The Association between Audit-Partner Quality and Engagement Quality: Evidence from Financial Report Misstatements

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Abstract: We study whether audit-partner quality influences the probability of annual report misstatements (measured by restatements) and whether various levels of quality control attenuate such influences. We measure audit-partner quality with audit failure rate (i.e., the total number of audit failures associated with an audit partner divided by the total number of audit reports signed by the same partner). We report the following key findings. First, an audit partner's past audit failure rate is positively associated with the probability that the current year annual report that he or she audits is subsequently restated. This positive association is more pronounced for engagement partners (i.e., partners who actually conduct the audits) than for review partners (i.e., partners who review the audits). Incorporating audit partner audit failure rates substantially increases the predictive power for future financial report restatements. Second, neither engagement-team-level nor audit-firm-level quality controls consistently attenuate engagement audit partners' influence on the probability of future restatements. Third, engagement audit partners' influence on the probability of future restatements becomes stronger for audits of more important clients. Taken together, the evidence suggests that, despite various levels of quality control, audit-partner quality significantly influences engagement quality and that such influences are exacerbated by audit partners' own economic incentives.

JEL Classification: M42

Keywords: audit-partner quality, audit failure rate, audit quality control, restatements.

Data Availability: Data used in this study are available from public sources.

I. INTRODUCTION

In this study, we investigate the influence of audit-partner quality on engagement-level audit quality (measured by restatements of audited annual reports). Specifically, we address two research questions. First, does audit-partner quality affect engagement-level audit quality? Second, how do engagement-team-level and audit-firm-level quality reviews moderate the influence of audit-partner quality on engagement-level quality? Prior empirical studies have mostly taken a firm-level or office-level perspective to investigate engagement-level audit quality.[1] However, both firm-level and office-level audit quality are ultimately driven by the quality of engagements supervised by numerous individual audit partners. In spite of this, very little empirical evidence exists on whether the quality of audit partners matters to engagement-level quality.

These research questions are of potential interest to researchers, regulators, investors, and auditors for the following reasons. First, the complex nature of auditing implies that it is inherently a judgment and decision-making process, the outcome of which is inevitably affected by the characteristics of the decision makers (Nelson and Tan 2005). As a team leader, an audit partner likely exerts significant influence on the audit outcomes (Ferguson et al. 2003). Although prior research documents associations between some particular aspects of audit-partner characteristics and audit outcomes,[2] there is little evidence on how the overall quality of an audit partner's work influences engagement quality or on whether such

[1] Please see Francis (2004) and Francis (2011) for comprehensive reviews of audit quality.
[2] See Bedard (2012) for a review of this literature.

influence is effectively mitigated by various levels of quality control. Second, this study also informs the current debate on mandatory audit partner identification in the U.S. In an effort to improve the transparency of public company audits, the Public Company Accounting Oversight Board (hereinafter PCAOB) proposed amendments to auditing standards in October 2011 (hereinafter the Proposed Standard),[3] mandating disclosure of the name of the engagement partner in the audit report (PCAOB 2011).[4] In anticipation of increased transparency and accountability, investors overwhelmingly welcome disclosures of partner identity.[5] In contrast, accounting firms unanimously oppose the Proposed Standard based on two major concerns. First, an audit report reflects the collaborative effort of the entire firm rather than any particular individual. Therefore, revealing audit partner identities might not

[3] In its Concept Release issued in July 2009, the PCAOB initially proposed to mandate that the engagement partner sign the audit report in addition to the firm's signature (PCAOB 2009b). Many commentators express concern over the potential increase in audit partners' legal liability arising from personal signatures. As a result, the Proposed Standard only requires disclosure of the engagement partner's name instead of a signature by the partner in the audit report (PCAOB 2011). In December 2013, the PCAOB re-proposed a revised standard, which requires disclosure of not only the name of the engagement partner but also the identity and the extent of participation of other accounting firms that took part in the audit. As of July 2014, the PCAOB is considering adoption of the revised standard after incorporating public comments.

[4] One of the primary benefits of such disclosure is that "[A]dditional transparency about the identity of the person responsible for the engagement could provide useful information to investors and, in turn, provide an additional incentive to firms to improve the quality of all their engagement partners" (PCAOB 2011, 9).

[5] For example, in a comment letter on the proposed audit partner identification, Jonathan D. Urick, a representative of the Council of Institutional Investors, stated: "Armed with valuable information provided by the lead auditor's signature, investors and boards will demand skilled engagement partners. The Council consequently believes that enhanced focus on the performance of the lead auditor will motivate audit firms to strengthen the quality, expertise, and oversight of their engagement partners. By more explicitly tying the lead auditor's professional reputation to audit quality, requiring engagement partners to sign the audit report will further result in better supervision of the audit team and the entire audit process" (PCAOB 2011, 6–7).

further inform users as to the quality of the audit report.[6] Second, users of audited financial reports receiving incomplete and misleading information might draw inappropriate inferences about audit quality based solely on the identity of the engagement partner.[7] Today, little evidence exists to corroborate either the presumed benefits of partner identification or the validity of accounting firms' concerns.[8] The PCAOB has called for research addressing the question: "Would disclosure of the engagement partner's name on the audit report enhance investor protection? If so, how?" (PCAOB 2011, 11).

We address this research question using audit-market data from China, which offers two advantages. First, Chinese regulations require that each audit report be certified by two audit partners, whose names are disclosed on the audit report, thus enabling us to identify the in-charge auditors behind each audit.[9] Second, under the dual-auditorship regime in China, the engagement partner directs all phases of the audit, whereas the review partner conducts

[6] For example, in its comment letter on the proposed partner identification, Ernst & Young stated: "Public company audits are not simply the work of the engagement partner....The consultative process that is at the center of our firm's system of quality control is designed to prevent any individual from making unilateral decisions around critical accounting and auditing decisions and other significant judgments that could significantly affect our firm's audit opinion." Therefore, "knowing who signed the auditor's report would not change the conclusion of the report, and the added signature of the engagement partner does not further inform users as to the quality of the information in the financial statements" (Ernst & Young 2009, 2–3).

[7] For example, in its letter on the proposed partner identification, Ernst & Young commented: "We are concerned that third parties may begin to trade on information about engagement partners without any ability to discern any correlation with audit quality." This practice would leave investors to "infer distinctions [about audit quality] without basis" (Ernst & Young 2009, 3–4).

[8] An exception is Carcello and Li (2013), who report that after the implementation of the audit partner signature requirement in the U.K., both audit quality and audit fees increased significantly. We address the PCAOB's call for research from a perspective different from that in Carcello and Li (2013) by focusing on the influence of audit-partner quality on engagement quality. We believe both perspectives provide useful insights into the current policy debate.

[9] For partnership CPA firms, the audit report should be signed by the engagement CPA and the partner CPA performing the final review; for limited-liability CPA firms, the audit report should be signed by the engagement CPA and the head of the CPA firm or an authorized deputy head of the firm (Ministry of Finance 2001). The legal liability between the two signing auditors is similar. For ease of exposition, we refer to both signing auditors as audit partners in this study.

the final review of the audit. This distinction allows us not only to assess the relative importance of the engagement vs. the review function but also to examine the interactions between these two functions of an audit team. Although audit reports in China do not explicitly disclose the role assumed by each signing auditor, in practice junior (senior) partners usually fulfill the engagement (review) responsibility.[10] As such, to distinguish between the two audit partners, we designate the one with the greater (fewer) number of years of experience working as a signing auditor as the review (engagement) partner of the audit.

We use audit failure, defined as an annual report restatement following an unqualified audit opinion, to measure audit quality for the following reasons. First, a restatement implies straightforward admissions by both the client and the auditor that the financial report is materially misstated. Issuance of an unqualified opinion to a materially misstated financial report clearly indicates impaired audit quality.[11] Second, among a multitude of surrogates of audit quality (Knechel et al. 2012), restatement is arguably the one most directly observable by outsiders.[12] Third, prior research shows that restatements frequently trigger sizable investor losses (Palmrose et al. 2004; GAO 2006; Hennes et al. 2008). If additional transparency about partner identity can improve investors' ability to predict future restatements, it will possibly enhance investor protection by sending out early warning signals about the quality of audited financial reports. Accordingly, we measure audit-partner

[10] We interviewed auditors working at audit firms in China to confirm this practice.
[11] The China Independent Auditing Standard (CIAS) stipulates four types of audit opinions: unqualified, qualified, disclaimer, and adverse (Ministry of Finance 2006).
[12] Some commentators speculate that "[D]atabases would be developed that attempt to create a 'box score' of partners' skills and qualifications, or to rank them by, for example, number of restatements" (PCAOB 2011, 8).

quality with the actual audit failure rate (hereinafter AFR), which is the total number of audit failures associated with an audit partner scaled by the total number of annual reports signed by the same partner. We calculate AFR cumulatively using data available since 2003, the first year that public firms in China started to make mandatory restatement disclosures.

Using 6,429 annual reports of Chinese companies signed by 2,735 audit partners during the period 2004–2009, we report the following key findings. First, after controlling for client, audit firm, and other audit-partner characteristics, an audit partner's past audit failure rate is positively associated with the probability that the current year audited annual report will be subsequently restated. Such association is significantly stronger for engagement partners than for review partners. In economic terms, holding all other variables at their sample means, for each 1 percent increase in the AFR of the engagement (review) partner, the probability of future restatements increases by 1.02 (0.56) percent, a significant (moderate) increase in light of the 5.8 percent base rate of annual report restatements of the full sample. Incorporating the AFR of audit partners into the restatement prediction model significantly increases the predictive power for future restatements. These results support the interpretation that audit partners' past performance predicts their future audit quality and that such effects are not completely eliminated by quality control within audit firms. Second, the association between the AFR of engagement partners and future restatement probability is not significantly weaker for engagements supervised by high-quality review partners than for those supervised by low-quality review partners, nor is such an association weaker for

engagement partners in the Top 8 audit firms relative to their non-Top 8 peers. These results indicate that neither engagement-team-level nor audit-firm-level quality control effectively attenuates the impact of engagement partners on audit quality. Third, the association between the AFR of engagement partners and future restatements is stronger for audits of more important clients than for audits of less important clients, which suggests that economic dependence of audit partners on their clients amplifies the influence of engagement partners. Our results are robust (1) to using alternative measures of engagement-level audit quality, (2) to alternative designations of review vs. engagement partners, (3) to controlling for potential endogeneity in the match between clients and audit partners, and (4) to a battery of other sensitivity tests.

Subject to the limitations discussed in Section II, this study contributes to the literature in the following ways. First, review and engagement auditors perform two important yet distinct functions in the audit process, with the review auditors supposedly providing independent and objective evaluations of the judgments and decisions rendered during the audit (PCAOB, 2009a). However, prior empirical audit-partner research does not distinguish between these two functions. This study highlights the pivotal role played by engagement partners and supports the view that partners who actually conduct audits very likely have a greater influence on engagement-level quality than partners who simply perform quality reviews, which underscores the importance of disclosing engagement partners in the audit report even though their work undergoes various levels of quality reviews.

Second, prior research on the role of audit partners primarily investigates the effect of a partner attribute such as partner tenure, industry expertise, and fee dependence on engagement-level quality (Carey and Simnett 2006; Chen et al. 2008; Chin and Chi 2009; Chen et al. 2010; Bedard and Johnstone 2010; Zerni 2012). Using audit failure rate as a comprehensive indicator of audit-partner quality, we show that, in the context of predicting future restatements, audit failure rate dominates those attributes examined by prior research.

Third, prior restatement prediction research mainly focuses on client characteristics (Dechow et al. 2011), audit firm characteristics (Lennox and Pittman 2010), and audit office characteristics (Francis et al. 2012). We show that incorporating the past AFRs of audit partners substantially increases the predictive power for future restatements. In addition, Francis and Michas (2013) report a contagion effect of audit quality within audit offices. Our results suggest that this effect might be driven by audit partners with persistently poor quality.

Fourth, we extend prior auditor independence research at the audit partner level (Chen et al. 2010) by documenting that client importance moderates the influence of audit-partner quality on engagement-level quality.

The rest of the paper is organized as follows. Section II introduces the institutional background of the Chinese audit market and discusses its unique features, Section III reviews the related literature, Section IV develops the hypotheses, Section V details the research design, Section VI discusses the results, and Section VII concludes the study.

II. INSTITUTIONAL BACKGROUND

Development of the Chinese Audit Market

After a suspension of more than 30 years, the Chinese auditing profession started its recovery in the early 1980s. Since the establishment of the Shanghai and Shenzhen Stock Exchanges in the early 1990s, the profession has undergone exponential growth in response to the demand for independent audits of publicly listed firms. The number of individual CPAs (accounting firms) grew from 500 (80) in 1986 to 85,000 (6,813) in 2009, among which 20,602 (54) were qualified to audit 1,718 publicly listed firms in 2009 (CSRC 2009). To regulate this fast-growing profession, the Ministry of Finance stipulated 48 independent auditing standards through six sets of rules issued from 1994 to 2003. In 2006, these auditing standards were further revised to be more compatible with International Standards on Auditing (ISA) and to facilitate the transition to International Financial Reporting Standards (IFRS) starting in 2007.

Compared with developed markets, the Chinese audit market is less concentrated (Chen et al. 2010). During our sample period of 2004–2009, the average market share of the Big 4 firms by the number of clients (total assets) was 7.04% (69.21%), whereas the average market share of the four largest national audit firms (national Top 4) by the number of clients (total assets) was 17.04% (6.41%). This less-concentrated market structure tends to intensify competition, especially among non-Top 8 audit firms.

Characteristics of the Chinese Audit Market

The Chinese audit market is marked by weak investor protection and low litigation risk. Although the government took significant steps to strengthen regulations and to improve audit quality after the spate of accounting and auditing scandals during 2000–2001,[13] the regulatory and legal structures in China still do not provide the same level of investor protection as that in more-developed markets.[14] Low litigation risk in China diminishes audit firms' motivation to implement appropriate quality control, which results in more pronounced influences by individual partners on audit quality. Low litigation risk also reduces audit partners' incentives to rectify past mistakes on a timely basis, which leads to a stronger persistence of audit-partner performance over time. In addition, strong influence from the government over state-owned enterprises (SOEs) potentially interferes with auditors' decision-making processes (Chan et al. 2006). Finally, market competition likely intensifies pressure on auditors to acquiesce to the views of important clients. Collectively, the above factors potentially distort auditors' incentives for high audit quality, thereby limiting our ability to generalize the findings to markets with more-developed legal and economic infrastructures.

[13] Examples of these steps include revising auditing standards, imposing a five-year mandatory audit partner rotation rule, allowing civil lawsuits to be filed against auditors for audit failures, and issuing sanctions against negligent auditors. During our sample period of 2004−2009, 18 audit firms and 57 audit partners received various levels of sanctions from the China Securities Regulatory Commission (CSRC), indicating that there are real costs imposed on auditors for substandard audits.

[14] Under the current legal regime, class action lawsuits are prohibited in China. In addition, the current judicial system imposes restrictions on the initiation of private securities litigation. For example, according to the Supreme Court Notice issued on January 9, 2003, investors who sustain losses due to reliance on an audited financial report can file lawsuits against the auditor only if that auditor has been sanctioned and confirmed guilty by the CSRC (Firth et al. 2004). See Chen et al. (2010), Chen et al. (2011), and Firth et al. (2012) for details about the evolving legal environment surrounding the audit market in China.

III. PRIOR LITERATURE

Audit Partner and Audit Quality

Prior research takes either a firm-level perspective (Palmrose 1988; Teoh and Wong 1993; Becker et al. 1998; Francis et al. 1999; Behn et al. 2008) or an office-level perspective (Reynolds and Francis 2001; Krishnan 2005; Francis and Yu 2009; Li 2009; Choi et al. 2010; Francis et al. 2012; Francis and Michas 2013) in investigating the relationship between auditor attributes and audit quality. These studies implicitly assume that, through standardized firm-wide quality control and knowledge sharing, audit quality within an audit firm or a practice office remains uniform (Zerni 2012). Recognizing the possibility that audit-partner characteristics potentially affect engagement-level quality above and beyond audit-firm-level and office-level quality control, recent studies have started to push down the level of analysis to audit partners. Several studies focus on the relationship between audit partner tenure and audit quality and report mixed findings (Carey and Simnett 2006; Chen et al. 2008; Chi et al. 2009). Other studies document that (1) audit partner industry expertise reduces the likelihood of subsequent restatements (Chin and Chi 2009) and is priced by clients (Zerni 2012), (2) audit partner style (aggressive vs. conservative) is persistent and is priced by the market (Knechel et al. 2013), (3) audit failures affect audit partner compensation (Knechel et al. 2014), and (4) each audit partner has a unique fixed effect on audit quality that can be explained by certain demographic characteristics (Gul et al. 2013).

We extend the prior literature by examining whether the audit failure rate, which summarizes an audit partner's past performance, predicts future engagement-level audit quality.[15] This question is important because one of the underlying assumptions of audit partner identification is that an audit partner's past performance likely predicts future performance, and that partner identity therefore potentially conveys incremental information with regard to audit quality.[16] Yet, the validity of these assumptions has not been substantiated and remains at the heart of the current debate.

Fee Dependence and Auditor Independence

DeAngelo (1981) demonstrates that client-specific start-up costs and the transaction costs of switching auditors give rise to quasi-rents in subsequent audits. The threat of losing these quasi-rents puts pressure on incumbent auditors to acquiesce to clients. In other words, auditors' incentives to compromise independence increase as client importance increases. Most prior empirical studies on auditor independence failed to find evidence that auditors compromise independence at either the audit-firm level (Craswell et al. 2002; Chung and Kallapur 2003; Kinney et al. 2004) or the audit-office level (Reynolds and Francis 2001; Li

[15] Based on our full sample, the Pearson correlation coefficients between review partner audit failure rate and partner tenure, industry expertise, and fee dependence are -0.028 ($p < 0.05$), -0.033 ($p < 0.01$), and 0.018 ($p > 0.1$), respectively. The Pearson correlation coefficients between engagement partner audit failure rate and partner tenure, industry expertise, and fee dependence are -0.010 ($p > 0.1$), -0.031 ($p < 0.05$), and -0.02 ($p < 0.10$), respectively. The low values of Pearson correlation coefficients suggest that the partner audit failure rate encompasses important dimensions of audit-partner quality other than partner tenure, industry expertise, and fee dependence.

[16] This assumption is also echoed in the PCAOB's initiative to require audit partner identification in the U.S. The Proposed Standard states, "[P]roviding financial statement users, audit committees, and others with the name of the engagement partner might provide them the opportunity to evaluate, to a degree, an engagement partner's experience and track record. If so, audit committees might increasingly seek out engagement partners who are viewed as performing consistently high-quality audits, and the resulting competition could lead to an improvement in audit quality." (PCAOB 2011, 6)

2009).[17] Given that it is the engagement partner who makes decisions for various aspects of an audit (Ferguson et al. 2003), client importance measured at the firm or office level might not accurately capture the economic incentives of auditors and thus may compromise the power of tests. To this end, DeFond and Francis (2005) and Francis (2011) suggest pushing down the level of analysis to audit partners. Along this line, using Chinese market data, Chen et al. (2010) show that institutional improvements constrain audit partners' tendency to issue clean audit opinions to important clients. However, audit partner independence may not be constant across all partners. In this study, we extend Chen et al. (2010) by showing how audit partner independence varies with audit-partner quality.

IV. HYPOTHESIS DEVELOPMENT

Audit Failures and Audit-Partner Quality

Two competing arguments explain the underlying reasons for audit failures: the causal argument and the isolated-incident argument. Under the causal argument, audit failures are caused by substandard audits and thus signal systematic poor audit quality. Consistent with this argument, prior research finds ample evidence of litigation against auditors alleging poor audit quality (Pierre and Anderson 1984; Palmrose 1988; Lys and Watts 1994; Bonner et al. 1998; Heninger 2001). In contrast, under the isolated-incident

[17] One exception is Frankel et al. (2002), who document a positive association between non-audit fees and several measures of earnings management. However, subsequent studies show that the results in Frankel et al. (2002) are somewhat sensitive to alternative research designs and variable measurements (Ashbaugh et al. 2003; Chung and Kallapur 2003; Larcker and Richardson 2004).

argument, audit failures are not always caused by poor audit quality,[18] because audit opinions only offer "reasonable assurance about whether the financial statements are free of material misstatement" (AU Sec. 508.08; AICPA 1989).[19] Thus, past audit failures do not necessarily reflect audit quality or predict future performance.[20] Even if audit failures arise due to poor audit quality, they might be more indicative of widespread problems in quality control within the audit firm than of deficient work by a particular audit partner.[21,22] In sum, whether an audit partner's past record predicts future audit failure is a joint test of (1) whether an audit partner's past audit failures mirror poor audit quality, and (2) whether audit-partner quality influences engagement-level quality above and beyond the effects of quality control. To examine this research question, we test the following hypothesis (stated in alternate form):

> **H1a:** The past audit failure rate of an audit partner is positively associated with the probability that the current year annual reports that he or she audits will be subsequently restated.

[18] Empirical evidence suggests that restatement does not always result in litigation against the auditor. For instance, based on 492 restatements announced between 1995 and 1999, Palmrose and Scholz (2004, 151) report that only 13% of restatements eventually resulted in litigation against the auditor. Schmidt (2012, 1041) reports that among 1,543 annual report restatements disclosed between 2001 and 2007, only 60 restatements (3.9%) resulted in litigation against the auditor.

[19] For example, even if the auditor exercises professional skepticism, independent judgment, and due diligence, he or she may still fail to discover fraud committed by the client's management. Knechel (2009) argues that the designed assurance level provided by an audit cannot be 100 percent due to cost concerns. Indeed, Dyck et al. (2010) report that the external auditor discovers only 10 percent of all corporate fraud.

[20] To the extent that a more conscientious auditor may be more likely to request a restatement conditional on detection of a prior year misstatement, higher restatements may even reflect higher audit quality. This is an alternative explanation for the positive association between past audit failure rate and future restatements.

[21] For example, in its comment letter to the Concept Release, KPMG stated: "Although the engagement partner has primary responsibility for the conduct of the audit, he/she operates within the framework of the firm's system of quality control, in order to ensure that the audit is conducted in accordance with professional standards" (KPMG 2009, 2).

[22] Examples of quality control procedures include multiple levels of reviews; standardization of audit programs; office-level and firm-level database sharing and consulting; uniform firm-wide personnel hiring, training, and promotion; and centralized decision making with respect to risk and materiality assessment (Ferguson et al. 2003; Zerni 2012).

Even if audit-partner quality affects engagement-level quality, it is unclear whether review or engagement partners play a more dominant role. In one direction, review partners are more experienced, possess higher status in the audit firm, and have the final say on critical auditing issues. In the other direction, engagement partners oversee the audit staff, are involved in daily audit field work, and render numerous nontrivial decisions. We examine this question in the following hypothesis (stated in alternate form):

> **H1b:** The positive association between the past audit failure rate of an audit partner and the probability that the current year annual reports that he or she audits will be subsequently restated is stronger for engagement partners than for review partners.

The Moderating Effects of Quality Control

Even if the quality control does not completely eliminate the influence of audit partners on engagement-level quality, evidence that stronger quality control weakens such an influence still lends support to those opposing the proposed partner identification. We examine the moderating effect of quality control at both the engagement-team level and the audit-firm level. At the engagement-team level, we expect that, relative to low-quality review partners, high-quality review partners more effectively detect and correct mistakes of engagement partners, thereby mitigating the influence of engagement partners on audit quality. We test this prediction in the following hypothesis (stated in alternate form):

> **H2a:** The positive association between the past audit failure rate of an engagement partner and the probability that the current year annual reports that he or she audits will be subsequently restated is weaker (less positive) for engagement teams with high-quality review partners than for engagement teams with low-quality review partners.

Audit-firm-level quality control procedures are not directly observable. Prior research reports higher audit quality of Top 8/10 audit firms relative to non-Top 8/10 audit firms in China (DeFond et al. 2000). Given that audit-firm-level quality control is an important mechanism to ensure audit quality, we believe it is reasonable to assume that Top 8 audit firms in China have more effective quality control in place than non-Top 8 firms. We investigate whether firm-level quality control moderates the influence of engagement and review partners using the following hypothesis (stated in alternate form):

> **H2b:** The positive association between the past audit failure rate of an audit partner and the probability that the current year annual reports that he or she audits will be subsequently restated is weaker (less positive) for Top 8 firm audit partners than for non-Top 8 firm audit partners.

The Moderating Effects of Client Importance

The economic incentives of audit partners may moderate the association between audit-partner quality and engagement-level quality. To the extent that poor-quality audit partners are more likely to acquiesce to more important clients than less important clients, we should observe a more pronounced association between audit failure rate and engagement-level quality for large engagements.[23] On the other hand, auditor independence implies that

[23] We recognize that besides economic incentives, political capital such as "Guanxi" can be another important factor affecting audit partners' judgments and decision making in China.

audit partner influence should not vary with client importance, particularly for review partners.[24] We investigate this question in the following hypothesis (stated in alternate form):

> **H3:** The positive association between the past audit failure rate of an audit partner and the probability that the current year annual reports that he or she audits will be subsequently restated is stronger (more positive) for engagements of more important clients than for engagements of less important clients.

V. RESEARCH DESIGN

Measure of Audit-Partner Quality

Holding audit-partner quality constant, the number of audit failures a partner encounters increases with the total number of audits he or she conducts. Therefore, we measure audit-partner quality with the actual audit failure rate, which is the total number of audit failures as a percentage of the total number of annual report audits as follows:[25]

[24] There are two reasons why economic incentives may play a different role between review and engagement partners. First, based on interviews with partners of audit firms, we learn that review partners typically participate in the profit sharing of their audit firms, whereas engagement partners do not. Such firm-wide profit sharing likely reduces the economic dependence of a review partner on any one particular client (Trompeter 1994). Second, compared with engagement partners, review partners play a much more limited role in audits, and as a result, their incentives may not significantly affect the audit outcome.

[25] This measure is in line with the characterization of restatements by the PCAOB in that "While the overall restatement levels may be a general indicator of audit effectiveness, the fact of a restatement alone, without additional context, may not be a sufficient basis to make predictions about a particular engagement partner's performance" (PCAOB 2011, 8). Restatements can be further categorized by the underlying misstatement reasons (Cheffers et al. 2011), and so we leave it to future research to investigate whether similar reasons drive an audit partner's past and future audit failures. We cite two cases as further evidence that restatements are a direct reflection of audit quality. In the first case, the accounting firm Zhengyuan LLP issued a standard unqualified opinion on the 2009 annual report of Yaxing Chemical (600319), where the accounts payable was understated by 30 million RMB. After the restatement, the CSRC sanctioned Zhengyuan LLP for failing to perform due diligence during the audit process. Specifically, the firm was fined 700,000 RMB and both signing audit partners received regulatory warning. In the second case, Zhongxincai LLP issued standard unqualified audit opinions on the annual reports of Huaxiatongjian (600149) during 2003–2005, which were later restated due to overstatement of net earnings. Subsequently, the CSRC issued a regulatory warning and imposed a 100,000 RMB fine on the CPA firm.

$$AFR_{i,t} = \frac{\#\ failure_{i,t}}{\#\ report_{i,t}}, \quad (1)$$

where *# failure*$_{i,t}$ is the total number of annual reports restated subsequent to an unqualified audit opinion from audit partner i as of year-end t, and *# report*$_{i,t}$ is the total number of annual reports signed off by audit partner i as of year-end t. We calculate the AFR cumulatively using data available since 2003, the first year that public firms in China started to make mandatory restatement disclosures. Higher AFRs arguably indicate lower partner quality.

Audit-Partner Audit Failure Rate and Future Restatements

To test the relation between annual report restatements and audit-partner audit failure rate, we estimate the following logistic regression at the client-year level:

$$\begin{aligned} PROB\{RESTATEMENT_{j,t} = 1\} = f(&\alpha_0 + \alpha_1 AFR\_REVIEW_{j,t-1} + \\ &\alpha_2 AFR\_ENGAGE_{j,t-1} + \alpha_{3-6} INDIVIDUAL_{j,t} + \beta_{1-6} AUDITFIRM_{j,t}, \\ &+ \gamma_{1-12} CLIENT_{j,t} + YEAR + INDUSTRY + \varepsilon_{j,t}) \end{aligned} \quad (2)$$

where $RESTATEMENT_{j,t}$ equals 1 if the annual report of client j in year t is subsequently restated following an unqualified audit opinion, and 0 otherwise. $AFR\_REVIEW_{j,t-1}$ ($AFR\_ENGAGE_{j,t-1}$) is the one-year-lagged value of the actual audit failure rate for the review (engagement) partner of client j in year t. We designate the audit partner with the greater (fewer) number of years of experience as a signing partner to be the review (engagement) partner.[26] Coefficient α_1 (α_2) measures the association between the review

[26] If the two signing auditors have the same number of years of experience working as a signing auditor (96 observations), we randomly select one as the review partner and the other as the engagement partner. As a sensitivity analysis, we switch the designation of review and engagement partner status between the two audit partners with identical experience and obtain results similar to those for the main analysis. For audit reports signed by more than two partners (318 observations), we designate the one with the most (least) experience as the review (engagement) partner.

(engagement) partner's past audit failure rate and RESTATEMENT. Based on the alternate hypothesis of H1a, we expect that $\alpha_1 > 0$ ($\alpha_2 > 0$). Based on H1b, we expect that $\alpha_2 > \alpha_1$.

To test H2a, which focuses on the mitigating effects of engagement-team-level quality control on the influence of engagement partners, we assume that high-quality review partners have lower AFRs than low-quality review partners. We modify model (2) and estimate the following logistic regression at the client-year level:

$$\begin{aligned} PROB\{RESTATEMENT_{j,t} = 1\} = f(&\alpha_0 + \alpha_1 QUALITY\_REVIEW_{j,t-1} + \\ &\alpha_2 AFR\_ENGAGE_{j,t-1} + \alpha_3 AFR\_ENGAGE_{j,t-1} * QUALITY\_REVIEW_{j,t-1} \\ &+ \alpha_{4-7} INDIVIDUAL_{j,t} + \beta_{1-6} AUDITFIRM_{j,t} + \gamma_{1-12} CLIENT_{j,t} + \\ &YEAR + INDUSTRY + \varepsilon_{j,t}) \end{aligned}, \qquad (3a)$$

where $QUALITY\_REVIEW_{j,t-1}$ equals 1 if $AFR\_REVIEW_{j,t-1}$ is below the sample median, and 0 otherwise. The coefficient for the interaction term $AFR\_ENGAGE_{j,t-1} * QUALITY\_REVIEW_{j,t-1}$ captures the incremental influence of an engagement partner who is supervised by a review partner with a low AFR. Based on the alternative hypothesis of H2a, we expect $\alpha_3 < 0$ in model (3a).[27]

To test H2b, which investigates the mitigating effects of audit-firm-level quality control on the influence of audit partners, we supplement model (2) with two interaction terms and estimate the following logistic regression at the client-year level:

[27] As an alternative specification, we set $QUALITY\_REVIEW_{j,t-1}$ to 1 if $AFR\_REVIEW_{j,t-1} = 0$ and set $QUALITY\_REVIEW_{j,t-1}$ to 0 if $AFR\_REVIEW_{j,t-1} > 0$, and re-estimate model (3a). The results are qualitatively similar. Throughout the paper, we use the term "qualitatively similar" to denote that both the sign and statistical significance level for the variables of interest remain unchanged.

$$PROB\{RESTATEMENT_{j,t}=1\} = f(\alpha_0 + \alpha_1 AFR\_REVIEW_{j,t-1} + \alpha_2 AFR\_ENGAGE_{j,t-1} + \alpha_3 AFR\_REVIEW_{j,t-1} * TOP8 + \alpha_4 AFR\_ENGAGE_{j,t-1} * TOP8 + \alpha_{5-8} INDIVIDUAL_{j,t} + \beta_{1-6} AUDITFIRM_{j,t} + \gamma_{1-12} CLIENT_{j,t} + YEAR + INDUSTRY + \varepsilon_{j,t}) \quad (3b)$$

where *TOP8* equals 1 for Top 8 audit firms and 0 otherwise. Based on the alternative hypothesis of H2b, we expect that $\alpha_3 < 0$ and $\alpha_4 < 0$ in model (3b).

To test hypothesis H3, which examines whether the association between the audit failure rate and future restatements varies with client importance, we modify model (2) by estimating the following logistic regression at the client-year level:

$$PROB\{RESTATEMENT_{j,t}=1\} = f(\alpha_0 + \alpha_1 AFR\_REVIEW_{j,t-1} + \alpha_2 AFR\_ENGAGE_{j,t-1} + \alpha_3 AFR\_REVIEW_{j,t-1} * CIMPORT\_REVIEW_{j,t} + \alpha_4 AFR\_ENGAGE_{j,t-1} * CIMPORT\_ENGAGE_{j,t} + \alpha_{5-8} INDIVIDUAL_{j,t} + \beta_{1-6} AUDITFIRM_{j,t} + \gamma_{1-12} CLIENT_{j,t} + YEAR + INDUSTRY + \varepsilon_{j,t}) \quad (4)$$

To facilitate interpreting the results, we set $CIMPORT\_REVIEW_{j,t}$ ($CIMPORT\_ENGAGE_{j,t}$) to 1 if fee dependence of the review (engagement) partner of client j in year t is greater than the sample median for review (engagement) partners, and 0 otherwise. Coefficient α_3 (α_4) reflects the incremental probability of future restatements when the review (engagement) partners audit more important clients as compared with less important clients. Based on the alternative hypothesis of H3, we expect that $\alpha_3 > 0$ and $\alpha_4 > 0$ in model (4). The control variables include other characteristics that likely affect future restatements. These controls are measured at the engagement-team level, the audit-firm level, and the client level, and they are discussed in detail in Appendix A. To mitigate the effects of outliers, we winsorize all continuous variables at the 1st and 99th percentiles. We estimate models (2)–(4)

with robust standard errors clustered by client firm and year, while controlling for industry and year fixed effects (Gow et al. 2010).[28] See Table 1 for detailed variable definitions.

----------Insert Table 1 here----------

VI. SAMPLE SELECTION AND RESULTS

Sample Selection

We construct our sample by merging data from the following sources for the period 2004–2009: (1) all available firm-year observations from the China Stock Market and Accounting Research Database (CSMAR), where we obtain financial and stock market data, audit opinions, and the names of audit firms; (2) all identities of the signing audit partners, which are obtained from CSMAR and are manually coded based on audit partner names;[29] and (3) all restatement announcements hand-collected from annual report disclosures. Our sample period starts in 2004 because public companies in China first started to make formal restatement disclosures in 2003, and we require a one-year-lagged value of the AFR.[30] After deleting observations with restatements following a modified audit opinion, observations listed on the SME and ChiNext boards,[31] observations in the financial industry, and

[28] The results are qualitatively similar if we control for audit-firm fixed effects.

[29] To accurately calculate the number of years of experience of signing audit partners, we trace the audit partner identity of all public companies' annual reports back to their initial year on the stock exchange. The Shanghai (Shenzhen) Stock Exchange was founded in 1990 (1991), so we obtain the names of signing audit partners for annual reports filed during the period 1990–2009 (1991–2009) for companies listed on the Shanghai (Shenzhen) Stock Exchange. We manually assign a unique code to each audit partner. For audit partners with identical names, we distinguish them based on their associated audit firms.

[30] In 2003, the CSRC issued a regulation specifying financial report restatement and disclosure requirements (CSRC 2003). Starting from 2003, all listed firms must disclose on a timely basis any discovered misstatements of financial information contained in previously issued financial reports.

[31] Observations listed on the SME and ChiNext boards mainly include small start-up companies, and the listing requirements, trading rules, and disclosure regulations are different for those companies. The results are qualitatively similar if we include 633 SME/ChiNext observations in the regressions.

observations with missing values, we arrive at 6,429 firm-year observations (for 1,311 firms).[32] After searching all public company disclosures during the period 2003–2010, we identify 1,411 annual report restatements that are not due to the convergence to IFRS in 2007. We keep only the first restatement for firms with multiple restatements during 2003–2009. After removing restatements due to changes in accounting principles and restatements with modified audit opinions, we arrive at 92 and 375 annual report restatements during 2003 and the period 2004–2009, respectively. We calculate the AFR for 2003 based on 1,293 annual report audits. See Table 2 for the detailed sample selection process of the full sample (Panel A), the restatement sample (Panel B), and the industry distribution of the restatement sample (Panel C).

----------Insert Table 2 here----------

Results on the Association between Audit-Partner Audit Failure Rate and Future Restatements

Table 3 Panel A reports summary statistics of variables used in model (2) for the full sample. On average, 5.8 percent of annual reports are subsequently restated following an unqualified audit opinion. The AFRs for review and engagement partners are 9.3 percent and 8.0 percent, respectively, with a significant difference between them ($p = 0.00$). Although half of the review (engagement) partners have AFRs no greater than 5.3 (0.0) percent, review (engagement) partners in the top decile have AFRs exceeding 25.0 (35.0) percent, indicating great variations in audit-partner quality. Review (engagement) partners on average have 8.1

[32] It could be argued that restatements subsequent to modified audit opinions may or may not amount to audit failures. As a result, we exclude such observations from the sample. The main results are qualitatively similar when we include those observations as audit failures in the sample.

(3.5) years of experience signing audit reports. The values for the control variables are generally in line with those documented in prior studies using Chinese data (Chen et al. 2010; Firth et al. 2012; Gul et al. 2013).

----------Insert Table 3 here----------

Panel B of Table 3 tabulates univariate test results between the restatement and non-restatement subsamples. The mean AFR of review (engagement) partners of annual reports with future restatement is 0.266 (0.474), compared with 0.082 (0.055) for review (engagement) partners of annual reports without future restatement, and the difference is significant at $p<0.01$ ($p<0.01$). The two subsamples exhibit significant variations in operating risk, financial risk, and ownership structure, as indicated by the differences in ROA, CFO, LEV, AGE, SOE, and CROSSLIST. The univariate tests highlight the importance of controlling for other determinants of restatement in our multivariate regressions.

----------Insert Table 4 here----------

Table 4 presents multivariate regression results for variations of model (2). Following Hillegeist et al. (2004), we use the Vuong test to examine the incremental explanatory power of each variation. In Column (1), we first report the baseline regression results excluding any audit-partner or audit-firm attributes. In Column (2), we add five audit-firm attributes. This specification corresponds to regimes in which only audit-firm identity is available. Incorporating audit-firm characteristics significantly increases the explanatory power relative to Column (1) ($p<0.01$). Column (3) includes the four partner-specific variables. Although

the coefficients for SPECIALIST_AUDITORS and FEEDEP_AUDITORS are significant at $p<0.10$ and $p<0.05$, we fail to find a significant increase in the model's pseudo R^2 based on the Vuong test ($p=0.29$). As we further include AFR_REVIEW and AFR_ENGAGE in Columns (4) and (5), respectively, both variables are positive and significant at $p<0.01$. In addition, we observe a steady increase in the model's pseudo R^2 between Column (4) and Column (3) ($p<0.01$), and between Column (5) and Column (4) ($p<0.01$). When we simultaneously include both AFR_REVIEW and AFR_ENGAGE in Column (6), both variables are significant at $p<0.01$, with the coefficient of AFR_ENGAGE (7.050) being significantly higher than that of AFR_REVIEW (3.301) at $p<0.01$. Based on Column (6), as the AFR of the review (engagement) partner increases by 1 percent, the probability of future restatements increases by 0.56 (1.02) percent. The less prominent role of review partners relative to that of engagement partners is consistent with the following: (1) review partners' limited involvement in the actual audit work lessens their personal influence on audit quality, and/or (2) the longer experience of review partners enables them to better comply with quality control procedures and mitigates their personal influence on engagement-level quality. The results are similar when we include only AFR_REVIEW and AFR_ENGAGE along with client characteristics in Column (7).

Taken together, these results support the alternative hypothesis of H1a in that the probability of future restatements is higher for annual reports audited by audit partners with higher past-audit failure rates. Consistent with the alternative hypothesis of H1b, we find that

engagement partners who actually conduct the audit have significantly greater influence on future restatement probability than review partners who simply perform the quality review.

With regard to control variables, we find that clients audited by high quality audit firms (i.e., Top 8 firms) are less likely to restate (Lennox and Pittman 2010). Older firms and firms with higher book-to-market ratio are more likely to restate current year annual reports.

Results on the Moderating Effects of Quality Control

Column (1) of Table 5 reports the estimation results for the moderating effects of engagement-team-level quality controls (H2a).[33] For brevity, we omit results for control variables at the audit firm and client level. As expected, the coefficient for QUALITY_ REVIEW is negative (-2.391) and significant at $p<0.01$, suggesting that annual reports reviewed by high-quality review partners are less likely to be subsequently restated. However, the coefficient for AFR_ENGAGE*QUALITY_REVIEW is positive (0.837) and not significantly different from zero ($p=0.11$), which suggests that the likelihood of future audit failures for engagement partners supervised by high-quality review partners is not different from that of engagement partners supervised by low-quality review partners. Therefore, we fail to reject the null hypothesis of H2a.

[33] Recall that we use review audit partner quality (QUALITY_REVIEW) to proxy for audit-team-level quality control in Column (1), and use Top 8 audit firms (TOP8) to proxy for audit-firm-level quality control in Column (2). We admit that both variables are imperfect measures for audit quality control and encourage researchers to seek more accurate proxies in future research.

Column (2) of Table 5 reports the results from testing H2b, which relates to the mitigating effects of audit-firm-level quality control on the influence of audit partners. The coefficient for AFR_REVIEW*TOP8 (AFR_ENGAGE*TOP8) is -2.560 (1.441) and is significant at $p<0.05$ ($p<0.05$), indicating that Top 8 review (engagement) partners exert less (more) influence on future restatement probability relative to their non-Top 8 peers, which supports (fails to support) the alternative hypothesis of H2b.[34] The test of coefficient restrictions indicates that within Top 8 audit firms, even though review partners have little impact (AFR_REVIEW+AFR_REVIEW*TOP8=1.108, $p=0.23$), engagement partners wield significant influence on the audit outcomes (AFR_ENGAGE+AFR_ENGAGE*TOP8=8.320, $p<0.01$).

In summary, the results in Table 5 show that although audit-firm-level quality control somewhat attenuates the influence of review partners, neither team-level nor firm-level quality control effectively weakens the influence of engagement partners. Given that engagement partners play a more dominant role than review partners, our results mostly fail to substantiate the mitigating effects of quality control on the influence of audit partners.

----------Insert Table 5 here----------

Results on the Moderating Effects of Client Importance

[34] The more pronounced influence of the engagement partners in Top 8 firms relative to their non-Top 8 peers is likely due to shorter tenure and higher fee dependence. Untabulated results indicate that the mean (median) value of partner tenure and fee dependence of engagement partners in Top 8 firms is 1.974 (2.000) and 0.696 (1.000), compared with 2.193 (2.000) and 0.634 (0.510) for engagement partners of non-Top 8 firms. The differences are significant at $p<0.01$ for the mean (median) of both measures.

Table 6 shows the results of variations of model (4). In Column (1), we include the client importance measure for both partners. The positive (negative) and insignificant (significant at $p<0.10$) coefficient for CIMPORT_REVIEW (CIMPORT_ENGAGE) suggests that review (engagement) partners on average do not compromise independence. This is consistent with the post-2001 results in Chen et al. (2010). In Columns (2) and (3), we alternately include the client importance measure and its interaction term for review and engagement partners. The coefficient for AFR_REVIEW*CIMPORT_REVIEW and AFR_ENGAGE*CIMPORT_ENGAGE are 1.234 ($p=0.29$) and 2.772 ($p<0.01$), respectively, indicating that the influence of engagement partners, but not review partners, is greater for audits of more important clients. The results for the full model in Column (4) are similar to those in Columns (2) and (3). Overall, these results support the interpretation that economic incentives amplify engagement audit partners' influence on audit quality. Therefore, we reject (fail to reject) the null hypothesis of H3 for engagement (review) partners.

----------Insert Table 6 here----------

Sensitivity Analyses

Alternative Measures of Engagement-Level Quality

To evaluate the robustness of our results, we use the absolute value of discretionary accruals (|DACC|) as the first alternative measure of engagement-level quality (Reynolds and Francis 2001; Francis and Yu 2009; Reichelt and Wang 2010). Using |DACC| as the dependent variable, we re-estimate Column (6) of Table 2. The untabulated coefficients for

AFR_REVIEW and AFR_ENGAGE are -0.023 (p=0.45) and 0.045 (p<0.01), respectively. We then use the auditor's tendency to issue a modified audit opinion (MAO) (DeFond et al. 2002; Chen et al. 2010; Chan and Wu 2011; Firth et al. 2012) as another alternative surrogate for engagement-level quality. We augment the model (2) with five additional control variables: inventory and accounts receivable (INVREC), prior year MAO (LAG_MAO), reporting lag (REPORTLAG), abnormal stock return (RET), and idiosyncratic risk (STDRET). The untabulated coefficients for AFR_REVIEW and AFR_ENGAGE are 0.358 (p=0.48) and -0.971 (p<0.01), respectively. The results are qualitatively similar if we replace MAO with going-concern opinions issued to financially distressed companies. In both cases, the differences between the two coefficients are significant at p<0.10. These results using alternative measures of engagement quality reinforce our main inferences.

Subsample Analyses Based on Economic Development, Ownership Structure, and Audit Firm Type

As discussed in Section II, concerns over weak investor protection, dominant state ownership, and fierce market competition potentially limit our ability to generalize the main finding to audit markets outside China. To alleviate such concerns, we re-estimate model (2) after partitioning the sample along (1) more- and less-developed markets based on the

Marketization Index in Fan et al. (2011);[35] (2) SOEs and non-SOEs; and (3) Top 8 and non-Top 8 audit firms. We expect stronger investor protection in more-developed markets relative to less-developed markets, weaker government influence at non-SOEs relative to SOEs, and less-intensive audit market competition among Top 8 audit firms relative to non-Top 8 audit firms. The results in Table 7 indicate that our main conclusions are robust to variations in the Marketization Index, ownership structure, and audit-market segment.

----------Insert Table 7 here----------

Using Short-Term Audit Failure Rate to Predict Future Restatements

In the main tests, we calculate AFR cumulatively using data available since 2003. As a sensitivity test, we re-estimate model (2) using the AFR calculated based on the past one-year and three-year performances. Based on the past one-year AFR, the untabulated coefficient for AFR_REVIEW (AFR_ENGAGE) is 3.318 (7.062), and it is significant at $p<0.01$ ($p<0.01$). Based on the past three-year AFR, the untabulated coefficient for AFR_REVIEW (AFR_ ENGAGE) is 4.778 (7.551) and is significant at $p<0.01$ ($p<0.01$). In both cases, the coefficient for AFR_ENGAGE is significantly greater than that of AFR_REVIEW at $p<0.01$.

[35] The Marketization Index comprises three components: the credit market index, the government decentralization index, and the legal environment index. The credit market index captures the activities of non-state financial institutions. The government decentralization index reflects the extent of government intervention in the economy and government efficiency. The legal index focuses on the efficiency of the legal system and protection of property rights. We designate five regions (Beijing, Shanghai, Guangzhou, Jiangsu, and Zhejiang) as more-developed markets and all other regions as less-developed markets. These five regions have had the highest Marketization Index and the most-developed economic and legal institutions in China over the past decade. Results are qualitatively similar if we partition the sample along the median value of the Marketization Index.

Allowing for Two-Year Restatement Lag

In the main tests, we allow for a one-year time lag between the end of the misstatement period and the restatement announcement for the last year of our sample period (2009). As a sensitivity analysis, we allow for two-year restatement lag by re-estimating model (2) using data for the period 2004–2008. The results are qualitatively similar to the main tests.

Potential Endogeneity in the Match between Clients and Audit Partners

The match between a client and its audit partners is potentially endogenous—i.e., clients with poor financial reporting quality likely select low quality audit partners in order to avoid tough scrutiny. This selection will bias toward a positive association between audit partners' past and future performance.[36] We use propensity score matching to address these concerns. Specifically, we estimate the likelihood of future restatement based on the 5 audit-firm and 12 audit-client variables in model (2). We then match, without replacement, each restatement observation with a non-restatement observation with the closest restatement

[36] However, compared with the match between clients and audit firms, we expect the extent of self-selection to be less severe in the match between clients and their audit partners, especially in audit firms with good quality control. To investigate this matching process, we interviewed audit partners from both Top 8 and non-Top 8 firms. Within Top 8 firms, clients are generally aligned with audit partners based on industry specialization and audit partners' workload. To minimize the risk of audit failures, internal risk-management procedures within Top 8 firms generally preclude assigning high-risk clients to low-quality partners. Within non-Top 8 firms, clients are usually audited by audit partners who brought in the client. Therefore, clients' self-selection of audit partners is expected to be more severe in non-Top 8 than in Top 8 audit firms. To the extent that self-selection drives our main results, we would expect the association between AFR and future restatements to be weaker at Top 8 than at non-Top 8 firms, which is not consistent with the results in Table 5, Column (2).

probability.[37] We next re-estimate model (2) using the matched sample. The untabulated coefficients for AFR_REVIEW and AFR_ENGAGE are 5.065 ($p<0.01$) and 8.339 ($p<0.01$), respectively, with the difference significant at $p<0.01$. We obtain similar results when we match with replacement.

Alternative Designation of Review and Engagement Audit Partners

As a robustness test, we designate, from the engagement team, the auditor who signs the most (least) number of audit reports in the current year as the review (engagement) partner. The mean number of audit reports signed by the review (engagement) partner under this alternative designation is 4.73 (1.94). We then re-estimate model (2). The untabulated coefficients for AFR_REVIEW and AFR_ENGAGE are 3.966 ($p<0.01$) and 6.674 ($p<0.01$), respectively, with the difference significant at $p<0.01$. We obtain similar results when we designate the review partner vs. the engagement partner based on the number of years of experience in the clients' industries.

In China, the signature of the review partner usually precedes that of the engagement partner. We find that designating the audit partner whose signature appears first (second) on the audit report as the review (engagement) partner does not change our main inferences. Despite using several methods to validate our designation of review versus engagement

[37] In the matched sample, the predicted probability of restatement and the means of independent variables do not differ at $p<0.10$ between observations with and without actual restatement, indicating that we achieved a relatively balanced sample through the matching process. We choose matching without replacement because "If matching is done with replacement and the same firm is included in multiple matches, it is necessary to adjust (increase) the standard error used for statistical tests. Depending on the correlation across matches, this adjustment can be quite large" (Armstrong et al. 2010, 244).

partners, we cannot completely be certain that our designation is free from measurement error. We acknowledge that this is a limitation to our study.

Other Additional Analyses

Our main results are robust to the following additional robustness specifications: (1) controlling for the number of clients' subsidiaries (COMPLEXITY), (2) deleting observations from the manufacturing industry, (3) deleting 2008–2009 from the sample period to remove the impact of the global financial crisis, (4) deleting observations for international Big 4 accounting firms, and (5) using subsample analyses to mitigate potential bias in the coefficient estimates of interaction terms in logit models as discussed in Ai and Norton (2003) and Norton et al. (2004).

VII. CONCLUSIONS

The independent auditor is one of the most important gatekeepers for corporate reporting. Prior research on audit quality is mostly confined to the roles of audit firms and audit offices. Yet very little is known about how the past performance of audit partners who supervise the entire audit process affects audit outcomes. Neither do we quite understand how quality control and audit partners' own economic incentives moderate audit partners' influence on audit quality. Our study sheds light on these important but under-explored questions.

Examining the Chinese audit market where audit partner identity is available, we find that audit-partner past performance, measured by the audit failure rate, predicts the

probability of future restatements for audited financial reports. Such predictive power is much stronger for engagement partners than for review partners. Moreover, we fail to find consistent evidence to support the claim that the influence of engagement partners on audit quality is effectively attenuated by quality control at either the engagement-team level or the audit-firm level. Instead, we find evidence suggesting that engagement partners' influence on audit quality is exacerbated by their own economic incentives.

The importance of audit-partner quality to engagement quality has been recognized by regulators and investors in China. China Institute of Certified Public Accounts (CICPA) tracks and discloses audit-partner performance records by posting on its website the number of times each audit partner has been sanctioned due to an audit failure, the date, reason, and nature of the sanction. Recent research shows that firms in China consider perceived audit-partner quality in auditor appointment and compensation decision (He et al. 2013).

In summary, subject to the limitations discussed in Section II, our study provides useful insights into how audit-partner quality affects engagement-level quality and underscores the importance of audit-partner identification. Future research can explore whether audit-partner quality affects the cost of equity and debt capital above and beyond audit-firm and audit-client characteristics. We believe research in this direction will deepen our understanding of auditor performance and the market perception of auditor reputation at the audit-partner level.

APPENDIX A

In models (2)–(4), we include three groups of variables to control for the effects of other audit-partner characteristics ($INDIVIDUAL_{j,t}$), audit-firm characteristics ($AUDITFIRM_{j,t}$), and client characteristics ($CLIENT_{j,t}$) on the dependent variable.

The variable group $INDIVIDUAL_{j,t}$ comprises four variables for other partner-specific attributes (Chen et al. 2008; Chin and Chi 2009; Chen et al. 2010): tenure ($TENURE\_AUDITORS_{j,t}$), industry expertise ($SPECIALIST\_AUDITORS_{j,t}$), fee dependence ($FEEDEP\_AUDITORS_{j,t}$), and auditor experience ($EXPERIENCE\_AUDITORS_{j,t}$),[38] all measured at the engagement-team level.

The variable group $AUDITFIRM_{j,t}$ includes five variables capturing audit firms' influence on audit quality: tenure ($TENURE\_FIRM_{j,t}$), industry expertise ($SPECIALIST\_FIRM_{j,t}$), and fee dependence ($FEEDEP\_FIRM_{j,t}$), all measured at the audit-firm level. We expect a negative sign for $SPECIALIST\_FIRM_{j,t}$ based on prior findings (Balsam et al. 2003; Krishnan 2003), and do not predict signs for $TENURE\_FIRM_{j,t}$ or $FEEDEP\_FIRM_{j,t}$ due to inconsistent results from prior studies (Frankel et al. 2002; Myers et al. 2003; Ashbaugh et al. 2003). Prior research shows lower (higher) audit quality for local (Top 8/10) auditors in China (Chan et al. 2006; DeFond et al. 2000; Chen et al. 2011), so we expect a positive (negative) sign for $LOCAL_{j,t}$ ($TOP8_{j,t}$).

[38] When estimating model (4), we replace $FEEDEP\_AUDITORS_{j,t}$ with $CIMPORT\_REVIEW_{j,t}$ and $CIMPORT\_ENGAGE_{j,t}$.

We include 12 variables in the variable group $CLIENT_{j,t}$ to control for audit client characteristics. First, to control for operating and financial risk, we include client size ($SIZE_{j,t}$), profitability ($ROA_{j,t}$), operating cash flows ($CFO_{j,t}$), leverage ($LEV_{j,t}$), financial distress score ($ZSCORE_{j,t}$), and book-to-market ratio ($BM_{j,t}$). We expect a negative (positive) sign for $ROA_{j,t}$ ($LEV_{j,t}$) (Brazel et al. 2009; Lennox and Pittman 2010; Dao et al. 2012), and do not predict the signs of other variables due to inconclusive findings in prior research.

Second, to control for clients' reporting incentives, we include loss in the prior year ($LLOSS_{j,t}$), rights offering incentives ($EM_{j,t}$), client age ($AGE_{j,t}$), and external financing activity ($FIN_{j,t}$). The CSRC stipulates strict profitability requirements for firms to maintain listing status (Chan and Wu 2011) or to qualify for rights offering (Chen et al. 2010). We expect that firms with prior losses and firms expecting rights offering would have stronger incentives to misstate earnings. We also expect older firms ($AGE_{j,t}$) and firms engaging in current year financing ($FIN_{j,t}$) to have a greater incentive to resort to earnings management (Chen et al. 2001; DeFond et al. 2000; Ashbaugh et al. 2003; Stanley and DeZoort 2007).

Finally, we control for the ownership structure of clients using state ownership ($SOE_{j,t}$) and cross-listing ($CROSSLIST_{j,t}$) status. Prior research shows that state-owned firms and cross-listed Chinese firms have lower earnings management due to lower earnings management incentives and more stringent reporting requirements (Gul et al. 2010; Chen et al. 2011). We expect that $SOE_{j,t}$ and $CROSSLIST_{j,t}$ would be negatively related to $RESTATEMENT_{j,t}$.

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Table 1 – Variable Definitions

Variables		Definitions
Dependent Variable – Main Tests		
RESTATEMENT	=	Equals to 1 if the current year annual report is subsequently restated following an unqualified audit opinion, and 0 otherwise.
Dependent Variables – Sensitivity Tests		
|DACC|	=	Absolute value of performance adjusted discretionary accrual calculated using cross-sectional Jones model based on Kothari et al. (2005).
MAO	=	Indicator variable that equals to 1 if a client receives a modified audit opinion for the current year, and 0 otherwise. Modified opinion includes unqualified opinion with explanatory notes, qualified opinion, disclaimer, and adverse opinion.
Test Variables – Main Tests		
AFR_AUDITOR	=	Actual audit failure rate of audit partner i as of year t. It equals to the actual total number of annual reports restated subsequent to an unqualified audit opinion from audit partner i as of year t, scaled by the total number of annual reports signed by audit partner i as of year t. We search for restatement announcements made through 2010.
AFR_REVIEW	=	Actual audit failure rate for the review partner of an audit. Among audit partners signing an audit report, we designate the partner with the most (least) number of years of experience as the review (engagement) audit partner.
AFR_ENGAGE	=	Actual audit failure rate for the engagement partner of an audit.
Variables used to designate review vs. engagement partner		
EXPERIENCE	=	The number of years of auditor experience. It equals to the total number of years that an individual auditor has been a signing auditor as of the end of the current year. We count auditor experience starting from 1990 (1991) for auditors whose clients are listed on the Shanghai (Shenzhen) Stock Exchange.
EXPERIENCE_REVIEW	=	The number of years of experience of the review partner of an audit.
EXPERIENCE_ENGAGE	=	The number of years of experience of the engagement partner of an audit.
Variables used to test the moderating effects of quality controls		
QUALITY_REVIEW	=	Equals to 1 if AFR_REVIEW is below the sample median, and 0 otherwise.
TOP8	=	Equals to 1 if the audit firm is one of the Top 8 audit firms, and 0 otherwise. The Top 8 audit firm is measured based on the rank issued by the China Institute of Certified Public Accountants each year.
Variables used to test the moderating effects of fee dependence		
FEEDEP_REVIEW	=	Fee dependence for the review partner of client j at year t. It is calculated as the total assets of client j at year t scaled by the sum of total assets of all the clients of the review partner of client j at year t.
FEEDEP_ENGAGE	=	Fee dependence for the engagement partner of client j at year t. It is calculated as the total assets of client j at year t scaled by the sum of total assets of all the clients of the engagement partner of client j at year t.
CIMPORT_REVIEW	=	Equals to 1 if FEEDEP_REVIEW is above the sample median, and 0 otherwise.
CIMPORT_ENGAGE	=	Equals to 1 if FEEDEP_ENGAGE is above the sample median, and 0 otherwise.
Other Control Variables		
TENURE_AUDITORS	=	Audit partner tenure. It equals the number of continuous years that an audit partner has been on the engagement for client j as of year t. For each audit, we use the longest audit partner tenure among the signing partners.
SPECIALIST_AUDITORS	=	Equals to 1 if any signing audit partner for the audit is an industry leader (highest market share or at least 5% market share of audit fee income) for the client's industry during year t, and 0 otherwise.
FEEDEP_AUDITORS	=	Fee dependence for all the signing audit partners for client j at year t, following

		Chen et al. (2010), which is computed as $\ln(assets_j) / \sum_{m=1}^{M}\sum_{j=1}^{J}\ln(assets_j)$, where j is the number of clients audited by audit partner i and m is the number of partners signing the audit report.
EXPERIENCE_AUDITORS	=	The average number of years of experience between the review and engagement partner of an audit.
TENURE_FIRM	=	The number of continuous years that the audit firm has been on the engagement for the client as of end of year t.
SPECIALIST_FIRM	=	Equals to 1 if the audit firm is an industry leader (measured by the highest market share of audit fee income) for the client's industry at year t, and 0 otherwise.
FEEDEP_FIRM	=	Fee dependence of the audit firm on client j at year t, following Chen et al. (2010). It equals $\ln(assets_j) / \sum_{j=1}^{J}\ln(assets_j)$, where j is the number of clients audited by the audit firm during year t.
LOCAL	=	Equals to 1 if the auditor and the client are in the same jurisdiction (province or equivalent in China), and 0 otherwise.
SIZE	=	Natural logarithm of total assets.
ROA	=	Return on assets.
CFO	=	Operating cash flow deflated by total assets.
LEV	=	Total debt scaled by total assets.
ZSCORE	=	Altman (1968) bankruptcy probability score.
LLOSS	=	Equals to 1 if the audit client reports losses in the prior year, and 0 otherwise.
AGE	=	Natural log of 1 plus the number of years the audit client has been listed on the stock exchange.
EM	=	Equals to 1 if an observation meets any of the following criteria: (1) firms with a small profit (0<ROA<1%), (2) firms with ROEs that are marginally above the CSRC's rights offering requirements specified for after 2000 (6%–7 % for a lower bottom-line ROE or recurring ROE), and 0 otherwise.
FIN	=	Equals to 1 if the sum of new long-term debt and equity financing exceeds two percent of lagged total assets, and 0 otherwise.
BM	=	Book to market ratio.
SOE	=	Equals to 1 if the largest shareholder of the audit client is government, and 0 otherwise.
CROSSLIST	=	Equals to 1 if the audit client is listed overseas, and 0 otherwise.
INVREC	=	(Inventory +Receivables)/total assets.
LAG_MAO	=	Equals to 1 if the audit client received a modified audit opinion in the prior year, and 0 otherwise.
REPORTLAG	=	The audit reporting lag, measured as natural log of the number of days between fiscal year-end and the audit report date.
RET	=	Cumulative market-adjusted stock returns of the audit client calculated over the current year.
STDRET	=	Standard deviation of the company's market adjusted abnormal return calculated using weekly return data over the current year.

Table 2: Sample Selection

Panel A: Sample selection for the full sample

	Number of firm-years
Total firm-year observations available on CSMAR during 2004–2009	9,648
Less:	
Restated annual reports receiving modified audit opinions	(404)
Companies listed on SME board and ChiNext board	(1,028)
Observations in financial industry	(128)
Observations with missing audit partner data	(515)
Observations with other missing variables	(854)
Observations with multipe restatements	(290)
Total firm-year observations in the final sample	6,429

Panel B: Sample selection for annual report restatements

	2003	2004–2009
Total number of annual report restatements during the period	234	1,177
Less:		
Restatements due to changes in accounting principles	(54)	(108)
Restated annual reports receiving modified audit opinions	(24)	(404)
Multiple restatements	(64)	(290)
Total number of annual report restatements classified as audit failure	92	375

Panel C: Industry distribution of annual report restatements classified as audit failures

	2003		2004–2009	
Industry	Number of Audit Failures	As Percentage of Total Audit Failures	Number of Audit Failures	As Percentage of Total Audit Failures
Agriculture, forestry & fishing	3	3.26%	12	3.20%
Mining	1	1.09%	10	2.67%
Manufacturing	51	55.43%	218	58.13%
Utilities	3	3.26%	22	5.87%
Construction	3	3.26%	7	1.87%
Transportation	1	1.09%	11	2.93%
Information & Technology	7	7.61%	15	4.00%
Wholesale trade	14	15.22%	17	4.53%
Real estate	4	4.35%	28	7.47%
Services	1	1.09%	8	2.13%
Entertainment	0	0.00%	4	1.07%
Conglomerates	4	4.35%	23	6.13%
Total	92	100%	375	100%

Table 3: Descriptive Statistics for Variables Used in the Regressions

Panel A: Descriptive statistics for the pooled sample

	N	Mean	Std.	p25	p50	p75	p90
RESTATEMENT	6,429	0.058	0.234	0.000	0.000	0.000	0.000
AFR_REVIEW	6,429	0.093	0.128	0.000	0.053	0.154	0.250
AFR_ENGAGE	6,429	0.080	0.172	0.000	0.000	0.079	0.300
TENURE_AUDITORS	6,429	2.640	1.549	1.500	2.500	3.500	4.500
SPECIALIST_AUDITORS	6,429	0.058	0.235	0.000	0.000	0.000	0.000
FEEDEP_AUDITORS	6,429	0.233	0.148	0.121	0.180	0.269	0.500
EXPERIENCE_AUDITORS	6,429	5.788	2.590	4.000	5.500	7.500	9.000
TENURE_FIRM	6,429	5.301	3.620	2.000	5.000	8.000	10.000
SPECIALIST_FIRM	6,429	0.492	0.500	0.000	0.000	1.000	1.000
FEEDEP_FIRM	6,429	0.039	0.035	0.019	0.032	0.046	0.070
TOP8	6,429	0.238	0.426	0.000	0.000	0.000	1.000
LOCAL	6,429	0.469	0.499	0.000	0.000	1.000	1.000
SIZE	6,429	21.489	1.142	20.735	21.426	22.143	22.956
ROA	6,429	0.024	0.080	0.009	0.028	0.055	0.094
CFO	6,429	0.053	0.084	0.010	0.052	0.099	0.156
LEV	6,429	0.266	0.192	0.123	0.248	0.374	0.496
ZSCORE	6,429	4.100	5.858	1.396	2.469	4.520	8.651
LLOSS	6,429	0.179	0.383	0.000	0.000	0.000	1.000
AGE	6,429	2.580	0.399	2.303	2.565	2.891	3.135
EM	6,429	0.107	0.309	0.000	0.000	0.000	1.000
FIN	6,429	0.478	0.500	0.000	0.000	1.000	1.000
BM	6,429	0.443	0.292	0.253	0.402	0.599	0.832
SOE	6,429	0.686	0.464	0.000	1.000	1.000	1.000
CROSSLIST	6,429	0.026	0.160	0.000	0.000	0.000	0.000
EXPERIENCE_REVIEW	6,429	8.112	3.550	5.000	8.000	11.000	13.000
EXPERIENCE_ENGAGE	6,429	3.464	2.510	1.000	3.000	5.000	7.000
FEEDEP_REVIEW	6,429	0.383	0.288	0.172	0.264	0.499	1.000
FEEDEP_ENGAGE	6,429	0.649	0.326	0.342	0.514	1.000	1.000

Panel B: Descriptive statistics by annual reports with and without subsequent restatements

	$RESTATEMENT_{j,t}$ =1 (N=375)		$RESTATEMENT_{j,t}$= 0 (N=6,054)		Difference in			
	Mean	Median	Mean	Median	Mean	Median	t-stat.	z-stat.
$AFR\_REVIEW_{j,t-1}$	0.266	0.200	0.082	0.043	0.184	0.157	16.43***	22.61***
$AFR\_ENGAGE_{j,t-1}$	0.474	0.310	0.055	0.000	0.419	0.310	26.04***	35.84***
TENURE_AUDITORS	2.592	2.500	2.640	2.500	-0.048	0.000	-0.65	-0.36
SPECIALIST_ AUDITORS	0.048	0.000	0.059	0.000	-0.011	0.000	-0.97	-0.89
FEEDEP_AUDITORS	0.244	0.198	0.233	0.179	0.011	0.019	1.43	1.66*
EXPERIENCE_AUDITORS	5.564	5.500	5.802	5.500	-0.238	0.000	-1.70*	-1.77*
TENURE_FIRM	5.019	5.000	5.319	5.000	-0.300	0.000	-1.74*	-0.87
SPECIALIST_FIRM	0.469	0.000	0.494	0.000	-0.025	0.000	-0.91	-0.91
FEEDEP_FIRM	0.047	0.037	0.039	0.031	0.008	0.006	3.60***	4.59***
TOP8	0.131	0.000	0.245	0.000	-0.114	0.000	-6.24***	-5.04***
LOCAL	0.483	0.000	0.468	0.000	0.015	0.000	0.57	0.57
SIZE	21.399	21.349	21.494	21.430	-0.095	-0.081	-1.74*	-1.28
ROA	0.014	0.019	0.024	0.029	-0.010	-0.010	-2.49**	-4.48***
CFO	0.043	0.038	0.054	0.052	-0.011	-0.014	-2.53**	-3.16***
LEV	0.283	0.260	0.264	0.247	0.019	0.013	1.83*	2.42**
ZSCORE	3.972	2.254	4.101	2.478	-0.129	-0.224	-0.44	-1.55
LLOSS	0.381	0.000	0.180	0.000	0.201	0.000	0.17	0.17
AGE	2.512	2.565	2.584	2.565	-0.072	0.000	-3.74***	-3.49***
EM	0.101	0.000	0.107	0.000	-0.006	0.000	-0.37	-0.37
FIN	0.461	0.000	0.479	0.000	-0.018	0.000	-0.64	-0.65
BM	0.476	0.419	0.442	0.401	0.034	0.018	2.21**	1.23
SOE	0.755	1.000	0.682	1.000	0.073	0.000	3.17***	2.95***
CROSSLIST	0.006	0.000	0.027	0.000	-0.021	0.000	-3.81***	-2.27**
EXPERIENCE_ REVIEW	7.704	8.000	8.138	8.000	-0.434	0.000	-2.36**	-2.15**
EXPERIENCE_ ENGAGE	3.424	3.000	3.467	3.000	-0.043	0.000	-0.31	-0.59
FEEDEP_REVIEW	0.416	0.322	0.381	0.263	0.035	0.059	2.23**	2.82***
FEEDEP_ENGAGE	0.660	0.513	0.648	0.514	0.012	-0.001	0.69	0.56

Notes: ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.
Table 3 reports descriptive statistics for variables used in model (2) for the sample period 2004–2009. Panel A presents the descriptive statistics for the full sample. Panel B presents descriptive statistics for the restatement and non-restatement subsamples. See Table 1 for variable definitions.

Table 4: The Association between Audit-Partner Audit Failure Rate and Future Restatements

	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
CONSTANT	-1.228	0.50	-2.589	0.17	-2.952	0.16	-4.814	0.06*	-6.331	0.02**	-6.814	0.02**	-5.267	0.04**
AFR_REVIEW							6.431	0.00***			3.301	0.00***	3.141	0.00***
AFR_ENGAGE									7.885	0.00***	7.050	0.00***	6.926	0.00***
TENURE_AUDITORS					-0.047	0.18	-0.042	0.28	0.006	0.86	0.003	0.92		
SPECIALIST_AUDITORS					-0.281	0.10*	-0.133	0.46	-0.099	0.73	-0.025	0.92		
FEEDEP_AUDITORS					0.553	0.02**	-0.005	0.98	0.351	0.36	0.031	0.95		
EXPERIENCE_AUDITORS					0.001	0.97	0.030	0.12	0.083	0.03**	0.097	0.01***		
TENURE_FIRM			-0.039	0.18	-0.031	0.32	-0.001	0.99	-0.036	0.29	-0.017	0.60		
SPECIALIST_FIRM			-0.069	0.71	-0.055	0.76	-0.008	0.98	-0.157	0.75	-0.093	0.86		
FEEDEP_FIRM			2.687	0.02**	2.095	0.06*	-0.343	0.85	-1.496	0.64	-2.026	0.52		
TOP8			-0.664	0.00***	-0.674	0.00***	-0.573	0.00***	-0.428	0.00***	-0.359	0.00***		
LOCAL			0.050	0.66	0.065	0.55	0.057	0.47	0.180	0.01***	0.150	0.03**		
SIZE	-0.124	0.16	-0.064	0.49	-0.048	0.64	-0.017	0.89	-0.009	0.94	-0.012	0.93	-0.053	0.66
ROA	-1.229	0.00***	-1.115	0.00***	-1.121	0.00***	0.007	0.99	-0.022	0.98	0.305	0.79	0.361	0.75
CFO	-1.244	0.07*	-1.298	0.05**	-1.302	0.05**	-1.301	0.16	-0.951	0.29	-0.986	0.28	-0.914	0.33
LEV	0.466	0.18	0.490	0.18	0.486	0.18	0.666	0.03**	0.783	0.01***	0.839	0.01***	0.797	0.00***
ZSCORE	0.004	0.83	0.007	0.71	0.006	0.74	0.009	0.52	0.026	0.04**	0.024	0.03**	0.024	0.04**
LLOSS	-0.048	0.79	-0.067	0.73	-0.067	0.72	-0.107	0.45	0.147	0.47	0.100	0.57	0.064	0.72
AGE	0.228	0.02**	0.337	0.00***	0.341	0.00***	0.400	0.01***	0.560	0.00***	0.592	0.00***	0.556	0.00***
EM	-0.205	0.30	-0.205	0.29	-0.201	0.28	-0.261	0.12	-0.282	0.24	-0.290	0.19	-0.274	0.25
FIN	-0.153	0.32	-0.166	0.30	-0.173	0.28	-0.205	0.28	-0.144	0.54	-0.134	0.58	-0.124	0.60
BM	0.918	0.00***	0.860	0.00***	0.877	0.00***	0.775	0.00***	0.594	0.02**	0.590	0.01***	0.632	0.01***
SOE	0.419	0.02**	0.454	0.01***	0.433	0.02**	0.408	0.02**	0.257	0.22	0.263	0.19	0.266	0.17
CROSSLIST	-1.148	0.02**	-0.858	0.05**	-0.848	0.04**	-0.823	0.13	-0.365	0.42	-0.599	0.21	-0.869	0.13

INDUSTRY	YES	YES	YES	YES	YES	YES	YES
YEAR	YES	YES	YES	YES	YES	YES	YES
N	6,429	6,429	6,429	6,429	6,429	6,429	6,429
pseudo R^2	0.038	0.048	0.050	0.188	0.412	0.431	0.425
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Tests of coefficient restrictions							
AFR_REVIEW=AFR_ENGAGE						p=0.00***	p=0.00***
Vuong test on incremental R^2		(2) vs. (1)	(3) vs. (2)	(4) vs. (3)	(5) vs. (4)	(6) vs. (5)	(7) vs. (2)
		p=0.00***	p=0.29	p=0.00***	p=0.00***	p=0.00***	p=0.00***

Notes: ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively. The p-values are calculated based on robust standard errors clustered by client firm and year. The sample period is 2004-2009. See Table 1 for variable definitions.
This table presents the multivariate test results on the effects of audit-partner quality on engagement-level quality measured with annual report restatements (RESTATEMENT). $AFR\_REVIEW_{j,t-1}$ ($AFR\_ENGAGE_{j,t-1}$) is the audit failure rate of the review (engagement) partner. It equals to the total number of audit failures associated with the review (engagement) partner as of year t-1, scaled by the total number of annual reports signed by the same review (engagement) partner as of year t-1.

Table 5: The Moderating Effects of Quality Control on the Association between Audit-Partner Audit Failure Rate and Future Restatements

RESTATEMENT	(1) Model (3a)		(2) Model (3b)	
	Coeff.	p-value	Coeff.	p-value
CONSTANT	-5.501	0.05**	-6.587	0.03**
AFR_REVIEW			3.668	0.00***
AFR_ENGAGE	6.933	0.00***	6.879	0.00***
QUALITY_REVIEW	-2.391	0.00***		
AFR_ENGAGE*QUALITY_REVIEW	0.837	0.11		
AFR_REVIEW*TOP8			-2.560	0.04**
AFR_ENGAGE*TOP8			1.441	0.02**
TENURE_AUDITORS	0.009	0.81	0.003	0.93
SPECIALIST_AUDITORS	-0.022	0.93	-0.039	0.88
FEEDEP_AUDITORS	0.526	0.20	-0.014	0.97
EXPERIENCE_ AUDITORS	0.052	0.19	0.095	0.01***
AUDIT FIRM CONTROLS	YES		YES	
CLIENT CONTROLS	YES		YES	
INDUSTRY	YES		YES	
YEAR	YES		YES	
N	6,429		6,429	
Pseudo R^2	0.449		0.433	
Tests of coefficient restrictions				
AFR_ENGAGE=AFR_REVIEW			p=0.00***	
AFR_ENGAGE+AFR_ENGAGE*QUALITY_REVIEW=0	p=0.00***			
AFR_REVIEW+AFR_REVIEW*TOP8=0			p=0.23	
AFR_ENGAGE+AFR_ENGAGE*TOP8=0			p=0.00***	

Notes: ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively. The p-values are calculated based on robust standard errors clustered by client firm and year. The sample period is 2004–2009. See Table 1 for variable definitions.

Column (1) presents the test results of model (3a), which investigates the moderating effects of engagement-team-level quality control on the association between engagement-partner quality and the probability of future restatements. QUALITY_REVIEW equals 1 if the audit failure rate of the review partner is below the sample median, and 0 otherwise.

Column (2) presents the test results of model (3b), which investigates the moderating effects of audit-firm-level quality control on the association between review and engagement partner quality and the probability of future restatements. TOP8 equals 1 for clients of Top 8 audit firms, and 0 otherwise.

Table 6: The Moderating Effects of Client Importance on the Association between Audit-Partner Audit Failure Rate and Future Restatements

	(1)		(2)		(3)		(4)	
Dependent Var.	Restatement		Restatement		Restatement		Restatement	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
CONSTANT	-7.098	0.01**	-6.632	0.02**	-6.487	0.03**	-6.363	0.03**
AFR_REVIEW	3.233	0.00***	2.350	0.03**	3.492	0.00***	2.723	0.01***
AFR_ENGAGE	7.141	0.00***	7.085	0.00***	5.673	0.00***	5.730	0.00***
CIMPORT_REVIEW	0.119	0.70	-0.098	0.67			-0.036	0.87
CIMPORT_ENGAGE	-0.324	0.06			-1.119	0.00***	-1.113	0.00***
AFR_REVIEW*CIMPORT_REVIEW			1.234	0.29			0.972	0.37
AFR_ENGAGE*CIMPORT_ENGAGE					2.772	0.00***	2.736	0.00***
TENURE_AUDITORS	0.005	0.89	-0.001	0.98	0.007	0.82	0.004	0.91
SPECIALIST_AUDITORS	-0.026	0.92	-0.023	0.93	0.041	0.88	0.041	0.88
EXPERIENCE_ AUDITORS	0.094	0.03***	0.102	0.01***	0.078	0.05**	0.084	0.05**
AUDIT FIRM CONTROLS	YES		YES		YES		YES	
CLIENT CONTROLS	YES		YES		YES		YES	
INDUSTRY	YES		YES		YES		YES	
YEAR	YES		YES		YES		YES	
N	6,429		6,429		6,429		6,429	
pseudo R^2	0.433		0.432		0.439		0.439	
Test of coefficient restrictions								
AFR_REVIEW=AFR_ENGAGE	p=0.00***		p=0.00***		p=0.00***		p=0.00***	

Notes: ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively. The p-values are calculated based on robust standard errors clustered by client firm and year. The sample period is 2004–2009. See Table 1 for detailed variable definitions.

This table presents the test results of the moderating effects of client importance on the association between audit-partner quality and engagement-level quality measured with annual report restatements (RESTATEMENT).

CIMPORT-REVIEW equals 1 if the fee dependence for the review partner is greater than the sample median for review partners, and 0 otherwise. CIMPORT-ENGAGE equals 1 if the fee dependence for the engagement partner is greater than the sample median for engagement partners, and 0 otherwise.

Table 7: The Association between Audit-Partner Audit Failure Rate and Future Restatements – Subsample Analysis

	(1)		(2)		(3)		(4)		(5)		(6)	
	More-Developed Markets		Less-Developed Markets		SOEs		Non-SOEs		Top 8 Audit Firms		Non-Top 8 Audit Firms	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
CONSTANT	-15.745	0.00***	-4.351	0.14	-4.651	0.22	-13.004	0.00***	-1.999	0.74	-7.684	0.01***
AFR_REVIEW	3.793	0.01***	3.324	0.00***	2.832	0.00***	4.743	0.00***	0.824	0.31	3.637	0.00***
AFR_ENGAGE	9.957	0.00***	6.535	0.00***	7.034	0.00***	7.645	0.00***	8.954	0.00***	6.844	0.00***
TENURE_AUDITORS	0.061	0.41	-0.025	0.65	0.040	0.20	-0.145	0.00***	0.143	0.40	-0.022	0.68
SPECIALIST_AUDITORS	0.049	0.95	0.071	0.86	0.411	0.30	-1.027	0.07*	0.068	0.94	0.032	0.93
FEEDEP_AUDITORS	-2.950	0.15	0.437	0.30	-0.319	0.65	0.916	0.26	-1.436	0.16	0.068	0.89
EXPERIENCE_ AUDITORS	0.126	0.02**	0.090	0.06*	0.090	0.08*	0.104	0.14	0.235	0.01***	0.067	0.15
AUDIT FIRM CONTROLS	YES		YES		YES		YES		YES		YES	
CLIENT CONTROLS	YES		YES		YES		YES		YES		YES	
INDUSTRY	YES		YES		YES		YES		YES		YES	
YEAR	YES		YES		YES		YES		YES		YES	
N	2,628		3,801		4,410		2,019		1,531		4,898	
pseudo R^2	0.532		0.428		0.446		0.476		0.545		0.429	
Tests of coefficient restrictions												
AFR_REVIEW=AFR_ENGAGE	p=0.00***		p=0.00***		p=0.00***		p=0.01***		p=0.00***		p=0.00***	

Notes: ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively. The p-values are calculated based on robust standard errors clustered by client firm and year. The sample period is 2004–2009. See Table 1 for variable definitions.
In Columns (1) and (2), we partition the sample based on Marketization Index in Fan et al. (2011). We designate the top five regions (Beijing, Shanghai, Guangzhou, Jiangsu, and Zhejiang) with the highest Marketization Index as more-developed markets, and all the other regions as less-developed markets.
In Columns (3) and (4), we partition the sample based on whether the audit client is a SOE or a non-SOE.
In Columns (5) and (6), we partition the sample based on whether the client is audited by a Top 8 or a non-Top 8 audit firm.