**	**-0.0070**	**-0.40**	(-)	**-0.0137**	**-0.18**
Controls		YES		YES		YES			YES	
Year Fixed Effects		YES		YES		YES			YES	
Firm Fixed Effects		YES		YES		YES			YES	
Cluster		Firm		Firm		Firm			Firm	
Observations		29,243		29,819		29,819			32,104	
Adjusted R-squared		0.7162		0.1347		0.0722			0.7689	

This table reports the results of an examination of the proportion of internal audit experience relative to total career experience for audit committee internal audit experts. Panel A presents the impact on financial reporting quality, while panel B presents the impact on non-financial reporting performance. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.

TABLE 13

Audit Committee Internal Audit Experts Who Are Disclosed Financial Experts

Panel A: Partition of audit committees with internal audit experts by disclosed financial experts

	$IA\_EXPERTISE_t = 1$	
	Frequency	Percent
$IA\_DISC\_EXPERT_t$	1,407	79%
$IA\_NOT\_DISC\_EXPERT_t$	369	21%
Total	1,776	

Panel B: Examination of audit committee internal audit experts who are also a disclosed financial expert and the impact on financial reporting quality

		DV = AEM_t		**DV = $MISSTATE_t$**		**DV = $BIGR_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
IA_DISC_EXPERT$_t$	(-)	**-0.0192*** **	**-2.34**	**-0.0187**	**-1.20**	**-0.0262*** **	**-2.43**
IA_NOT_DISC_EXPERT$_t$	(-)	**0.0080**	**0.72**	**0.0237**	**0.91**	**-0.0154**	**-1.27**
Controls		YES		YES		YES	
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		Firm		Firm		Firm	
Observations		32,122		32,122		32,122	
Adjusted R-squared		0.3077		0.2043		0.2553	

TABLE 13 (cont'd)

Panel C: Examination of audit committee internal audit experts who are also a disclosed financial expert and the impact on non-financial reporting performance

		DV = *FIRM_EFF*$_t$		**DV = *ΔOPIN*$_t$**		**DV = *ΔOPCF*$_t$**			**DV = *REM*$_t$**	
		(1)		(2)		(3)			(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	**Pr.**	coef.	tstat
IA_DISC_EXPERT$_t$	(+)	**0.0051**	**0.75**	**0.0025**	**0.85**	**0.0017**	**0.52**	(-)	**-0.0078**	**-0.53**
IA_NOT_DISC_EXPERT$_t$	(+)	**0.0036**	**0.33**	**0.014*** **	**2.67**	**0.0077****	**1.92**	(-)	**0.0013**	**0.07**
Controls		YES		YES		YES			YES	
Year Fixed Effects		YES		YES		YES			YES	
Firm Fixed Effects		YES		YES		YES			YES	
Cluster		Firm		Firm		Firm			Firm	
Observations		29,258		29,834		29,834			32,122	
Adjusted R-squared		0.7161		0.1349		0.0724			0.7688	

This table reports the results of an examination of audit committee internal audit experts who are also a disclosed financial expert. Panel A presents descriptive information on the percentage of audit committees that have at least one internal audit expert whose is a disclosed financial expert. Panel B presents the results of audit committee internal audit expertise partitioned by the existence of at least one internal audit expert who is a disclosed financial expert and the impact on financial reporting quality. Panel C presents the results of audit committee internal audit expertise partitioned by disclosed financial expertise on non-financial reporting performance. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.

TABLE 14

Audit Committee Internal Audit Experts Who Are Audit Committee Chairs

Panel A: Partition of audit committees with internal audit experts by audit committee chair

	$IA\_EXPERTISE_t = 1$	
	Frequency	Percent
$IA\_AC\_CHAIR_t$	830	47%
$IA\_NOT\_AC\_CHAIR_t$	946	53%
Total	1,776	

Panel B: Examination of audit committee internal audit experts who are also an audit committee chair and the impact on financial reporting quality

		DV = AEM_t		**DV = $MISSTATE_t$**		**DV = $BIGR_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
***IA_AC_CHAIR**$_t$*	(-)	**-0.0200****	**-1.80**	**0.0024**	**0.12**	**-0.0233****	**-1.88**
***IA_NOT_AC_CHAIR**$_t$*	(-)	**-0.0081**	**-1.10**	**-0.0150**	**-0.93**	**-0.024*****	**-2.41**
Controls		YES		YES		YES	
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		Firm		Firm		Firm	
Observations		32,122		32,122		32,122	
Adjusted R-squared		0.3076		0.2042		0.2552	

TABLE 14 (cont'd)

Panel C: Examination of audit committee internal audit experts who are also an audit committee chair and the impact on non-financial reporting performance

		DV = *FIRM_EFF$_t$*		**DV = *ΔOPIN$_t$***		**DV = *ΔOPCF$_t$***			**DV = *REM$_t$***	
		(1)		(2)		(3)			(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	**Pr.**	coef.	tstat
IA_AC_CHAIR$_t$	(+)	**0.0152****	**1.67**	**0.0042**	**0.95**	**0.0036**	**0.78**	(-)	**0.0031**	**0.16**
IA_NOT_AC_CHAIR$_t$	(+)	**-0.0017**	**-0.24**	**0.0060****	**1.92**	**0.0029**	**0.94**	(-)	**-0.0108**	**-0.81**
Controls		YES		YES		YES			YES	
Year Fixed Effects		YES		YES		YES			YES	
Firm Fixed Effects		YES		YES		YES			YES	
Cluster		Firm		Firm		Firm			Firm	
Observations		29,258		29,834		29,834			32,122	
Adjusted R-squared		0.7162		0.1348		0.0723			0.7688	

This table reports the results of an examination of audit committee internal audit experts who are also an audit committee chair. Panel A presents descriptive information on the percentage of audit committees that have at least one internal audit expert who is an audit committee chair. Panel B presents the results of audit committee internal audit expertise partitioned by the existence of at least one internal audit expert who is an audit committee chair and the effect on financial reporting quality. Panel C presents the results of audit committee internal audit expertise partitioned by audit committee chair on non-financial reporting performance. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.

TABLE 15

Audit Committee Internal Audit Experts and Additional Accounting, Finance, or Public Audit Experience

Panel A: Partition of audit committees with internal audit experts by additional accounting, finance, or public audit experience

	$IA\_EXPERTISE_t$ = 1	
	Frequency	Percent
$IA\_ACCT\_EA_t$	1,406	79%
$IA\_NO\_ACCT\_EA_t$	370	21%
Total	1,776	

Panel B: Examination of audit committee internal audit experts who have additional accounting, finance, or public audit experience and the impact on financial reporting quality

		DV = AEM_t		**DV = $MISSTATE_t$**		**DV = $BIGR_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
***IA_ACCT_EA**$_t$*	(-)	**-0.0174****	**-1.98**	**-0.0183**	**-1.16**	**-0.0225****	**-2.03**
***IA_NO_ACCT_EA**$_t$*	(-)	**0.0046**	**0.46**	**0.0275**	**0.84**	**-0.0277****	**-2.04**
Controls		YES		YES		YES	
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		Firm		Firm		Firm	
Observations		32,122		32,122		32,122	
Adjusted R-squared		0.3077		0.2043		0.2552	

TABLE 15 (cont'd)

Panel C: Examination of audit committee internal audit experts who have additional accounting, finance, or public audit experience and the impact on non-financial reporting performance

		DV = *FIRM_EFF*$_t$		**DV = *ΔOPIN*$_t$**		**DV = *ΔOPCF*$_t$**			**DV = *REM*$_t$**	
		(1)		(2)		(3)			(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	**Pr.**	coef.	tstat
IA_ACCT_EA$_t$	(+)	**0.0067**	**1.01**	**0.0038**	**1.14**	**0.0029**	**0.83**	(-)	**-0.0125**	**-0.86**
IA_NO_ACCT_EA$_t$	(+)	**-0.0022**	**-0.16**	**0.011****	**1.86**	**0.0041**	**0.83**	(-)	**0.0197**	**0.82**
Controls		YES		YES		YES			YES	
Year Fixed Effects		YES		YES		YES			YES	
Firm Fixed Effects		YES		YES		YES			YES	
Cluster		Firm		Firm		Firm			Firm	
Observations		29,258		29,834		29,834			32,122	
Adjusted R-squared		0.7161		0.1349		0.0723			0.7689	

This table reports the results of an examination of audit committee internal audit experts who have additional accounting, finance, or public audit experience. Panel A presents descriptive information on the percentage of audit committees that have at least one internal audit expert who also has additional accounting, finance, or public audit experience. Panel B presents the results of audit committee internal audit expertise partitioned by the existence of at least one internal audit expert who has additional accounting, finance, or public audit experience and the impact on financial reporting quality. Panel C presents the results of the effect on non-financial reporting performance. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.

TABLE 16

Audit Committee Internal Audit Expertise and Other Audit Committee Accounting Expertise

Panel A: Partition of audit committees with internal audit experts and an additional audit committee member that is an accounting expert

	$IA\_EXPERTISE_t = 1$	
	Frequency	Percent
$IA\_AND\_AC\_ACCT_t$	1,237	70%
$IA\_NO\_AC\_ACCT_t$	539	30%
Total	1,776	

Panel B: Examination of audit committees with at least one internal audit expert and at least one additional accounting expert and the impact on financial reporting quality

		DV = AEM_t		**DV = $MISSTATE_t$**		**DV = $BIGR_t$**	
		(1)		(2)		(3)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat
***IA_AND_AC_ACCT**$_t$*	(-)	**-0.0154****	**-1.86**	**-0.0182**	**-1.16**	**-0.0318*****	**-3.17**
***IA_NO_AC_ACCT**$_t$*	(-)	**-0.0052**	**-0.59**	**0.0174**	**0.73**	**-0.0019**	**-0.12**
Controls		YES		YES		YES	
Year Fixed Effects		YES		YES		YES	
Firm Fixed Effects		YES		YES		YES	
Cluster		Firm		Firm		Firm	
Observations		32,122		32,122		32,122	
Adjusted R-squared		0.3076		0.2043		0.2554	

TABLE 16 (cont'd)

Panel C: Examination of audit committees with at least one internal audit expert and at least one additional accounting expert and the impact on non-financial reporting performance

		DV = *FIRM_EFF*$_t$		**DV = *ΔOPIN*$_t$**		**DV = *ΔOPCF*$_t$**			**DV = *REM*$_t$**	
		(1)		(2)		(3)			(4)	
Independent Variables	**Pr.**	coef.	tstat	coef.	tstat	coef.	tstat	**Pr.**	coef.	tstat
IA_AND_AC_ACCT$_t$	(+)	**0.0029**	**0.42**	**0.0060****	**1.82**	**0.0029**	**0.87**	(-)	**-0.0038**	**-0.27**
IA_NO_AC_ACCT$_t$	(+)	**0.0098**	**0.85**	**0.0033**	**0.67**	**0.0037**	**0.78**	(-)	**-0.0101**	**-0.45**
Controls		YES		YES		YES			YES	
Year Fixed Effects		YES		YES		YES			YES	
Firm Fixed Effects		YES		YES		YES			YES	
Cluster		Firm		Firm		Firm			Firm	
Observations		29,258		29,834		29,834			32,122	
Adjusted R-squared		0.7161		0.1348		0.0723			0.7688	

This table reports the results of an examination of audit committees with at least one internal audit expert and at least one additional accounting expert who is not an internal audit expert. Panel A presents descriptive information. Panel B presents the results of audit committees with at least one internal audit expert and at least one additional accounting expert who is not an internal audit expert and the impact on financial reporting quality. Panel C presents the results of the effect on non-financial reporting performance. Robust standard errors are clustered by firm. ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels, respectively, based on one-tailed p-values when there is a directional prediction, and two-tailed p-values otherwise. Coefficient estimates are included with t-statistics to the right.